39 Deansgate, Manchester

Flood Risk Assessment & Drainage Strategy Report

For: Kames Property Income Fund

Geo-Environmental Engineering Services

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REVISIONS

Revision	Date	Prepared By	Authorised By	Remarks
First Issue	11th September 2019	Neville Shaw	Andrew Edwards	-
Revision A	23rd December 2019	Neville Shaw	Andrew Edwards	Updated following receipt of amended proposed development plans
Revision B	30th January 2020	Neville Shaw	Andrew Edwards	Updated site area
Revision C	20th July 2021	Neville Shaw	Andrew Edwards	Updated client and site details
Revision D	30th July 2021	-	Andrew Edwards	Updated Site Details

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1.0 INTRODUCTION

IGE Consulting has been commissioned by *Kames Property Income Fund* to undertake a Flood Risk Assessment and Drainage Strategy report for a site at 39 Deansgate, Manchester. This document has been prepared to accompany the full planning application for the proposed commercial re-development of the application site.

The objective of this Flood Risk Assessment and Drainage Strategy is to identify potential drainage / flooding issues and any consequent implications on the proposed site development. Both existing and proposed surface water and foul water drainage for the development site are considered.

The Flood Risk Assessment and Drainage Strategy has been undertaken in accordance with the pro-forma guidance contained in:

- Department for Communities and Local Government document 'National Planning Practice Guidance: Flood Risk and Coastal Change'
- Manchester City, Salford City and Trafford Councils Level 1 Strategic Flood Risk Assessment (SFRA) dated May 2010 and Level 2 SFRA dated March 2011
- CIRIA SuDS Manual C753 dated 2015
- DEFRA / Environment Agency publication SC030219 'Rainfall Runoff Management for Developments' dated October 2013.
- National Planning Policy Framework published in March 2012, and revised in July 2018

To date, consultations have been undertaken with the Environment Agency (EA) and United Utilities (UU).

2.0 STANDARDS AND LIMITATIONS

This report has been prepared solely for use by *Kames Property Income Fund*.

It shall not be relied upon or transferred to any other party without the prior written authorisation of IGE Consulting.

The findings and opinions in the report are based on information derived from a variety of different sources. IGE Consulting do not accept any liability for the accuracy or otherwise of any information provided by third parties.

It should be noted that some of the aspects considered in this study may be subject to change with time. Therefore, if the development is delayed or postponed, consideration may need to be given to reviewing such issues to confirm that no changes have taken place, either at the site or within relevant legislation.

Further consultations with statutory bodies are likely as the scheme progresses. It should be noted that even where responses have been received from Regulators, these could be subject to change at a later date.

3.0 CURRENT SITUATION

3.1 Site Location and Description

The Site is irregular in shape and comprises an area of 0.12 ha (1,227m^2). It is bound by Deansgate to the West, St Mary's Gate to the North, the Grade II* listed Barton Arcade to the South and by 12-14 St Mary's Gate to the East. It situated within the St Ann's Conservation Area.

The existing building has a net area of 3,754m2 (40,408sq. ft) with accommodation arranged over ground, mezzanine, and eight upper floors. The ground floor, circa 1,116m2 (12,013sq. ft) is occupied by a variety retail tenants whilst the upper floors are currently used as offices, with an area in excess of 2,638m2 (28,395sq. ft).

The Site is currently serviced by an alley leading to a yard accessed via the pedestrianised Exchange Street / St. Ann's Square to the East.

This existing site is wholly developed and is currently positively drained (refer to drainage survey in Appendix 5 and topographical / existing drainage connectivity survey in Appendix 3).

The site is generally level with the existing building ground floor level varying from circa 36.5m AOD to 37.0m AOD (refer to topographical / existing drainage connectivity survey in Appendix 3).

3.2 Hydrology and Flooding

Current Environment Agency flood data indicates the site to lie wholly in Flood Zone 1 - refer to Appendix 2 for details.

EA / DEFRA flood mapping generally indicates a very low probability of surface water flooding across the site with a localised area in the south east corner of the site identified to have a low to medium risk of surface water flooding.

The site is shown to lie outside the maximum extent of flooding area from reservoirs.

The nearest watercourse to the site is the River Irwell which lies circa 175m to the west of the site development boundary.

3.3 Existing Sewers

The adopted sewers present in the vicinity of the proposed development site are noted as follows - refer to Appendix 4 for United Utilities (UU) sewer plans and Appendix 3 for topographical survey including the existing drainage survey:

- 700mm x 1600mm brick combined sewer extending from east to west beneath St Mary's Gate;
- 2300mm diameter combined sewer extending from north to south beneath Deansgate;
- 100mm diameter combined sewer extending from south to north beneath the existing passageway directly to the east of the subject site adjacent to 12-14 St Mary's Gate;
- 150mm diameter combined sewer extending from east to west across the envelope of the development site;
- 150mm diameter combined sewer indicated to extend from north to south beneath the eastern pavement of Deansgate.

An existing drainage survey has been undertaken at the site (refer to Appendix 5 for details) which indicates that existing site surface water discharges into the system of 150mm diameter adopted combined sewers adjacent to / crossing the site envelope.

Existing foul water from the site is also indicated to discharge into the system of 150mm diameter adopted combined sewers adjacent to / crossing the site envelope.

The new building arrangement includes a full basement. This new arrangement, together with the level of the existing adopted sewer system crossing the site, will necessitate the diversion of the existing 100mm / 150mm combined sewer system by

lowering it to sit directly beneath the new basement slab level. The exact future alignment and level of this length of adopted sewer are subject to detailed design of the proposed building and associated liaison / negotiation with United Utilities.

4.0 PROPOSED DEVELOPMENT

4.1 Development Proposals

It is proposed to undertake the erection of a 17 storey building comprising office use (Use Class E(g)(i)) and flexible ground floor commercial units (Use Classes E(a),(b),(c) and sui generis 'drinking establishment'), new electricity sub-station, basement cycle parking and rooftop plant enclosure, together with access, servicing and associated works following demolition of the existing building- refer to proposed site plans submitted as part of the planning application.

4.2 Surface Water Drainage

The issue of surface water drainage to the proposed development has been considered with reference to the hierarchy of surface water disposal as noted in the Building Regulations H3:

i) Sustainable Urban Drainage Systems (SUDS)
ii) Discharge of surface water off site direct to watercourse
iii) Discharge to adopted sewer

SUDS are made up of one or more structures built to manage surface water runoff. They are used in conjunction with good management of the site to prevent flooding and pollution. There are four general methods of control:

- Filter strips and swales
- Filter drains and permeable surfaces
- Infiltration devices
- Basins and Ponds

The nature of this development (full basement) clearly precludes the use of soakaways and permeable surfaces for post-development surface water drainage.

The nearest water course is the River Irwell which lies circa 175m to the west of the site through numerous third part ownerships. It is therefore not considered practical to discharge post-development surface water to the River Irwell.

Given the nature of the site and the proposed build, the only pragmatic method of post-development surface water discharge is to the adopted combined system present adjacent / within the site envelope. The existing drainage survey superimposed onto the site topographical survey (refer to Appendix 3) indicates that the 150mm diameter sewer extending from UU manhole 7515 discharges into the adjacent 2300mm diameter combined sewer beneath Deansgate via UU manhole 7506.

The new building arrangement includes a full basement. This new arrangement, together with the level of the existing adopted sewer system crossing the site, will necessitate the diversion of the existing adopted 100mm / 150mm combined sewer by lowering it to sit directly beneath the new basement slab level. The exact future alignment and level of this length of adopted sewer are naturally subject to detailed design of the proposed building and associated liaison / negotiation with United Utilities. It is therefore proposed that post-development surface water discharges directly to the adopted combined sewer system at location(s) along its diverted line to suit the detailed building design.

Due to the building functional requirements, it is not feasible to accommodate post-development surface water storage within the new building envelope and hence it is considered pragmatic for post-development surface water from the 0.11 hectare development site to discharge unattenuated (as existing) into the adjacent UU adopted combined sewer system.

4.3 SuDS Feasibility

One SuDS measure that is considered feasible in the context of the nature of the proposed development is noted below:

- Blue / Green Roofs: It is proposed to utilise a 'blue' roof system in order to collect rainwater, provide attenuation then release water slowly after rainfall has ceased (refer to proposed development plans submitted for for details).

Other SuDS measures are not considered appropriate at this development – refer to the reasoning set out below:

- Underground Storage: Due to the building functional requirements, it is not feasible to accommodate post-development surface water storage within the new building envelope.
- Rainwater Harvesting: In accordance with BS8515: 2009 + A1: 2013, the annual demand of the commercial building will be greater than the annual rainwater yield. Therefore, the use of rainwater harvesting is not a feasible SuDS method. Furthermore, the various functional requirements of the development scheme dictate that there is not available space to accommodate rainwater harvesting.
- Soakaway: The proposed basement covering the full site area precludes the use of this option.
- Filter Strips: The proposed basement area occupies the whole site area hence filter strips are not feasible.
- Permeable Paving: The proposed basement area occupies the whole site area and therefore permeable paving is not feasible.
- Bioretention Area: The proposed basement area occupies the whole site area and therefore a bioretention area is not feasible.
- Swale: The proposed basement area occupies the whole site area and therefore swales are not feasible.
- Hardscape Storage: The proposed basement area occupies the whole site area and therefore hardscape storage is not feasible.
- Pond / Basin: The proposed basement area occupies the whole site area and therefore ponds / basins are not feasible.

4.4 National Planning Policy Framework and Technical Guidance

The commercial site development proposals are classed as 'less vulnerable' in Table 2 of the Flood Risk and Coastal Change guidance.
'Less vulnerable' developments in Flood Zone 1 are classed as appropriate according to Table 3 of the Flood Risk and Coastal Change guidance.

Proposed post development levels will be engineered in order to protect the development and not provide any increased flood risk elsewhere. Types of flooding that could affect the site are:

River	the site is in Flood Zone 1
Sea	there is no risk of flooding from the sea
Land	there are no undrained land slopes towards the site
Groundwater	there are no springs or weep areas on the site
Sewers	there have been no local reports of sewer surcharge

4.5 EA Mapping Review

There are no groundwater protection zones in the vicinity of the site and there is negligible residual fluvial risk. The site is not noted to lie within a flood warning area.

4.6 Safe Access and Egress

Safe access / egress from the site in extreme conditions will be via the entrance on Deansgate.

4.7 Foul Water Drainage

It is proposed to discharge post-development foul water to the existing adopted combined sewer system in Deansgate via connection(s) along the diverted sewer line (refer to clause 4.2 for details).

The foul drainage network (as indicated in Appendix 4) will naturally comply with Building Regulations 2010 – Approved Document H1 and future calculations for post-development foul water discharge will be based on Sewers for Adoption 8th Edition.

5.0 CONCLUSIONS

5.1 Flooding

Following review of the Environment Agency flood maps and data, it has been confirmed that the site lies wholly in Flood Zone 1.

5.2 Site Surface Water Drainage

There will be no change in hard surfaced area at the post-development site in relation to the current situation.

It is proposed to discharge post-development surface water to the adopted combined sewer system at locations along the diverted sewer line (within the new building envelope) to suit the detailed building design (refer to clause 4.2 for details).

All feasible SuDS methods have been assessed given the nature and location of the development site (refer to section 4.3 for details) – none are considered feasible other than the blue roof system (which work by retaining the flow of water into the sewer system).

5.3 Site Foul Water Drainage

It is proposed to discharge post-development foul water to the adopted combined sewer system via connection(s) along the diverted sewer line to suit the detailed building design (refer to clause 4.2 for details).

5.4 Flood Risk Management Measures

There will be a site management Health and Safety document prepared in respect of the site.

5.5 Off Site Impacts

All roofed and paved areas are to be formally drained into the site surface water drainage system.

5.6 Residual Risk

With careful design of the drainage elements as described above, there will be no residual flood related risks remaining after the development has been completed.

A post-development safe emergency access can be maintained at all times during a flood event. Emergency access will be from Deansgate.

APPENDIX 1

SITE LOCATION PLAN

APPENDIX C – TITLE PLAN

HM Land Registry
Official copy of title plan

Title number **LA14037**
Ordnance Survey map reference **SJ8398NE**
Scale **1:1250**
Administrative area **Greater Manchester : Manchester**

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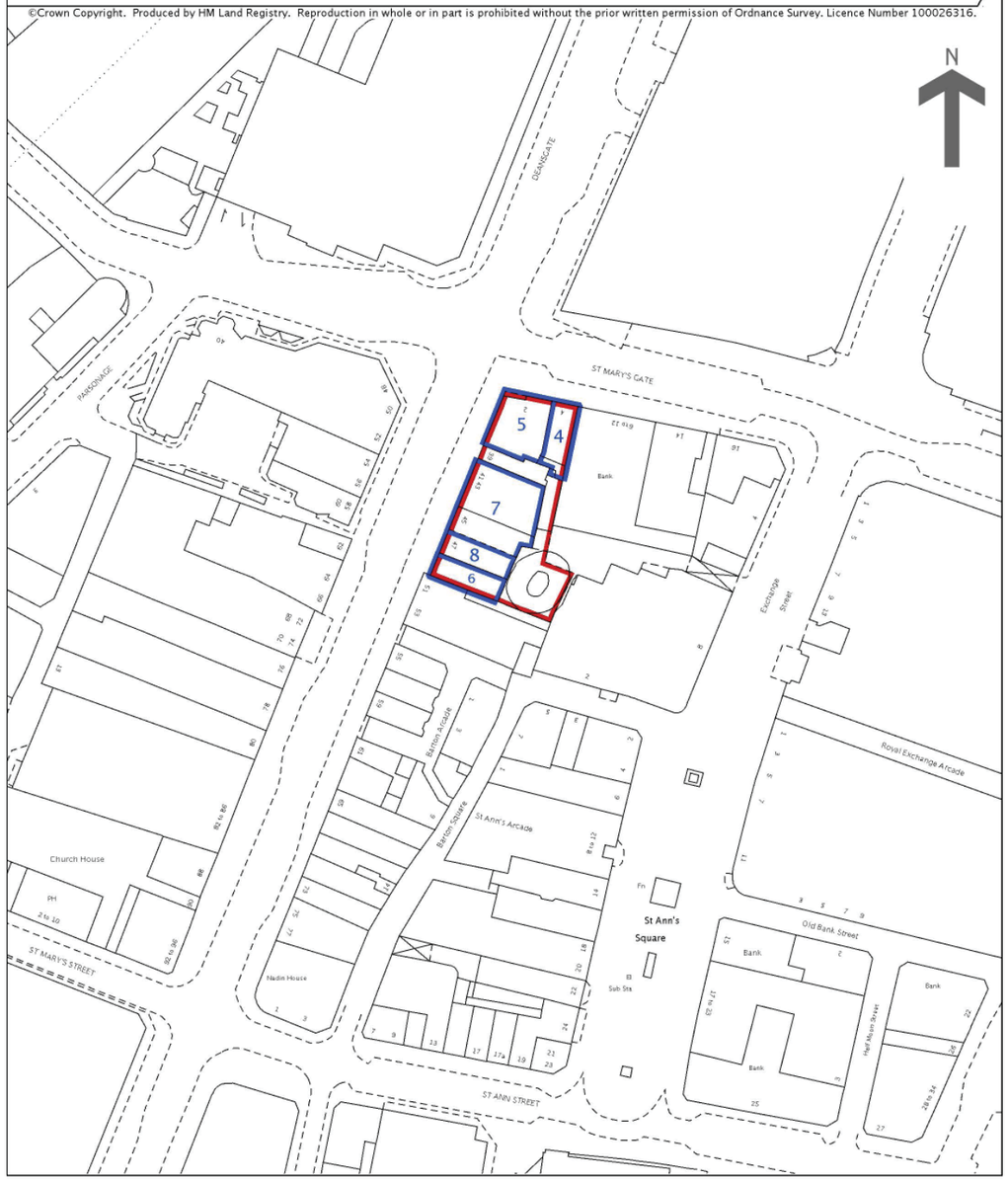


HM Land Registry

Official copy of register of title

Title number LA14037 | Edition date 11.07.2016

- This official copy shows the entries on the register of title on 21 JUL 2017 at 14:45:54.
- This date must be quoted as the "search from date" in any official search application based on this copy.
- The date at the beginning of an entry is the date on which the entry was made in the register.
- Issued on 21 Jul 2017.
- Under s.67 of the Land Registration Act 2002, this copy is admissible in evidence to the same extent as the original.
- This title is dealt with by HM Land Registry, Fylde Office.

A: Property Register

This register describes the land and estate comprised in the title. Except as mentioned below, the title includes any legal easements granted by the registered lease but is subject to any rights that it reserves, so far as those easements and rights exist and benefit or affect the registered land.

GREATER MANCHESTER : MANCHESTER

1 (07.09.1962) The Leasehold land shown edged with red on the plan of the above Title filed at the Registry and being Speakers House, 39 Deansgate, Manchester (M3 2BA).

2 The mines and minerals are excepted.

3 (07.09.1962) Short particulars of the lease(s) (or under-lease(s)) under which the land is held:
Date : 31 July 1962
Term : 99 years from 27 April 1960
Rent : £17250
Parties : (1) The Lord Mayor Aldermen and Citizens of The City of Manchester
(2) Coal Industry (Nominees) Limited

4 There are excepted from the effect of registration all estates, rights, interests, powers and remedies arising upon, or by reason of, any dealing made in breach of the prohibition or restriction against dealings therewith inter vivos contained in the Lease.

5 Unless otherwise mentioned the title includes any legal easements granted by the registered lease(s) but is subject to any rights that it reserves, so far as those easements and rights exist and benefit or affect the registered land.

6 (01.05.2007) A new title plan based on the latest revision of the Ordnance Survey Map has been prepared.

B: Proprietorship Register

This register specifies the class of title and identifies the owner. It contains any entries that affect the right of disposal.

Title absolute

1 of 3

B: Proprietorship Register continued

1 (20.11.2015) PROPRIETOR: TARGET REAL ESTATE LLP (LLP Regn. No. OC397354) of 111 Edmund Street, Birmingham B3 2HJ.

2 (20.11.2015) The price stated to have been paid on 4 November 2015 was £7,645,000 exclusive of VAT.

3 (20.11.2015) A Transfer of the land in this title dated 4 November 2015 made between (1) The Royal London Mutual Insurance Society Limited and (2) Target Real Estate Llp contains purchaser's personal covenants.

NOTE:-Copy filed.

4 (20.11.2015) RESTRICTION: No disposition of the registered estate by the proprietor of the registered estate is to be registered without a written consent signed by the proprietor for the time being of the Charge dated 4 November 2015 in favour of ICG-Longbow Debt Investments No 4 S.A.R.L. referred to in the Charges Register or its conveyancer.

5 (11.07.2016) RESTRICTION: No disposition of the registered estate by the proprietor of the registered estate is to be registered without a written consent signed by the proprietor for the time being of the Charge dated 27 June 2016 in favour of N M Rothschild & Sons Limited referred to in the Charges Register or their conveyancer.

C: Charges Register

This register contains any charges and other matters that affect the land.

1 The parts of the land affected thereby are subject to the leases set out in the schedule of leases hereto.
The leases grant and reserve easements as therein mentioned.

2 Deed dated 20 December 1963 made between (1) The Lord Mayor Aldermen and Citizens of The City of Manchester, (2) Coal Industry (Nominees) Limited (3) Polewin Properties Investments Limited (4) The Prudential Assurance Company Limited and (5) General Store Holdings Limited relates to rights of light and re-building.

3 (20.11.2015) REGISTERED CHARGE contained in a Supplemental Debenture dated 4 November 2015.

NOTE: See the entry below altering the priority of this charge.

4 (20.11.2015) Proprietor: ICG-LONGBOW DEBT INVESTMENTS NO.4 S.A.R.L. (incorporated in Luxembourg) of 2 Boulevard Konrad Adenauer, L-1115 Luxembourg, Luxembourg.

5 (20.11.2015) The proprietor of the Charge dated 4 November 2015 referred to above is under an obligation to make further advances. These advances will have priority to the extent afforded by section 49(3) Land Registration Act 2002.

6 (11.07.2016) REGISTERED CHARGE contained in a Debenture dated 27 June 2016 affecting also other titles.

NOTE 1: Charge reference CYM252650.
NOTE 2: See the entry below altering the priority of this charge.

7 (11.07.2016) Proprietor: N M ROTHSCHILD & SONS LIMITED (Co. Regn. No. 00925279) of New Court, 1-10 St. Swithin's Lane, London EC4N 8AL.

8 (11.07.2016) The proprietor of the Charge dated 27 June 2016 referred to above is under an obligation to make further advances. These advances will have priority to the extent afforded by section 49(3) Land Registration Act 2002.

9 (11.07.2016) The priorities of the charges dated 27 June 2016 and 4 November 2015 referred to above have been altered by a Intercreditor Agreement dated 27 June 2016.

Schedule of notices of leases

1	02.02.2010 7 (part of)	43 Deansgate, Manchester (ground floor only)	22.01.2010 15 years from 22.1.2010	MAN155326
2	01.11.2010 7 (part of)	41 Deansgate, Manchester (ground floor)	24.09.2010 10 years from 24.9.2010	MAN167405
3	12.05.2011 4 (part of) and 5 (part of)	10/12 St Mary's Gate (ground floor) and (ground and first floor)	06.04.2011 10 years from 6.4.2011	MAN175709
4	27.09.2011 4 (part of)	8 St Mary's Gate (ground and first/mezzanine floors)	13.09.2011 15 years from 5.9.2011	MAN181718
5	10.05.2013 edged and numbered 8 in blue (part of)	47 Deansgate (ground floor)	18.04.2013 15 years from and including 18.04.2013	MAN208678
6	23.04.2014 edged and numbered 7 in blue (part of)	7th floor, Speakers House, 39 Deansgate	26.03.2014 from 24/3/2014 until 5/4/2021	MAN225620
7	19.09.2014 Edged and numbered 6 in blue (part of)	49 Deansgate (ground and first floors)	04.09.2014 10 years from and including 29.9.2013	MAN233372
8	29.10.2014 Edged and numbered 7 in blue (part of) and 8 in blue (part of)	45 Deansgate (Ground and first floors)	22.10.2014 10 years from 22/10/2014	MAN236289

End of register

APPENDIX 2

ENVIRONMENT AGENCY FLOOD MAPPING

Flood map for planning

Your reference	Location (easting/northing)	Created
Deansgate	**383768/398505**	**6 Sep 2019 19:36**

Your selected location is in flood zone 1, an area with a low probability of flooding.

This means:

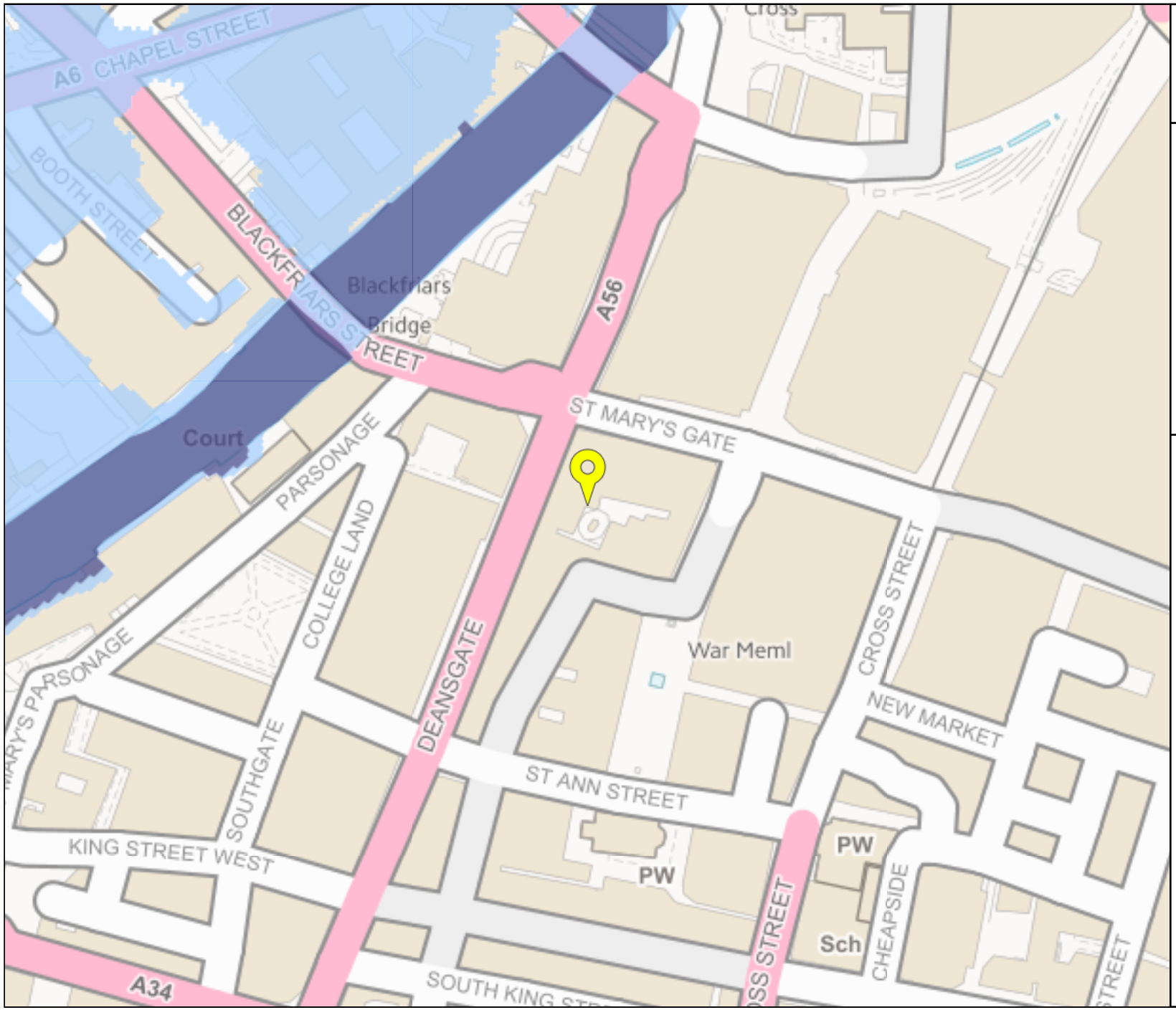
- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

The Open Government Licence sets out the terms and conditions for using government data.
https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/



Environment Agency

Flood map for planning

Your reference
Deansgate

Location (easting/northing)
383768/398505

Scale
1:2500

Created
6 Sep 2019 19:36

- Selected point
- Flood zone 3
- Flood zone 3: areas benefitting from flood defences
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Flood storage area

0 20 40 60m

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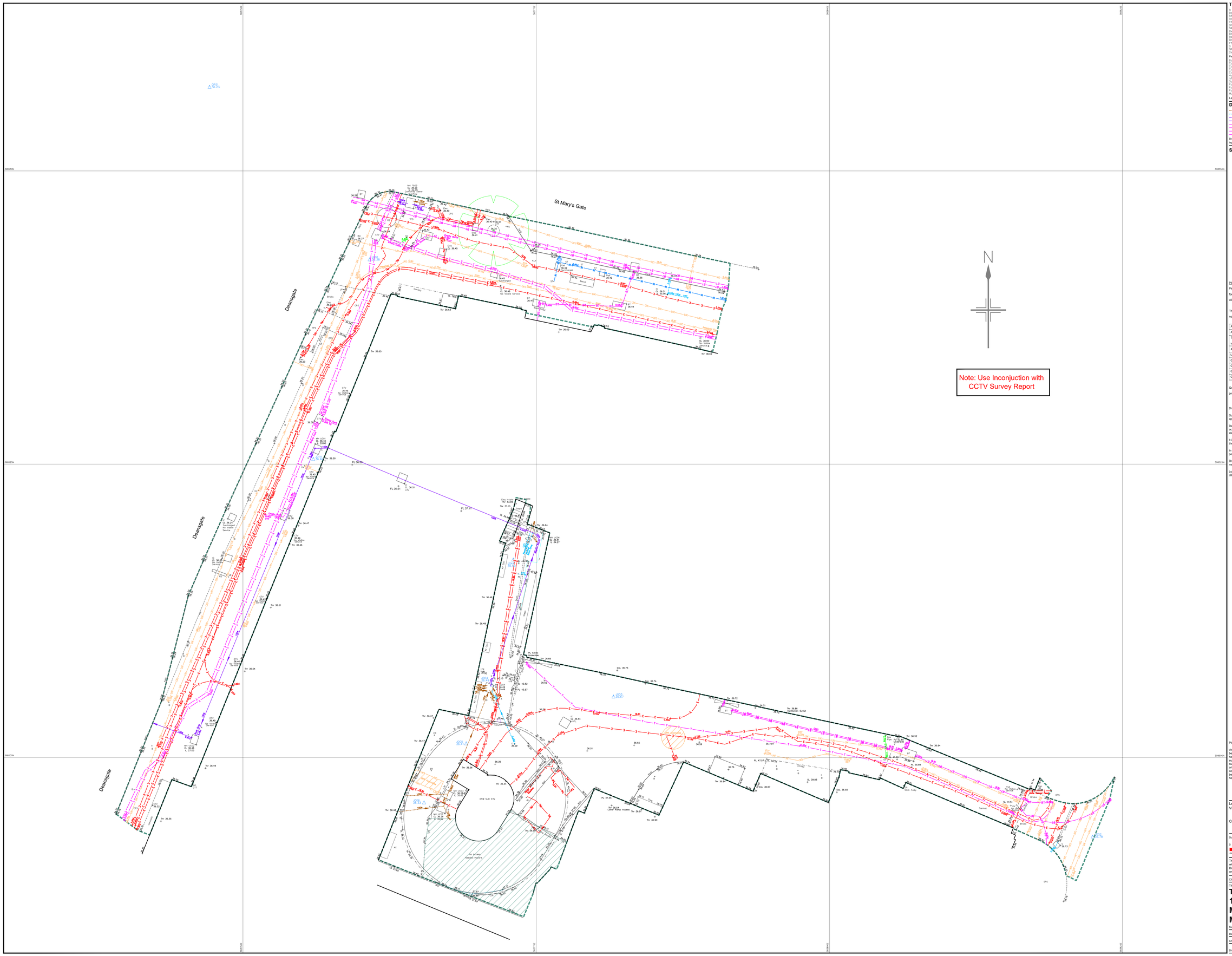
APPENDIX 3

EXISTING TOPOGRAPHICAL SURVEY



Note: Use Inconjuction with CCTV Survey Report

Topographical Survey Legend

B	Bollard	H	Height	SP	Soil pipe	Level prefix descriptions	
BS	Bus stop	Hyd	Hydrant	ST	Stop tap	AL	Arch level
BT	British telecom o.	IC	Inspection cover	Stay	Cable stay	BL	Bed level
CTV	Cable television	KO	Kerb outlet	TB	Telephone box	CL	Ceiling level
CTV	Cable television cover	KO	Kerb outlet	TCB	Telephone call box	EL	Eaves level
DP	Downpipe	LB	Letter box	TL	Traffic light	FL	Floor level
DR	Drain	LP	Lamp post	TP	Telegraph pole	IL	Invert level
Elec	Electrical o.	Utv	Utility marker	TPS	Tactile paving slabs	PL	Parapet level
ER	Earth rod	MP	Meter point	Vent	Vent pipe	RL	Roof/Ridge level
ER	Earth rod	NP	Name plate	WM	Water meter	SL	Soffit level
FP	Flagpole	P	Post	WO	Water outlet	Spr	Arch springing level
FT	Floodlight	PM	Parking meter	UTL	Unable to lift	TF	Top of fence level
G	Gully	RE	Rodding eye			TW	Top of wall level
GP	Guy post	RO	Road sign			WL	Water level
GV	Gas valve	rwp	Rain water pipe			WL	Water level

Fence annotation

B/W	Barbed wire
C/B	Closed boarded
C/I	Corrugated iron
C/L	Chain link
H/P	Horizontal panel
W/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	

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	EASTING	NORTHING	LEVEL
J001	383760.80	398542.47	36.38
J002	383822.45	398493.25	36.78
J003	383781.60	398505.19	36.67
J004	383771.21	398506.20	36.49
J005	383769.03	398501.20	36.41
GPS1	383747.15	398557.18	36.23
GPS2	383851.76	398532.00	37.23
J04A	383773.05	398516.86	36.50
J006	383765.44	398496.16	36.33
J01A	383756.00	398525.45	36.40

PAS128 Quality Levels

Please refer to PAS128:2014 Table 1 - "Quality level of survey outputs (normative)" for in anticipated accuracy of quality levels.

All utilities are located to PAS128 QL-B2 unless otherwise stated.

The following table identifies the PAS128 quality level based on the text notes shown on the drawing:

Annotation found on drawing	PAS128 Quality Level
Added from records	PAS128 QL-D
Trench scar, street furniture, visual note/reference to utility	PAS128 QL-C
Assumed route	PAS128 QL-B4
Unable to obtain depth	PAS128 QL-B3
QL-B1	PAS128 QL-B1
QL-B3P	PAS128 QL-B3P
QL-B2P	PAS128 QL-B2P
QL-B1P	PAS128 QL-B1P

Quality levels ending with a 'P' refer to a utility that has been located with post processed Ground Penetrating Radar (GPR).

Drawing caveats, please note:

Survey Systems Ltd carry out surveys in accordance with site procedures using approved detectors.

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.

It is SSL's procedure to use statutory undertakers plans prior to and during the survey as a guide for the survey team.

In accordance with British Telecom's national policy survey companies are not permitted to raise BT inspection chamber covers.

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

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

Please note:

Any discrepancy found between an Ordnance Survey benchmark and an OSGB15 computed orthometric height is likely to be due to bench mark subsidence or uplift and, assuming precise GPS survey has been carefully carried out, the orthometric height given by OSGB15 should be considered correct in preference to archive benchmark heights. OSGB15 converts GPS ellipsoid heights to orthometric heights above mean sea level.

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www.survsys.co.uk

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

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

Scale **1:100**

0 1 2 3 4 5 6 7 8 9
metres

The accuracy of this survey is commensurate with the drawing scale specified within the title block. Copyright in this drawing remains with Survey Systems Ltd. Do not scale from this drawing, work to figured dimensions. Check all dimensions on-site. In the event of any discrepancy, please refer query to Survey Systems Ltd.

Client CBRE

Title

Topographical & Utility Survey
12-14 St Mary's Gate
Manchester
M1 1PX

Surveyed	AT JDS	Drawn	GAT AG
Date	June 2019	Checked	AT AJG
CAD file name	19457-TOPO-UTIL	Revision No. / Sheet size	A0

Drawing No. **SSL:19457:100:1:1:TOPO-UTIL**

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APPENDIX 4

UNITED UTILITIES SEWER PLANS

How to contact us:

United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

Your Ref: 39 Deansgate
Our Ref: UUPS-ORD-121212
Date: 02/09/2019

Integra Consulting

14-32
Hewitt Street,
Manchester,
M15 4GB

FAO:

Dear Sirs

Location: Deansgate

I acknowledge with thanks your request dated 31/08/2019 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx .

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please contact us .

Yours Faithfully,

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

United Utilities Water Limited
Registered In England & Wales No. 2366678
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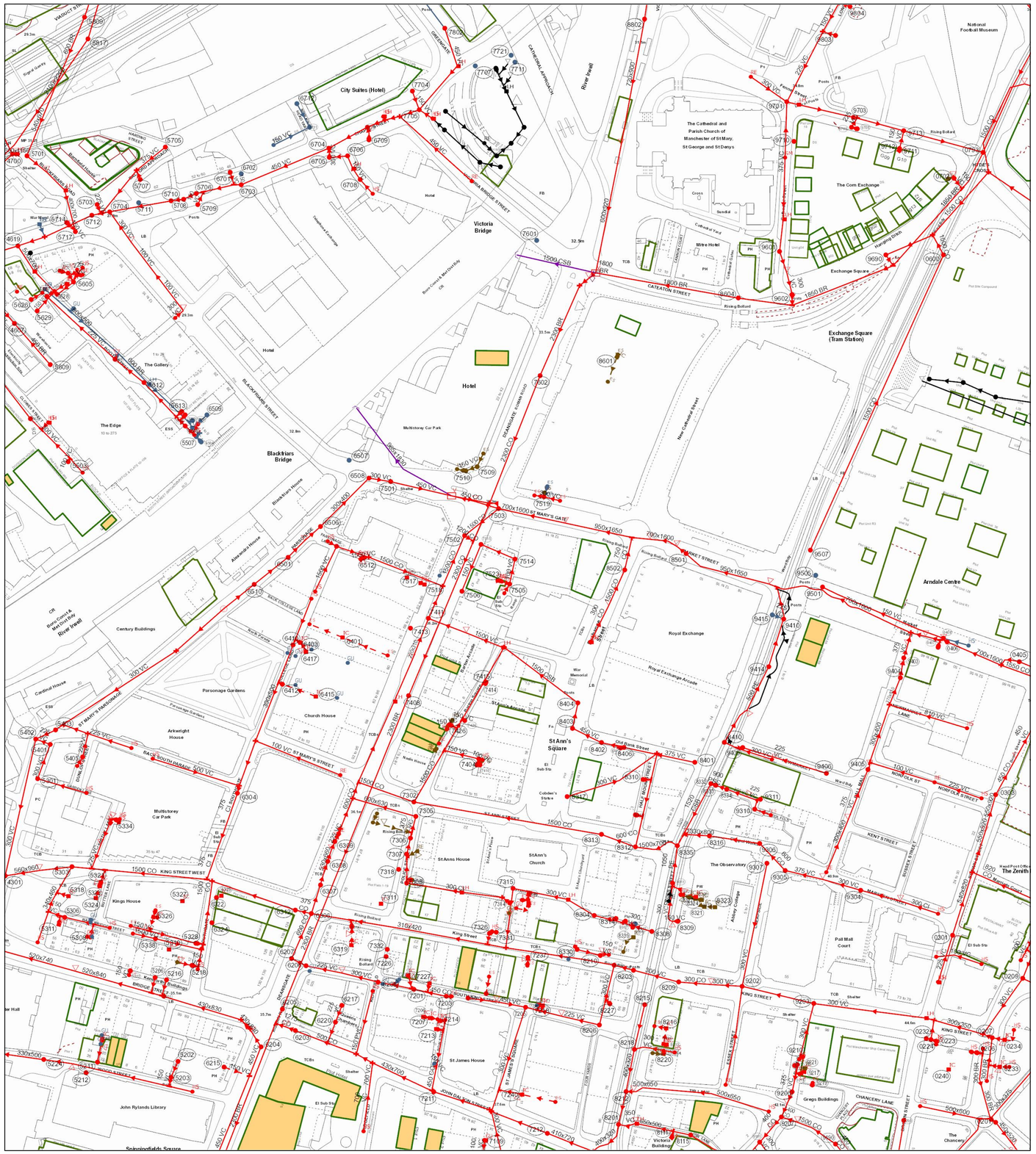
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP



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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Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7334		CO		150			VC	2.025999	
9203	41.57	CO	35.97	300			VC	40.93669	1 in 27
6306	35.83	CO	31.04	600			CO	16.76305	1 in 186
0407	40.62	CO	31.03	225			VC	4.123106	
8802	30.95	CO	22.78	720			BR	71.19691	1 in 4
6709	26.74	CO	23.8	150			VC	4	
9219		CO		150			VC	1.277161	
8330		CO		100			VC	13.17195	
9804	34.17	CO	31.1	150			VC	6.324555	
5705	29.27	CO	24.17	375			VC	20.61553	
5628		CO		500			BR	32.5925	
7704	26.7	CO	24.72	150			VC	11.04485	
6312	35.69	CO	30.65	1500			CO	48.70318	
9190	42.4	CO	37.69	1500			CO	24.35539	
7404		CO		150			VC	19.72096	
6203	35.7	CO	23.05	1275			CO	5.385165	
5202	35.26	CO	31.23	150			VC	9.848658	
5709	27.23	CO	24.28	150			VC	7.615773	
8309		CO		150			VC	3.095986	
7515		CO		150			VC	28.14859	
6206	35.66	CO	31.91	600			CO	8.944272	1 in 25
7203	36.24	CO	33.37	450			CO	18.43909	1 in 64
7510		FO		150			VC	4.836473	
8401	37.17	CO	28.79	375			VC	40.28788	1 in 204
5609	26.61	CO	24	450			BR	30.4795	
5402	33.55	CO	28.24	300			VC	77.87811	1 in 88
7411	36.15	CO	25.52	1500			CO	19.69772	
7302	36.54	CO	0	1500			CO	107.2179	
7424		CO		150			VC	1.63088	
8310		CO		150			VC	4.474856	
7326		CO		150			VC	6.118659	
6705	26.65	CO	22.54	300			VC	2.87207	
5328		CO		150			VC	4.231385	
8203	37.8	CO	32.62	400			VC	11.07758	1 in 58
7505		CO		100			VC	14.13708	
9601	35.16	CO	27.65	375			VC	12.64911	1 in 1
9410	38.23	CO	28.36	500			PE	18.14539	1 in 107
8334		CO		300			VC	6.37267	
7602		CO	0	2300			CO	76.32169	
5707	28.24	CO	0	375			VC	5.385165	
7305	36.55	CO	30.44	600			BR	36.40055	
9307	38.74	CO	35.62	300			VC	69.73816	1 in 61
9706	35.3	CO	0	150			VC	3.162278	
5222		CO		150			VC	2.498542	
4301	33.01	CO	27.17	525			CO	26.68333	1 in 167
8215	38.29	CO	35.26	400			VC	25.46346	1 in 31
5508	26.54	SW	24.32	150			VC	2.236068	1 in 1
0405	42.15	CO	28.53	700			BR	11.70457	
8312	36.88	CO	31.5	600			CO	20.24846	1 in 225
6703	26.85	CO	22.32	450			VC	25.58735	1 in 1279
9713		CO		375			VC	45.67192	
8315		CO		150			VC	4.180113	
6304	35.8	CO	31.34	375			CI	50.92151	
6207	35.66	CO	31.53	600			CO	27.313	1 in 67
8227		CO		150			VC	3.213574	
8332	37.17	CO	31.4	1520			CSB	39.20944	1 in 47
7410		CO		100			VC	3.514048	
8327		CO		150			VC	8.139123	
5809	28.93	CO	23.64	600			BR	41.23106	1 in 258
7302	36.54	CO	28.47	1500			CO	99.47964	
5612	27.09	CO	22.75	225			VC	20.61553	
9406	39.23	CO	37.53	225			VC	48.60643	
8304	37.03	CO	33.07	300			VC	48.08697	1 in 117
6712	26.97	SW	25.98	150			VC	14.76482	1 in 32
5206		CO		225			VC	8.828272	
6215		CO		150			VC	14.89882	1 in
5629		CO		330			BR	41.62415	
6208	35.97	CO	32.75	300			VC	20.61553	1 in 50
8313	36.83	CO	31.57	1500			CO	105.5462	
5201	35	CO	27.36	520			BR	50.96077	1 in 73
6306	35.83	CO	0	375			CO	9.219544	
9690	35.77	CO	0	600			CO	7.211102	
8311	37.12	CO	29.13	1050			PE	20.90259	1 in 348
7408	36.06	CO	22.1	2300			BR	187.5527	1 in 6252
4700	28.07	CO	24.6	600			BR	17.69181	1 in 885
7211	37.01	CO	30.72	430			BR	37.57659	
6706	26.64	CO	24.15	150			VC	10.01802	1 in 9
5701	28.18	CO	23.28	560			BR	14.21267	1 in 284
7802	26.6	CO	22.61	450			VC	54.34251	1 in 776
8317	36.69	CO	29.19	300			VC	56.17143	
8406		CO		150			VC	1.642787	
9305	39.21	CO	31.37	600			CO	20.51828	1 in 187
6204	35.52	CO	28.3	450			CO	9.433981	
0301	44.48	CO	40.58	540			BR	36.68787	
5628		CO		150			VC	7.196777	
5714	27.59	CO	0	150			CI	3.605551	
5505	26.61	CO	23.18	225			VC	7.071068	
5301	33.38	CO	32.3	300			VC	20.24846	1 in 32
7109		CO		100			VC	7.270655	
7426		CO		150			VC	4.539907	
8403	36.74	CO	28.36	450			VC	14.31782	1 in 143
8209	38.67	CO	33.53	300			VC	25.91794	1 in 28
9705	35.27	CO	32.7	225			VC	5.830952	
5817	28.96	CO	0	2100			BR	98.43329	
8402	36.66	CO	28.51	450			VC	17.68854	1 in 138
6410		CO	0	390			VC	57.17316	
5601		CO		225			VC	5.747467	
6501	35.35	CO	26.37	300			VC	12.72792	
5704	27.78	CO	22.15	450			VC	10.19804	1 in 204
5502	26.94	CO	22.94	300			VC	86.17817	1 in 66
8201	39	CO	33.06	400			VC	22.88452	1 in 28
5628		CO		150			VC	5.070491	
5507	26.56	SW	25.18	150			VC	2.828427	
6504	26.53	SW	26.18	150			VC	4.101243	1 in 4
7308	36.39	CO	30.99	375			VC	16	1 in 67
5203	34.88	CO	31.65	150			VC	5.055399	
5708	27.27	CO	22.27	450			VC	7.071068	1 in 236
0201	44.68	CO	41.15	450			BR	16.40122	1 in 61
7333		FO		150			VC	0.585281	
8210		CO		100			VC	1.413869	
0209	46.31	CO	40.06	300			VC	38.01316	
7705	26.85	CO	22.52	450			VC	11.50125	
6205	35.55	CO	22.05	2300			BR	137.6375	
6506	34.94	CO	29.93	300			VC	38.18377	1 in 11
5508	34.1	CO	24.8	300			VC	12.16553	1 in 243
9415		SW	35.66	225			VC	6.624982	1 in 35
9414	38.02	CO	32.15	500			PE	27.83223	1 in 58
7503		CO	0	956			BR	13.60147	
7514		CO		150			VC	20.5863	
8218	38.49	CO	34.43	400			CO	23.89805	1 in 25
5509	26.55	CO	24.49	150			VC	5.830952	
9703	35.29	CO	30.94	375			VC	28.95878	
8401	37.17	CO	28.79	375			VC	12.86285	1 in 49
7204	36.37	CO	33.41	450			VC	16.12452	
8604		CO	0	1800			BR	80.34492	
6220		CO		225			VC	12.30985	
5303	33.64	CO	28.4	1500			CO	18.11077	1 in 44
6307	35.94	CO	30.93	600			CO	7.28011	1 in 56
7502	36.25	CO	25.01	1200			CO	5.830952	
0303	43.96	CO	39.49	450			CO	22.82542	
5605	27.25	CO	23.5	300			VC	11.40175	
6509		SW	0	939			CO	10.62262	
8333		CO	31.79	900			PSC	2.935409	1 in 18
8115		CO		650			BR	31.19168	
9310		CO		225			VC	11.31291	
5708	26.74	CO	25.2	150			VC	14.82688	1 in 17
0207	45.7	CO	42.36	300			BR	5.385165	
7501	34.54	CO	24.73	450			VC	34.78601	
5510	26.72	CO	25.08	150			VC	4.24264	
7306	36.52	CO	30.62	375			VC	12.36932	1 in 206
9306	38.22	CO	31.24	600			CO	28.3249	1 in 189
0703		CO	0	1850			BR	171.3522	
7307	36.46	CO	30.73	375			VC	9.219544	1 in 49
5706	27.2	CO	22.28	450			VC	7.615773	
9202	39.78	CO	34.41	300			VC	17.35456	1 in 46
8206	37.53	CO	33.45	225			VC	21.50517	1 in 98
7212	38.32	CO	36.28	410			BR	33.24154	
7503		CO	0	1500			CO	24.20744	
9701	34.81	CO	28.63	375			VC	37.92708	
9191	41.7	CO	37.12	450			CO	21.75631	1 in 49
0408	40.37	CO	37.37	150			VC	73.01138	1 in 187
8335	36.91	CO	28.82	1500			BR	25.03875	
8316	37.12	CO		1330			CO	12.53283	
7503		CO	0	700			BR	6.954919	
9403	40.06	CO	29.5	375			VC	7.28011	
5629		CO		150			VC	14.39183	
6217		CO		225			VC	9.95782	
5308		CO		225			VC	7.415942	
9405	40.4	CO	35.98	375			VC	2.236068	
7314	36.91	CO	32.86	225			VC	5	
9803	34.6	CO	31.44	150			VC	7.28011	
0406	40.87	CO	28.12	1600			BR	2.236068	
6308	35.97	CO	30.65	530			CO	6.324555	1 in 79
8212	38.79	CO	33.48	400			VC	18.7454	1 in 45
6319		CO		225			VC	3.759728	
7315	36.56	CO	32.64	300			BR	16.12452	
8308	37.5	CO	33.56	300			VC	16.76305	1 in 70
5608	28.32	CO	24.31	225			VC	2.236068	
7710	27.35	CO	22.22	450			VC	34.52535	1 in 691
9206	41.98	CO	38.04	375			VC	7.615773	1 in 45
5218		CO		150			VC	3.609745	
6704	26.69	CO	22.4	450			VC	52.73185	1 in 879
8206	37.53	CO	33.68	300			VC	34.18039	1 in 35
7519		CO		300			VC	5.322454	
9304	41.64	CO	36.67	300			VC	21.84033	1 in 8
9602		CO	0	900			BR	3	
5216		CO		225			VC	9.2409	
5334		CO		225			VC	2.792821	
9409		CO		225			VC	2.734224	
5712	27.8	CO	22.18	450			VC	28.63564	
5608	28.32	CO		225			VC	51.66236	
9507		CO	0	1500			CO	179.9222	
6701	26.97	CO	23.61	150			VC	7.28011	
8404	36.74	CO	28.24	1500			CSB	51.40039	
5306	33.95	CO	29.71	150			VC	9.486833	
4619		CO		500			BR	24.04163	
5712		CO		150			VC	10.17526	
8208	37.6	CO	32.43	300			VC	60.91538	
7509		FO		150			VC	6.819644	
5403	33.63	CO	28.42	300			VC	12.08305	1 in 81
8501	37.04	CO	26.34	950			BR	6.403124	
5703	27.77	CO	26.9	225			VC	5.385165	
5405	34.35	CO	0	225			VC	13.34166	
8502		CO	0	750			CO	18.43909	
9290	44.08	CO	39.7	300			VC	36.49657	1 in 33
5401	33.67	CO	31.14	225			VC	8.544003	1 in 95
9207	41.95	CO	37.49	400			CO	9.219544	1 in 54
0600	36.38	CO	27.93	1500			CO	12.52996	
7201	36.09	CO	33.06	300			CO	20.39986	1 in 68
8410	37.34	CO	33.84	500			PE	22.32272	1 in 17
6309	36.01	CO	30.45	570			CO	2.236068	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5503	26.74	CO	25.26	100			VC	2.236068	
9404	40.13	CO	33	340			BR	6.082763	1 in 7
6710	26.75	CO	22.42	450			VC	24.32982	
5613	26.76	CO	24.99	225			VC	4.24264	
7205	36.7	CO	32.99	300			VC	61.03383	

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

All point assets follow the standard colour convention:
red - combined, blue - surface water, brown - foul, purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

- FO Foul
- SW Surface Water
- CO Combined
- OV Overflow

SEWER SHAPE

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

SEWER MATERIAL

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

Address or Site Reference:

Deansgate,

Scale: 1:1250 **Date:** 02/09/2019

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Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly

APPENDIX 5

EXISTING DRAINAGE SURVEY DATA

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/ Main sections

Project name :	Project number :	Contact :	Date :
St_Marys_Gate_Manchester_Survey	**19457**	**Simon Scragg**	**06/06/2019**

Nr.	US MH	DS MH	Date	Road	Tape No.	Material	m	(m)
8	UC10	UC06	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	5.69	5.69
9	UC11	UC06	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	1.89	1.89
10	UC12	UC04	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	3.95	3.95
11	UC13	UC04	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	0.02	0.02
12	UC14	UC04	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	7.02	7.02
13	UC15	UC04	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	5.89	5.89
14	UC16	UC04	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	1.56	1.56
15	UC18	UC17	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	3.62	3.62
16	UC17	UC03	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	0.63	0.63
17	UC19	UC03	06/06/2019	R/O 41/43 DEANSGATE		Vitrified clay	3.24	3.24

Pipe size: CIRCULAR 100 = 33.51 m (33.51 m)

Nr.	US MH	DS MH	Date	Road	Tape No.	Material	m	(m)
1	UC01	UC02	06/06/2019	O/S 43/41 DeansGate		Cast iron	22.74	22.74
2	UC03	UC01	06/06/2019	O/S 43/41 DeansGate		Cast iron	5.88	5.88
3	UC06	UC05	06/06/2019	O/S 43/41 DeansGate		Cast iron	10.78	10.78
4	UC02	UC07	06/06/2019	O/S 45/47 DeansGate		Vitrified clay	11.90	11.90
5	UC08	UC06	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	0.93	0.93
6	UC09	UC06	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	13.00	13.00
7	UC03	UC09	06/06/2019	R/O 41/43 DEANSGATE		Cast iron	8.96	8.96

Pipe size: CIRCULAR 150 = 74.19 m (74.19 m)

All sections = 107.7 m (107.7 m)

SURVEY systems

IWJS

Project-information

Project name :	Project Number :	Contact :	Date :
St_Marys_Gate_Manchester_Survey	**19457**	**Simon Scragg**	**06/06/2019**

Client:	**CBRE Ltd**
Contact Name:	**Edward Warren**
Department:	**Director**
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Town:	**Square | Manchester | M2 3DE**
Telephone:	**0161 2335446**
Mobile:	**07795 121228**
E-mail:	**ed.warren@cbre.com**

Site:	**St Marys Gate, Manchester**
Contact Name:	**Edward Warren**
Department:	**Director**
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Mobile:	**07795 121228**
E-mail:	**ed.warren@cbre.com**

Contractor	**SSL / IWJS**
Contact Name:	**Simon Scragg / Jake Boydell**
Telephone:	**01625 533444**
E-mail:	**simon.s@survsys.co.uk**

Defect Grade Description

Project Name :	Project number :	Contact :	Date :
St_Marys_Gate_Manchester_Survey	**19457**	**Simon Scragg**	**06/06/2019**

1:

Brick: No Structural Defects
Pipe: No Structural Defects

Acceptable Structural Condition

2:

Brick: Minor cracking, Surface mortar loss, Spalling slight, wear slight
Pipe: Circumfrential crack, Moderate joint defects, Spalling slight, Wear slight

Minor collapse risk in short term but potential for further deterioration

3:

Brick: Total mortorloss without other defects, single brick displaced, Deformation up to 5%, Spalling medium, Wear medium
Pipe: Fractures with deformation up tp 5%, Longitudinal cracking or mulitlpe cracking, Minor loss of level, More severe joint

! Collapse unlikely in near future but future deterioration likely !

4:

Brick: Total mortorloss with deformation greater than 10%, Deformation up to 10% and fractured, Displaced/hanging brickwork, Small number of missing bricks
Pipe: Broken, Deformation up to 10% and broken,, Fractured with deformation 5 - 10%, Multipl

!! Collapse likely in foreseeable future !!

5:

Brick: Already Collapsed, Missing invert, Deformation over 10% and fractured, Displaced/hanging brickwork and deformation over 10%, Extensive missing bricks
Pipe: Already collapsed, Deformation over 10% and broken, Extensive areas of fabric missin

!!! Collapsed or collapse imminent !!!

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**1**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC01**
Road :	**O/S 43/41 DeansGate**	Catchment:		U/S Depth :	
Location	**A footway beside a road**	Pipe Shape :	**Circular**	D/S MH :	**UC02**
Inspection	**UC01 (D/S) UC02**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**22.74 m**	Lining :	

Comment :

1:196	Position	Observation	Grade
UC01	0.00	Start node type, manhole, reference number : UC01	0
	0.00	Water level, 05% of the vertical dimension	0
UC02	22.74	Finish node type, manhole reference number: UC02 Remarks: drop shaft into UC02	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**2**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC03**
Road :	**O/S 43/41 DeansGate**	Catchment:		U/S Depth :	
Location	**A footway beside a road**	Pipe Shape :	**Circular**	D/S MH :	**UC01**
Inspection	**UC01 (U/S) UC03**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**5.88 m**	Lining :	

Comment :

1:56	Position	Observation	Grade
UC01	0.00	Start node type, manhole, reference number : UC01	0
	0.00	Water level, 05% of the vertical dimension	0
UC03	5.88	Finish node type, manhole reference number: UC03 Remarks: UTR UC05 DUE TO BEING ON TILED FLOORING WITHIN BUILDING	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**3**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC06**
Road :	**O/S 43/41 DeansGate**	Catchment:		U/S Depth :	
Location	**A footway beside a road**	Pipe Shape :	**Circular**	D/S MH :	**UC05**
Inspection	**UC05 (U/S) UC06**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**10.78 m**	Lining :	

Comment :

1:98	Position	Observation	Grade
UC05	0.00	Start node type, manhole, reference number : UC05	0
	0.00	Water level, 05% of the vertical dimension	0
UC06	10.78	Finish node type, manhole reference number: UC06	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**4**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC02**
Road :	**O/S 45/47 DeansGate**	Catchment:		U/S Depth :	
Location	**A footway beside a road**	Pipe Shape :	**Circular**	D/S MH :	**UC07**
Inspection	**UC02 (D/S) UC07**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Vitrified clay**
Total length :	**11.90 m**	Lining :	

Comment :

1:98	Position	Observation	Grade
UC02	0.00	Start node type, manhole, reference number : UC02	0
	0.00	Water level, 05% of the vertical dimension	0
	5.03	Line deviates down	0
UC07	11.90	Finish node type, other special chamber reference number: UC07 Remarks: JUNCTION INTO MAIN SEWRE ON DEANSGATE	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

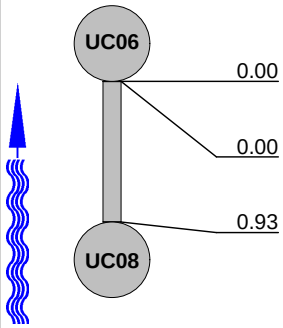
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**5**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC08**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC06**
Inspection	**UC06 (U/S) UC08**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**0.93 m**	Lining :	

Comment :

1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC06	0
	0.00	Water level, 05% of the vertical dimension	0
	0.93	Finish node type, other special chamber reference number: UC08 Remarks: SVP	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

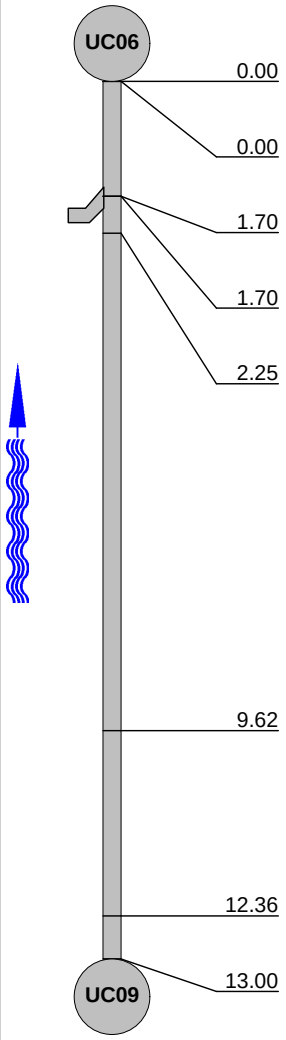
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**6**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC09**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC06**
Inspection	**UC06 (U/S) UC09**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**13.00 m**	Lining :	

Comment :



1:112 Position	Observation	Grade
0.00	Start node type, manhole, reference number : UC06	0
0.00	Water level, 05% of the vertical dimension	0
1.70	Junction, at 1 o'clock, diameter 100mm	0
1.70	Material changes, vitrified clay	0
2.25	Material changes, cast iron	0
9.62	Line deviates right	0
12.36	Water level, 15% of the vertical dimension	0
13.00	Finish node type, manhole reference number: UC09	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

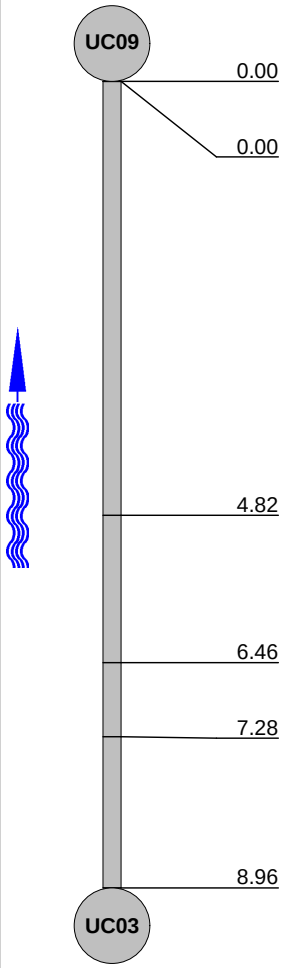
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**7**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC03**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC09**
Inspection	**UC09 (U/S) UC03**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**150 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**8.96 m**	Lining :	

Comment :



1:84	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC09	0
	0.00	Water level, 05% of the vertical dimension	0
	4.82	Water level, 10% of the vertical dimension	0
	6.46	Dimension changes, 100mm high	0
	7.28	Water level, 05% of the vertical dimension	0
	8.96	Finish node type, manhole reference number: UC03	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**8**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC10**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC06**
Inspection	**UC06 (U/S) UC10**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**5.69 m**	Lining :	

Comment :

1:56	Position	Observation	Grade
UC06	0.00	Start node type, manhole, reference number : UC06	0
	0.00	Water level, 05% of the vertical dimension	0
UC10	5.69	Finish node type, other special chamber reference number: UC10 Remarks: ACO DRAIN	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

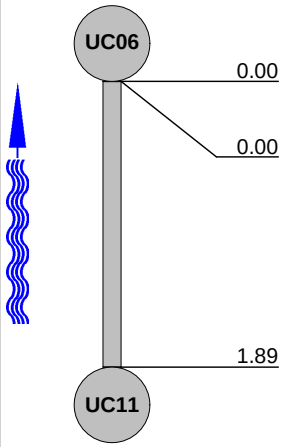
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**9**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC11**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC06**
Inspection	**UC06 (U/S) UC11**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**1.89 m**	Lining :	

Comment :



1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC06	0
	0.00	Water level, 05% of the vertical dimension	0
	1.89	Finish node type, other special chamber reference number: UC11 Remarks: ACO DRAIN	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

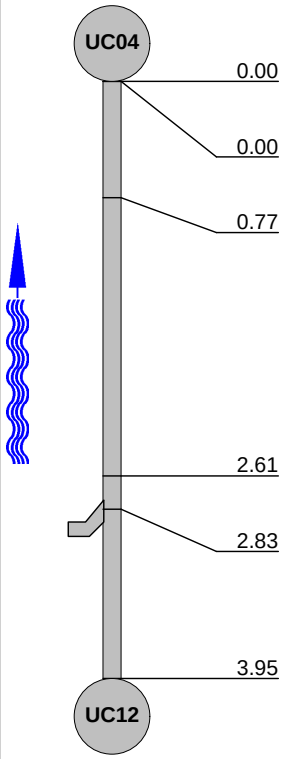
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**10**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC12**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC04**
Inspection	**UC04 (U/S) UC12**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**3.95 m**	Lining :	

Comment :



1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC04	0
	0.00	Water level, 05% of the vertical dimension	0
	0.77	Line deviates right	0
	2.61	Material changes, vitrified clay	0
	2.83	Junction, at 3 o'clock, diameter 100mm Remarks: JUNCTION SERVES RAINWATER GULLY	0
	3.95	Finish node type, other special chamber reference number: UC12 Remarks: HOS	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

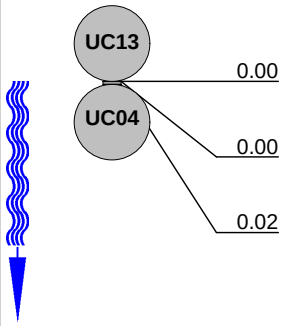
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**11**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC13**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC04**
Inspection		Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**0.02 m**	Lining :	

Comment :

1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC13	0
	0.00	Water level, 05% of the vertical dimension	0
	0.02	Finish node type, other special chamber reference number: UC04 Remarks: LINE NOT IN USE	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

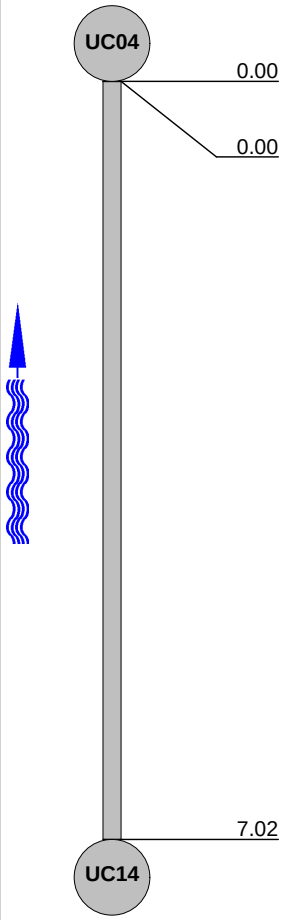
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**12**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC14**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC04**
Inspection	**UC04 (U/S) UC14**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**7.02 m**	Lining :	

Comment :



1:70	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC04	0
	0.00	Water level, 05% of the vertical dimension	0
	7.02	Finish node type, other special chamber reference number: UC14 Remarks: LINE NOT IN USE	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

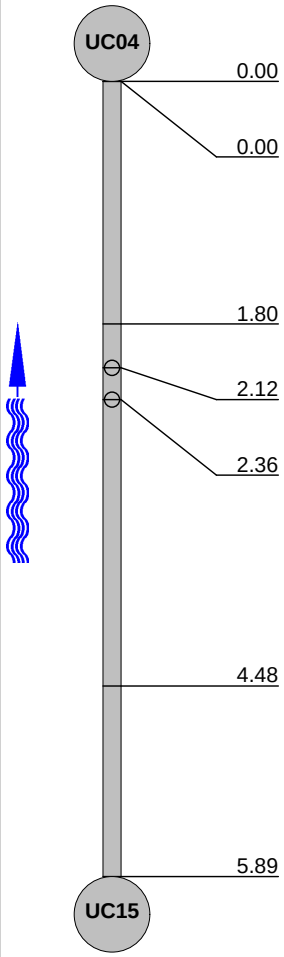
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**13**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC15**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC04**
Inspection	**UC04 (U/S) UC15**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**5.89 m**	Lining :	

Comment :



1:56	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC04	0
	0.00	Water level, 05% of the vertical dimension	0
	1.80	Material changes, vitrified clay	0
	2.12	Junction, at 12 o'clock, diameter 100mm	0
	2.36	Junction, at 12 o'clock, diameter 100mm	0
	4.48	Line deviates up	0
	5.89	Finish node type, inspection chamber reference number: UC15 Remarks: HOS UTL UC15 DUE TO BEING LOACTED WITH BUILDING	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**14**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC16**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC04**
Inspection	**UC04 (U/S) UC16**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**1.56 m**	Lining :	

Comment :

1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC04	0
	0.00	Water level, 05% of the vertical dimension	0
	1.32	Line deviates up	0
	1.56	Survey abandoned Remarks: SA DUE TO LINE UP, LINE LOOKS LIIKE IT SERVES SW STACK	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**15**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC18**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC17**
Inspection	**UC17 (U/S) UC18**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**3.62 m**	Lining :	

Comment :

1:50	Position	Observation	Grade
UC17	0.00	Start node type, manhole, reference number : UC17	0
	0.00	Water level, 05% of the vertical dimension	0
UC18	3.62	Finish node type, other special chamber reference number: UC18 Remarks: UC17 IS HOS AND TAKES NOTHING FURTHER U/S FR	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

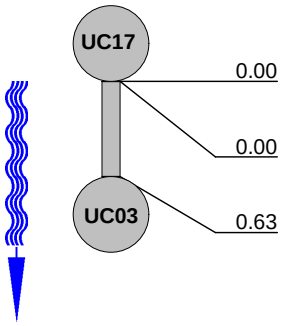
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**16**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC17**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC03**
Inspection	**UC17 (D/S) UC03**	Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Cast iron**
Total length :	**0.63 m**	Lining :	

Comment :

1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC17	0
	0.00	Water level, 05% of the vertical dimension	0
	0.63	Finish node type, manhole reference number: UC03	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

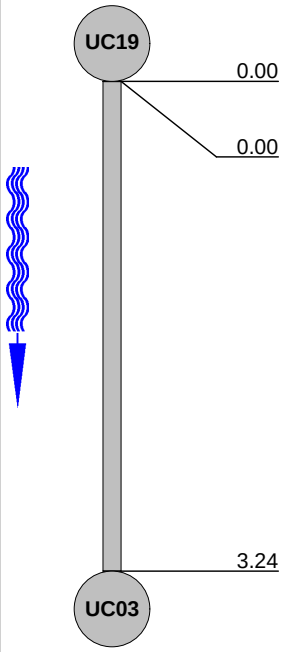
Inspection report

Date :	Job number :	Section Type :	Operator :	Section number :	PLR SUFFIX:
06/06/2019		**unknown**	**Aden H**	**17**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Type of Drain :
no rain or snow	**FL65 WZD**	**PUSH ROD**		**no**	**Gravity drain/sewer**

Place :	**Manchester**	Location details:		U/S MH :	**UC19**
Road :	**R/O 41/43 DEANSGATE**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Pipe Shape :	**Circular**	D/S MH :	**UC03**
Inspection		Pipe Length		D/S Depth :	

Use:	**Combined**	Pipe Width :	
Year laid :		Pipe Diameter :	**100 mm**
Purpose :	**Sample survey to determine asset condition**	Pipe material :	**Vitrified clay**
Total length :	**3.24 m**	Lining :	

Comment :



1:50	Position	Observation	Grade
	0.00	Start node type, manhole, reference number : UC19	0
	0.00	Water level, 05% of the vertical dimension	0
	3.24	Finish node type, other special chamber reference number: UC03 Remarks: SVP	0

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**	**1**	**0**	**0**	**0**	**0**	**1**

SURVEY systems

Project No.	19457
Survey Date.	04/06/2019
Surveyor.	A.HALLIWELL

IWJS

Asset Survey Card

Asset ID: SJ83987503 Asset Type : MH (eg: MH, CP, GY) Function: C Cover Level:

Location: St.Mary's Gate junction of Deansgate Footpath

Town: MANCHESTER

COVER DETAILS

[ ] Square [x] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 700 x 600 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	3.34		C	100	x		VC			-3.340
B	13.58		A	900	x	1700	B			-13.580
C					x					0.000
D					x					0.000
E					x					0.000
F					x					0.000
G					x					0.000
X	13.94		C	1500	x		CO			-13.940
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

640 x 640 Size (mm) 0.35 Depth (m) 2 No. of Reg Courses Soffit

Chamber

3200 x 1800 Size (mm) YES Side Entry N OX / H2S / METH Toxic atmosphere N Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [x] Brick [ ] Bolted segments [ ] GRP [ ] Reducing Slab

1 Step Irons [x] Ladder 1 No. of Landings 200 Depth of Flow (mm) 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

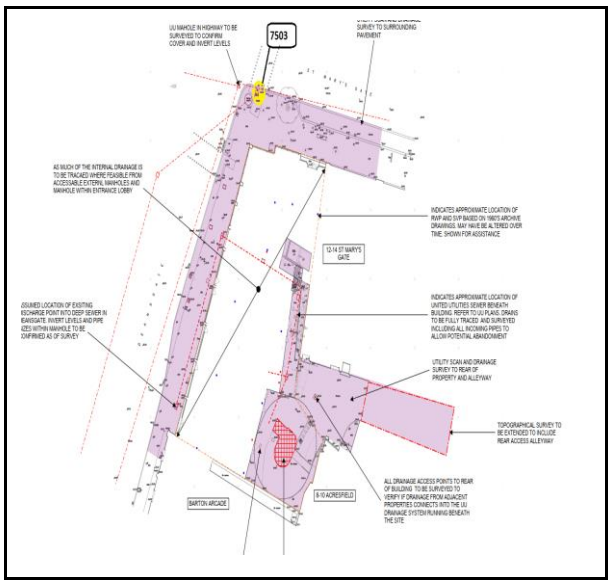
CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[x]	[x]	[x]	[x]	[x]
Needs Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

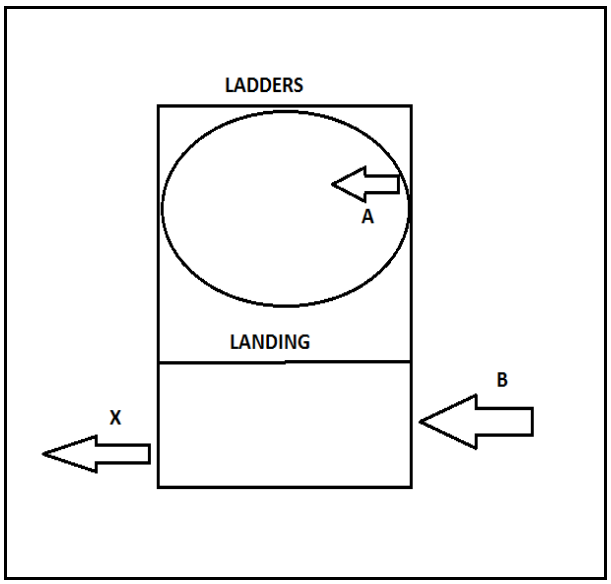
Remark

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU	: Public	PR	: Private	WC	: Culverted Watercourse } Applies to main outlet
	24	: Section 24	HD	: Highway Drain		
FUNCTION	F	: Foul	C	: Combined	S	: Surface Water } Applies to main outlet
MANHOLE TYPE	IF	: Infall	MH	: Manhole	CP	: Catchpit
	LH	: Lamphole	RE	: Rodding Eye	SO	: Storm Overflow
	GU	: Gully	OF	: Outfall	SA	: Soakaway
COVER DUTY	L	: Light Duty	M	: Medium Duty	H	: Heavy Duty
SHAPE	C	: Circular	E	: Egg	R	: Rectangular
	S	: Square	T	: Trapezoidal	A	: Arched
	B	: Barrel	H	: Horseshoe (Inverted U)	U	: U-shaped with flat top
	X	: Other (state in words)				
PIPE (OR LINING) MATERIAL	AK	: Alkathene	AC	: Asbestos Cement	BR	: Brick
	CI	: Cast Iron	SI	: Spun (Grey) Iron	CO	: Concrete
	CSB	: Concrete Segments (Bolted)	CSU	: Concrete Segments (Unbolted)	CC	: Concrete Box Culvert
	DI	: Ductile Iron	GRC	: Glass Reinforced Concrete	GRP	: Glass Reinforced Plastic
	PSC	: Plastic/Steel Composite	PVC	: Polyvinyl Chloride	PE	: Polyethylene
	RPM	: Reinforced Plastic Matrix	ST	: Steel	VC	: Vitrified Clay
	PP	: Polypropylene	PF	: Pitch Fibre	MAC	: Masonry, Coursed
	MAR	: Masonry, Randon Courses	XXX	: Other (State in remarks)		
LINING	BL	: Bitumen	RL	: Resin	IS	: Insituform
	CL	: Cement	PI	: Plastic		

SURVEY systems

Project No.	19457
Survey Date.	04/06/2019
Surveyor.	A.HALLIWELL

IWJS

Asset Survey Card

Asset ID: UC01 | Asset Type : MH (eg: MH, CP, GY) | Function: C | Cover Level:

Location: F/O 41-43 DEANSGATE

Town: MANCHESTER

COVER DETAILS

[ ] Square [x] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 750 x 600 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	2.66		C	150	x		CI			-2.660
B					x					0.000
C					x					0.000
D					x					0.000
E					x					0.000
F					x					0.000
G					x					0.000
X	2.7		C	150	x		CI			-2.700
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

600 x 600 Size (mm) | 0.31 Depth (m) | 2 No. of Reg Courses | Soffit

Chamber

930 x 920 Size (mm) | Side Entry | N OX / H2S / METH Toxic atmosphere | N Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [x] Brick [ ] Bolted segments [ ] GRP [ ] Reducing Slab

4 Step Irons [ ] Ladder [ ] No. of Landings | 15 Depth of Flow (mm) | 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

CONDITION INFORMATION (Specify in Remark)

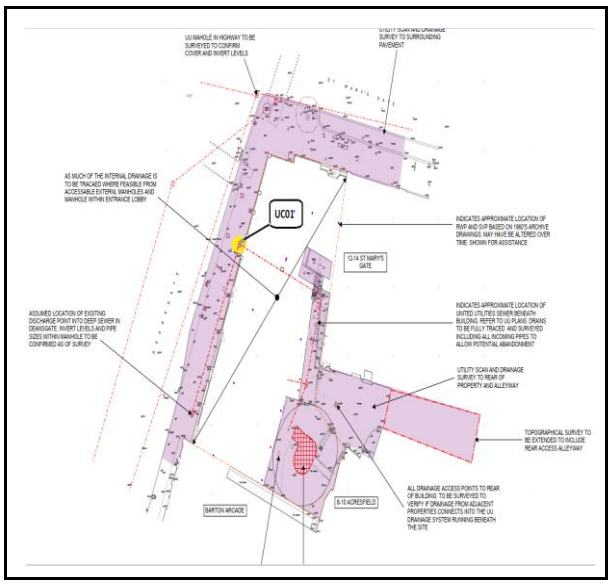
	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[x]	[x]	[x]	[ ]	[x]
Needs Attention	[ ]	[ ]	[ ]	[ ]	[x]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Remark

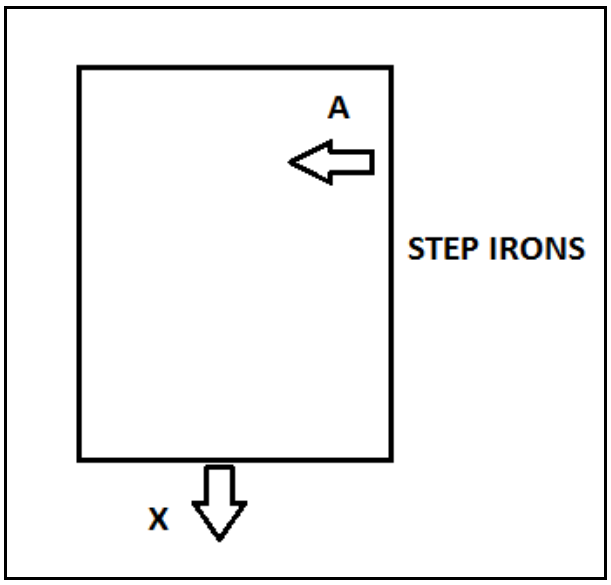
RECOMMEND TO REMOVE DEBRIS FROM BENCHING

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU : Public		PR : Private		WC : Culverted Watercourse	} Applies to main outlet
	24 : Section 24		HD : Highway Drain			
FUNCTION	F : Foul		C : Combined		S : Surface Water	} Applies to main outlet
MANHOLE TYPE	IF : Infall		MH : Manhole		CP : Catchpit	
	LH : Lamphole		RE : Rodding Eye		SO : Storm Overflow	
	GU : Gully		OF : Outfall		SA : Soakaway	
COVER DUTY	L : Light Duty		M : Medium Duty		H : Heavy Duty	
SHAPE	C : Circular		E : Egg		R : Rectangular	
	S : Square		T : Trapezoidal		A : Arched	
	B : Barrel		H : Horseshoe (Inverted U)		U : U-shaped with flat top	
	X : Other (state in words)					
PIPE (OR LINING) MATERIAL	AK : Alkathene		AC : Asbestos Cement		BR : Brick	
	CI : Cast Iron		SI : Spun (Grey) Iron		CO : Concrete	
	CSB : Concrete Segments (Bolted)		CSU : Concrete Segments (Unbolted)		CC : Concrete Box Culvert	
	DI : Ductile Iron		GRC : Glass Reinforced Concrete		GRP : Glass Reinforced Plastic	
	PSC : Plastic/Steel Composite		PVC : Polyvinyl Chloride		PE : Polyethylene	
	RPM : Reinforced Plastic Matrix		ST : Steel		VC : Vitrified Clay	
	PP : Polypropylene		PF : Pitch Fibre		MAC : Masonry, Coursed	
	MAR : Masonry, Randon Courses		XXX : Other (State in remarks)			
LINING	BL : Bitumen		RL : Resin		IS : Insituform	
	CL : Cement		PI : Plastic			

SURVEY systems

IWJS

Project No.	19457
Survey Date.	04/06/2019
Surveyor.	A.HALLIWELL

Asset Survey Card

Asset ID: UC02 | Asset Type : MH (eg: MH, CP, GY) | Function: C | Cover Level:

Location: F/O 45-47 DEANSGATE

Town: MANCHESTER

COVER DETAILS

[ ] Square [x] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 700 x 530 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	3.45		C	150	x		CI			-3.450
B					x					0.000
C					x					0.000
D					x					0.000
E					x					0.000
F					x					0.000
G					x					0.000
X	9.41		C	150	x		VC			-9.410
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

600 x 600 Size (mm) | 0.45 Depth (m) | No. of Reg Courses | CONCRETE Soffit

Chamber

1520 x 1520 Size (mm) | Side Entry | N OX / H2S / METH Toxic atmosphere | N Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [ ] Brick [x] Bolted segments [ ] GRP [ ] Reducing Slab

28 Step Irons [ ] Ladder [ ] No. of Landings | 15 Depth of Flow (mm) | 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

CONDITION INFORMATION (Specify in Remark)

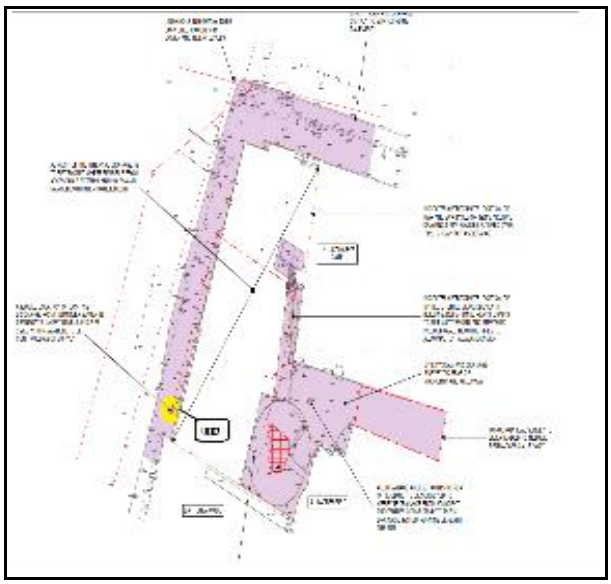
	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[x]	[x]	[ ]	[x]	[x]
Needs Attention	[ ]	[ ]	[ ]	[x]	[ ]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Remark

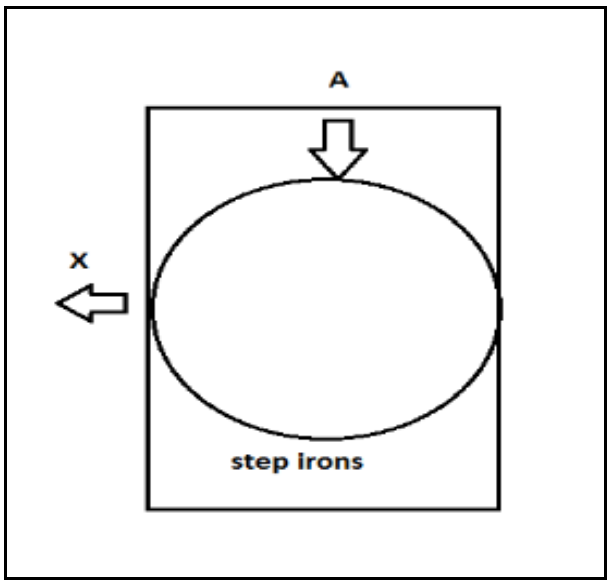
RECOMMEND TO REMOVE LADDERS FROM WITHIN MH CHAMBER

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU	: Public	PR	: Private	WC	: Culverted Watercourse } Applies to main outlet
	24	: Section 24	HD	: Highway Drain		
FUNCTION	F	: Foul	C	: Combined	S	: Surface Water } Applies to main outlet
MANHOLE TYPE	IF	: Infall	MH	: Manhole	CP	: Catchpit
	LH	: Lamphole	RE	: Rodding Eye	SO	: Storm Overflow
	GU	: Gully	OF	: Outfall	SA	: Soakaway
COVER DUTY	L	: Light Duty	M	: Medium Duty	H	: Heavy Duty
SHAPE	C	: Circular	E	: Egg	R	: Rectangular
	S	: Square	T	: Trapezoidal	A	: Arched
	B	: Barrel	H	: Horseshoe (Inverted U)	U	: U-shaped with flat top
	X	: Other (state in words)				
PIPE (OR LINING) MATERIAL	AK	: Alkathene	AC	: Asbestos Cement	BR	: Brick
	CI	: Cast Iron	SI	: Spun (Grey) Iron	CO	: Concrete
	CSB	: Concrete Segments (Bolted)	CSU	: Concrete Segments (Unbolted)	CC	: Concrete Box Culvert
	DI	: Ductile Iron	GRC	: Glass Reinforced Concrete	GRP	: Glass Reinforced Plastic
	PSC	: Plastic/Steel Composite	PVC	: Polyvinyl Chloride	PE	: Polyethylene
	RPM	: Reinforced Plastic Matrix	ST	: Steel	VC	: Vitrified Clay
	PP	: Polypropylene	PF	: Pitch Fibre	MAC	: Masonry, Coursed
	MAR	: Masonry, Randon Courses	XXX	: Other (State in remarks)		
LINING	BL	: Bitumen	RL	: Resin	IS	: Insituform
	CL	: Cement	PI	: Plastic		

SURVEY systems

IWJS

Project No.	19457
Survey Date.	04/06/2019
Surveyor.	A.HALLIWELL

Asset Survey Card

Asset ID: UC03 | Asset Type : MH (eg: MH, CP, GY) | Function: | Cover Level:

Location: R/O 12-14 ST.Mary's Gate

Town: MANCHESTER

COVER DETAILS

[x] Square [ ] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 680 x 680 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	0.62		C	100	x		CI			-0.620
B	0.55		C	100	x		VC			-0.550
C					x					0.000
D					x					0.000
E					x					0.000
F					x					0.000

Outgoing Pipes

X	0.66		C	100	x		CI			-0.660
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

N/A x [ ] Size (mm) [ ] Depth (m) [ ] No. of Reg Courses [ ] Soffit

Chamber

810 x 650 Size (mm) [ ] Side Entry N OX / H2S / METH Toxic atmosphere N Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [x] Brick [ ] GRP [ ] Reducing Slab

[ ] Step Irons [ ] Ladder [ ] No. of Landings 0 Depth of Flow (mm) 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

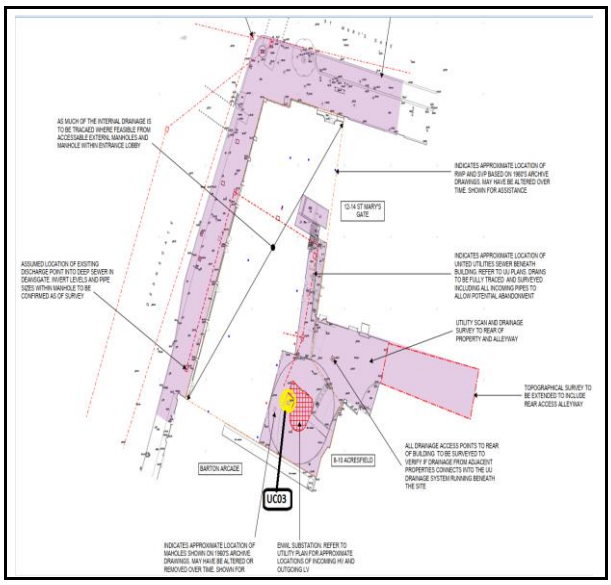
CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[ ]	[ ]	[x]	[x]	[x]
Needs Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

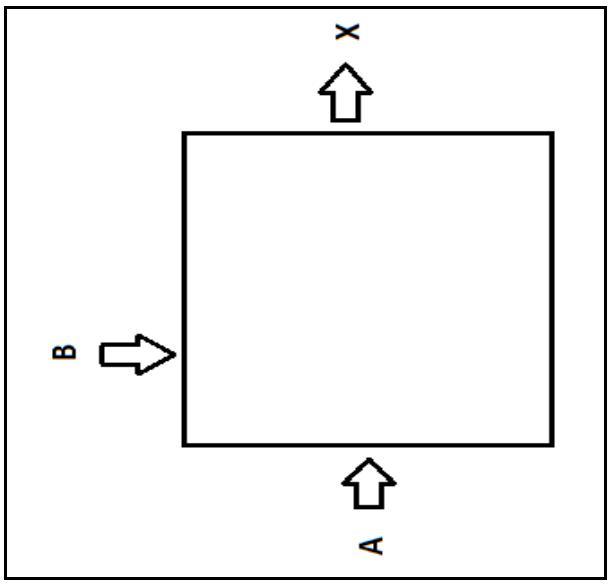
Remark

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU : Public		PR : Private		WC : Culverted Watercourse	} Applies to main outlet
	24 : Section 24		HD : Highway Drain			
FUNCTION	F : Foul		C : Combined		S : Surface Water	} Applies to main outlet
MANHOLE TYPE	IF : Infall		MH : Manhole		CP : Catchpit	
	LH : Lamphole		RE : Rodding Eye		SO : Storm Overflow	
	GU : Gully		OF : Outfall		SA : Soakaway	
COVER DUTY	L : Light Duty		M : Medium Duty		H : Heavy Duty	
SHAPE	C : Circular		E : Egg		R : Rectangular	
	S : Square		T : Trapezoidal		A : Arched	
	B : Barrel		H : Horseshoe (Inverted U)		U : U-shaped with flat top	
	X : Other (state in words)					
PIPE (OR LINING) MATERIAL	AK : Alkathene		AC : Asbestos Cement		BR : Brick	
	CI : Cast Iron		SI : Spun (Grey) Iron		CO : Concrete	
	CSB : Concrete Segments (Bolted)		CSU : Concrete Segments (Unbolted)		CC : Concrete Box Culvert	
	DI : Ductile Iron		GRC : Glass Reinforced Concrete		GRP : Glass Reinforced Plastic	
	PSC : Plastic/Steel Composite		PVC : Polyvinyl Chloride		PE : Polyethylene	
	RPM : Reinforced Plastic Matrix		ST : Steel		VC : Vitrified Clay	
	PP : Polypropylene		PF : Pitch Fibre		MAC : Masonry, Coursed	
	MAR : Masonry, Randon Courses		XXX : Other (State in remarks)			
LINING	BL : Bitumen		RL : Resin		IS : Insituform	
	CL : Cement		PI : Plastic			

SURVEY systems

IWJS

Project No.	19457
Survey Date.	05/06/2019
Surveyor.	A.HALLIWELL

Asset Survey Card

Asset ID: UC04 | Asset Type : MH (eg: MH, CP, GY) | Function: | Cover Level:

Location: R/O 12-14 ST.Mary's Gate

Town: MANCHESTER

COVER DETAILS

☐ Square ☒ Rectangle ☐ Triangle ☐ Dbl Triangle ☐ Circular ☐ Other ____ Other

☐ Hinged ☐ Lockable ☐ Grating ☒ H Cover Duty 770 x 660 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	0.92		C	100	x		CI			-0.920
B	0.92		C	100	x		CI			-0.920
C	0.92		C	100	x		CI			-0.920
D	0.93		C	100	x		CI			-0.930
E	0.91		C	100	x		CI			-0.910
F	0.91		C	100	x		CI			-0.910
G	0.91		C	100	x		CI			-0.910
X	0.97		C	100	x		CI			-0.970
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

770 x 630 Size (mm) | 0.63 Depth (m) | No. of Reg Courses | Soffit

Chamber

1100 x 700 Size (mm) | Side Entry | N OX / H2S / METH Toxic atmosphere | N Evidence of Surcharge

☐ Pre Cast Concrete ☐ Insitu Concrete ☐ Brick ☐ GRP ☐ Reducing Slab

☐ Step Irons ☐ Ladder ☐ No. of Landings | 0 Depth of Flow (mm) | 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

☐ Flap Valve ☐ Orifice ☐ Sluice Gate ☐ Weir ☐ Screens ☐ Penstock ☐ Flume ☐ H/Wall

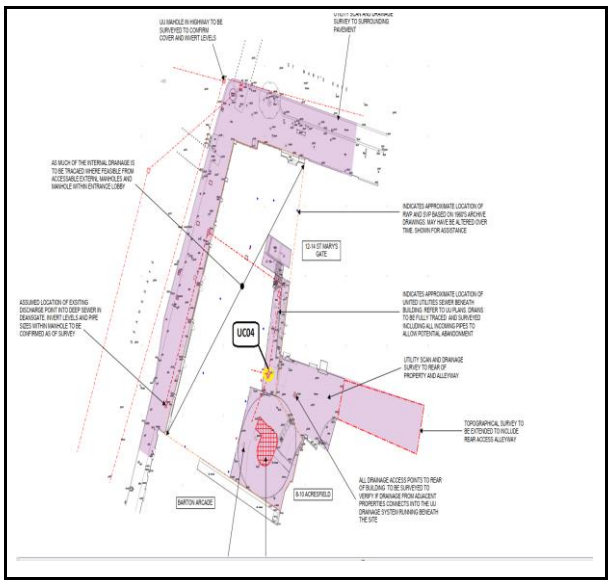
CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	☒	☒	☐	☒	☒	☒
Needs Attention	☐	☐	☐	☐	☐	☐
Urgent Attention	☐	☐	☐	☐	☐	☐

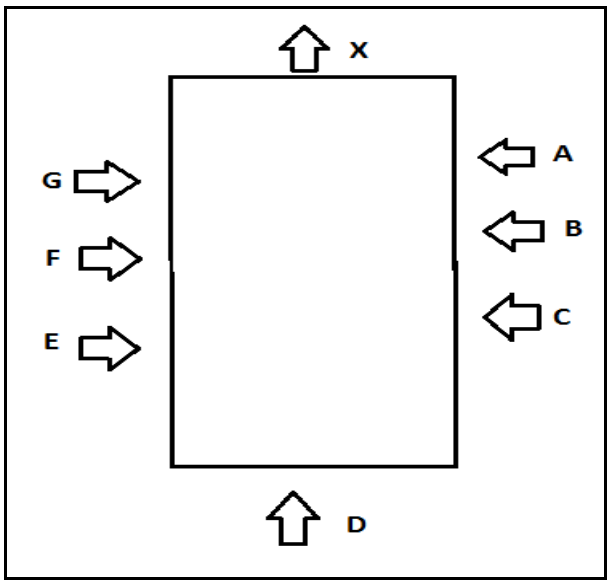
Remark

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU : Public	PR : Private	WC : Culverted Watercourse } Applies to main outlet
	24 : Section 24	HD : Highway Drain	
FUNCTION	F : Foul	C : Combined	S : Surface Water } Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow
	GU : Gully	OF : Outfall	SA : Soakaway
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty
SHAPE	C : Circular	E : Egg	R : Rectangular
	S : Square	T : Trapezoidal	A : Arched
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top
	X : Other (state in words)		
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed
	MAR : Masonry, Randon Courses	XXX : Other (State in remarks)	
LINING	BL : Bitumen	RL : Resin	IS : Insituform
	CL : Cement	PI : Plastic	

SURVEY systems

Project No.	19457
Survey Date.	05/06/2019
Surveyor.	A.HALLIWELL

IWJS

Asset Survey Card

Asset ID: UC06 | Asset Type : MH (eg: MH, CP, GY) | Function: | Cover Level:

Location: R/O 12-14 ST.Mary's Gate

Town: MANCHESTER

COVER DETAILS

[ ] Square [x] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 670 x 500 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	2.23		C	100	x		CI			-2.230
B	2.23		C	100	x		CI			-2.230
C	2.21		C	150	x		CI			-2.210
D	1.19		C	150	x		CI			-1.190
E	0.5		C	100	x		CI			-0.500
F	0.5		C	100	x		CI			-0.500
G					x					0.000
X	2.24		C	150	x		CI			-2.240
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

[ ] x [ ] Size (mm) [ ] Depth (m) [ ] No. of Reg Courses [ ] Soffit

Chamber

1000 x 930 Size (mm) [ ] Side Entry [N] OX / H2S / METH Toxic atmosphere [N] Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [x] Brick [ ] GRP [ ] Reducing Slab

3 Step Irons [ ] Ladder [ ] No. of Landings 5 Depth of Flow (mm) 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

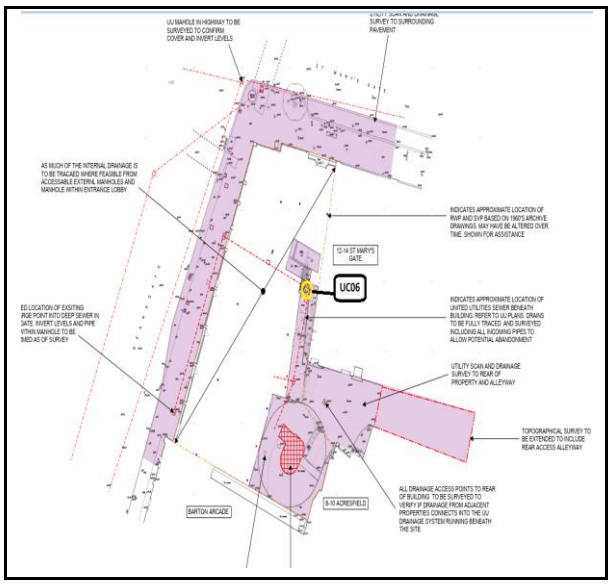
CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[ ]	[x]	[x]	[x]	[x]
Needs Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

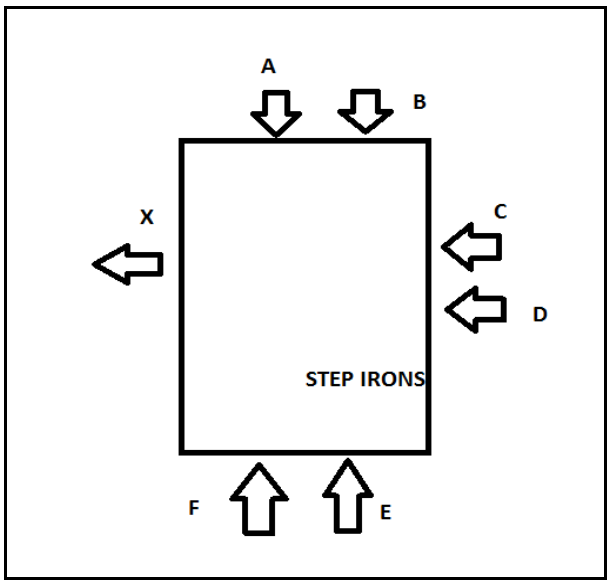
Remark

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



LOCATION PHOTO

INTERNAL PHOTO

STATUS	PU	: Public	PR	: Private	WC	: Culverted Watercourse } Applies to main outlet
	24	: Section 24	HD	: Highway Drain		
FUNCTION	F	: Foul	C	: Combined	S	: Surface Water } Applies to main outlet
MANHOLE TYPE	IF	: Infall	MH	: Manhole	CP	: Catchpit
	LH	: Lamphole	RE	: Rodding Eye	SO	: Storm Overflow
	GU	: Gully	OF	: Outfall	SA	: Soakaway
COVER DUTY	L	: Light Duty	M	: Medium Duty	H	: Heavy Duty
SHAPE	C	: Circular	E	: Egg	R	: Rectangular
	S	: Square	T	: Trapezoidal	A	: Arched
	B	: Barrel	H	: Horseshoe (Inverted U)	U	: U-shaped with flat top
	X	: Other (state in words)				
PIPE (OR LINING) MATERIAL	AK	: Alkathene	AC	: Asbestos Cement	BR	: Brick
	CI	: Cast Iron	SI	: Spun (Grey) Iron	CO	: Concrete
	CSB	: Concrete Segments (Bolted)	CSU	: Concrete Segments (Unbolted)	CC	: Concrete Box Culvert
	DI	: Ductile Iron	GRC	: Glass Reinforced Concrete	GRP	: Glass Reinforced Plastic
	PSC	: Plastic/Steel Composite	PVC	: Polyvinyl Chloride	PE	: Polyethylene
	RPM	: Reinforced Plastic Matrix	ST	: Steel	VC	: Vitrified Clay
	PP	: Polypropylene	PF	: Pitch Fibre	MAC	: Masonry, Coursed
	MAR	: Masonry, Randon Courses	XXX	: Other (State in remarks)		
LINING	BL	: Bitumen	RL	: Resin	IS	: Insituform
	CL	: Cement	PI	: Plastic		

SURVEY systems

Project No.	19457
Survey Date.	04/06/2019
Surveyor.	A.HALLIWELL

IWJS

Asset Survey Card

Asset ID: UC17 | Asset Type : MH (eg: MH, CP, GY) | Function: | Cover Level:

Location: R/O 12-14 ST.Mary's Gate

Town: MANCHESTER

COVER DETAILS

[x] Square [ ] Rectangle [ ] Triangle [ ] Dbl Triangle [ ] Circular [ ] Other [ ] Other

[ ] Hinged [ ] Lockable [ ] Grating [H] Cover Duty 680 x 680 Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Size (mm) Height		Width	Pipe Mat	Lining Mat	Back Drop Dia (mm)	Invert Level (m)
A	0.61		C	100	x		CI			-0.610
B	0.61		C	100	x		CI			-0.610
C					x					0.000
D					x					0.000
E					x					0.000
F					x					0.000

Outgoing Pipes

X	0.64		C	100	x		CI			-0.640
Z					x					0.000

MANHOLE CONSTRUCTION DETAILS

Shaft

N/A x [ ] Size (mm) [ ] Depth (m) [ ] No. of Reg Courses [ ] Soffit

Chamber

830 x 670 Size (mm) [ ] Side Entry N OX / H2S / METH Toxic atmosphere N Evidence of Surcharge

[ ] Pre Cast Concrete [ ] Insitu Concrete [x] Brick [ ] GRP [ ] Reducing Slab

[ ] Step Irons [ ] Ladder [ ] No. of Landings 0 Depth of Flow (mm) 0 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

[ ] Flap Valve [ ] Orifice [ ] Sluice Gate [ ] Weir [ ] Screens [ ] Penstock [ ] Flume [ ] H/Wall

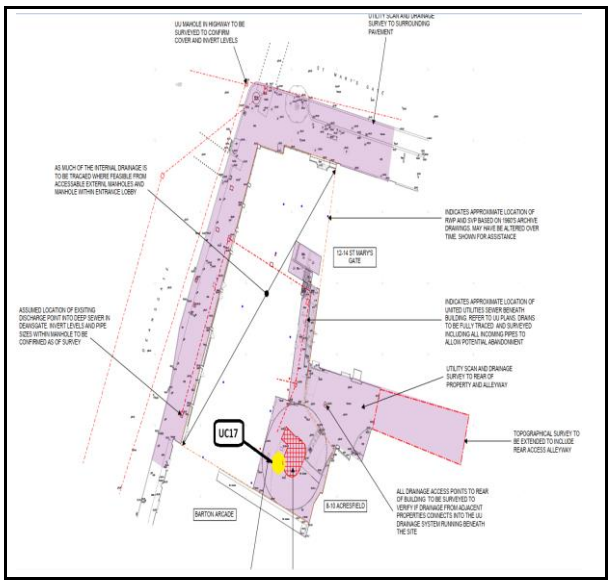
CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	[x]	[ ]	[ ]	[x]	[x]	[x]
Needs Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Urgent Attention	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

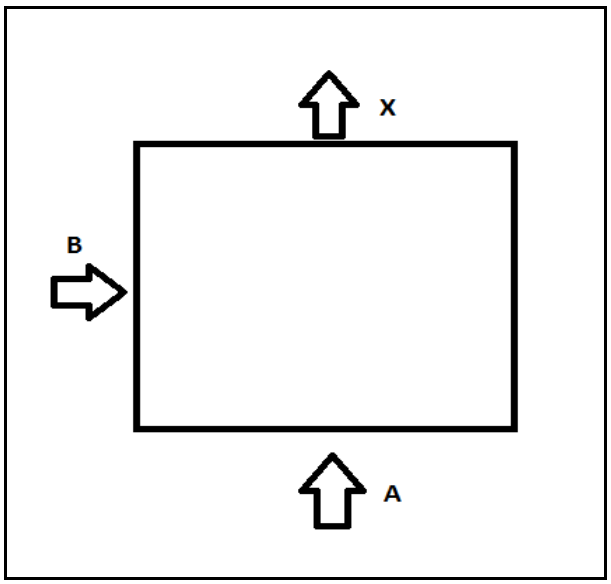
Remark

See Overleaf for Key

LOCATION SKETCH



PLAN OF MANHOLE



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	PSC	: Plastic/Steel Composite	PVC	: Polyvinyl Chloride	PE	: Polyethylene
	RPM	: Reinforced Plastic Matrix	ST	: Steel	VC	: Vitrified Clay
	PP	: Polypropylene	PF	: Pitch Fibre	MAC	: Masonry, Coursed
	MAR	: Masonry, Randon Courses	XXX	: Other (State in remarks)		
LINING	BL	: Bitumen	RL	: Resin	IS	: Insituform
	CL	: Cement	PI	: Plastic		