

Appendix C

C.1 Utilities Information

The information contained in this appendix refers to the utilities identified within the park or adjacent to the park. Further information received as part of the utilities search is provided on a CD with this report.

Request Status Report

12454

Selly Oak Park / Harbourne Lane, Birmingham

OSGR:403728,282928

B29 6ST

Date Requested: 06-Nov-2009

Utility	Status	Response	Notes
Affiniti (KCOM)	Received	Not affected	Website used
Birmingham City Council	Received	Not affected	Drainage
Birmingham City Council	See Notes	Affected	Traffic Control Equipment
British Gas C/O ES Pipelines	Received	Not affected	
British Telecommunications Plc	Received	Affected	
Cable & Wireless	Received	Not affected	
Central Networks Ltd	Received	Affected	Electricity
EasyNet Telecom Ltd	Received	Not affected	
Environment Agency	See Notes	Affected	See letter
Envoy	Received	Not affected	
FibreSpan	Received	Not affected	
Fujitsu Telecommunications Europe Ltd	Received	Not affected	
Gamma Telecommunications	Received	Not affected	
Gas Transportation Company	Received	Not affected	
Global Crossing (Instalcom)	Received	Not affected	
Interoute (Ringway/Beach/51 degrees)	Received	Not affected	
Line Search (Fisher German)	Received	Not affected	
McNicholas [Colt Networks]	Received	Not affected	
McNicholas [KPN Networks]	Received	Not affected	
McNicholas [TATA networks]	Received	Not affected	
Network Rail - London & North West	Sent	No Response Received	
Severn Trent Water Ltd	Received	Affected	Water & Sewer
Telnet on behalf of Teliasonera	Received	Not affected	
TrafficMaster Plc	Received	Not affected	
Transco (Gas)	Received	Affected	
Verizon Business	Received	Not affected	
Virgin Media	Sent	No Response Received	
Vtesse Networks	Sent	No Response Received	

13 November 2009

Aslam.Bukhari@atkinsglobal.com

Dear Mr. Bukhari,

SELLY OAK PARK / HARBORNE LANE – BIRMINGHAM B29 6ST

Thank you for your e-mail dated 6th November 2009.

With regard to the above location, we do own traffic signal equipment in the vicinity you wish to commence work.

Please find attached sheets.

I trust the above is satisfactory.

Yours faithfully

Mohammed Ismail - Technical Officer
Traffic Management Services – UTC
Highways

Your Reference 12454/AB
Our Reference TMS/UTC/33420/MI
File Reference
CS/11/11/22

Environment and Culture
P.O. Box 37 (3/4)
1 Lancaster Circus Queensway
Birmingham B4 7DQ

Telephone	0121 303 1872
Facsimile	0121-303 6599
email	highways@birmingham.gov.uk
internet	www.birmingham.gov.uk

***To help us to respond to enquiries quickly – why not email them to:
highways@birmingham.gov.uk?***

BIRMINGHAM CITY COUNCIL

HIGHWAYS – UTC

Traffic Signal Equipment

During implementation of your works you may encounter Traffic Signal equipment in the footway and the carriageway within the area of your works.

Traffic Signal equipment consists of:

- 1 Equipment cabinets
- 2 Signal pedestals and signal heads
- 3 Cables to pedestals
- 4 Cables to vehicle detection
- 5 Vehicle detection

1 Equipment cabinets

These are usually grey in colour 450X600 mm or units on short pedestals. All cabinets will have cable at less than 500 mm depth within a 750 mm radius. This is necessary for the cables to gain entry to the cabinets.

Many of the cables carry mains (240 V) supplies.

2 Signal pedestals and signal heads

These are positioned around the installation for the various parts of the signal installation

All will have cables at less than 500 mm depth within 750 mm of the pedestal. This is necessary for the cables to enter the cable access entry point.

Many cables carry mains (240 V) supplies.

3 Cables to pedestals

See 2 above.

4 Cables to vehicle detection

This will be of two types, those for detection of traffic approaching and those for traffic leaving.

Approaching detection may be as much as 130 m before the stopline
Leaving detection may be up to 50 m beyond the installation.

Cables should be in duct with at least 500 mm cover for most of their length.
Where the connection is made to the detection cable in the carriageway, cover is **ONLY 50mm**. This is a necessary part of the design. Great care is required at these points.

5 Vehicle detection

Vehicle detection consists of wires laid in purpose cut slots in the carriageway.
The depth of cut is just **50 mm**. This is necessary for them to work.

At most locations, they are clearly visible as a black rectangle, diamond or chevron in the carriageway. This is the pitch used to fill the slot after installation of the cable.

6 Training

If desired a five minute recognition training session can be arranged. Avoidance of damage by minor adjustment of excavations can avoid or reduce damage.

7 Damage

All damage will be charged for. The signals are installed under statutory powers, including the cables, which are necessarily at shallow depth. In many cases damage can be identified to the second, with an alarm in the Control Centre when it occurs.

Contacts

Traffic Control Operations Desk 0121 303 7370 (24hrs)

Traffic Control Operations FAX 0121 303 7193

email traffic.control@birmingham.gov.uk

Openreach Plant Maps Requested

NewSite Office (addresses can be located from [here](#))
National Freephone: 0800 616 866

Dear Sir/Madam,

Thank you for your request to: www.openreach.co.uk/networkinfo/

You have downloaded copies of our drawings marked up to show the approximate location of Openreach apparatus, which is present in the immediate vicinity of your works. It is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works made near to Openreach apparatus, which may, exist at various depths and may deviate, from the marked route.

To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of Openreach plant. Please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by your plant. In the event of clearance not being adequate we anticipate that your plant is either resited, or an order is placed with Openreach for rearrangements of its plant. If there are any difficulties with the Map please ring 0800 616866.

Please contact our Network Protection Service if required by dialling 0800 917 3993 or by Email on DBYD@openreach.co.uk giving seven days notice of your commencement date. This will provide you with on-site advice and a check of location for any Openreach apparatus.

Further to this, I hope the following points will assist you at the new development: -

Openreach has a licence obligation to provide service to any end customer requiring a connection. A Developer would not normally be charged for provision of service, our standard connection charges would apply to the end user when orders are placed with the communication provider of choice. However, should a Developer insist on an underground service in an area where Openreach plant is provided overhead, charges may be incurred.

When the Developer has obtained contract and planning permission Openreach would request a 'Clean', scaled Site Layout, Location Map and a covering letter be sent to the relevant newSite Office. We would particularly request that you give details of your programmed site start date and likely first occupancy date where possible. To obtain contact details of the newSite office covering the development area click on the URL below.

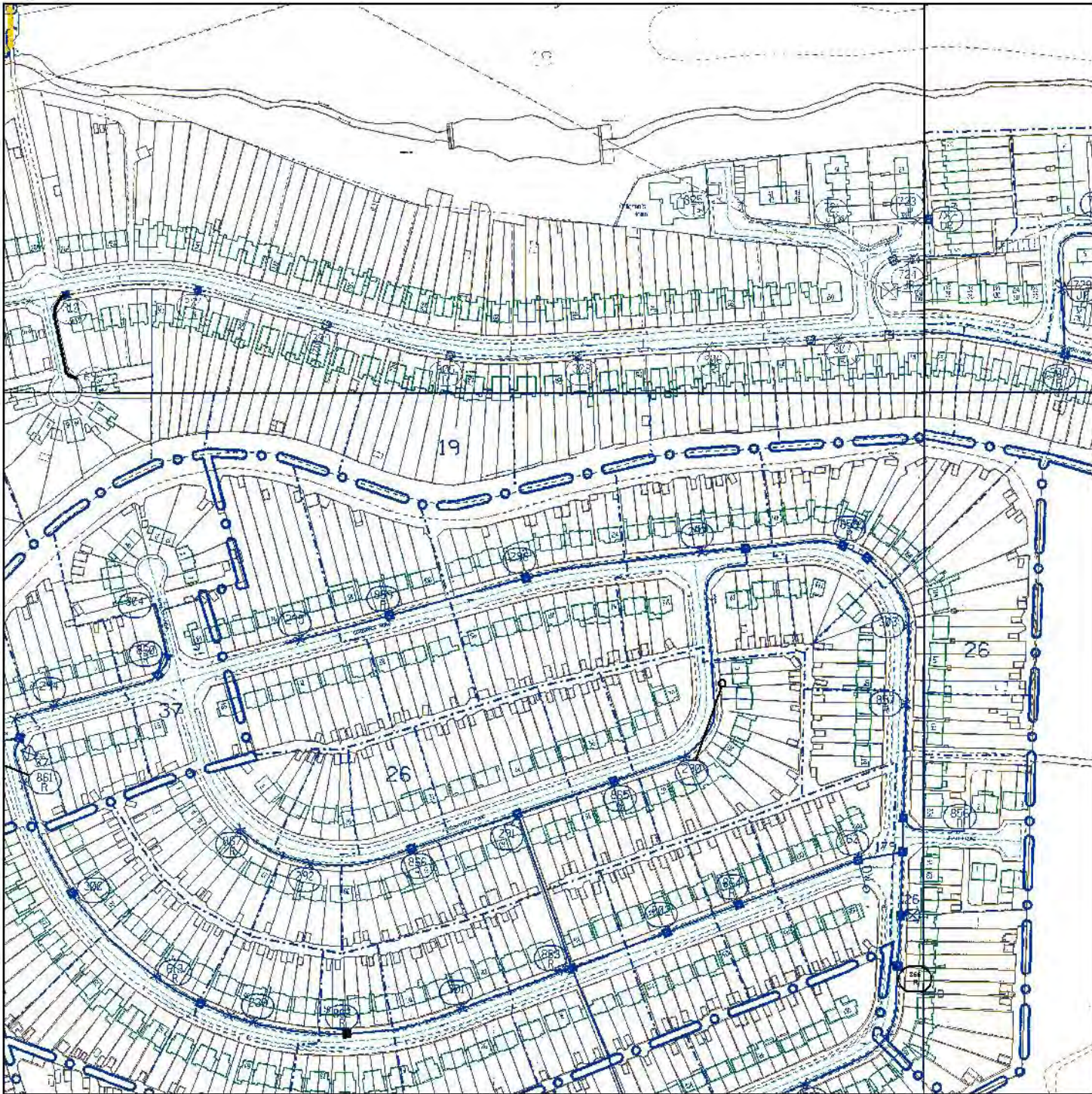
<http://www.openreach.co.uk/orpg/networkinfo/developnetwork/regionalcontacts.do>

Where a development affects existing Openreach apparatus in the public highway, the cost of any necessary protection or diversionary works must be borne by the Developer. In this case where a budget estimate is required a Site Plan, Location Map and a covering letter should be forwarded to the Repayments Project Office. Please visit <http://www.openreach.co.uk/orpg/networkinfo/alternetwork/alterationcontacts.do> for contact details of the Repayments Office covering the development area.

Yours faithfully,

Openreach newSites

Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08.00 to 17.00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

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KEY TO BT SYMBOLS

	UNDERGROUND PLANT		POLE
	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

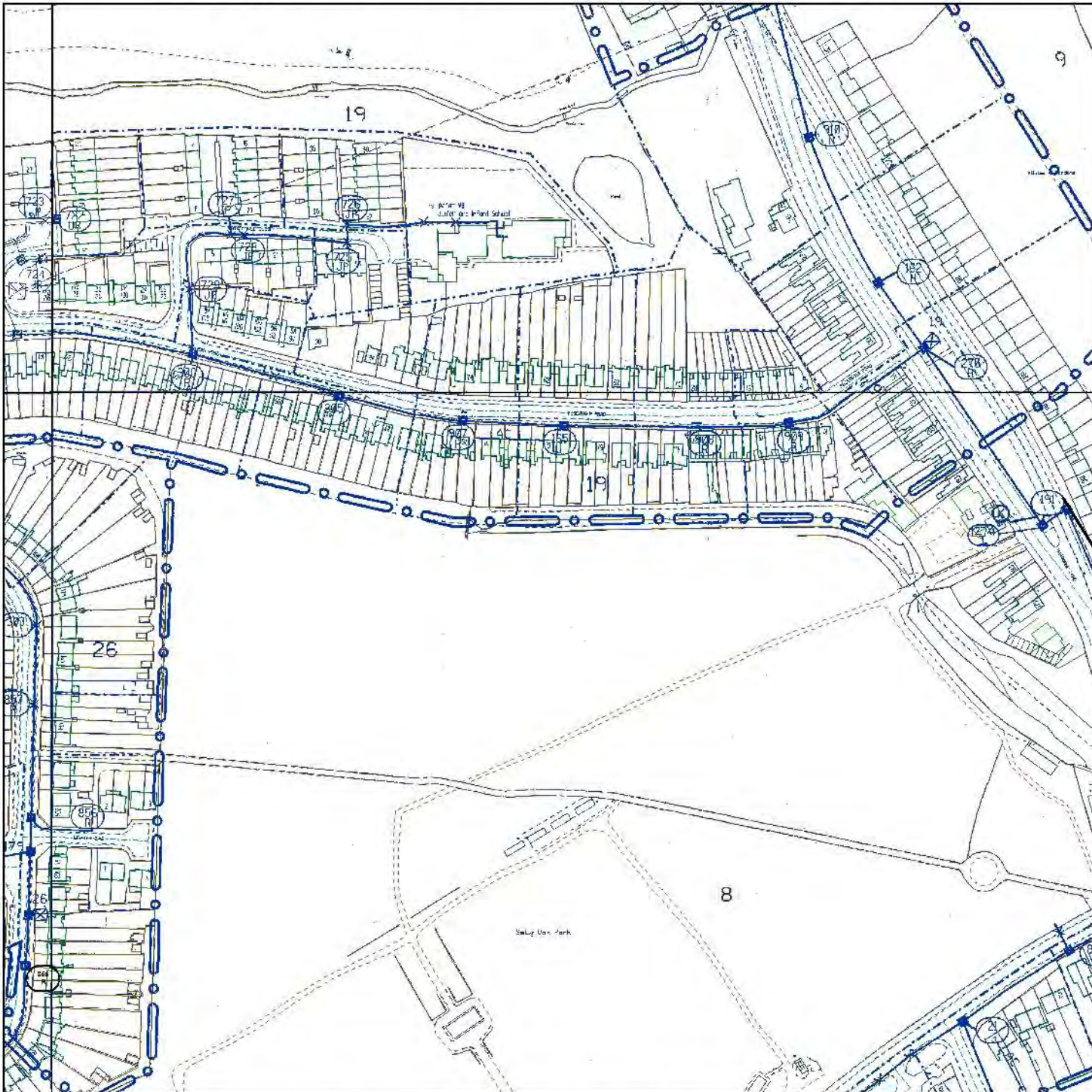
openreach
a BT Group business

BT ref: QTE12519Y

Map reference (centre): SP0332882928

Issued: 11/11/09 12:56:28

Maps by email Plant Information Reply



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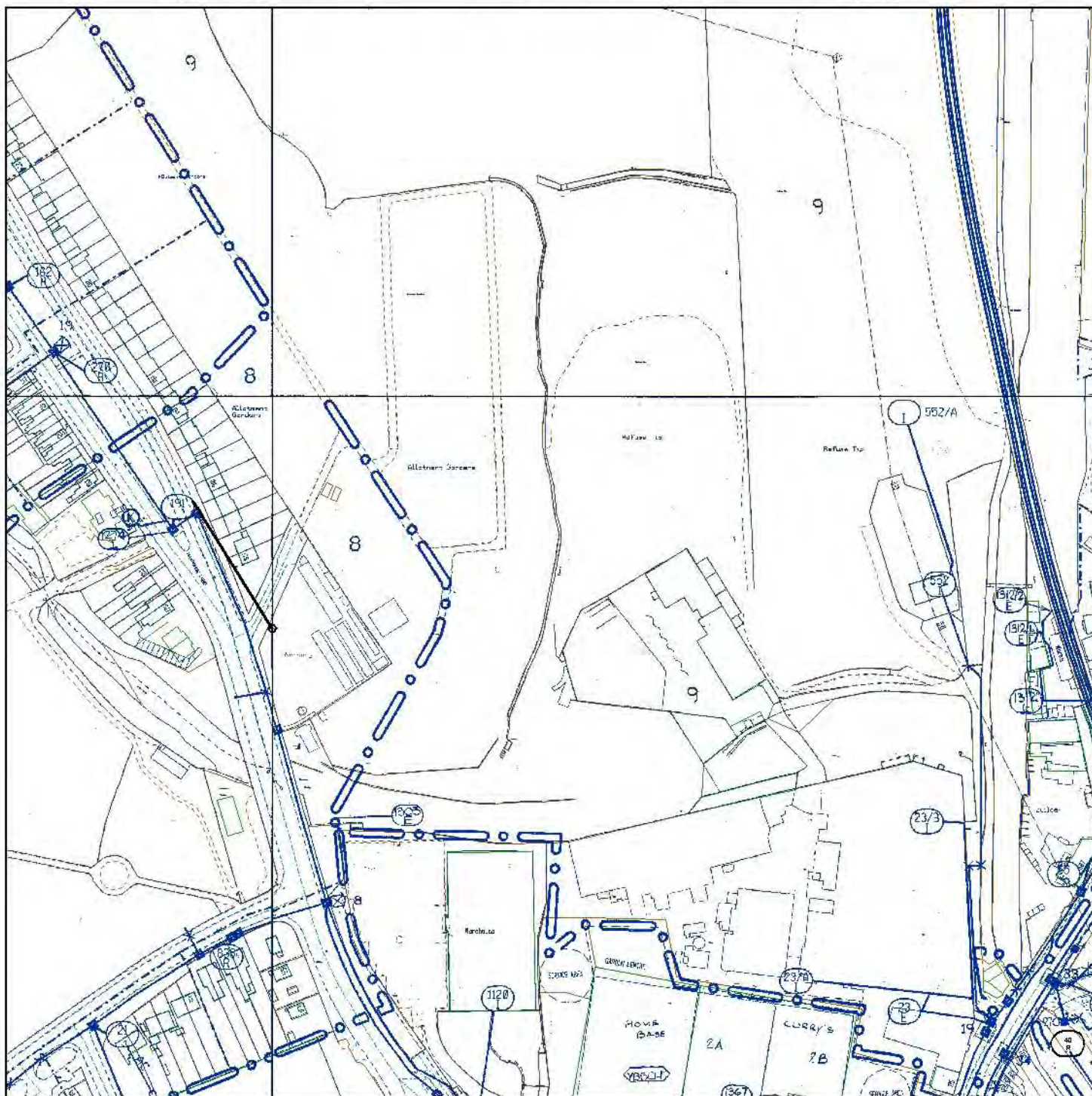
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BT ref: UDI125191

Map reference (centre): SP0372882928

Issued: 11/11/09 12:56:33

Maps by email Plant Information Reply



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DIAL BEFORE YOU DIG



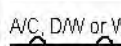



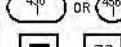

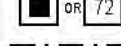





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ADVANCE NOTICE REQUIRED
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E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

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	OVERHEAD PLANT		CABINET
	JOINT BOX		BURIED JOINT
	DISTRIBUTION POINT		JOINTING POST
	MANHOLE		PROPOSED U/G
	DP BOUNDARY		PROPOSED O/H
	OTHER BT BOUNDARY		PROPOSED BOX

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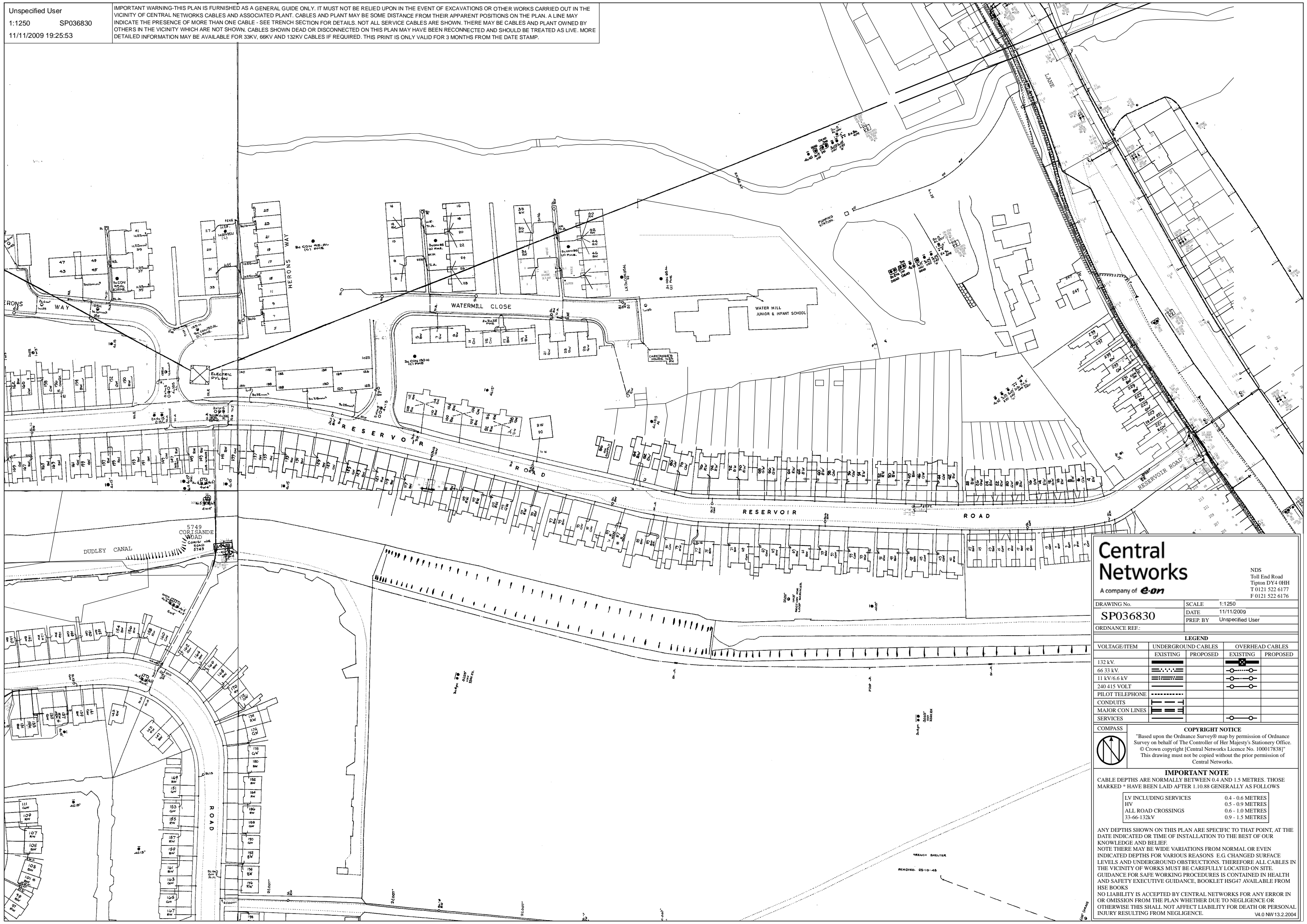
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BT ref: CBY12529J

Map reference (centre): SP0412882928

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 Tipton DY4 0HH
 T 0121 522 6177
 F 0121 522 6176

DRAWING No. SP036830	SCALE 1:1250
ORDNANCE REF:	DATE 11/11/2009
	PREP. BY Unspecified User

LEGEND				
VOLTAGE/ITEM	UNDERGROUND CABLES		OVERHEAD CABLES	
	EXISTING	PROPOSED	EXISTING	PROPOSED
132 kV.				
66 33 kV.				
11 kV/6.6 kV				
240 415 VOLT				
PILOT TELEPHONE				
CONDUITS				
MAJOR CON LINES				
SERVICES				

COMPASS

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LV INCLUDING SERVICES	0.4 - 0.6 METRES
HV	0.5 - 0.9 METRES
ALL ROAD CROSSINGS	0.6 - 1.0 METRES
33-66-132kV	0.9 - 1.5 METRES

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Unspecified User
 1:1250 SP040830
 11/11/2009 19:26:42

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DRAWING No. SP040830	SCALE 1:1250
DATE 11/11/2009	PREP BY Unspecified User
ORDNANCE REF:	

VOLTAGE/ITEM	UNDERGROUND CABLES		OVERHEAD CABLES	
	EXISTING	PROPOSED	EXISTING	PROPOSED
132 kV.				
66 33 kV.				
11 kV/6.6 kV				
240 415 VOLT				
PILOT TELEPHONE				
CONDUITS				
MAJOR CON LINES				
SERVICES				

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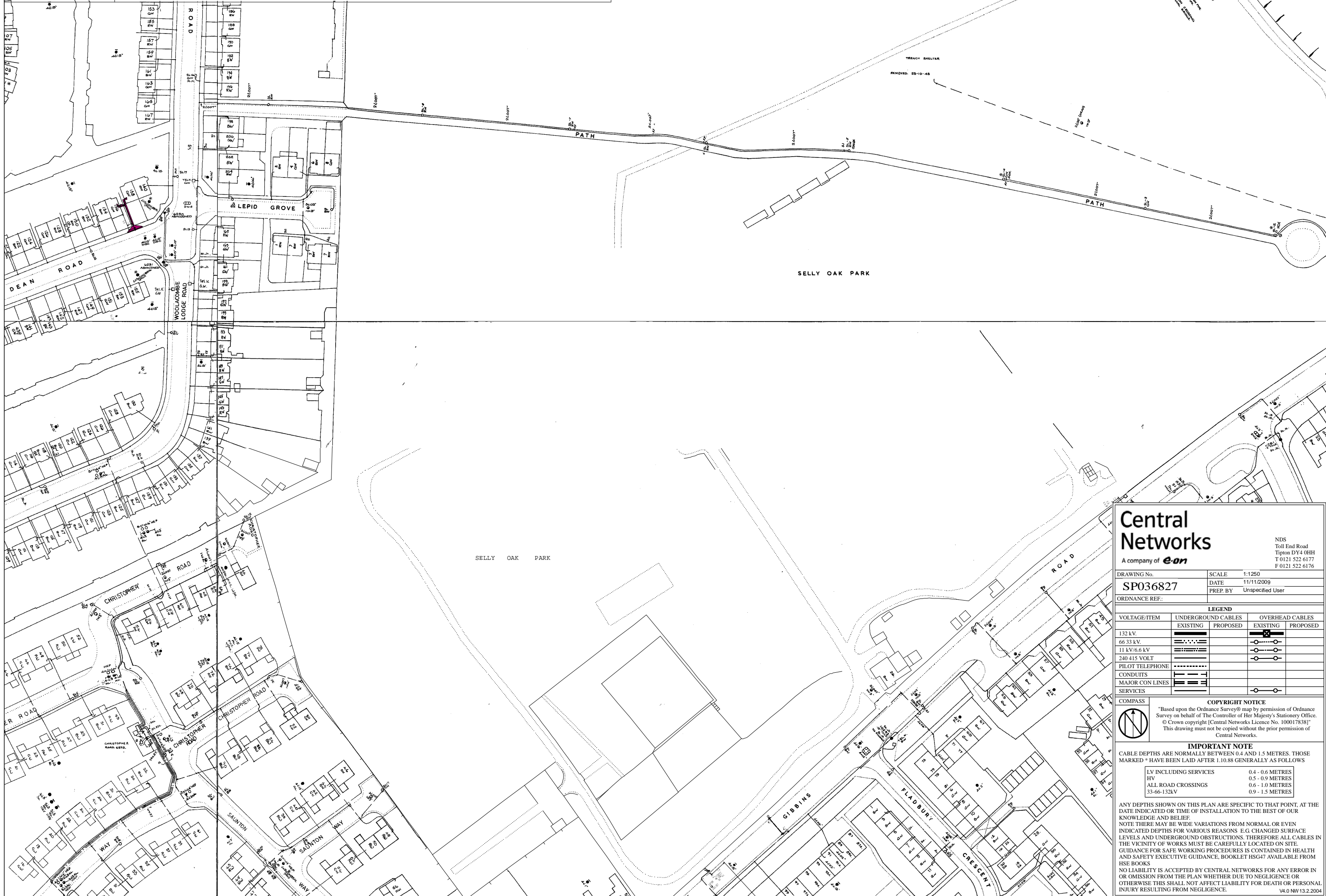
IMPORTANT NOTE

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LV INCLUDING SERVICES	0.4 - 0.6 METRES
HV	0.5 - 0.9 METRES
ALL ROAD CROSSINGS	0.6 - 1.0 METRES
33-66-132kV	0.9 - 1.5 METRES

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DRAWING No.	SCALE	1:1250
SP036827	DATE	11/11/2009
ORDNANCE REF:	PREP. BY	Unspecified User

VOLTAGE/ITEM	UNDERGROUND CABLES		OVERHEAD CABLES	
	EXISTING	PROPOSED	EXISTING	PROPOSED
132 kV.				
66 33 kV.				
11 kV/6.6 kV				
240 415 VOLT				
PILOT TELEPHONE				
CONDUITS				
MAJOR CON LINES				
SERVICES				

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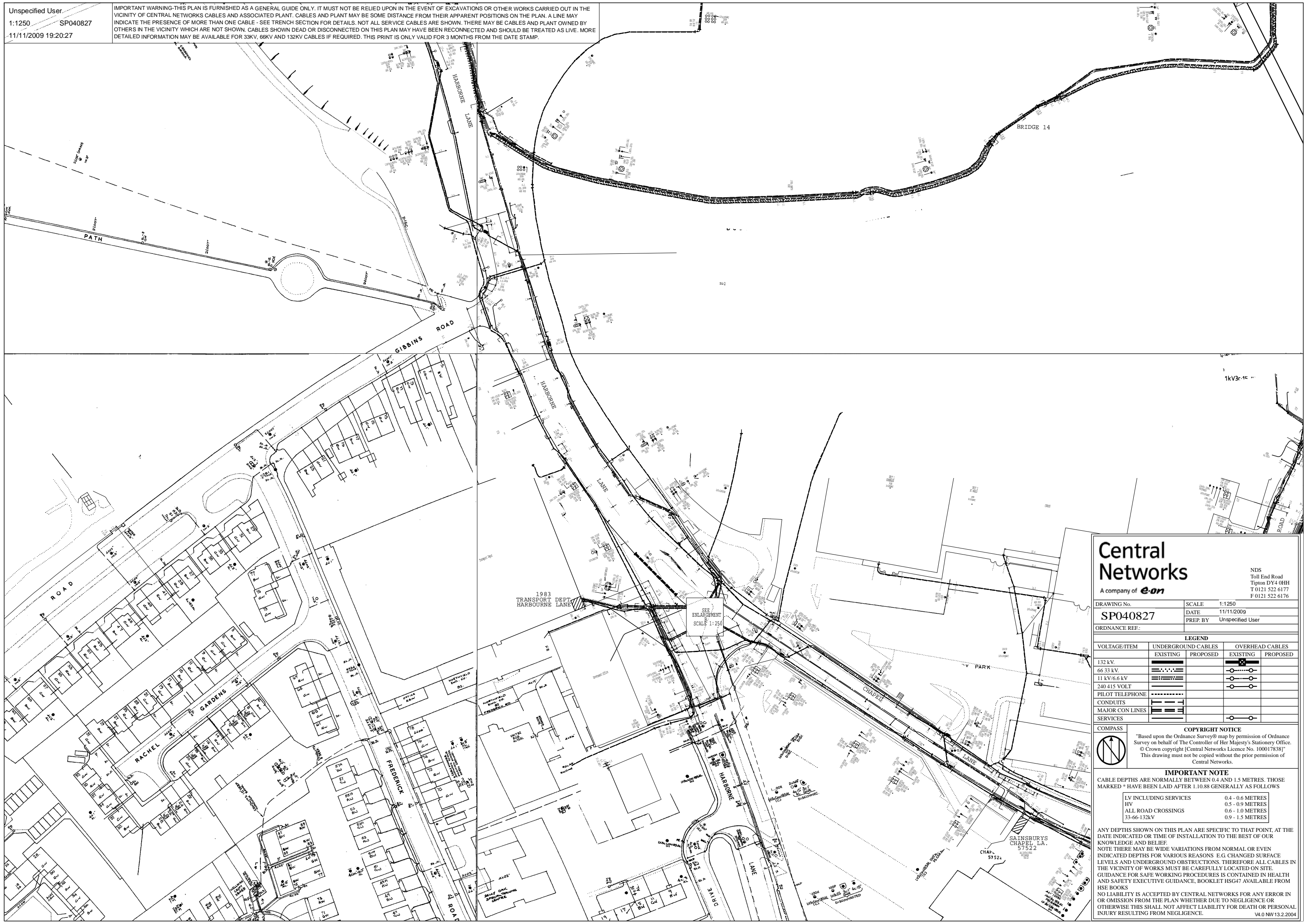
IMPORTANT NOTE
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LV INCLUDING SERVICES	0.4 - 0.6 METRES
HV	0.5 - 0.9 METRES
ALL ROAD CROSSINGS	0.6 - 1.0 METRES
33-66-132KV	0.9 - 1.5 METRES

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V4.0 NW 13.2.2004

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DRAWING No.	SCALE	1:1250
SP040827	DATE	11/11/2009
ORDNANCE REF:	PREP. BY	Unspecified User

VOLTAGE/ITEM	UNDERGROUND CABLES		OVERHEAD CABLES	
	EXISTING	PROPOSED	EXISTING	PROPOSED
132 kV.				
66 33 kV.				
11 kV/6.6 kV				
240/415 VOLT				
PILOT TELEPHONE				
CONDUITS				
MAJOR CON LINES				
SERVICES				

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N.B SECTIONS G-G AND F-F, IN 12 WAY DUCT ONE OF THE FOUR 11KV3c-15 IS DEAD, IT IS NOT POSSIBLE TO ASCERTAIN WHICH.

Central Networks

A company of **e-on**

NDS
 Toll End Road
 Tipton DY4 0HH
 T 0121 522 6177
 F 0121 522 6176

DRAWING No.	SCALE	1:1250
SP044827	DATE	11/11/2009
ORDNANCE REF:	PREP. BY	Unspecified User

VOLTAGE/ITEM	UNDERGROUND CABLES		OVERHEAD CABLES	
	EXISTING	PROPOSED	EXISTING	PROPOSED
132 kV.				
66 33 kV.				
11 kV/6.6 kV				
240 415 VOLT				
PILOT TELEPHONE				
CONDUITS				
MAJOR CON LINES				
SERVICES				

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 CABLE DEPTHS ARE NORMALLY BETWEEN 0.4 AND 1.5 METRES. THOSE MARKED * HAVE BEEN LAID AFTER 1.10.88 GENERALLY AS FOLLOWS

LV INCLUDING SERVICES	0.4 - 0.6 METRES
HV	0.5 - 0.9 METRES
ALL ROAD CROSSINGS	0.6 - 1.0 METRES
33-66-132kV	0.9 - 1.5 METRES

ANY DEPTHS SHOWN ON THIS PLAN ARE SPECIFIC TO THAT POINT, AT THE DATE INDICATED OR TIME OF INSTALLATION TO THE BEST OF OUR KNOWLEDGE AND BELIEF.
 NOTE THERE MAY BE WIDE VARIATIONS FROM NORMAL OR EVEN INDICATED DEPTHS FOR VARIOUS REASONS E.G. CHANGED SURFACE LEVELS AND UNDERGROUND OBSTRUCTIONS. THEREFORE ALL CABLES IN THE VICINITY OF WORKS MUST BE CAREFULLY LOCATED ON SITE.
 GUIDANCE FOR SAFE WORKING PROCEDURES IS CONTAINED IN HEALTH AND SAFETY EXECUTIVE GUIDANCE, BOOKLET HSG47 AVAILABLE FROM HSE BOOKS.
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Hemalatha, Mani

From: Customer Contact, Thames Northeast [thnortheast@environment-agency.gov.uk]

Sent: 06 November 2009 21:34

To: Hemalatha, Mani

Subject: NE22076NS:-12452/HM,Royal Brompton Hospital,Sydney Street, London

Dear Hemalatha

Enquiry regarding 12454/HM – Royal Brompton hospital, SW3 6NP

Thank you for your enquiry.

Although we are classed as a statutory undertaker for certain purposes, we do not generally have plant equipment or pipelines situated in the public highway.

Our consent as a regulator may be required if you are intending to carry out work within 8 metres of a Main River as defined in the Water Resources Act 1991 or within 16 metres of the Tidal Thames.

This reply has been drafted without conducting a specific search of our records. If you have reason to think that your proposal will affect land or equipment which we own please resubmit your enquiry making this clear.

Please note that you should not treat this response to your enquiry as replacing the need to make any other appropriate search, enquiry or inspection.

If I can be of any further help, please contact me.

Yours sincerely

Natalie Stokes

External Relations Officer

Direct dial 01707 632 505

Direct fax 01707 632 610

Direct email thnortheast@environment-agency.gov.uk

From: Hemalatha, Mani [mailto:Hemalatha.Mani@atkinsglobal.com]

Sent: 06 November 2009 05:13

To: plant@espipelines.com; National Plant Enquiry's; nrswa@uk.easynet.co.uk; kjeffery@fibrespan.com; plantenq@mailman.ftel.co.uk; streetworks@gammatelecom.com; nrswa@gtc-uk.co.uk; PlantEnquiries@instalcom.co.uk; plantenquiries@netsphere24.co.uk; plantenquiries@mcnicholas.co.uk; Enquiries, Unit; opesoutheast@networkrail.co.uk; Telenttelia.Plantenquiries@telent.com; lulcedip@tube.tfl.gov.uk

Subject: Ref 091106/jc05 ER Thames NE ATKINS STATS PLANT ENQUIRY -12452/HM,Royal Brompton Hospital,Sydney Street, London

09/11/2009

Click [here](#) to report this email as spam.

Ref: - 12452/HM

Location Name: - Royal Brompton Hospital, Sydney Street, London

Postcode: - SW3 6NP

OS Grid Reference: - 527090,178341

Description of works: Street improvements

Reply Required By: - November 19th, 2009

McNic - please reply for KPN, COLT and TATA

Please find attached a plant enquiry with corresponding map for your attention. Please could you send us plans showing the location of your company's affected plant to the below address quoting our reference number and the name of the scheme shown above.

If you do not have any apparatus in this area, please could you send written confirmation to declare that no apparatus is affected.

Please don't hesitate to contact me with any questions.

Regards,

Hemalatha.M
Stats CoOrdinator
Telecoms Division

ËTKINS

The Hub, 500 Park Avenue,
Aztec West, Almondsbury,
Bristol. BS32 4RZ

☎ Office: 01454 662392 or 01454 662396

☎ Fax: 01454 663331

✉ E-Mail: hemalatha.mani@atkinsglobal.com

www.atkinsglobal.com

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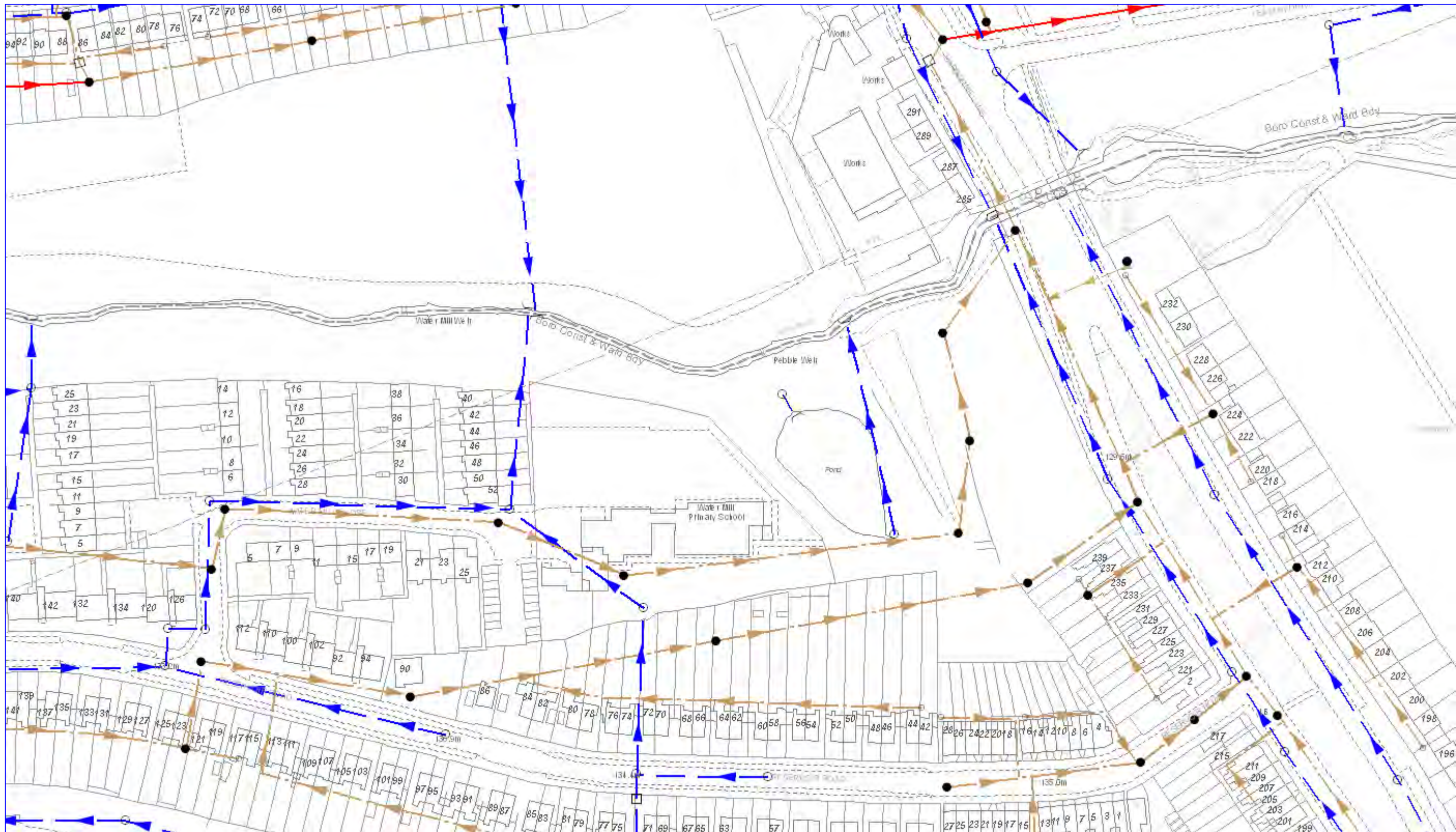
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09/11/2009

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 Edgbaston
 Birmingham
 B16 9DD
 Telephone: 0845 601 6616

Sewer Record

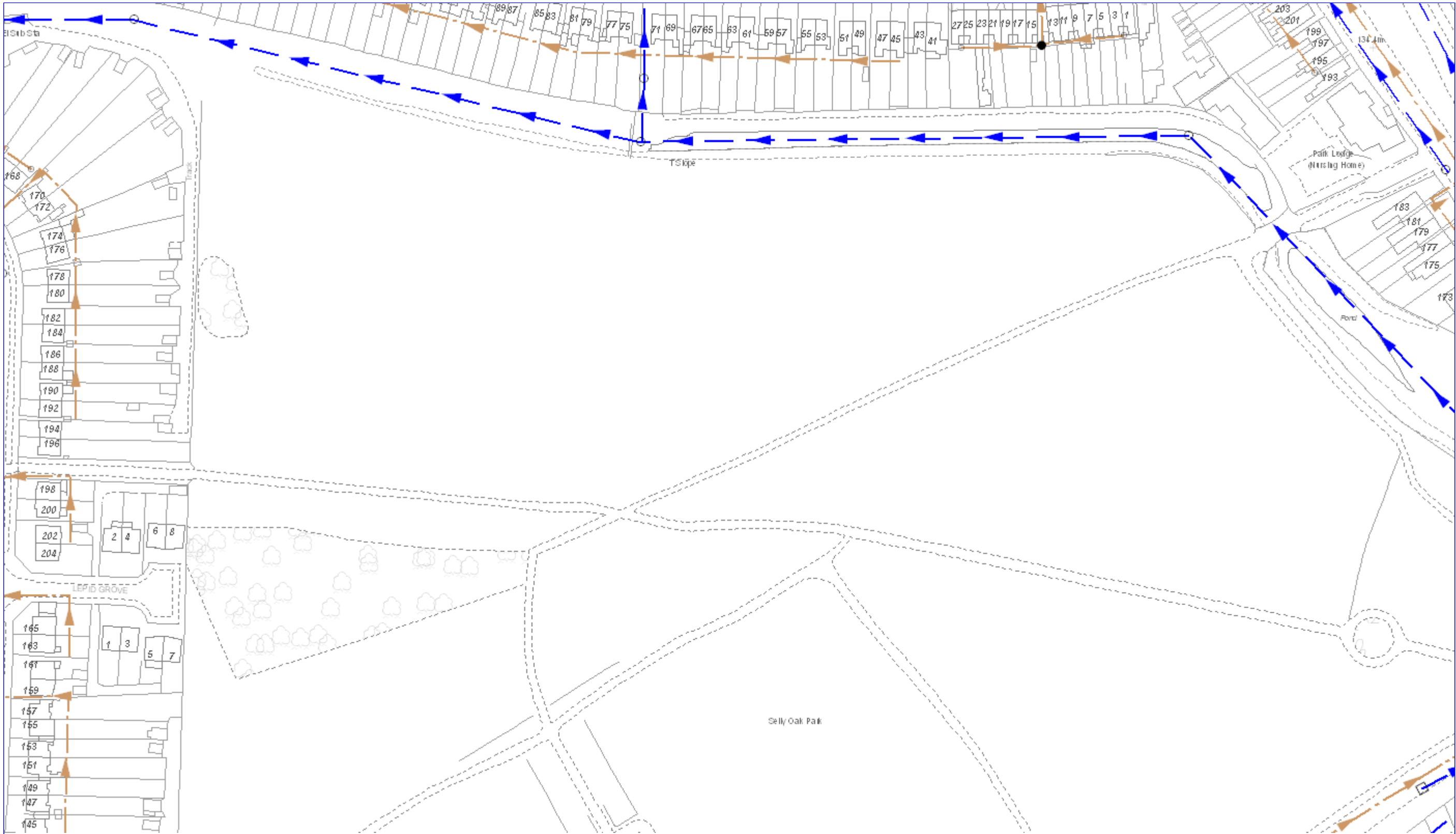
O/S Map scale: Approx. 1:1250
 Date of Issue: 11 11 2009
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This map is centered upon OS Grid Ref:
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Public foul gravity	Public combined gravity	Public surface water gravity
Pressurised foul	Pressurised combined	Pressurised surface water
Section 104 sewers are shown in green	Private sewers are shown in magenta	All Non-Sewer Standard (NSS) Lateral Drains are shown in Orange
Abandoned sewer	Culverted watercourse	Highway drain
Manhole - foul / combined	Manhole - surface water	Duct
Lamphole	Blind shaft	Head node
Overflow	Outfall	High voltage cable
Combined Lateral Drain (SS)	Low voltage cable	Instrumentation
Foul Lateral Drain (SS)		
Surface Water Lateral Drain (SS)		



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Sewer Record

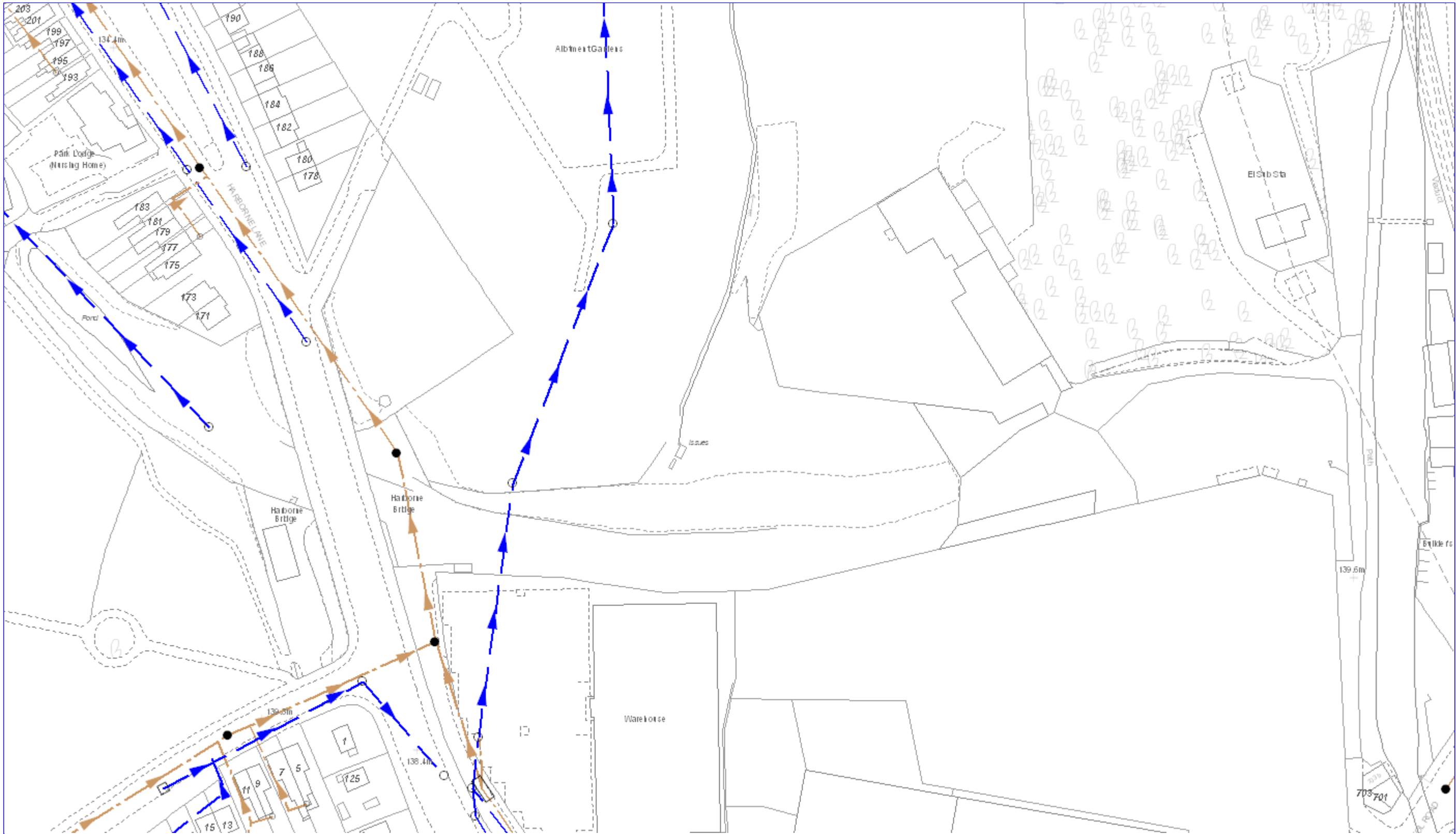
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Date of Issue: 11 11 2009

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	Public foul gravity		Public combined gravity		Public surface water gravity
	Pressurised foul		Pressurised combined		Pressurised surface water
	Section 104 sewers are shown in green		Private sewers are shown in magenta		All Non-Sewer Standard (NSS) Lateral Drains are shown in Orange
	Abandoned sewer		Culverted watercourse		Highway drain
	Manhole - foul / combined		Manhole - surface water		Duct
	Lampole		Blind shaft		Head node
	Overflow		Outfall		High voltage cable
	Combined Lateral Drain (SS)		High voltage cable		Low voltage cable
	Foul Lateral Drain (SS)		Low voltage cable		Instrumentation
	Surface Water Lateral Drain (SS)				



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Sewer Record

O/S Map scale: Approx. 1:1250

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Section 104 sewers are shown in green
 Private sewers are shown in magenta
 All Non-Sewer Standard (NSS) Lateral Drains are shown in Orange

O/S Map scale: Approx. 1:1250
Date of Issue: 11 11 2009
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Sewer Record

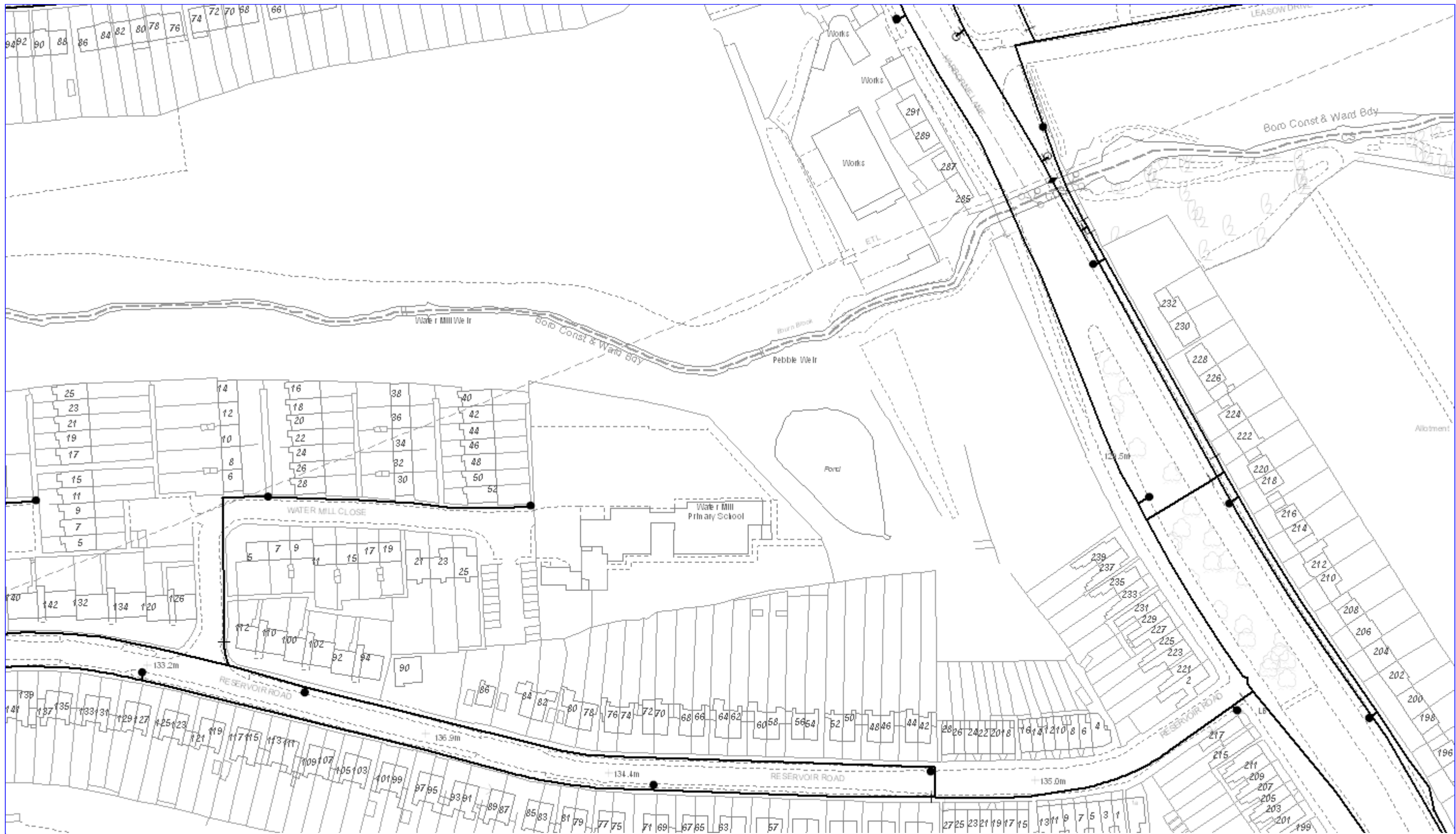
This map is centered upon OS Grid Ref:
 x - 403719.0 y - 282595.0

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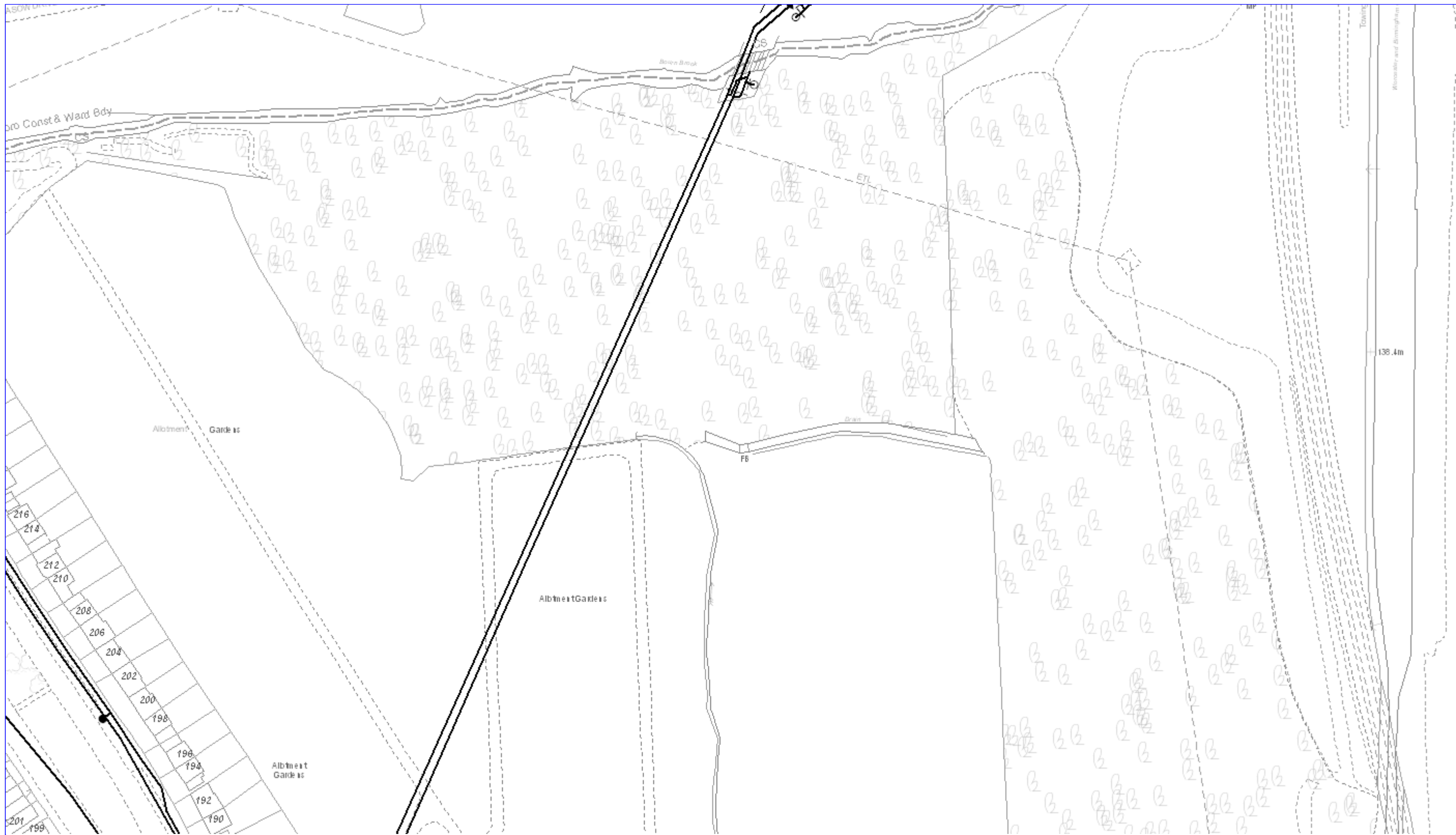


Water Mains Record

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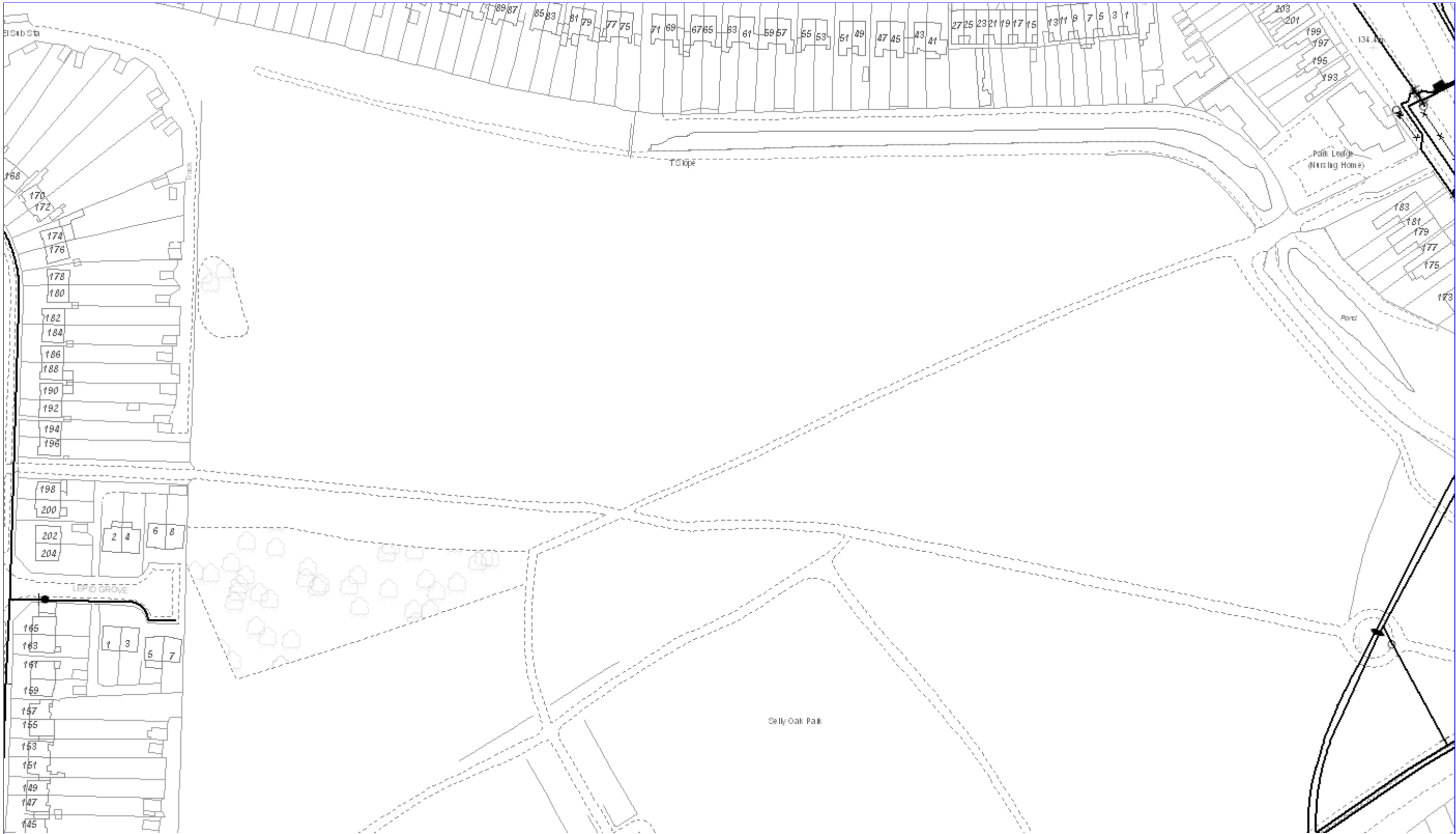


Water Mains Record

This map is centered upon OS Grid Ref:
 x - 403320.0 y - 282850.0

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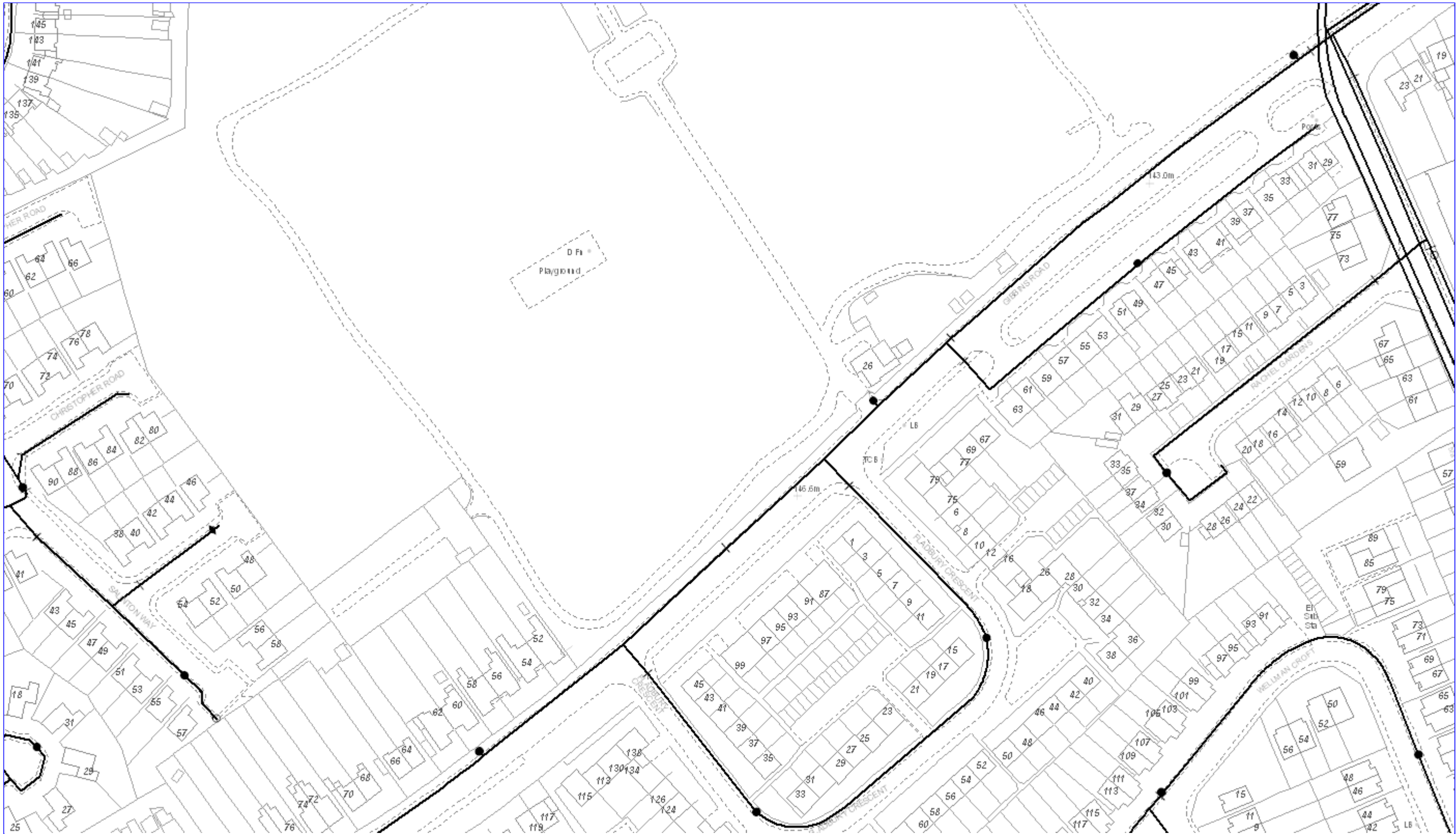
Water Mains Record

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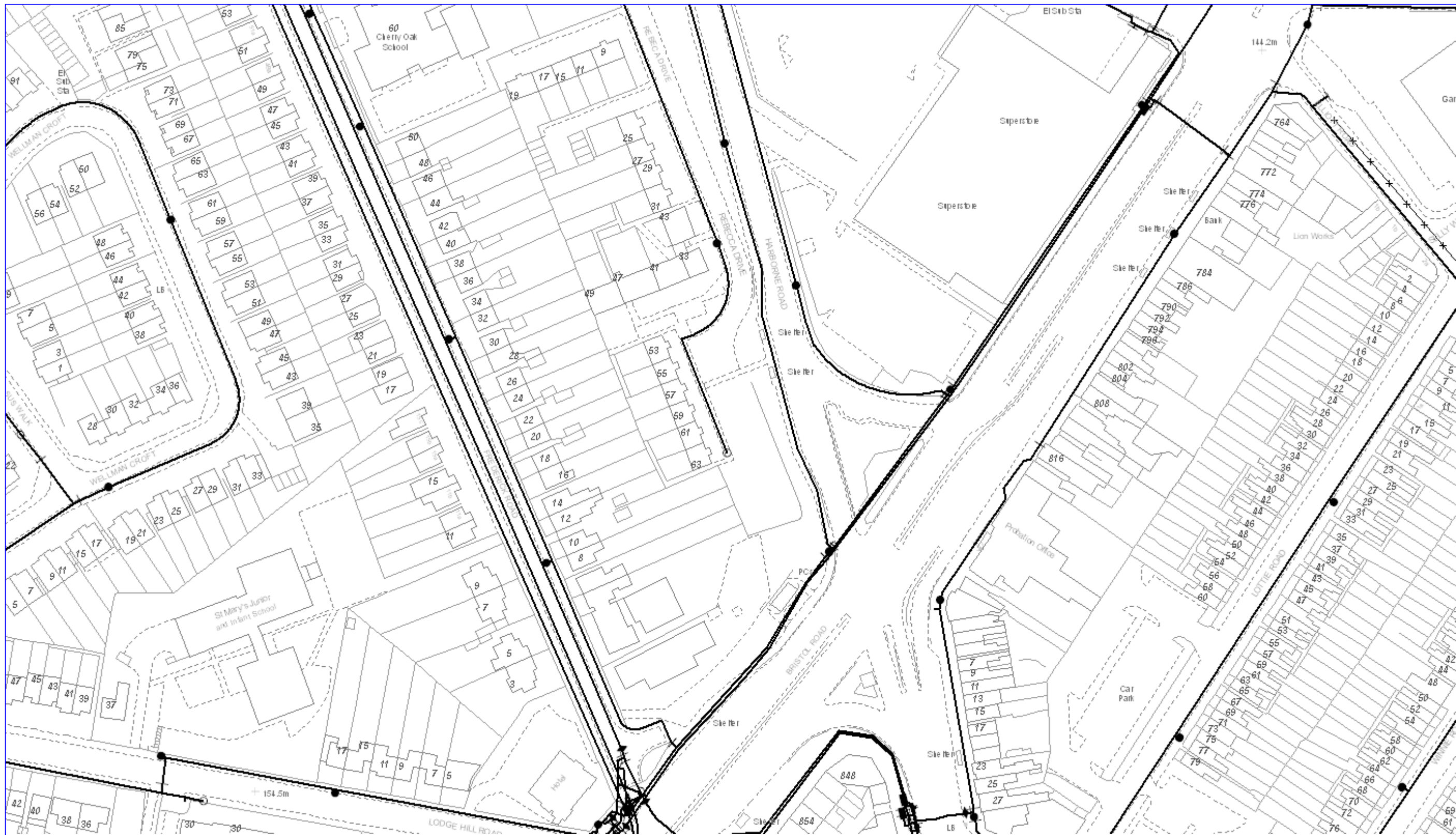


Water Mains Record

This map is centered upon OS Grid Ref:
x - 403719.0 y - 282595.0

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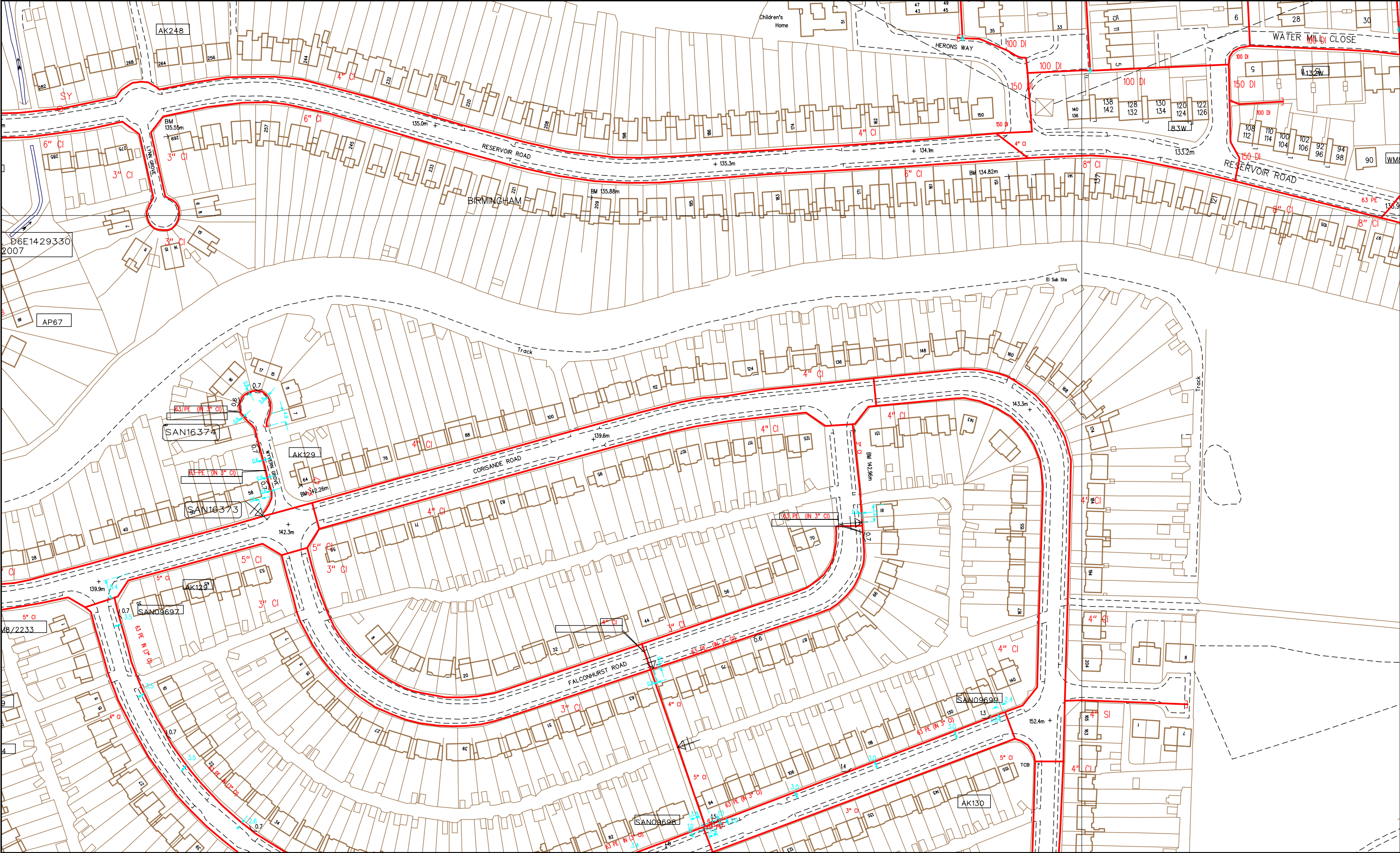


Water Mains Record

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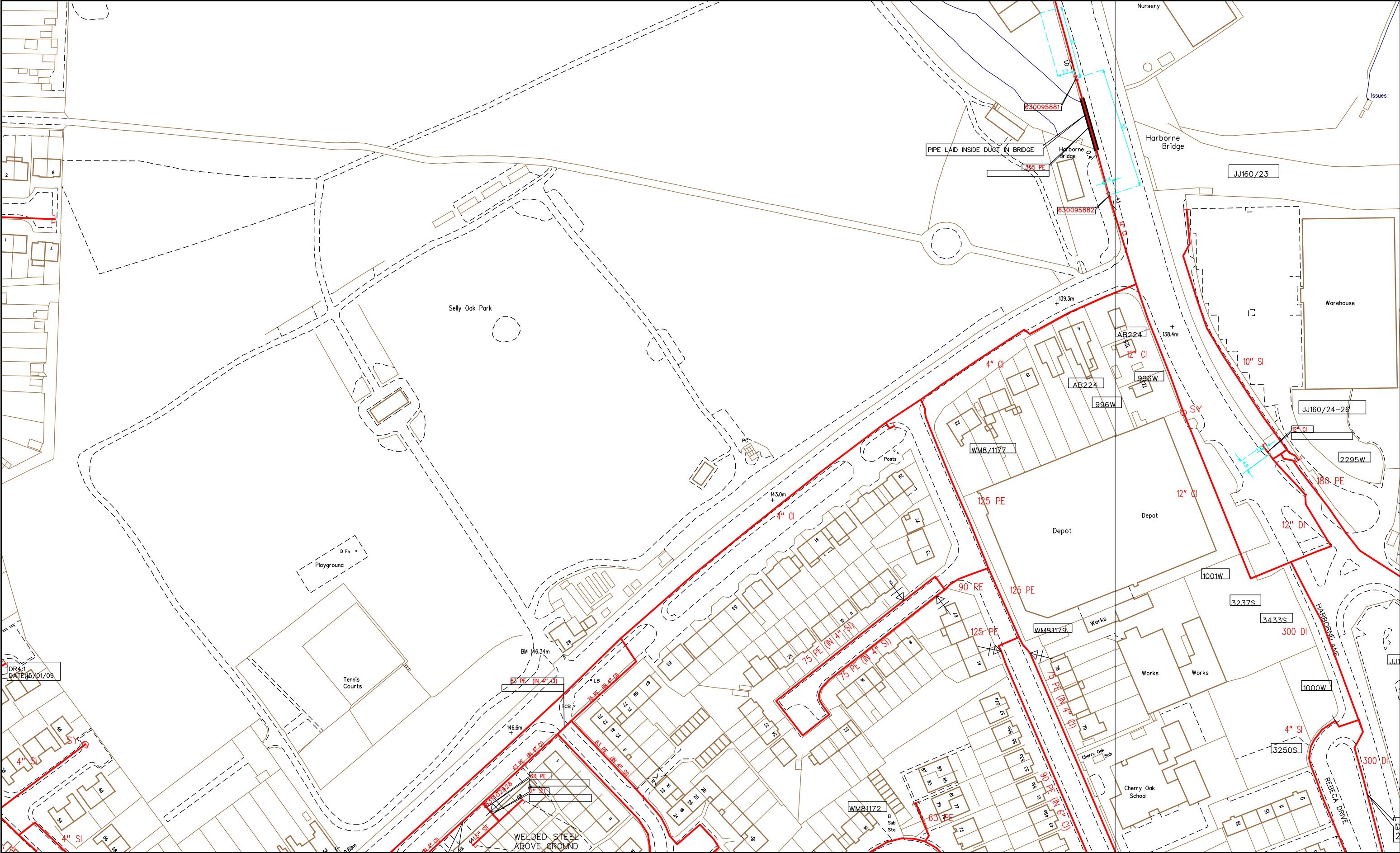
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USER ID: STAC4400	MP MAINS	
DATE: 03/12/2009	IP MAINS	
EXTRACT DATE: 11/09/2009	LHP MAINS	
MAP REF: SP0382	NHP MAINS	
CENTRE: 403337, 282909	Valves Depth of Cover Syphons Diameter Change Material Change	

This plan shows those pipes owned by National Grid Gas plc in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Gas plc or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (9am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

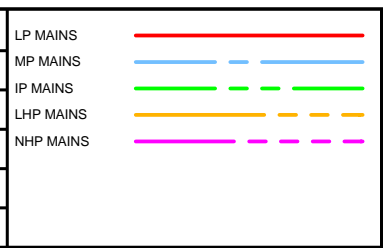
MAPS Viewer Version 5.6.3.0

Local Machine

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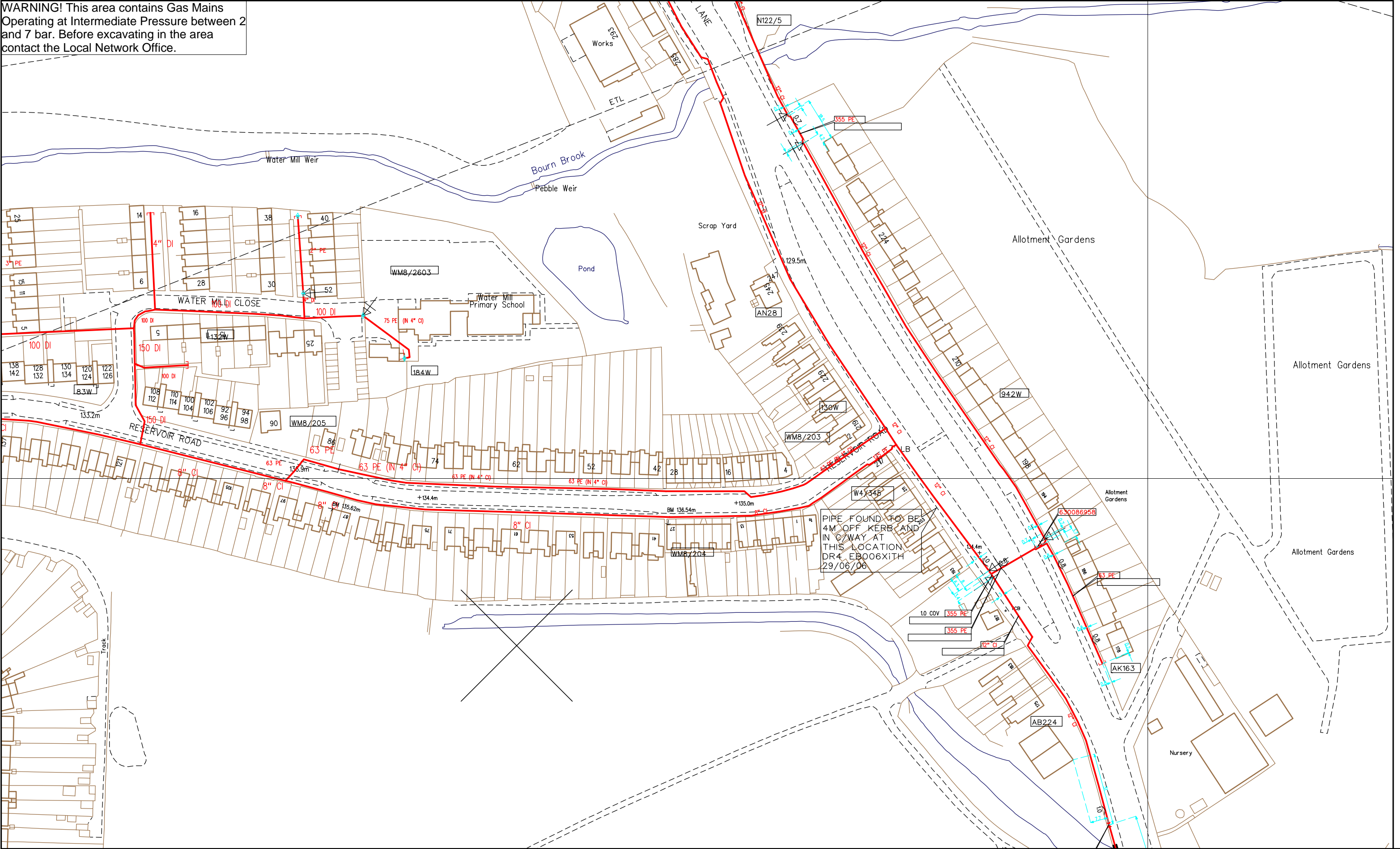
SCALE: Not to scale
 USER ID: STAC4400
 DATE: 03/12/2009
 EXTRACT DATE: 11/09/2009
 MAP REF: SP0382
 CENTRE: 403822, 282701



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WARNING! This area contains Gas Mains Operating at Intermediate Pressure between 2 and 7 bar. Before excavating in the area contact the Local Network Office.



PIPE FOUND TO BE 4M OFF KERB AND IN G/WAY AT THIS LOCATION DR4 EB006X1TH 29/06/06

SCALE: Not to scale	LP MAINS	
USER ID: STAC4400	MP MAINS	
DATE: 03/12/2009	IP MAINS	
EXTRACT DATE: 11/09/2009	LHP MAINS	
MAP REF: SP0383	NHP MAINS	
CENTRE: 403806, 283023		

Valve	
Depth of Cover	
Syphon	
Diameter Change	
Material Change	

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Appendix D

D.1 Water Supply Aqueduct

The image provided in this appendix has been scanned in from a drawing held by Severn Trent Water. This has been recreated and is provided for information only.

**WATER SUPPLY CORPORATION. 1901. -- ELAN SUPPLY,
MIDDLE LEVEL MAINS. -- BROOK CROSSING. -- OAK AND BOURNE**

DRAWING N° 4.

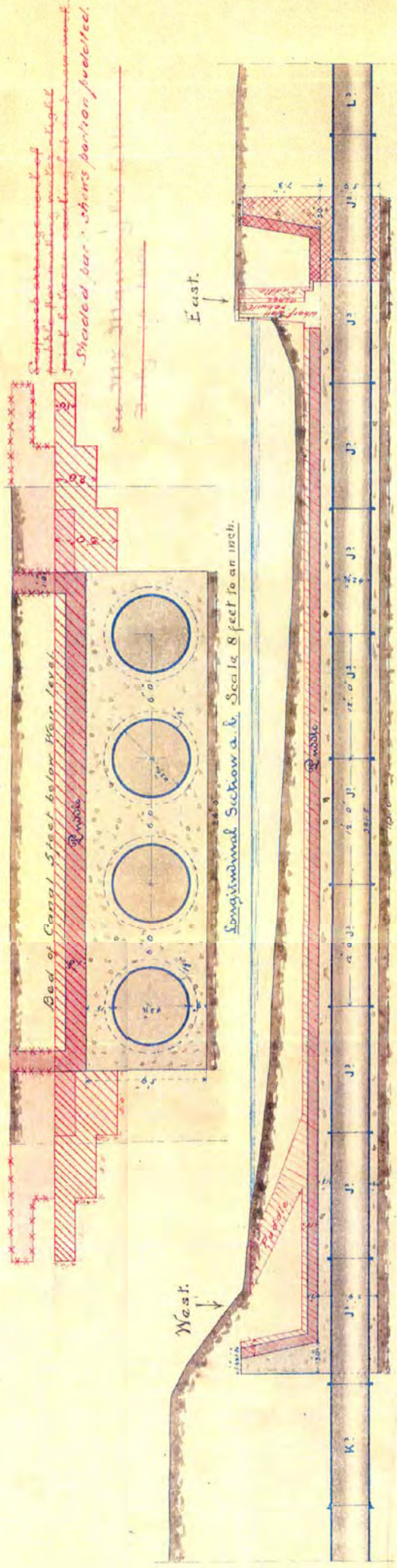
MIDDLE LEVEL MAINS.

Canal Crossing Selly Oak
Scale 8 feet to an inch.

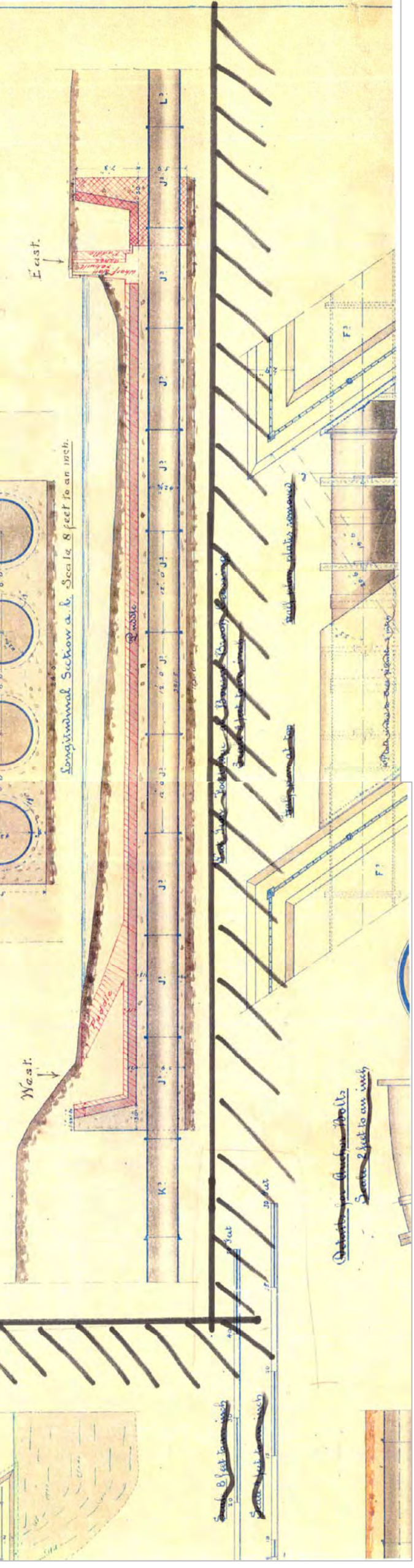
Plan.



Transverse Section c.d. Scale 4 feet to an inch.



Longitudinal Section a.b. Scale 8 feet to an inch.



Appendix E

E.1 Construction Cost Estimates

If completed separately

Harborne Wharf		Allowance	Allowance with volunteers
Sub-total		£ 181,955	£ 173,905
Preliminaries at 20% of structures	20%	£ 36,391	£ 34,781
Construction Total		£ 218,346	£ 208,686
Fees and disbursements	15%	£ 32,752	£ 31,303
Total (witout contingency)		£ 251,097	£ 239,988
Overall Contingency	25%	£ 62,774	£ 59,997
Grand Total		£ 314,000	£ 300,000
Possible Cost Saving Overall (attributed to voluteers)			£ 14,000
As a percentage of total cost this is saving of			4%

Phase 2		Allowance	Allowance with volunteers
Sub-total		£ 174,072	£ 165,129
Preliminaries at 20% of structures	20%	£ 34,814	£ 33,026
Construction Total		£ 208,886	£ 198,154
Fees and disbursements	15%	£ 31,333	£ 29,723
Total (witout contingency)		£ 240,219	£ 227,877
Overall Contingency	25%	£ 60,055	£ 56,969
Grand Total		£ 300,000	£ 285,000
Possible Cost Saving Overall (attributed to voluteers)			£ 15,000
As a percentage of total cost this is saving of			5%

If completed as one project

Harborne Wharf and Phase 2		Allowance	Allowance with volunteers
Sub-total		£ 356,026	£ 339,033
Preliminaries at 20% of structures	20%	£ 71,205	£ 67,807
Construction Total		£ 427,232	£ 406,840
Fees and disbursements	15%	£ 64,085	£ 61,026
Total (witout contingency)		£ 491,316	£ 467,866
Overall Contingency	25%	£ 122,829	£ 116,966
Grand Total		£ 614,000	£ 585,000
Possible Cost Saving Overall (attributed to voluteers)			£ 29,000
As a percentage of total cost this is saving of			5%

Lapal Canal Restoration Selly Oak Park
Cost Estimate

Area	Work Required	Quantity	Unit	Approx Rate	Allowance	Allowance with volunteers
Harborne Wharf						
	Excavation	1,336	m³	£ 2.00	£ 2,672	£ 2,672
	Dredging		m³	£ 1.80	£ -	£ -
	Deposition on site in landscape areas		m³	£ 2.00	£ -	£ -
	Clean Disposal (haul + landfill tax)	1,202	m³	£ 40.00	£ 48,096	£ 48,096
	Hazardous Disposal (haul + landfill tax)	134	m³	£ 100.00	£ 13,360	£ 13,360
	Remove / grout filter drain in centre of canal	1	sum	£ 1,500.00	£ 1,500	£ 1,500
PV	Remove vegetation	1	sum	£ 2,000.00	£ 2,000	£ 1,000
	Remediation to canal bed	1	sum	£ 4,000.00	£ 4,000	£ 4,000
PV	Stop Logs / groves	1	sum	£ 1,000.00	£ 1,000	£ 500
	Slip way	1	sum	£ 3,810.00	£ 3,810	£ 3,810
	Canoe landing next to slip way	1	sum	£ 1,000.00	£ 1,000	£ 1,000
PV	Fencing to south side (anticlimb)	75	m	£ 60.00	£ 4,500	£ 2,000
PV	Plant hedges (west end)	60	m	£ 35.00	£ 2,100	£ 1,000
PV	Landscaping	1	sum	£ 3,000.00	£ 3,000	£ 1,500
	Retaining Wall 1.5m H (winding area)	15	m²	£ 110.00	£ 1,650	£ 1,650
	Retaining Wall 1.5m H (winding area)	30	m²	£ 125.00	£ 3,750	£ 3,750
	Retaining Wall fondation	15	m	£ 25.00	£ 375	£ 375
	Repair walls (canal edge)	144	m²	£ 55.00	£ 7,920	£ 7,920
	Retaining wall south side of wharf (Spec TBC)	1	sum	£ 15,000.00	£ 15,000	£ 15,000
	Railings to Wharf area	25	m	£ 150.00	£ 3,750	£ 3,750
PV	Interpretation boards	1	sum	£ 800.00	£ 800	£ 250
PV	Security / parking bollards	1	sum	£ 700.00	£ 700	£ 400
	Surfacing to south side	1	sum	£ 4,396.00	£ 4,396	£ 4,396
	New Paths (north side)	1	sum	£ 17,975.60	£ 17,976	£ 17,976
	New Handrailings (north side)	100	m	£ 150.00	£ 15,000	£ 15,000
PV	Benches / Seats	7	sum	£ 300.00	£ 2,100	£ 1,500
	1.2m wide pontoons	35	m	£ 400.00	£ 14,000	£ 14,000
	Other wharf Items	1	sum	£ 2,000.00	£ 2,000	£ 2,000
	Slipway winch TBC	1	sum	£ -	£ -	£ -
	Repointing / repairs to Selly Park Bridge	1	sum	£ 4,000.00	£ 4,000	£ 4,000
	Fill Canal with Water	1	sum	£ 1,500.00	£ 1,500	£ 1,500

£ 181,955 £ 173,905

Sub-total					£ 181,955	£ 173,905
Preliminaries at 20% of structures costs	20%				£ 36,391	£ 34,781
Construction Total					£ 218,346	£ 208,686
Fees and disbursements	15%				£ 32,752	£ 31,303
Total (witout contingency)					£ 251,097	£ 239,988
Overall Contingency	25%				£ 62,774	£ 59,997
Total					£ 313,872	£ 299,985
Grand Total					£ 314,000	£ 300,000
Possible Cost Saving Overall (attributed to voluteers)						£ 14,000
As a percentage of total cost this is a	4% saving					

Lapal Canal Restoration Selly Oak Park
Cost Estimate

Area	Work Required	Quantity	Unit	Approx Rate	Allowance	Allowance with volunteers
Phase 2						
	Excavation	1,245	m ³	£ 2.00	£ 2,489	£ 2,489
	Excavation (Winding area)	345	m ³	£ 2.00	£ 690	£ 690
	Dredging		m ³	£ 1.80	£ -	£ -
	Deposition on site in landscape areas	42	m ³	£ 2.00	£ 84	£ 84
	Clean Disposal (haul + landfill tax)	1,393	m ³	£ 40.00	£ 55,710	£ 55,710
	Hazardous Disposal (haul + landfill tax)	155	m ³	£ 100.00	£ 15,475	£ 15,475
PV	Disposal of household waste on park side of boundaries	1	sum	£ 1,500.00	£ 1,500	£ 500
	Remove / grout filter drain in centre of canal	1	sum	£ 2,500.00	£ 2,500	£ 2,500
PV	Remove vegetation	1	sum	£ 2,000.00	£ 2,000	£ 500
	Japanese Knotweed - <i>assume buried*</i>	1	sum	£ 14,040.00	£ 14,040	£ 14,040
	Remediation to canal bed	1	sum	£ 6,000.00	£ 6,000	£ 6,000
PV	Repair works to south side of canal	300	m	£ 15.00	£ 4,500	£ 1,500
	Retaining Wall 1.2m H (winding area)	65	m ²	£ 110.00	£ 7,150	£ 7,150
	Retaining Wall foundation	50	m	£ 25.00	£ 1,250	£ 1,250
PV	Rerurbish existing toe path (no compaction)	33	m ³	£ 32.00	£ 1,043	£ 200
	Shared use path - surfacing	1	sum	£ 18,532.50	£ 18,533	£ 18,533
PV	Fencing (west end) timber post and rail	30	m	£ 30.00	£ 900	£ 300
PV	Plant hedges (west end)	60	m	£ 35.00	£ 2,100	£ 600
	Remove chamber between 71 and 75 Reservoir Road	1	sum	£ 1,500.00	£ 1,500	£ 1,500
	New Chamber between 71 and 75 Reservoir Road	1	sum	£ 4,000.00	£ 4,000	£ 4,000
	Modifications to turnover bridge	1	sum	£ 28,128.00	£ 28,128	£ 28,128
PV	Stop Logs / groves	1	sum	£ 1,000.00	£ 1,000	£ 500
	Repair walls (canal edge)	36	m ²	£ 55.00	£ 1,980	£ 1,980
	Fill Canal with Water	1	sum	£ 1,500.00	£ 1,500	£ 1,500
					£ 174,072	£ 165,129

* It is assumed that Japanese Knotweed can be treated and buried on site, if this is not possible, off site disposal could cost perhaps £300,000.

**Lapal Canal Restoration Selly Oak Park
Cost Estimate**

Sub-total		<u>£ 174,072</u>	<u>£ 165,129</u>
Preliminaries at 20% of structures costs	20%	£ 34,814	£ 33,026
Construction Total		<u>£ 208,886</u>	<u>£ 198,154</u>
Fees and disbursements	15%	£ 31,333	£ 29,723
Total (witout contingency)		<u>£ 240,219</u>	<u>£ 227,877</u>
Overall Contingency	25%	£ 60,055	£ 56,969
Total		<u>£ 300,274</u>	<u>£ 284,847</u>
Grand Total		<u>£ 300,000</u>	<u>£ 285,000</u>
Possible Cost Saving Overall (attributed to voluteers)			<u>£ 15,000</u>
As a percentage of total cost this is a	5% saving		

Build up sheet

WHARF

Volume of excavation in Wharf

area 1670 m² (CAD drawing)
depth 1 m

Volume 1670 m³

However, not all the wharf is infilled so assume 4/5 needs excavation

Volume is 1336 m³

PHASE 2

Volume of excavation (winding)

area 230 m² (CAD drawing)
depth 1.5 m
Volume 345 m³

Volume of excavation west end (canal)

area 712.5 m² (CAD drawing)
depth 0.2 m
Volume 142.5 m³

Volume of excavation east end (canal)

area 2660 m² (CAD drawing)
depth 0.2 m
Volume 532 m³

Total volume of excavation (excluding winding)

1244.5 m³

Western bund (disposition)

area 56 m²
height 1.5 m
volume 42 m³

New wall

Brickwork Vertical Straight 328 wide (Spons 303)

£110.00 £/m²

Brickwall foundation assume

£25.00 £/lin m

Place stone to toe path

Place and grade subbase material (sppns 279)

£32.00 £/m³

save labour cost if volunteers

£3.00 £/m³

volume of material south phase 2

£32.60 £/m³

New shared path

width	2.5 m	Edging	700 m
length	350 m		
area	875 m ²		

			depth	£/m ²
Excavate path (spons)	£2.00	£/m ³	0.2	£0.40
Place and grade subbase material (sppns 279)	£28.00	£/m ³	0.1	£2.80
DBM surfacing (100mm deep)	£12.50	£/m ²		£12.50
				<u>£15.70</u>
Edging (spon 282)				
concrete bedding	£2.25	£/m		
lay kerbing	£4.60	£/m		
	£6.85	£/m		
		cost of edging		£4,795.00
		cost of surfacing		<u>£13,737.50</u>
		total cost		<u>£18,532.50</u>

Fencing (son 328)

Assume 4 post and rail, assume rate	£30.00 /m
Assume a rate for fencing above moorings	£60.00 /m

Plant Hedge

Assume rate from Lichfield	£35.00 /m
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turnover loop

		quantity	price
Excavate path (spons)	£2.50	50	£125.00
Brickwork Vertical curved 328 wide (Spons 303)	£125.00	96	£12,000.00
Brickwall foundation assume	£25.00	80	£2,000.00
place sub base	£28.00	13.5	£378.00
DBM surfacing (100mm deep)	£12.50	90	£1,125.00
Lan purchase / legals			£7,500.00
Other elements			<u>£5,000.00</u>
			<u>£28,128.00</u>

Wall restoration

Assume rate is	£55.00	£/m ²
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Vegetation

		quantity	price
Vegetation clearance (spon 164)	2900	0.09	£261.00
Long site with water so assume a cost of	2000	sum	

New path next to wharf (north)

width	2.3 m	Edging	990 m
length	310 m		
area	713 m ²		

Excavate path (spons)	£2.00	£/m ³	depth	0.2	£0.40
Place and grade subbase material (spons 279)	£28.00	£/m ³		0.1	£2.80
DBM surfacing (100mm deep)	£12.50	£/m ²			£12.50
					<u>£15.70</u>
Edging (spon 282)					
concrete bedding	£2.25	£/m			
lay kerbing	£4.60	£/m			
					<u>£6.85</u> £/m
	cost of edging	£6,781.50			
	cost of surfacing	£11,194.10			
	total cost	<u>£17,975.60</u>			

New path next to wharf (south)

area	280 m ²
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Excavate path (spons)	£2.00	£/m ³	depth	0.2	£0.40
Place and grade subbase material (spons 279)	£28.00	£/m ³		0.1	£2.80
DBM surfacing (100mm deep)	£12.50	£/m ²			£12.50
					<u>£15.70</u>
	cost of surfacing	£4,396.00			

Slipway

width	5 m	volume	30
length	20 m		
area	100 m ²		
depth	0.3 m		

Excavate assume	£100.00	quantity	price
Formwork (assume sum)	£300.00 sum	1	£300.00
Supply C30 concrete (spons 190)	£93.00 £/m ³	30	£2,790.00
Placing Concrete (Spon 192)	£24.00 £/m ³	30	£720.00
			<u>£3,810.00</u>

Knotweed removal

if the area is	6	5	30 m ²
which has to be incresed by	14	14	
to dimensions of	20	19	380 m ²
depth			5 m
			1900 m ³

Excavation	£2.00	£/m ³	£3,800.00
treatment visits	£400		£1,200

If that were taken off site at a rate of £100.00 m³ £40.00 m³

£381,200 £153,200

If buried £10,800
30.00% £14,040

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