BYTNAR
ENGINEERING SOLUTIONS
ALTERATIONS | EXTENSIONS | NEW BUILDS

Mr. and Mrs Dean
24 Chalcot Crescent,
London
NW1 8YE, UK

REF: 1849

RE: Proposed Vault Toilet Construction, Feasibility Drainage Assessment- 24 Chalcot Crescent, NW1 8YE, London.

Thank you for instructing Bytnar Ltd to carry out an assessment on the existing drainage system in regards to proposed toilet relocation to the lowered level vault enclosure. This report takes in consideration the condition of existing drainage and its layout in relation to proposed modifications.

A site investigation has been conducted at **24 Chalcot Crescent** on Tuesday the 27th of November, 2018 at 9am.

Findings and Recommendations

The building is a 4-storey "Regency" terraced house of traditional construction with front under pavement vaults at the lover ground floor level. The proposal is to relocate existing toilet facilities from under the main entrance stairs to the adjacent vault enclosure, see Appendix A- Architectural Plans. Vault floor to be lowered by 350mm to accommodate such a change.

Thames Water asset location search has revealed combined sewerage line to which property is connected, see Appendix B- Asset Location. Further investigatory works identified existing drainage layout and some blockages between the Manhole and Public Drainage to an extent of 15% of the cross-sectional area of the drain and some joint displacements of medium size which do not govern any immediate necessity of repair or unblocking, see Appendix C- Drain Survey.

It has been concluded that a connection to the existing drainage system is feasible, however, due to the lowering of the toilet level to the level susceptible to drainage surcharge it will be necessary to introduce methods mitigating the extend of impact such occurrence may have.

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We recommend employing appropriate anti-flooding valve prior to the connection with the existing manhole and routing of the proposed drainage elements as shown on the design drawings, see Appendix D- Proposed Drainage Layout.

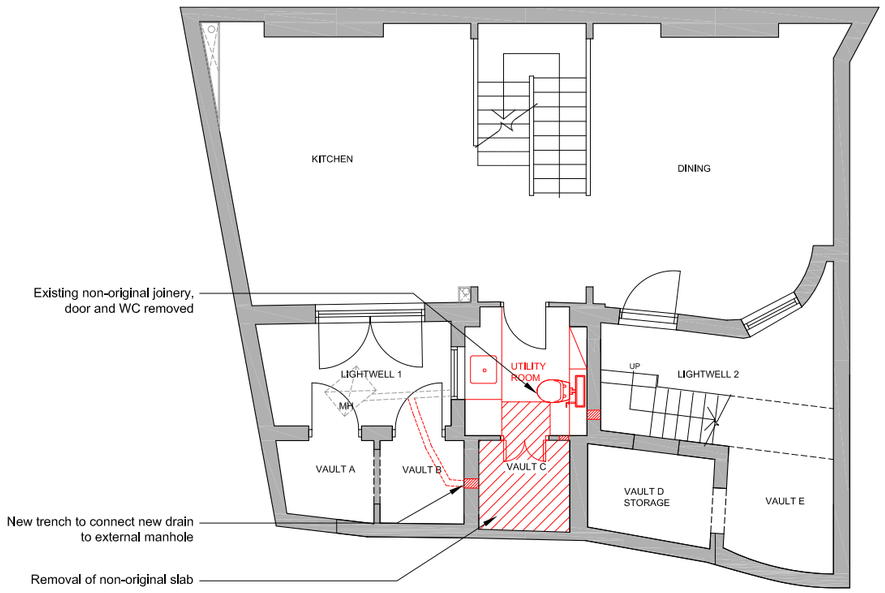
Yours sincerely,

Piotr Bytnar BEng (Hons)
Director

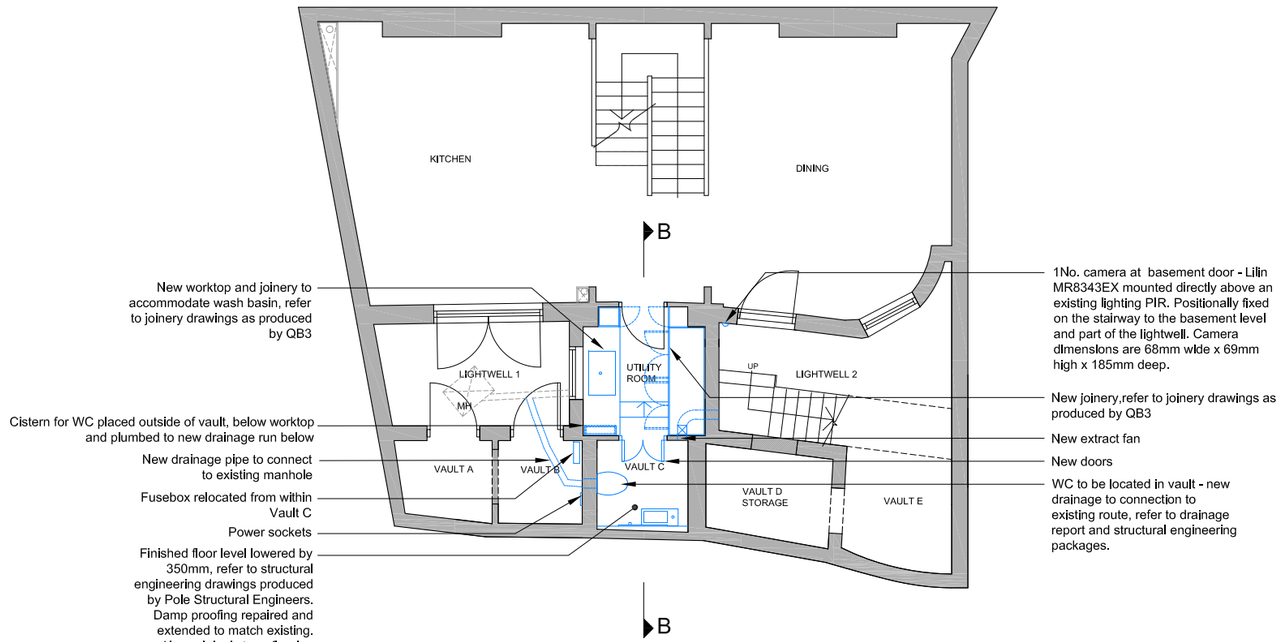
Appendix A- Architectural Plans

Current existing drawings, as previously approved in application reference: 2007/5363/P and 2007/5364/L

PLANNING



01 EXISTING BASEMENT FLOOR PLAN
1:50 @ A1 / 1:100 @ A3



02 PROPOSED BASEMENT FLOOR PLAN
1:50 @ A1 / 1:100 @ A3

NOTES:

DRAWINGS BASED ON SURVEY INFORMATION PROVIDED BY OTHERS

DRAWINGS ARE NOT FOR CONSTRUCTION UNLESS OTHERWISE STATED.

REPORT ANY DRAWING INCONSISTENCIES TO THE ARCHITECT IMMEDIATELY. ARCHITECT TO BE ADVISED OF ANY VARIATION BETWEEN DRAWINGS AND SITE CONDITIONS.

DO NOT SCALE FROM THIS DRAWING - ALL DIMENSIONS TO BE CHECKED ON SITE.

STRUCTURAL INFORMATION PREPARED BY Pole Structural Engineers
CONTACT DETAILS: 020 8944 9955

DRAINAGE INFORMATION PREPARED BY Bytnar Engineering Solutions
CONTACT DETAILS: 07522 282698

UNDER THE CDM REGULATIONS 2015 (THE HEALTH & SAFETY AT WORK ACT 1974), ONE OF THE RESPONSIBILITIES OF THE CLIENT IS TO APPOINT A 'PRINCIPAL DESIGNER'. RDA DO NOT OFFER ANY ADVICE WITH REGARDS TO CDM. UNLESS SPECIFICALLY APPOINTED, AND THIS WOULD REQUIRE THE CLIENT APPOINTING A CDM CONSULTANT TO ADVISE RDA DIRECTLY AS THE 'PRINCIPAL DESIGNER'.

KEY:
EXISTING
PROPOSED
DEMOLITION

Scale 1:50 @ A1, 1:100 @ A3

0 1 2 3 4 5 6 7 8 9 10m

REVISIONS:

/ 10.05.2019 Submitted for Listed Building Consent

RODIĆ DAVIDSON ARCHITECTS is the trading name of bdAr ltd

Client: Mr. Sam Dean
Project: 24 Chalcot Crescent, London, NW1 8YD
Scale: 1:50 @ A1 / 1:100 @ A3
Drawn by: NW
Drawing Title: EXISTING & PROPOSED BASEMENT FLOOR PLAN
Project No.: RDA_0975
Date: October 2018
Checked by: SR
Drawing No.: PL.01.001
Rev: /

RODIĆ DAVIDSON ARCHITECTS
1 Pied Bull Yard
London WC1A 2AE
t: +44 (0)207 043 3551
f: +44 (0)207 043 3552
www.rodicdavidson.co.uk

Appendix B- Asset Location

Asset location search

Thames Water Property Searches

Bytnar Ltd
27
Hambrook Road
SNODLAND
ME6 5SQ

Search address supplied 24
Chalcot Crescent
London
NW1 8YE

Your reference 1849

Our reference ALS/ALS Standard/2018_3911007

Search date 17 November 2018

Keeping you up-to-date

Notification of Price Changes

From 1 September 2018 Thames Water Property Searches will be increasing the price of its Asset Location Search in line with RPI at 3.23%.

For further details on the price increase please visit our website: www.thameswater-propertysearches.co.uk
Please note that any orders received with a higher payment prior to the 1 September 2018 will be non-refundable.

Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13

searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk

0845 070 9148

searchcode

Asset location search

Property Searches

Search address supplied: 24, Chalcot Crescent, London, NW1 8YE

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This searchprovides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0845 070 9148, or use the address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk
Web: www.thameswater-propertysearches.co.uk

Waste Water Services

Please provide a copy extract from the public sewer map.

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority.

Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners.

This report relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus.

The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an ‘as constructed’ record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies.

For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.

For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Payment for this Search

A charge will be added to your suppliers account.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational issues please direct them to our service desk. Which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

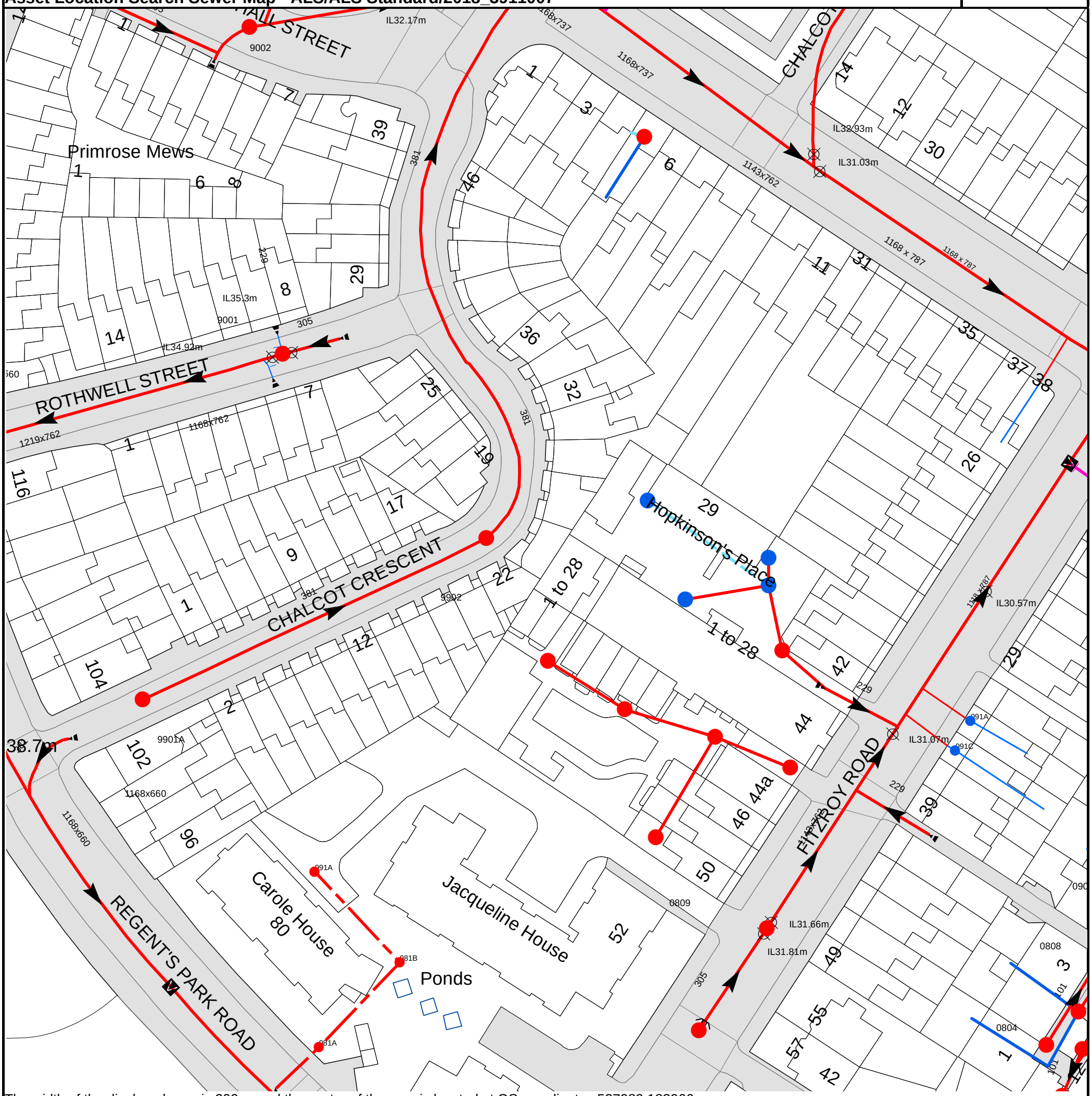
Clean Water queries

Should you require any advice concerning clean water operational issues or clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Asset Location Search Sewer Map - ALS/ALS Standard/2018_3911007



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 527989,183966

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

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
0803	n/a	n/a
08BG	n/a	n/a
09EB	n/a	n/a
091C	n/a	n/a
09EA	n/a	n/a
091A	n/a	n/a
09DJ	n/a	n/a
9901A	38.48	33.98
99DH	n/a	n/a
09DG	n/a	n/a
09DF	n/a	n/a
09DE	n/a	n/a
09DD	n/a	n/a
9902	38.15	33.31
09DC	n/a	n/a
9001	n/a	n/a
00CA	n/a	n/a
9002	38.68	32.8
981A	n/a	n/a
0804	n/a	n/a
0805	35.24	31.95
981B	n/a	n/a
0809	n/a	n/a
991A	n/a	n/a
09EC	n/a	n/a

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

ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

Foul: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.

Surface Water: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.

Combined: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.

Trunk Surface Water

Trunk Foul

Storm Relief

Trunk Combined

Vent Pipe

Bio-solids (Sludge)

Proposed Thames Surface Water Sewer

Proposed Thames Water Foul Sewer

Gallery

Foul Rising Main

Surface Water Rising Main

Combined Rising Main

Sludge Rising Main

Proposed Thames Water Rising Main

Vacuum

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

Air Valve

Dam Chase

Fitting

Meter

Vent Column

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

Control Valve

Drop Pipe

Ancillary

Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

Outfall

Undefined End

Inlet

Other Symbols

Symbols used on maps which do not fall under other general categories

Public/Private Pumping Station

Change of characteristic indicator (C.O.C.I.)

Invert Level

Summit

Areas

Lines denoting areas of underground surveys, etc.

Agreement

Operational Site

Chamber

Tunnel

Conduit Bridge

Other Sewer Types (Not Operated or Maintained by Thames Water)

Foul Sewer

Surface Water Sewer

Combined Sewer

Gulley

Culverted Watercourse

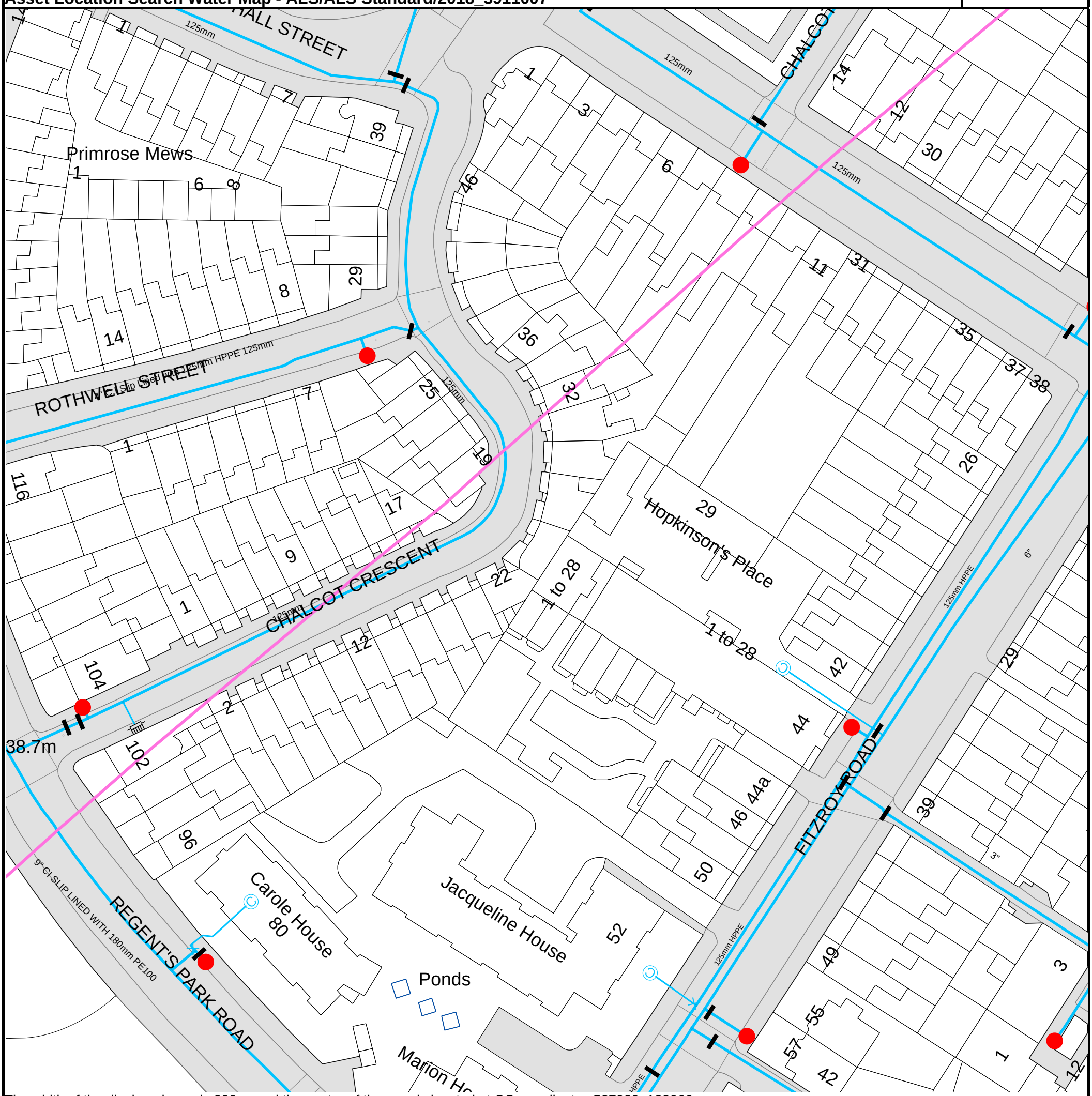
Proposed

Abandoned Sewer

Notes:

1) All levels associated with the plans are to Ordnance Datum Newlyn.
2) All measurements on the plans are metric.
3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
5) 'na' or '0' on a manhole level indicates that data is unavailable.
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in milimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Asset Location Search Water Map - ALS/ALS Standard/2018_3911007



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 527989, 183966.

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

ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)

4"

Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.

16"

Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.

3" SUPPLY

Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.

3" FIRE

Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.

3" METERED

Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.

Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.

Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Other Water Pipes (Not Operated or Maintained by Thames Water)

Other Water Company Main: Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.

Private Main: Indiates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment 14 days from due date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service, or will be held to be invalid.
4. Thames Water does not accept post-dated cheques-any cheques received will be processed for payment on date of receipt.
5. In case of dispute TWUL`s terms and conditions shall apply.
6. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
7. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
8. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 316 9800

If you are unhappy with our service you can speak to your original goods or customer service provider. If you are not satisfied with the response, your complaint will be reviewed by the Customer Services Director. You can write to her at: Thames Water Utilities Ltd. PO Box 492, Swindon, SN38 8TU.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0121 345 1000 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	**BACS Payment**	**Telephone Banking**	**Cheque**
Call **0845 070 9148** quoting your invoice number starting CBA or ADS / OSS	Account number **90478703** Sort code **60-00-01** A remittance advice must be sent to: **Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW.** or email **ps.billing@thameswater.co.uk**	By calling your bank and quoting: Account number **90478703** Sort code **60-00-01** and your invoice number	Made payable to '**Thames Water Utilities Ltd**' Write your Thames Water account number on the back. Send to: **Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW** or by DX to **151280 Slough 13**

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.

Search Code

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Thames Water Property Searches, Clearwater Court, Vastern Road, Reading RG1 8DB, which is registered with the Property Codes Compliance Board (PCCB) as a subscriber to the Search Code. The PCCB independently monitors how registered search firms maintain compliance with the Code.

The Search Code:

- provides protection for homebuyers, sellers, estate agents, conveyancers and mortgage lenders who rely on the information included in property search reports undertaken by subscribers on residential and commercial property within the United Kingdom
- sets out minimum standards which firms compiling and selling search reports have to meet
- promotes the best practise and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

By giving you this information, the search firm is confirming that they keep to the principles of the Code. This provides important protection for you.

The Code's core principles

Firms which subscribe to the Search Code will:

- display the Search Code logo prominently on their search reports
- act with integrity and carry out work with due skill, care and diligence
- at all times maintain adequate and appropriate insurance to protect consumers
- conduct business in an honest, fair and professional manner
- handle complaints speedily and fairly
- ensure that products and services comply with industry registration rules and standards and relevant laws
- monitor their compliance with the Code

Complaints

If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure. If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award compensation of up to £5,000 to you if he finds that you have suffered actual loss as a result of your search provider failing to keep to the Code.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

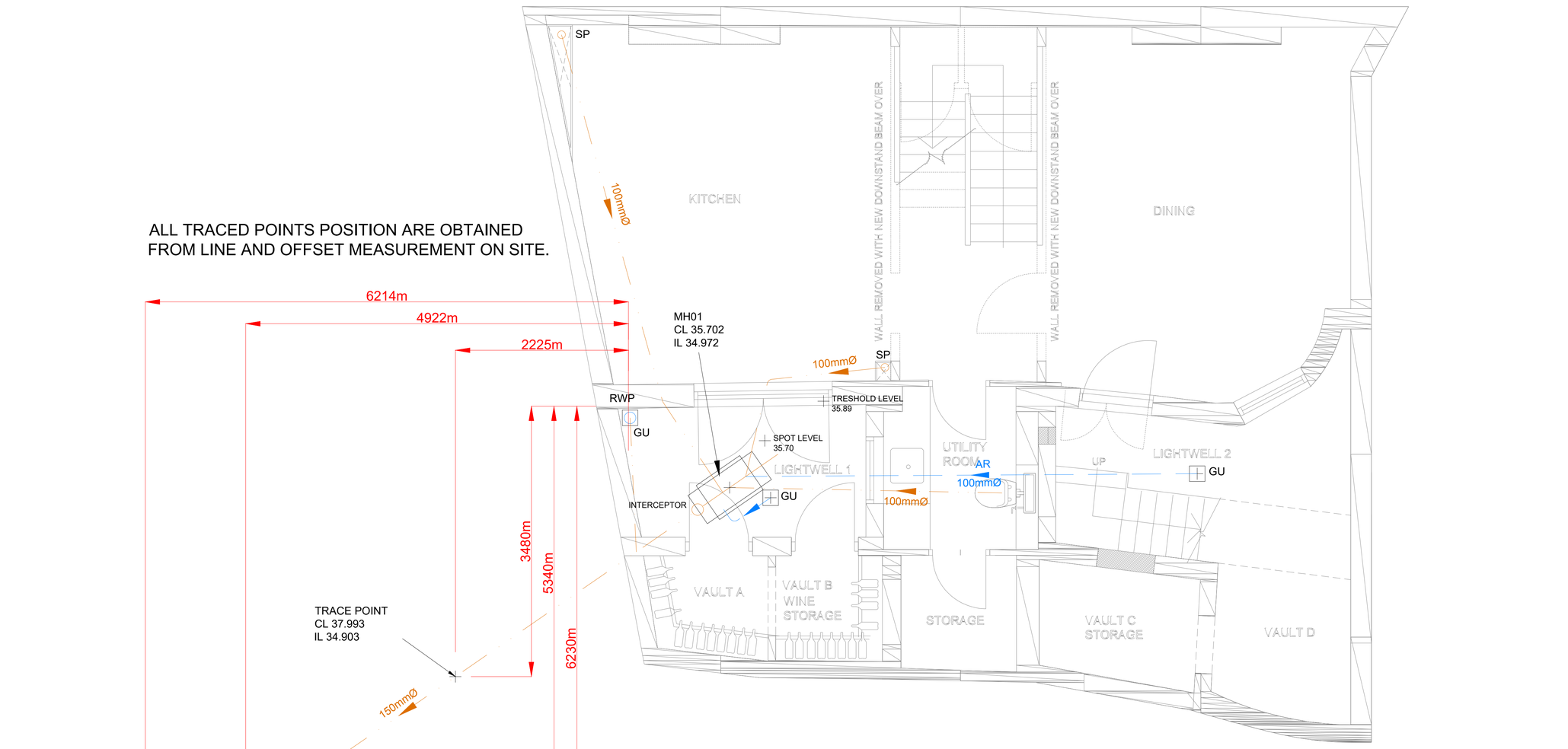
TPOs Contact Details

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk

PLEASE ASK YOUR SEARCH PROVIDER IF YOU WOULD LIKE A COPY OF THE SEARCH CODE

Appendix C- Drain Survey



TOPOGRAPHICAL SURVEY LEGEND

GENERAL

AV	AIR VALVE	LH	LAMP HOLE
BB	BOLISHA BEACON	LP	LAMP POST
Bdy	BOUNDARY	MK	MARKER POST
BH	BOREHOLE	MS	MILE STONE
BL	BED LEVEL	NB	NOTICE BOARD
BO	BOLLARD	NP	NAME-PLATE
BS	BUS STOP	OSBM	ORDNANCE SURVEY BENCH MARK
BKW	BRICK WALL	OH	OVERHEAD
CATV	CABLE TELEVISION	PE	PENSTOCK
CG	CATTLE GRID	PM	PARKING METER
CH	CHANNEL LEVEL	PO	POST
Conc	CONCRETE	RB	RUBBISH BIN
Corr	CORRUGATED	RS	ROAD SIGN
CO	COPING LEVEL	RTW	RETAINING WALL
CPS	CONC. PAVING SLABS	RWP	RAIN WATER PIPE
CR	CROWN LEVEL	SAP	SAPLING
CUL	CULVERT	SC	STOP COCK
DK	DROP KERB	SL	SOFFIT LEVEL
DP	DOWN PIPE	SVP	SOIL VENT PIPE
EB	ELECTRICITY BOX	SP	SIGN POST
EC	ELECTRICITY CABLE	STN	SURVEY STATION
ElecMH	ELECTRICITY MANHOLE	SV	STOP VALVE
EP	ELECTRICITY POLE	SW	SURFACE WATER
EPy	ELECTRICITY PYLON	TB	TREE BOLE
ER	EARTHING ROD	TBM	TEMPORARY BENCH MARK
FH	FIRE HYDRANT	TCB	TELEPHONE CALL BOX
FLR	FLOOR LEVEL	TH	THRESHOLD
FM	FLOW METER	TL	TRAFFIC LIGHT
FB	FLOWER BED	TMH	TELEPHONE MANHOLE
FW	FOUL WATER	TOW	TOP OF WALL
GL	GROUND LEVEL	TP	TELEGRAPH POLE
GP	GATE POST	TS	TREE STUMP
GV	GAS VALVE	U/G	UNDERGROUND
H	HIGH	VA	VALVE
HO	HOLE	VP	VENT PIPE
HW	HEADWALL	W	WIDE
IC	INSPECTION COVER	WL	WATER LEVEL
JB	JUNCTION BOX	WM	WATER METER
KL	KEEP LEFT ROAD SIGN	WO	WASH OUT
LB	LETTER BOX	WP	WOODEN POST
		WV	WATER VALVE

FENCE TYPES

BWF	BARBED WIRE FENCE	IWF	FENCE INTERWOVEN
CBF	CLOSE BOARDED FENCE	LLF	FENCE LARCH LAP
CLF	CHAINLINK FENCE	PAL	FENCE PALISADE FENCE
CPF	CHESTNUT PALING	PRF	POST & RAIL FENCE
CWF	FENCE CHICKEN WIRE	PWF	POST & WIRE FENCE
IRF	FENCE IRON RAILING	TR	TRELLIS

TREE TYPES

AA	ACACIA	ED	ELDER	OR	ORNAMENTAL		
AH	ASH	EM	ELM	PE	PINE		
AL	ALDER	FR	FIR	PD	POLLARDED		
AN	ASPEN	HB	HORNBEAM	PR	POPLAR		
AP	APPLE	HC	HORSE CHESTNUT	SB	SILVER BIRCH		
BH	BEECH	HN	HAWTHORN	SC	SWEET CHESTNUT		
BL	BLACKTHORN	HY	HOLLY	SU	SPRUCE		
BR	BIRCH	LA	LARCH	SY	SYCAMORE		
CE	CHERRY	LE	LIME	WB	WHITEBEAM		
CO	CONIFER	LN	LONDON PLANE	WT	WALNUT		
CR	CEDAR	ME	MAPLE	WW	WILLOW		
CY	CYPRESS	OK	OAK	YW	YEW		
DD	DEAD			XX	UNKNOWN		

TYPE CO
LEVEL 45.96
SPREAD 16.00
DIAM. 0.300
HEIGHT 18.00

SERVICE ABBREVIATIONS

AC	ASSUMED CONNECTION	IL	INVERT LEVEL
AR	ASSUMED ROUTE	KIG	KERB INLET GULLY
BD	BACK DROP	MH	MANHOLE
CC	CONFIRMED CONNECTION	OHL	OVER HEAD LINE
CD	CHAMBER DEPTH	PI	PETROL INTERCEPTOR
COW	CABLE ON WALL	RD	FROM RECORD DRAWINGS
CL	COVER LEVEL	RE	RODDING EYE
CP	CATCH PIT	SA	SOAKAWAY
CB	CABLE RISER	UNK	UNKNOWN SERVICE
D	DEPTH	UTL	UNABLE TO LOCATE
(dis)	DISUSED	UTR	UNABLE TO RAISE
EOT	END OF TRACE	UTT	UNABLE TO TRACE
GU	GULLY	UTS	UNABLE TO SURVEY

UTILITY LEGEND AND NOTES

FOUL WATER DRAINAGE
SURFACE WATER DRAINAGE
WATER
GAS
ELECTRICITY
TELEPHONE
UNKNOWN SERVICE DETECTED BY EML
UNKNOWN SERVICE DETECTED BY GPR
OIL
CATV
UNKNOWN LINEAR FEATURE DETECTED BY GPR
FIBRE OPTIC
UNDERGROUND CHAMBER
GPR (0.00) GROUND PENETRATING RADAR DEPTH)

UTILITY DEPTHS

SERVICES ARE DRAWN IN 3D WITH THE LEVEL CORRESPONDING TO THE CENTRE OF THE UTILITY EXCEPTIONS TO THIS ARE SERVICES AND FEATURES DETECTED BY GPR WHERE THE LEVEL IS THAT OF THE TOP OF THE UTILITY. THESE ARE DENOTED BY GPR LAYERS OR LINETYPES SHOWN ABOVE OR BY SPECIFIC LABELLING OF THE DRAWING.

CONFIDENCE RATING

CONFIDENCE RATINGS FOR UTILITIES TRACED ARE IDENTIFIED AS LAID OUT IN SECTION 5 OF THE PAS 128:2014 SPECIFICATION FOR UNDERGROUND UTILITY DETECTION, VERIFICATION AND LOCATION

CAUTIONARY NOTES

ELECTRO-DETECTION TECHNIQUES HAVE BEEN USED IN THE LOCATION OF UNDERGROUND SERVICES. THE RESULTS ARE NOT INFALLIBLE AND TRIAL EXCAVATIONS MUST BE CARRIED OUT TO CONFIRM SERVICE IDENTIFICATION, POSITIONS AND PARTICULARLY DEPTHS. ALTHOUGH ALL REASONABLE EFFORT HAS BEEN MADE IN SEARCHING AVAILABLE RECORD DRAWINGS, THE COMPLETENESS OF THE UNDERGROUND SERVICE INFORMATION CANNOT BE GUARANTEED. INFORMATION OBTAINED BY GPR IS INDICATIVE OF BURIED INFRASTRUCTURE THAT MAY NOT BE DETECTABLE BY OTHER MEANS.

DRAINAGE NOTES

PIPES ON THE REPORT ARE REFERENCED CLOCKWISE FROM THE OUTGOING PIPE WITH THE MH NUMBER AS THE PREFIX I.E. MH01A.
END POINT LOCATIONS WITHIN BUILDINGS ARE INDICATIVE UNLESS STATED.

MH01C
MH01B MH01D
MH01A MH01E
MH01 X

Note: Pipe sizes in mm

TECHNICAL NOTES

ALL COVER AND TRACE POINT POSITIONS ARE OBTAINED FROM LINE AND OFFSET MEASUREMENT ON SITE AND HAS BEEN BEST FITTED ONTO THE DRAWING SUPPLIED BY CLIENT.

COVER AND SPOT LEVELS ARE TAKEN ON SITE BY MEANS OF LEVELLING FROM A TBM WHICH WAS OBTAINED FROM ACTIVE GPS NETWORK "OS/GB36-15"

SEWER SONDE AND "RD8000" HAS BEEN UTILISED TO OBTAINED TRACE POINT OF THE SEWER LINE.

A SCALE FACTOR OF

HAS BEEN APPLIED TO THIS DRAWING

Rev.	Date	Description	By

Drawn by C.D | Surveyed by C.D | Checked by C.B

SURVEY DESIGN SERVICES

Project title
26 CHALCOT CRESCENT
CAMDEN

Drawing title
DRAINAGE
INVESTIGATION

Client
BYTNAR

Drawing No. SDS 206472 | Revision —

Scale N/A | Date November 18 | Sheet size A1

Survey Design Services [SDS]
Unit 13 & 14 Foundry Business Park - Seager Road, Faversham
Tel. 01795 594110
surveys@surveydesignservices.co.uk

Project Information

Project Name:	Client's Ref:	Contractor's Ref:	Project Date:
206472 CHALCOT CRESCENT		**206472**	**30/11/2018**

Client

Company:	BYTNAR
Contact:	Piotr Bytnar
Department:	Structural Engineer/ Party Wall Surveyor
Phone:	07522282698
Mobile:	07522282698
Email:	piotrbytnar@bytnar.co.uk

Site

Company:	BYTNAR
Contact:	Piotr Bytnar
Department:	Structural Engineer / Party Wall Surveyor
Street:	Chalcot Crescent
Town or City:	Camden
County:	London
Post Code:	NW1 8YD
Phone:	07522282698
Mobile:	07522282698
Email:	piotrbytnar@bytnar.co.uk

Contractor

Company:	Survey Design Services [SDS]
Contact:	S . Forwood
Department:	CCTV Surveys - Drainage Investigation
Street:	Unit 13 & 14 Foundry Business Park - Seager Road
Town or City:	Faversham
County:	Kent
Post Code:	ME13 7FD
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Email:	surveys@surveydesignservices.co.uk

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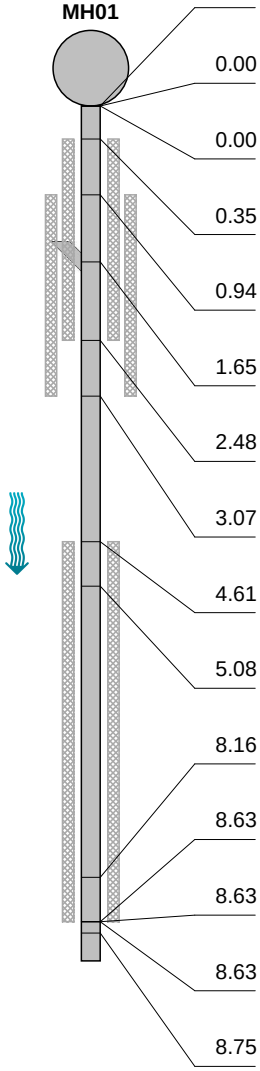
Section Inspection - 30/11/2018 - MH01X

Section:	Inspection:	Date:	Time:	Client's Ref:	Weather:	Pre Cleaned:	PLR:
1	**1**	**30/11/18**	**12:21**		**No Rain Or Snow**	**No**	**MH01X**
Operator:		Vehicle:		Camera:	Preset Length:	Criticality Grade:	Alternative ID:
Sds Cd		**MOBILE**		**Push Rod**			

Town or Village:	**CAMDEN**	Insp Dir:	**MH01 >> MH01 X**	US MH:	**MH01**
Road:	**Chalcot Crescent**	Inspected Length:	**10.29 m**	US Depth:	**0.730 m**
Location:	**Property with buildings**	Total Length:	**10.29 m**	DS MH:	**MH01 X**
Surface Type:		Pipe Length:	**0.60 m**	DS Depth:	**0.000 m**

Use:	**Combined**	Pipe Shape:	**Circular**
Type of Pipe:	**Gravity drain/sewer**	Height / Width:	**150 mm**
Year Constructed:	**1980**	Pipe Material:	**Vitrified clay pipe (i.e. all clayware)**
Inspection Purpose:	**Sample survey to determine asset condition**	Lining Type:	**None**
Flow Control:	**No flow control**	Lining Material:	**None**

Comment: **SURVEY COMPLETE**
Recommendation: **NONE**



1:80 Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node type, manhole, reference number: MH01	00:00:00		
0.00		WL	Water level, 5% of the vertical dimension	00:00:01		
0.00		LD	Line deviates down: SHARP. INTERCEPTOR MH	00:00:02		
0.35	S01	CUW	Loss of vision, camera under water, start: INTERCEPTOR TRAP	00:00:08		
0.94	S02	DER	Settled deposits, coarse, 15% cross-sectional area loss, start	00:00:18	1	
1.65		CN	Connection other than junction at 02 o'clock, diameter: 100mm: UNKNOWN CONNECTION	00:00:24	2	
2.48	F01	CUW	Loss of vision, camera under water, finish	00:00:37		
3.07	F02	DER	Settled deposits, coarse, 15% cross-sectional area loss, finish	00:00:43		3
4.61	S03	DEX	Settled deposits, other, 10% cross-sectional area loss, start: POSSIBLY GREASE	00:00:51	3	
5.08		LL	Line deviates left: VERY SLIGHT	00:00:53		
8.16		LL	Line deviates left: VERY SLIGHT	00:01:28		
8.63	F03	DEX	Settled deposits, other, 10% cross-sectional area loss, finish: POSSIBLY GREASE	00:01:32		3
8.63		JDM	Joint displaced, medium	00:01:32	4	1
8.63		LD	Line deviates down: MEDIUM	00:01:35		
8.75		LR	Line deviates right: SLIGHT	00:01:37		

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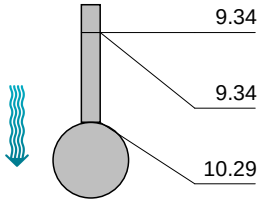
Section Inspection - 30/11/2018 - MH01X

Section:	Inspection:	Date:	Time:	Client's Ref:	Weather:	Pre Cleaned:	PLR:
1	**1**	**30/11/18**	**12:21**		**No Rain Or Snow**	**No**	**MH01X**

Operator:	Vehicle:	Camera:	Preset Length:	Criticality Grade:	Alternative ID:
Sds Cd	**MOBILE**	**Push Rod**			

Recommendation: **NONE**



MH01 X

Depth: 0.00

1:80 Position [m]	Code	Observation	MPEG	Photo	Grade
9.34	JDM	Joint displaced, medium	00:01:40	5	1
9.34	LD	Line deviates down: SHARP	00:01:40		
10.29	BRF	Finish node type, major connection without manhole, reference number: MH01 X: THAMES WATER SEWER	00:02:09	6	

Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	1.0	0.2	2.0	1.0	2	2.0	0.4	4.0	3.0

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Section Pictures - 30/11/2018 - MH01X

Section Number:	Inspection Direction:	PLR:	Client's Ref:	Contractor's Ref:
1	**MH01 >> MH01 X**	**MH01X**		**206472**

1, 00:00:18, 0.94m
Settled deposits, coarse, 15% cross-sectional area loss, start

2, 00:00:24, 1.65m
Connection other than junction at 02 o'clock, diameter: 100mm / UNKNOWN CONNECTION

3, 00:00:51, 4.61m
Settled deposits, other, 10% cross-sectional area loss, start / POSSIBLY GREASE

4, 00:01:32, 8.63m
Joint displaced, medium

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Section Pictures - 30/11/2018 - MH01X

Section Number:	Inspection Direction:	PLR:	Client's Ref:	Contractor's Ref:
1	**MH01 >> MH01 X**	**MH01X**		**206472**

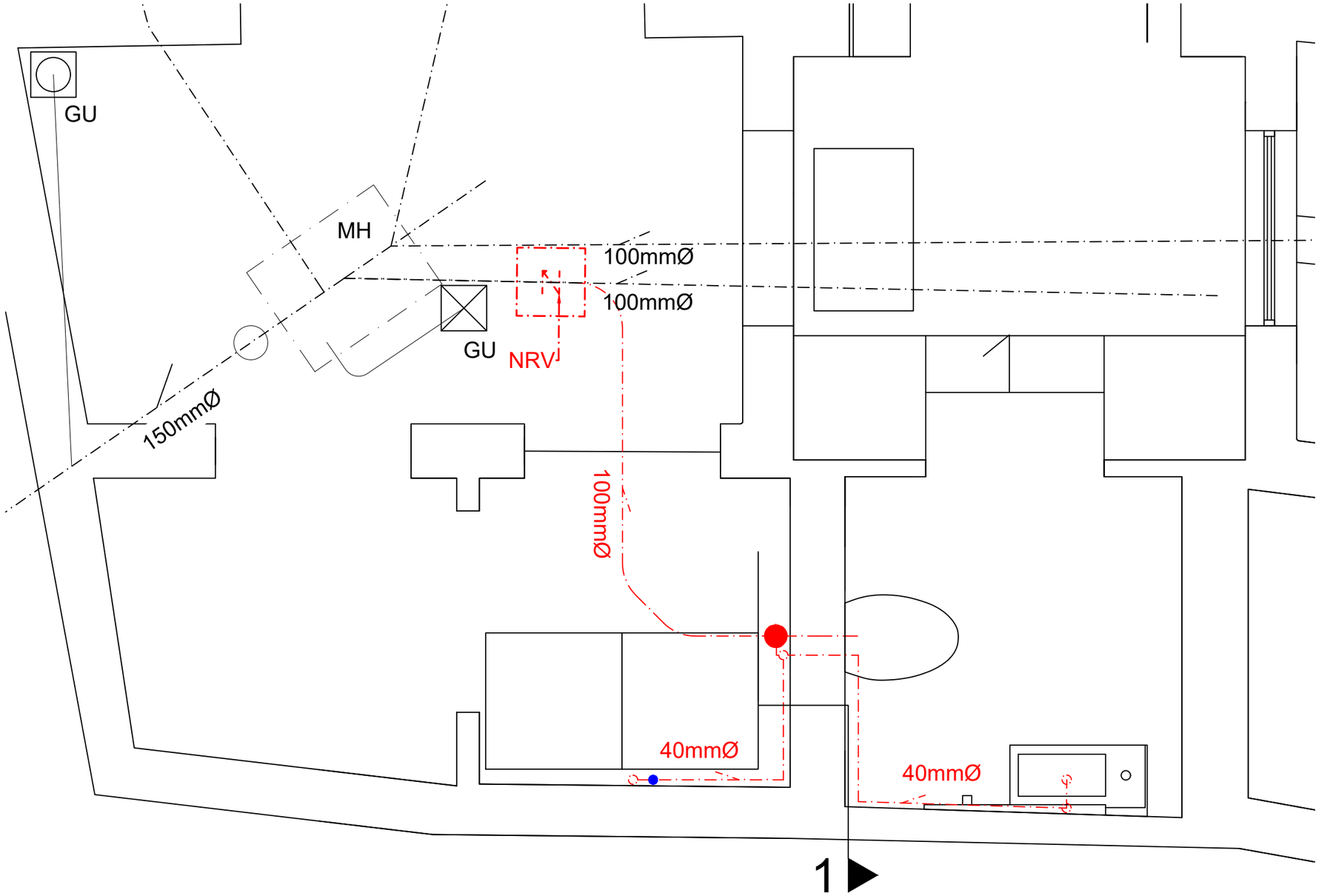
5, 00:01:40, 9.34m
Joint displaced, medium

6, 00:02:09, 10.29m
Finish node type, major connection without manhole, reference number: MH01 X / THAMES WATER SEWER

Survey Design Services [SDS], Unit 13 & 14 Foundry Business Park - Seager Road, Faversham, Tel: 01795 594110, Fax: 01795 530724

SDS 206472 Chalcot Crescent - Section Reference & Recommendations							
Section No.	Inspection No.	PLR	Upstream Node	Downstream Node	Comments	Recommendations	Further Work Required
1	1	MH01X	MH01	MH01 X	SURVEY COMPLETE	NONE	No

Appendix D- Proposed Drainage Layout



Proposed Drainage Layout
Scale 1:20

General Notes:

1) All Dimensions are in millimeters unless otherwise noted.
2) Do not scale from these drawings, working dimensions to be responsibility of an architect/contractor.
3) Architectural details shown are indicative only.
4) All drainage to comply with Approved Documents H or alternatively with relevant British Standards
5) Workmanship to BS 8000
6) Connect to existing drainage using flexible connectors
7) Change in the flow direction to be achieved either by long sweep elbow or at 45° angle
8) Pipes laid in Clay to be of Vitrified Clay

Legend:

- Existing drain pipes
- New drain pipes
- NRV — Proprietary None Return Valve with access chamber to comply with BS EN 13564
- Rodding access for the toilet branch
- Air Admittance Valve

BY	COMMENTS	DATE
PB	Change of layout	21/03/19
PB	Change of layout	01/04/19
PB	Change of layout	09/04/19

STATUS:	Rev.
CONSTRUCTION	C.4

BYTNAR
ENGINEERING SOLUTIONS
ALTERATIONS | EXTENSIONS | NEW BUILDS
2/38 Northbrook Road, IG1 3BS
tel: 07522282698 piotrbytnar@bytnar.co.uk

scale	:	1: 50@ A3
date	:	April 19
drawing number	:	1849.DR01
drawn by	:	PB

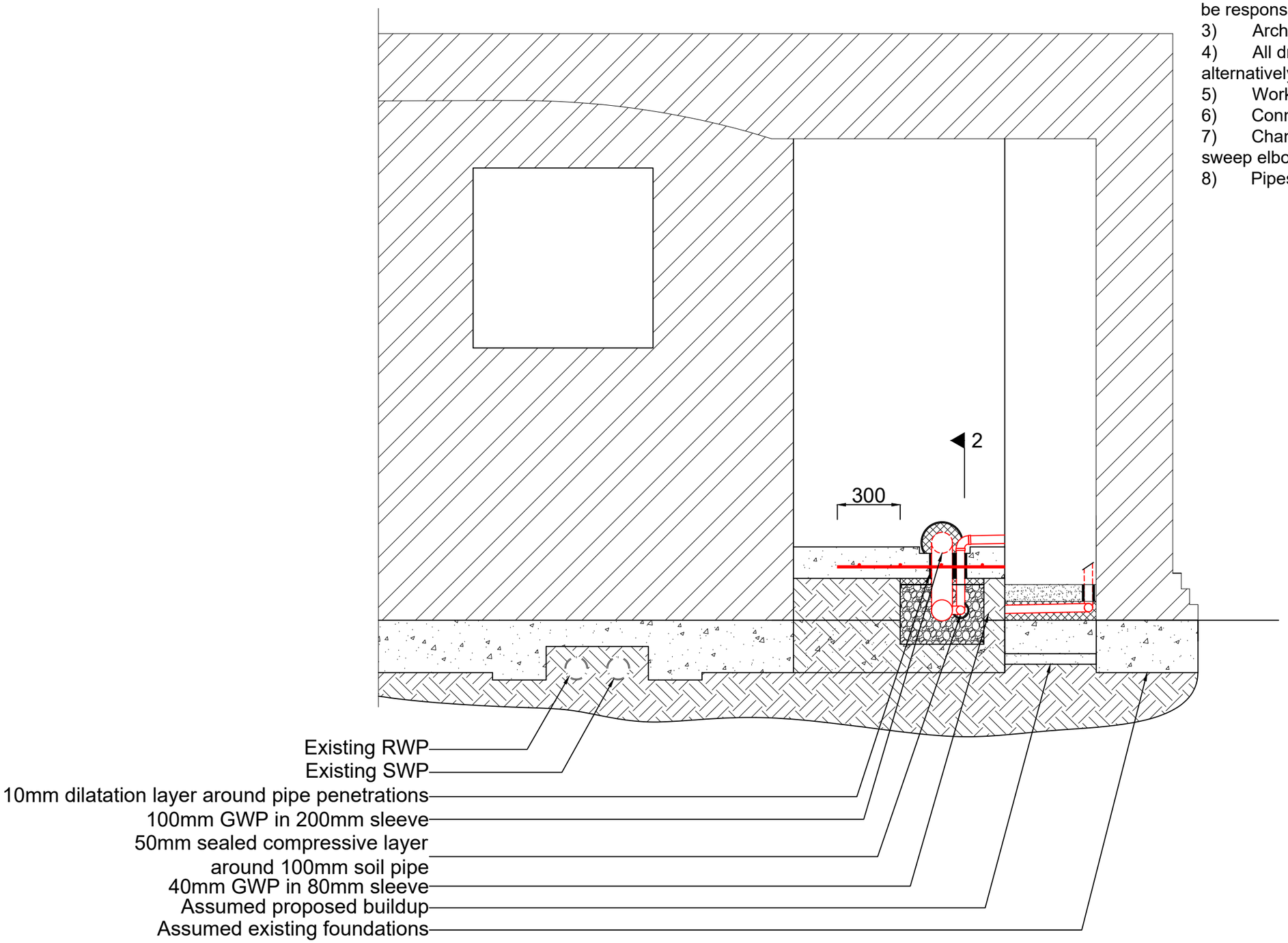
project : 24 Chalcot Crescent, NW1 8YE

client : Mr & Mrs Dean

drawing title : Proposed Drainage Layout

General Notes:

1) All Dimensions are in millimeters unless otherwise noted.
2) Do not scale from these drawings, working dimensions to be responsibility of an architect/contractor.
3) Architectural details shown are indicative only.
4) All drainage to comply with Approved Documents H or alternatively with relevant British Standards
5) Workmanship to BS 8000
6) Connect to existing drainage using flexible connectors
7) Change in the flow direction to be achieved either by long sweep elbow or at 45° angle
8) Pipes laid in Clay to be of Vitrified Clay



Section 1-1
Scale 1:20

BY	COMMENTS	DATE
PB	Change of layout	21/03/19
PB	Change of layout	01/04/19
PB	Change of layout	09/04/19

STATUS:	Rev.
CONSTRUCTION	C.4

BYTNAR
ENGINEERING SOLUTIONS
ALTERATIONS | EXTENSIONS | NEW BUILDS
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scale	:	1: 50@ A3
date	:	April 19
drawing number	:	1849.DR02
drawn by	:	PB

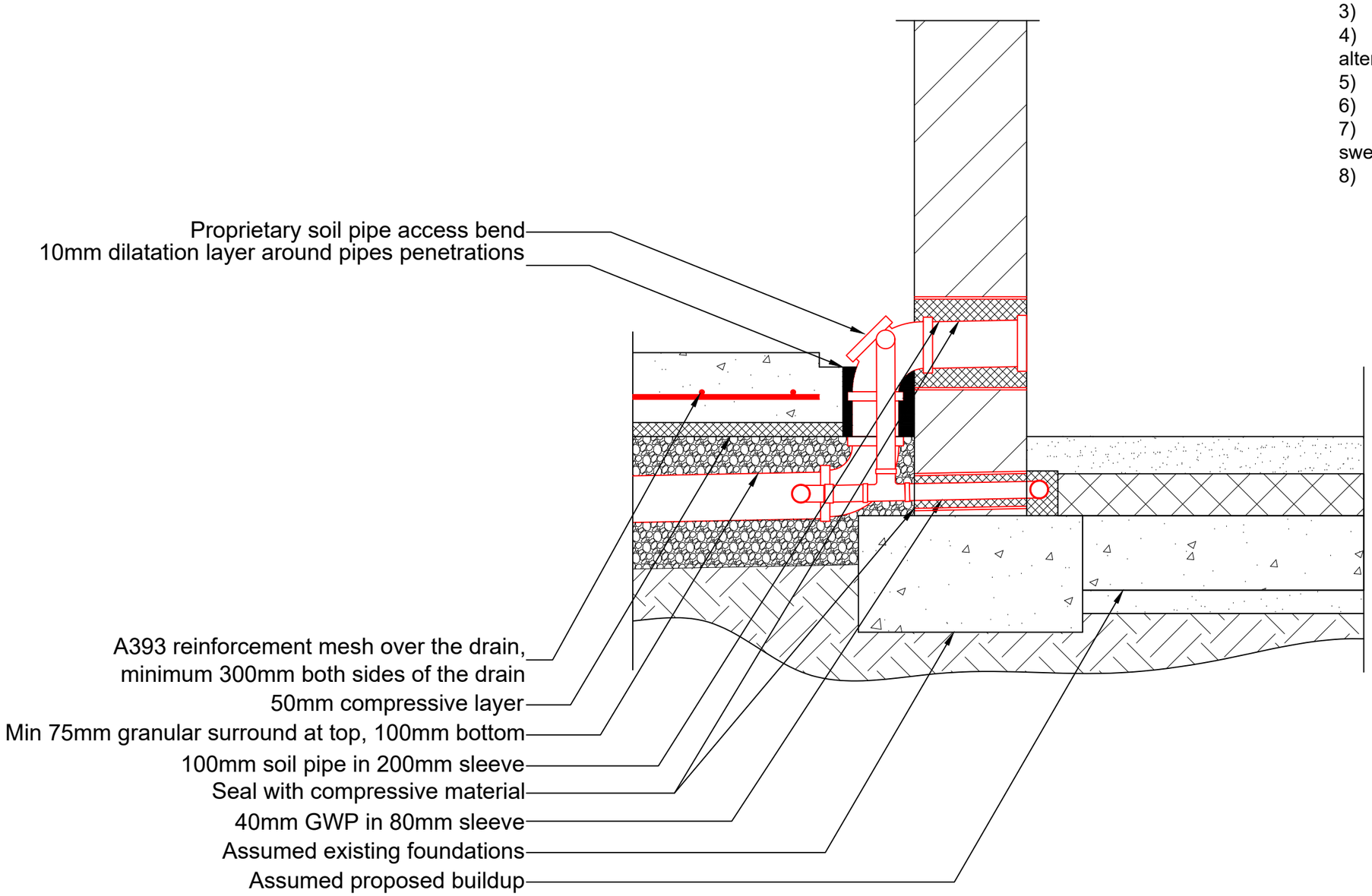
project : 24 Chalcot Crescent, NW1 8YE

client : Mr & Mrs Dean

drawing title : Proposed Section 1:1

General Notes:

1) All Dimensions are in millimeters unless otherwise noted.
2) Do not scale from these drawings, working dimensions to be responsibility of an architect/contractor.
3) Architectural details shown are indicative only.
4) All drainage to comply with Approved Documents H or alternatively with relevant British Standards
5) Workmanship to BS 8000
6) Connect to existing drainage using flexible connectors
7) Change in the flow direction to be achieved either by long sweep elbow or at 45° angle
8) Pipes laid in Clay to be of Vitrified Clay



Section 2-2
Scale 1:10

BY	COMMENTS	DATE
PB	Change of layout	01/04/19
PB	Change of layout	09/04/19

STATUS:	Rev.
CONSTRUCTION	C.3

BYTNAR
ENGINEERING SOLUTIONS
ALTERATIONS | EXTENSIONS | NEW BUILDS
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scale	:	1: 50@ A3
date	:	April 19
drawing number	:	1849.DR03
drawn by	:	PB

project : 24 Chalcot Crescent, NW1 8YE

client : Mr & Mrs Dean

drawing title : Proposed Section 2:2