Factual Preliminary Dismantling Assessment Report for Gasholder No. 2

Bradford Road Gasholder Station, Manchester (Site Code 0049)

September 2017

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Document Control

Project:	0049 – Bradford Road, Manchester, Factual Preliminary Dismantling Assessment
Client:	National Grid Property Ltd.
Job Number:	A074754-431
File Origin:	N:\Projects\A072000 - A079999\A074754-431\reports\Bradford Road\Final\Factual\Bradford Road_0049_Factual Preliminary Dismantling Assessment_final 110917.docx

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Issue	Date	Status
1	July 2017	DRAFT for Client Review
2	September 2017	FINAL following Client Review

Terms and Conditions

This report has been prepared for NGPH in accordance with the terms and conditions of the current Term Contract agreement between NGPH and WYG (2012-2019), and in line with the NGPH document '*Assessment and Remediation Core Specification*' (Version 3.0, March 2016) with specific reference to Appendix D02 (Procurement of Demolition Services).

It should be noted that as agreed with NGPH no checks have been carried out to ensure the accuracy of information obtained from third parties and no liability can be accepted for any errors or misinterpretation of the information presented within this report.

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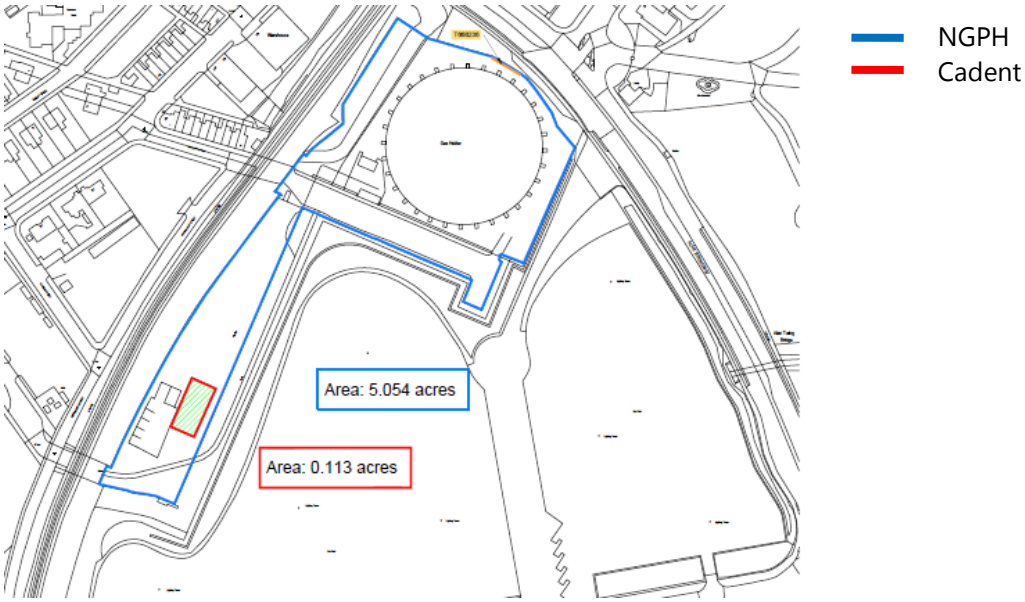
Reporting Insert



Site Address:	Bradford Road Gasholder Station, Manchester, M40 7BN	**NGP Document Tracking Code:**	
Report Title:	Factual Preliminary Dismantling Assessment		
Report Type:	Demolition	**Retention Period:**	Indefinitely
Site Code:	0049	**Author (Company):**	WYG
Report Date:	12.09.17	**Factual/ Interpretative:**	Factual
Draft/Final	Final	**H&S File?**	No
Work Stage	Demolition		
Brief Description of Contents	Factual information relevant to the future dismantling of Gasholder No.2.		
Access Permitted:	NGPH Land Regeneration	**NGPH Contact:**	Laura Watson

1 Introduction

1.1 Objectives

WYG was commissioned by National Grid Property Holdings (NGPH) to undertake a preliminary dismantling assessment of one below ground gasholder (Gasholder No.2) located at Bradford Road, Manchester. Dismantling of the gasholder at the site is proposed. The aim of this assessment is to identify and collate factual information relevant to the future dismantling of the gasholder.

1.2 Report Format

The report is subdivided as follows:

Section 1	Introduction
Section 2	Site Location and Description
Section 3	Site History and Heritage
Section 4	Environmental Setting
Section 5	Site Assessment
Section 6	Constraints

Supporting information is included in the Appendices.

1.3 Sources of Information

This report presents a summary of available information, for further details reference should be made to the specific reports listed below for further detail.

- British Gas, No.1 Sheet, Report of Examination of Gasholder (No.2);
- Royal & Sunalliance, No.1 Sheet, Report of Examination of Gasholder (No.2);
- National Grid, Drainage Layout, Drawing Number NW-BRADRD-N-002, May 2008;
- United Utilities, Consent to the Discharge of Trade Effluent, 27th March 2006;
- WYG, Ground Investigation Factual Report, Bradford Road NGG Land, August 2014 (ref: A074754-142-0049-Ngg-FAC-V1 FINAL);
- WYG, Ground Investigation Factual Report, Bradford Road NGP Land, August 2014 (ref: A074754-142-0049-NGP-FAC-V1);
- Zetica, Regional Unexploded Bomb Risk Map, Manchester, 2017;
- WYG, Asbestos Demolition Survey Report, Bradford Road Gasholder Station, 13th July 2017 (Job Number: J038013);
- DETS, Ref. 17-03036-1: Paint sampling analysis, July 2017;

- Exova Jones Environmental, Test Report 17/10407 Batch 1: Holder water laboratory analysis;
- WYG, Ecological Appraisal Report, Bradford Road, July 2017 (Job Number: A074754-431);
- Landform Surveys, Drawing C225B-001: Topographic Survey, 30/06/17;
- MJE, Dumpling Survey undertaken on 28th April 2014; and
- Service Plans.

In addition to the sources above the following online resources have been used to gather information:

- National Gas Archive Information;
- Coal Authority Online Viewer;
- Department of Environment, Farming and Rural Affairs (DEFRA) MAGIC Maps;
- DEFRA Flood map for planning service;
- Environment Agency website (www.environment-agency.gov.uk);
- Multi-Agency Geographic Information for the Countryside website (www.magic.gov.uk);
- British Geological Survey GeoIndex on-line (www.bgs.ac.uk/geoindex);
- Natural England Website (www.naturalengland.org.uk);
- Heritage Gateway (http://www.heritagegatweay.org.uk/Gateway/advanced_search.aspx); and
- Pastscape website (http://www.pastscape.org.uk/).

2 Site Location and Description

2.1 Site Details	
Site Address	Bradford Road Gasholder Station, Broxton Street, Manchester, M40 7BN.
Site Code	Location code 0049
National Grid Reference	386580, 399170
Site Area	NGPH land holding: 4ha.
Site Ownership	The site is owned by NGPH and is split into two distinct areas, the north and the south. North: a redundant gasholder compound and ancillary buildings. South: vacant, disused grassed/ scrubland. The gasholder compound comprises one below ground column guided gasholder (Gasholder No.2), a former boiler house and chimney stack. A Cadent Gas Limited (CGL) owned high-pressure gas compound (confined within a palisade fence) is located in the south of the site. The Cadent (CGL) land is considered 'off-site' however, access to this area is from the main site entrance off Bradford Road.
2.2 Site Setting	
Site Location	The site is located on Broxton Street beneath the viaduct, off Bradford Road. The site is approximately 2.5km east of Manchester City Centre within a predominantly residential and commercial setting. The site location is shown on Drawing No. 1 (A74754-431-LDS-N-0049/01).
Site Topography and Elevation	The site is generally flat. The south of the site has an approximate elevation of 52m Above Ordnance Datum (AOD). The north of the site surrounding the Gasholder has an approximate elevation of 54m Above Ordnance Datum (AOD). Steps and raised ground is present along the southern boundary of the gasholder. A copy of the topographic survey for the site is included in Appendix B1.
Site Description and Current Site Use	The site is vacant NGPH land. The northern section of the site comprises a vacant gasholder compound with one below ground column guided gasholder (Gasholder No.2), a former boiler house and chimney stack. A temporary methane extraction unit is currently situated to the north east of the gasholder to reduce the level methane within

	the holder water. The southern section of the site is vacant vegetated scrub land. A redundant above ground gas main runs from the gasholder compound past the site entrance, through the southern part of the site where it exits the site at the southern boundary and crosses the railway to the adjacent Miles Platting gasholder compound. Cadent (CGL) own and operate a high-pressure gas compound (confined within a palisade fence) within this area site. The Cadent (CGL) land is considered 'off-site'. The current site layout is shown on Drawing No. 2 (A74754-431-LDS-N-0049/02). Photographs taken during the site visit 16th June 2017 are presented in Appendix A.			
Site Access	The site area can be accessed from Broxton Street via a double palisade gate under the railway viaduct (approximately 4.80m high) in the north west of the site. Broxton Street is a residential cobbled street, parked cars are present on either side of the street. The gasholder compound and associated boiler house can be accessed through gates located to the south west and south of the fenced compound.			
Adjoining and Nearby Land Uses and Land Ownership	**North**	**East**	**South**	**West**
	Nearby is the Alan Turing Way (A6010), fire station, light industrial/commercial and Phillips Park Cemetery.	NGPH land is adjacent to site. Nearby, Sports City Car Park and Phillips Park Cemetery are found.	Cadent (CGL) land, disused NGPH land is adjacent to the site. Sports City Car Park, public sports venues and Ashton Canal are nearby.	Adjacent to the site is NGPH land (Miles Platting gasholder compound). Railway and New Viaduct Street, Residential and commercial properties.
Sensitive Land Uses and Receptors	**North**	**East**	**South**	**West**
	Industrial and Commercial property.	Car park users.	Car park users, Ashton Canal.	Residential and Commercial property.
Site Tenants	The site is currently vacant and there are no known tenants on site.			
Ground Cover (%)	Ground Coverage at the site is approximately: • 30% Buildings and Gasholder.			

	• 10% Hardstanding. • 10% Gravel. • 40% Vegetation. An estimate of ground cover is shown on Drawing No. 2 (A74754-431-LDS-N-0049/02).
Live Plant	Cadent (CGL) own and operate a high-pressure gas compound (confined within a palisade fence) in the south of the site.
Services and Utilities	There is 1No. Low Voltage Below Ground electricity main that enters the site from the north, and traces the north-west perimeter of the gasholder until it terminates at the former boiler house. 1No. live 16inch steel High Pressure Below Ground Gas Main enters the site from the northeast corner of the site, trending roughly north west around the gasholder and then trending south west round the western side of the holder. It then trends generally south west until it enters the Cadent (CGL) owned compound, exits the compound to the south and then proceeds to trend south, then west, leaving the site along the subway. 1No. live 12inch steel Intermediate Pressure Below Ground Gas Mains enters the site from Broxton Street and trends across the site in a roughly south east orientation, it then trends north east along the eastern side of the gasholder and exits the site at the top east site corner. 1No. live 15inch cast iron Medium Pressure Below Ground Gas Main enters the site from the north-east site corner, and trends south east adjacent to the east side of the gasholder, it then trends northwest parallel to the southern side of the gasholder before trending south past the Cadent (CGL) owned compound and exiting the site west along the subway. A combined sewer enters the site from Broxton Street and terminates prior to reaching the gasholder. There are two unknown metallic traces both trending roughly south west in the central area of the site. Redundant gas mains serving the gasholder are present on site. Unrecorded live services may be present on site. Service information is based on third party information. WYG accepts no liability for its accuracy or the accuracy of indicative service locations presented on any of the drawings or plans contained within this report. Copies of Statutory Service Plans are presented in Appendix B2. A composite services plan is included as Drawing No. 3 (A74754-431-LDS-N-0049/03).

2.3 Boundary Information

Boundary		North	East	South

Information	**Type**	Palisade fencing	Palisade fencing	Palisade fencing
	Approx. Height (m)	3 m	3 m	3 m
	Approx. Length (m)	120 m	120 m	350 m
Internal Site Boundaries	The Cadent (CGL) high-pressure gas compound and the gasholder compound are separated from the rest of the site by palisade fencing.			
Retaining Features or Shared / Party Walls	There are general redundant plant bases, concrete structures, etc. across the site. A brick railway viaduct (approximately 4.80m high) is situated at the entrance to the site from Broxton Street.			

3 Site History and Heritage

Summary Site History	Information regarding the history of the site has been obtained from WYG, Data Review Report Bradford Road Gasholder Station and Surplus Land, Manchester, November 2012 (ref: A074754-28-DR-V1). The site was formally part of the larger coal gas manufacturing and storage facility of Bradford Road Gasworks. Development of the gasworks began in the late 19th century. The first gasworks structures on the site were built by 1922. The main manufacture and processing plant were located to the east and south of the site. The gasworks extended to the west of these sites. The River Medlock was culverted around the turn of the 20th century according to historical Ordnance Survey maps. The gasworks continued to expand until production ceased in the 1970s. The majority of structures were demolished in the late 1970s and 1980s although the gasholder remains on site.
Historic Structures	The Pastscape website does not list any historic structures or buildings within 250m of the site.
Heritage	The site includes no designated heritage assets.
Designations On-Site/ Close Proximity to the Site (i.e. Conservation Area, World Heritage Site, Local/National Listings etc.)	Ashton Canal is recorded as a Site of Biological Interest by GMEU for aquatic flora, located immediately south of the Surplus Land.

4 Environmental Setting

4.1 Geology	
Made Ground	The BGS GeoIndex (2017) indicates there is Made Ground on site. Previous site investigation identified Made Ground across the site, with an average thickness of 1.5m. Made Ground typically comprised a gravelly fine to coarse sand with brick, ash and clinker.
Superficial Geology	The BGS GeoIndex (2017) records the superficial geology as Glacial Till. Previous site investigation identified Glacial Till in the form of a firm, very stiff slightly sandy gravelly clay. The thickness of Glacial Till ranged from 9.22 – 7.9m across the site.
Solid Geology	The BGS records the Solid Geology as Upper Coal Measures (Sandstones, Mudstones and Coal).
Structural Geology	The Bradford Fault (extensional faulting) outcrops approximately 1km to the northeast of the site. The Ardwick Fault outcrops approximately 1.5km to the southwest.
Mining and Extraction	A Coal Authority Report issued in 2004 found fourteen mine entries within 20m of the site, none of which are located on the site itself.
4.2 Hydrogeology	
Aquifer Classification(s)	The BGS Groundwater Vulnerability Map indicated that the Glacial Till is likely to be an Unproductive Stratum and the underlying bedrock (Coal Measures) is a Secondary Aquifer (fractured or potentially fractured rocks that do not have high primary permeability with a High Vulnerability.
Source Protection Zones (SPZ)	There are no Source Protection Zones within 1km of the site. The nearest surface water abstraction is from the Ashton Canal approximately 370m east of the site, operated by British Waterways. There are no active abstractions from the River Medlock, listed within 1km of the site.
4.3 Hydrology	
Distance/ Direction to Nearby	The River Medlock is located 200m south of the site. Ashton Canal is found 220m south of the site.

Watercourse(s)	
Site Drainage	The gasholder overflow points are located on the north-eastern sides of the gasholder. There are three separate foul drain drainage routes. Two flow south of the gasholder, join and flow west to join the combined system on Broxton Street. The third flows north from the interceptor, located on the north/north-east of the gasholder, to join the combined system in Alan Turing Way. There are two storm drains, that flow roughly east, both flow towards the culverted River Medlock and combined sewer. A methane extraction plant is currently on site in order to reduce methane levels within the holder water, prior to the holder water being discharged to the outflow. A copy of the site drainage plan is included in Appendix B3.
Flood Risk	DEFRA online flood maps indicate the site is located in a Flood Zone 1 area, with a low probability of flooding.

5 Site Assessment

Ecology	A Phase 1 Habitat Survey was completed on 16th June, 2017. The following potential constraints have been identified; • The presence of one active and two seasonally inactive outlier badger setts close to the gasholder. • Various structural features having the potential for roosting bats. • One small area of Japanese rose, and invasive species, was found on site. • Nesting Birds. A copy of the survey report is included in Appendix B4.
Asbestos	A refurbishment and demolition asbestos survey was completed on 16th June, 2017. A copy of the survey report is included in Appendix B5. Asbestos Containing Materials (ACMs) have been positively identified in buildings/structures at the site as follows:

Building / Structure	**Area Description**	**Material Description**	**Asbestos Type**
Boiler Room 2	Ground Floor, Boiler Room (1)	Flashguards within electrics. Asbestos Cement.	Chrysotile
Boiler Room 2	Ground Floor, Boiler Room (1)	Asbestos cement debris to floor.	Chrysotile

Other / Hazardous Substances	Filming oil was not observed to be present on the gasholder during the sampling. However, the MJE Consultants, Dumpling Survey undertaken April 2014, indicates that oil is present on the surface of the tank water and outer annulus. Therefore, film oil maybe present within the holder. Gasholder sludge, holder water and residual water may also be considered as hazardous substances.
Hydrogeological Regime (Below Ground Gasholder Tanks)	Groundwater was not encountered in Made Ground or Glacial Till during previous site investigation work. Following groundwater monitoring, groundwater was recorded between 48.41m AOD (3.84mbgl) and 46.41m AOD (4.69mbgl) within the Glacial Till.
Soil and/or Groundwater Contamination	Visual and olfactory observations of contamination, including tar, were recorded in Made Ground, natural strata and groundwater during ground investigation works. It is understood that shallow soils adjacent to the gasholder are impacted with

	TPH, PAH and lead. Shallow asbestos has been identified within the shallow Made Ground. Due to the former gas work nature of the site, it is considered other contaminants may exist within the Made Ground and ground water. This may comprise of a wide range of metals, metalloids, organic and inorganic contaminants.	
Unexploded Ordnance (UXO)	The regional Unexploded Bomb (UXB) map, was obtained from Zetica. The map indicates that the site is located in an area at moderate risk from UXB (Zetica, 2017). The UXB Map is included in Appendix B6.	
Sampling and Testing	Samples of water and paint were collected from Gasholder No.2 on the 16th June, 2017. Water samples were collected from 4 equidistant points around each gasholder, roughly North, East, South and West. At each sampling location, two samples were collected; one shallow sample from approximately 600mm below the water level and one deep sample from approximately 3m above the base of the holder tank. Paint samples were collected from 4 equidistant points around each gasholder, roughly North, East, South and West. The paint was scraped through all layers until the metal exposed at each location and a composite sample of the paint flakes prepared. A copy of the results is provided in Appendix B7 and 8.	
Operational Plant & Equipment	Operational equipment comprises a high-pressure gas compound owned and operated by Cadent (CGL).	
Gasholder Information (If Buildings Also Repeat Section for Building(s))	**Reference**	**Gasholder No.2.** All information below is taken from the No. 1 sheet pertaining to Gasholder No.2 included in Appendix B9.
	Above or Below Ground	Below ground
	Spiral or Column Guided	Column
	Date of Construction	1910
	Lift Construction	Riveted Steel
	Tank Construction	Brick and Puddle Clay

	Gas Capacity	298,863 m^3				
	Water Capacity	45,640m^3				
	Manufacturer / Erecter	Holder built by: Ashmore Benson & Pease Ltd. Tank built by: E. Nuttall & Co.				
	Dumpling Present	Dumpling present occupying 45.02% of the tank volume; 37367m^3. The dumpling is of a solid construction i.e. brick, stone, concrete. A copy of the dumpling survey is included in Appendix B10.				
	Gasholder No.2 Dimensions					
		Inner Lift	**2nd Lift**	**3rd Lift**	**4th Lift**	**Tank**
	Diameter (m)	83.27	84.18	84.1	86.01	86.93
	Overall Height (m)	12.35	12.35	12.35	12.35	13.5
	No. Guide Rails	N/A	N/A	N/A	N/A	N/A
	No. Guide Carriages	N/A	N/A	N/A	N/A	N/A
	Lift Rotation	N/A	N/A	N/A	N/A	N/A
	Lift Pressure (WG")	4.5" wg	6.5" wg	8.5" wg	10.5" wg	N/A
	Crown Rise (m)	6.1	N/A	N/A	N/A	N/A
	Column Height (m) / Column Details	32 no. columns, 46.32m high. Base of columns – 2.44m by 1.22m. Six tiers of latticed girders.				
	Other Pertinent / Unusual Details / Features	Anti-flood devices fitted 2001.				

Building Information / Description	**Boiler House** – a single storey corrugated iron building located north of the access route, west of the gasholder. It is approximately 10m by 5m.
Gasholder Status and Isolations	It is understood that the gasholders have been purged and isolated from the network, but purging certificates have not been provided at this stage. A copy of the NRO documentation has not been provided at this stage. It is noted that the gasholders are free venting to air. Isolation certificates for the Boiler house have not been provided at this stage.
Gasholder History	There are no known historic events associated with the gasholder structures.
Gasholder Dewatering	There is one discharge consent which has been operational since 27th March 2006. The trade effluent to be discharged consists solely of waste water derived from natural gas storage/distribution. The sewer into which trade effluent may be discharged and the point of discharge is the foul sewer situated north east of the gasholder. The maximum amount of the trade effluent discharged in any one day shall not exceed 15m^3, the highest rate at which the trade effluent may be discharged shall not exceed 4litre/sec. The gasholder overflow points are located on the north-eastern sides of the gasholder. A copy of the existing discharge consent for the site is presented in Appendix B13.

6 Constraints

The following have been identified as potential constraints associated with the proposed dismantling works and the site.

- Discharge Rates.
- Unknown status of gasholder drainage routes i.e. silting, cracking etc.
- Hazardous materials including asbestos and paint containing heavy metals including lead on/within the gasholders.
- Previous investigations recorded groundwater at approximately 4.69m bgl (Glacial Till).
- Operational Cadent (CGL) high-pressure compound located in the south of the site.
- The presence of below ground intermediate, medium and high-pressure gas mains running around the perimeter of the gasholder and along access routes.
- Protection requirements for existing operational Cadent (CGL) equipment and gas mains/pipelines.
- Protection to other remaining site services.
- Live services (electrics) feed into the former boiler house due for demolition.
- Shared site access.
- Adjacent railway line and viaduct.
- Unauthorised trespassers have been noted at the site historically.
- Restricted height access due to the viaduct.
- Restricted space surrounding the gasholder due to high, intermediate and low-pressure gas mains.
- Below ground steel high pressure mains present are present at approximate 1.10mbgl trending north west around the gasholder.
- Below ground cast iron intermediate pressure mains are present at approximately 0.80 – 1.00mbgl are located beneath the access route and trending along the eastern side of the gasholder.
- Below ground cast iron medium pressure mains are present at approximately 0.80 – 1.00mbgl are located beneath the access route and trending along the eastern side of the gasholder.
- Residential and commercial properties to the northern and eastern boundary of the site.
- Potential ecological issues.
- Redundant overhead pipework.
- Purging certificates for the gasholder and overhead redundant pipework not provided at this stage.
- A temporary methane extraction plant is currently on site to reduce methane levels within the holder water.

Drawings

Drawing No.1 – A074754-431-LDS-N-0049/01	*Site Location Plan*
Drawing No.2 - A074754-431-LDS-N-0049/02	*Site Layout Plan (with Holder Dimensions)*
Drawing No.3 – A074754-431-LDS-N-0049/03	*Composite Services Plan*

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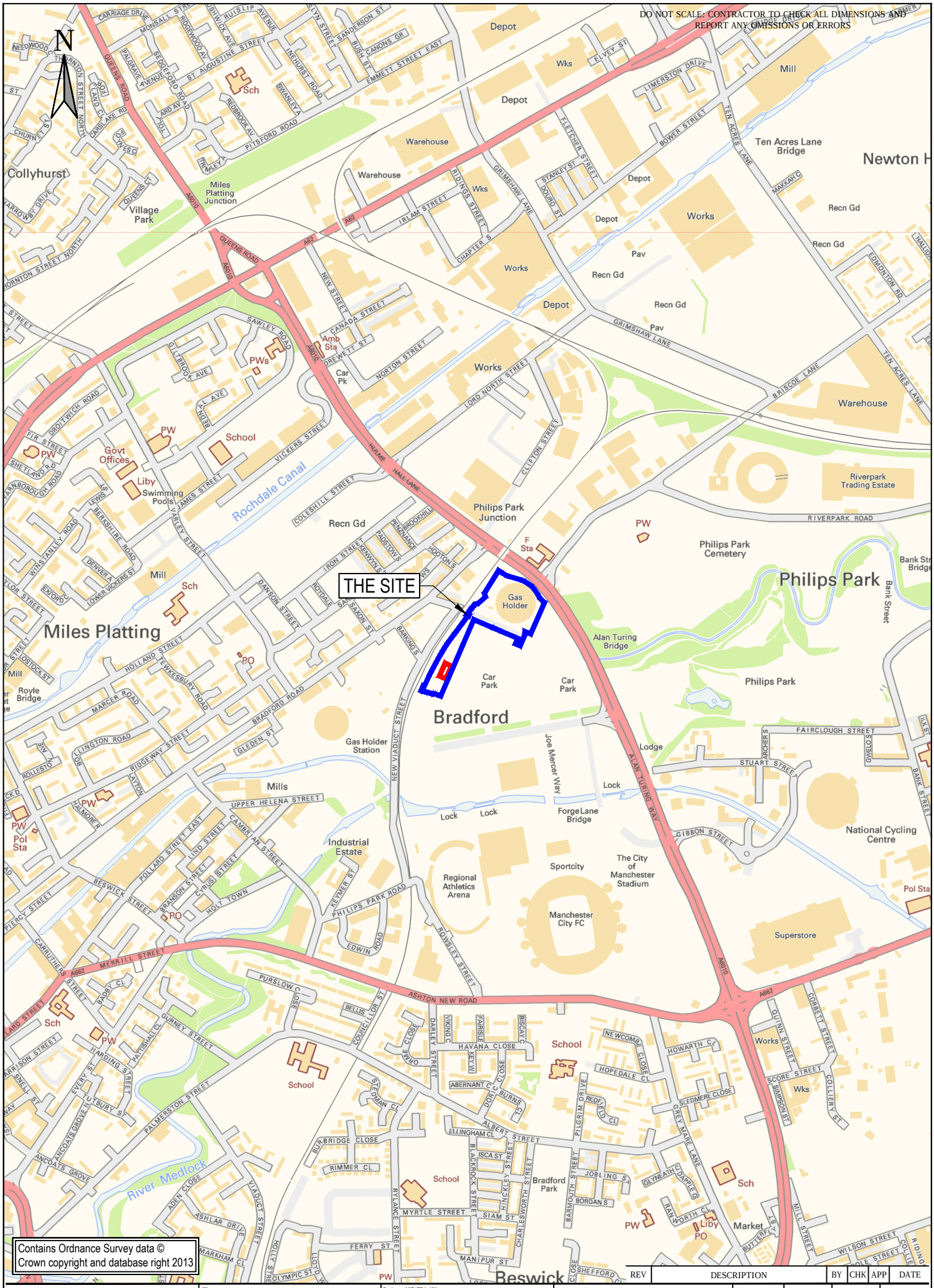

REV	DESCRIPTION	BY	CHK	APP	DATE

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NATIONAL GRID PROPERTY HOLDINGS LTD

Project: A074754-431
BRADFORD ROAD
MANCHESTER
LOCATION CODE: 0049

Drawing Title:
SITE LOCATION PLAN

Scale @ A4	Drawn	Date	Checked	Date	Approved	Date
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Project No.	Office	Type	Drawing No.	Revision
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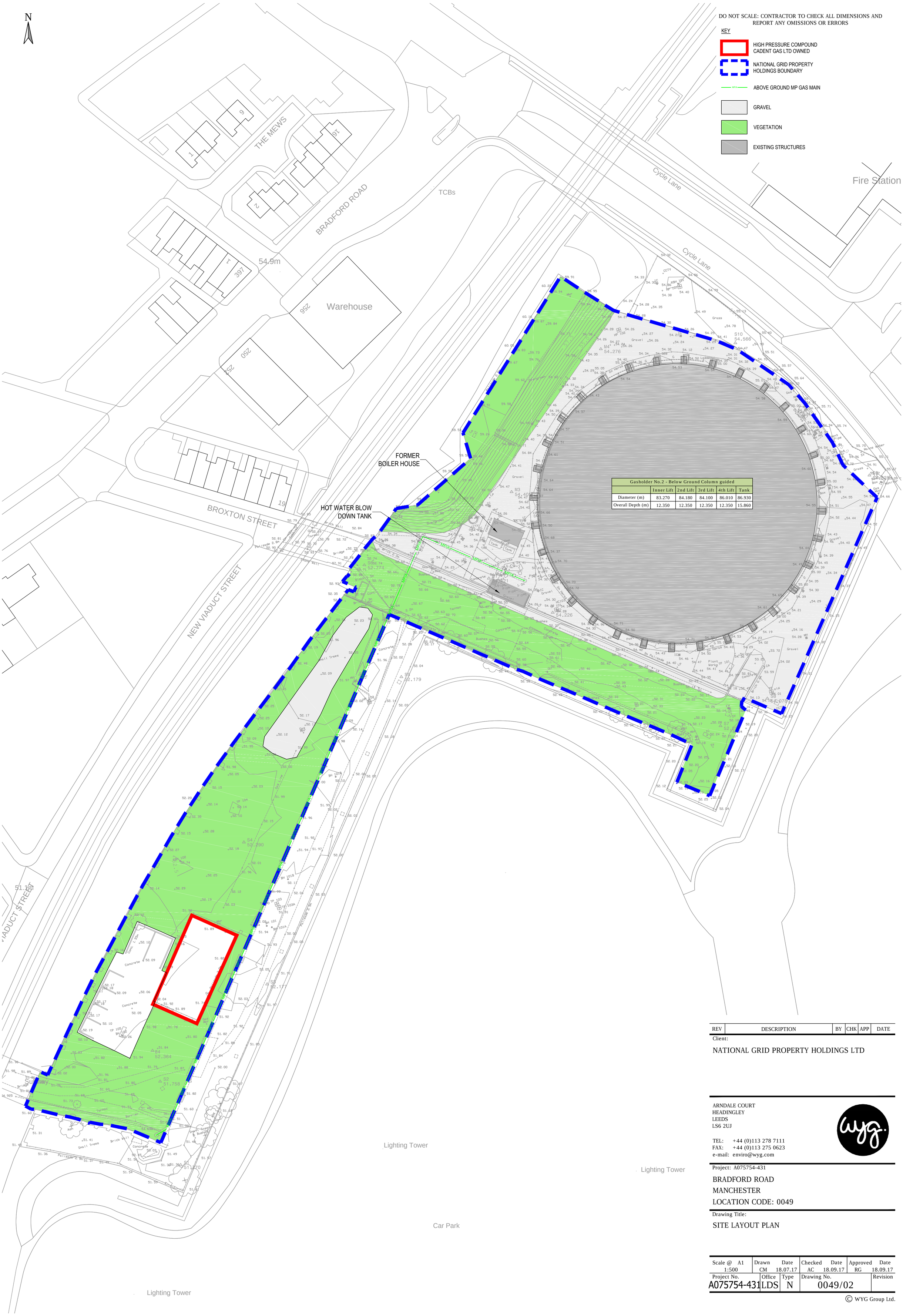

Gasholder No.2 - Below Ground Column guided					
	Inner Lift	2nd Lift	3rd Lift	4th Lift	Tank
Diameter (m)	83.270	84.180	84.100	86.010	86.930
Overall Depth (m)	12.350	12.350	12.350	12.350	15.860

REV	DESCRIPTION	BY	CHK	APP	DATE

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Project: A075754-431

BRADFORD ROAD
MANCHESTER
LOCATION CODE: 0049

Drawing Title:

SITE LAYOUT PLAN

Scale @ A1	Drawn	Date	Checked	Date	Approved	Date
1:500	CM	18.07.17	AC	18.09.17	RG	18.09.17

Project No.	Office	Type	Drawing No.	Revision
A075754-431	LDS	N	0049/02	

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KEY

NATIONAL GRID PROPERTY HOLDINGS LANDHOLDING BOUNDARY

CADENT GAS LTD LAND HOLDING BOUNDARY

EXISTING STRUCTURES

SERVICES (OVERLAIN FROM PLANS)

- LP GAS BELOW GROUND
- IP GAS BELOW GROUND
- FOUL SEWER
- COMBINED SEWER
- SURFACE WATER SEWER
- WATER MAINS
- ELECTRICITY HV BELOW GROUND
- BT ABOVE GROUND
- BT BELOW GROUND
- CABLE / FIBRE OPTIC BELOW GROUND

SERVICES (SURVEYED ON SITE RSK UTILITY CLEARANCE DRAWING 293489-Fig-01 01.01.2012)

- SURFACE WATER DRAIN
- RADAR TRACE
- UNKNOWN (METALLIC)

SERVICES (SURVEYED ON SITE LANDSCOPE SURVEY DRAWING 1633_200_B JULY 2015)

- MP GAS BELOW GROUND
- MP GAS ABOVE GROUND
- IP GAS BELOW GROUND
- IP GAS ABOVE GROUND
- HP GAS BELOW GROUND
- HP GAS ABOVE GROUND
- LV ELECTRIC BELOW GROUND

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

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Project: A074754-431

BRADFORD ROAD
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LOCATION CODE: 0049

Drawing Title:

SERVICE LOCATION PLAN

Scale @ A0	Drawn	Date	Checked	Date	Approved	Date
1:500	CM	18.07.17	AC	18.09.17	RG	18.09.17

Project No.	Office	Type	Drawing No.	Revision
A074754-431	LDS	N	0049/03	

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Appendix A Photographic Plates

Photograph No.1:- View looking south showing access to the site.

Photograph No.2:- View northwest of site entrance from Broxton Street, showing gas mains & viaduct.

Arndale Court
Headingley
Leeds
LS6 2UJ

Tel: 0113 278 7111
Fax: 0113 275 0623
E-mail enviro.leeds@wyg.com

Environmental Consultancy
Ground Technologies & Investigation

Project :-

Bradford Road, Manchester

(Site Code: 0049)

Client:- National Grid Property Ltd.

Project No.: -
A079999\A074754-431

Date :- July 2017

Photograph No.3:- View looking west showing former boiler house and chimney.

Photograph No.4:- View southeast showing palisade fenced gasholder perimeter, with steps up to the compound.

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Headingley
Leeds
LS6 2UJ

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Fax: 0113 275 0623
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Environmental Consultancy
Ground Technologies & Investigation

Project :-

Bradford Road, Manchester

(Site Code: 0049)

Client:- National Grid Property Ltd.

Project No.: -
A079999\A074754-431

Date :- July 2017

Photograph No.5:- View northwest showing above ground gas mains and boilers.

Photograph No.6:- View north of the gasholder, above ground gas mains, chimney and boiler.

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Headingley
Leeds
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Tel: 0113 278 7111
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Environmental Consultancy
Ground Technologies & Investigation

Project :-

Bradford Road, Manchester

(Site Code: 0049)

Client:- National Grid Property Ltd.

Project No.: -
A079999\A074754-431

Date :- July 2017

Photograph No.7:- View looking east of sparging system adjacent to the gasholder.

Arndale Court
Headingley
Leeds
LS6 2UJ

Tel: 0113 278 7111
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Environmental Consultancy
Ground Technologies & Investigation

Project :-

Bradford Road, Manchester

(Site Code: 0049)

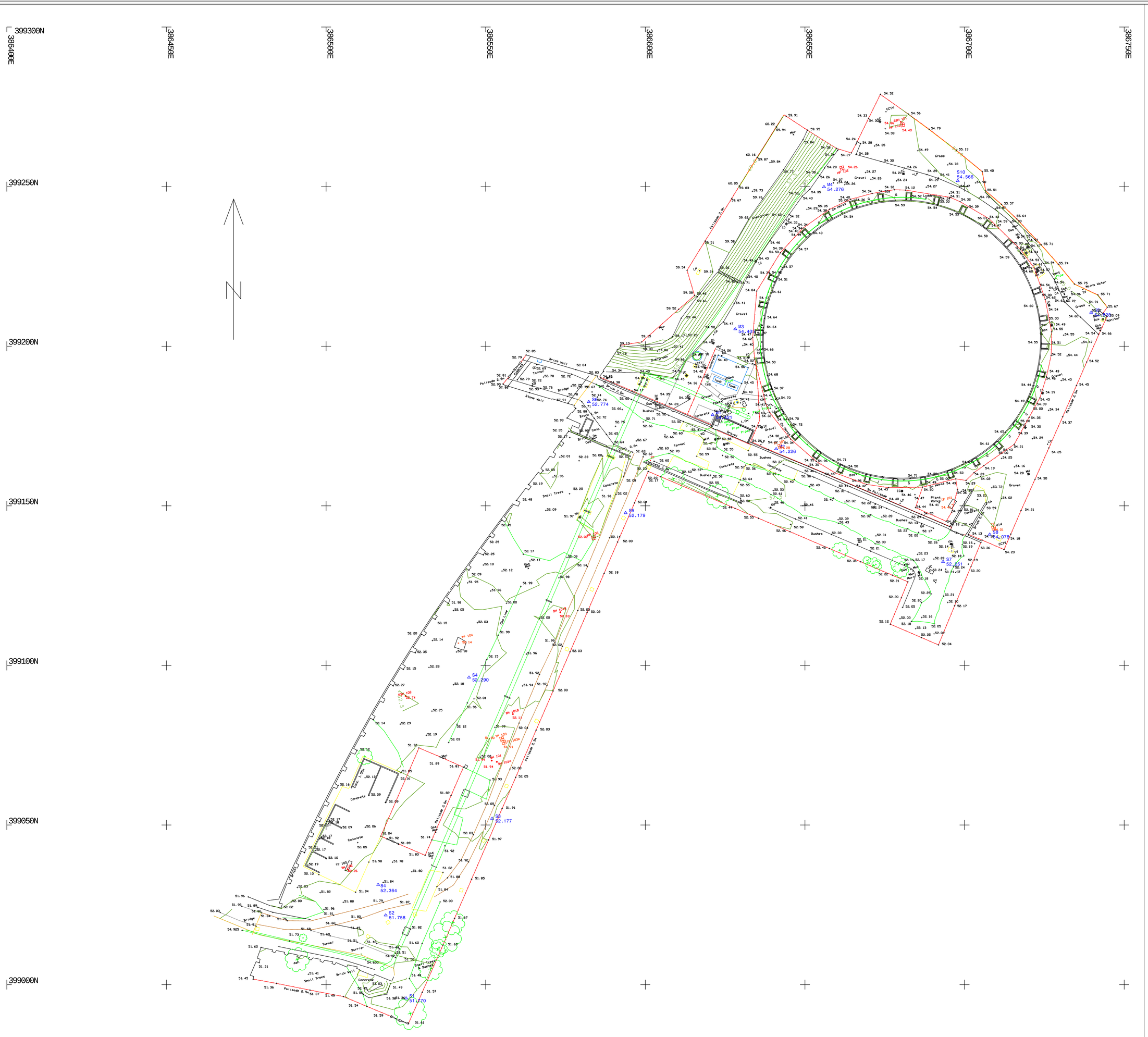
Client:- National Grid Property Ltd.

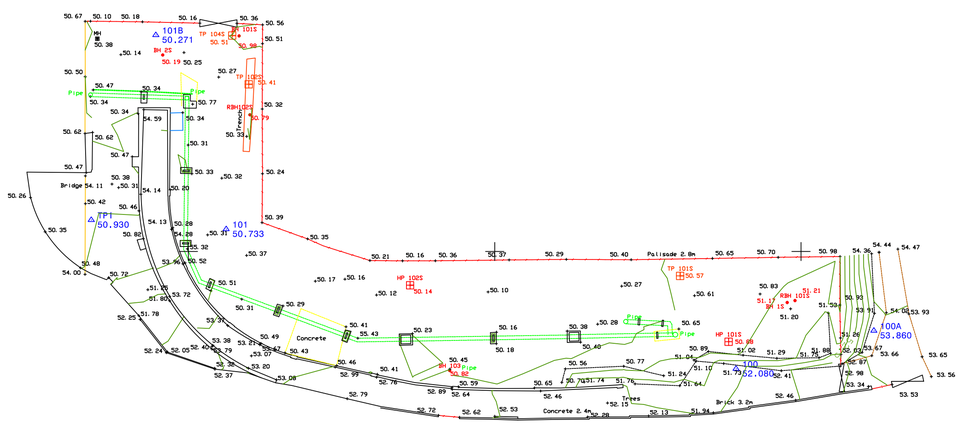
Project No.: -
A079999\A074754-431

Date :- July 2017

Appendix B Supporting Information

Appendix B1 Topographical Survey





84	386516.310	399031.341	52.364
100	386539.395	398780.853	52.080
101	386456.167	398803.654	50.733
100A	386561.887	398787.076	53.860
101B	386444.681	398835.338	50.271
M1	386621.085	399178.486	54.421
M2	386640.984	399167.823	54.226
M3	386628.164	399205.408	54.405
M4	386655.970	399249.933	54.276
S1	386525.071	398995.738	51.770
S2	386518.673	399021.743	51.758
S3	386552.005	399062.034	52.177
S4	386544.766	399096.253	52.290
S5	386593.827	399147.775	52.179
S6	386582.298	399182.588	52.774
S7	386693.260	399132.514	52.251
S8	386707.859	399141.046	54.078
S9	386739.656	399210.581	54.828
S10	386697.875	399251.803	54.566
TP1	386434.139	398805.157	50.930

Legend

BO	BOLLARD	KO	KERB OUTLET
BS	BUS STOP	LP	LAMP POST
BM	BENCH MARK	MH	MANHOLE
CL	COVER LEVEL	MP	MILEPOST
CCTV	CCTV POLE	PB	POST BOX
DK	DROP KERB	RS	ROAD SIGN
DP	DOWNPIPE	RE	RODDING EYE
EC	ELECTRIC COVER	SF	SOFFIT
EP	ELECTRIC POLE	SV	STOP VALVE
ER	EARTH ROD	TL	TRAFFIC LIGHT
FH	FIRE HYDRANT	TP	TELEGRAPH POLE
FL	FLOOR LEVEL	T	TELECOM COVER
GV	GAS VALVE	TV	CABLE TV COVER
GMK	GAS MARKER	UTL	UNABLE TO LIFT
GU	GULLY	WM	WATER METER
IC	INSPECTION COVER	△ 100	SURVEY STATION
IL	INVERT LEVEL	* 20.22	SPOT LEVEL

CO-ORDINATES AND ELEVATIONS ARE SET BY GNSS AT STATION M1.
CO-ORDINATES ARE TO OS NATIONAL GRID USING OSTN02 TRANSFORMATION
LEVELS ARE TO ORDNANCE DATUM USING OSGM02 GEOID MODEL.
THE REMAINDER OF THE SURVEY IS TO SCALE FACTOR 1 PLANE GRID.

This drawing is the property of Landform Surveys Ltd.
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Accuracies are commensurate with the stated scale of the survey.

rev	by	date	notes	check

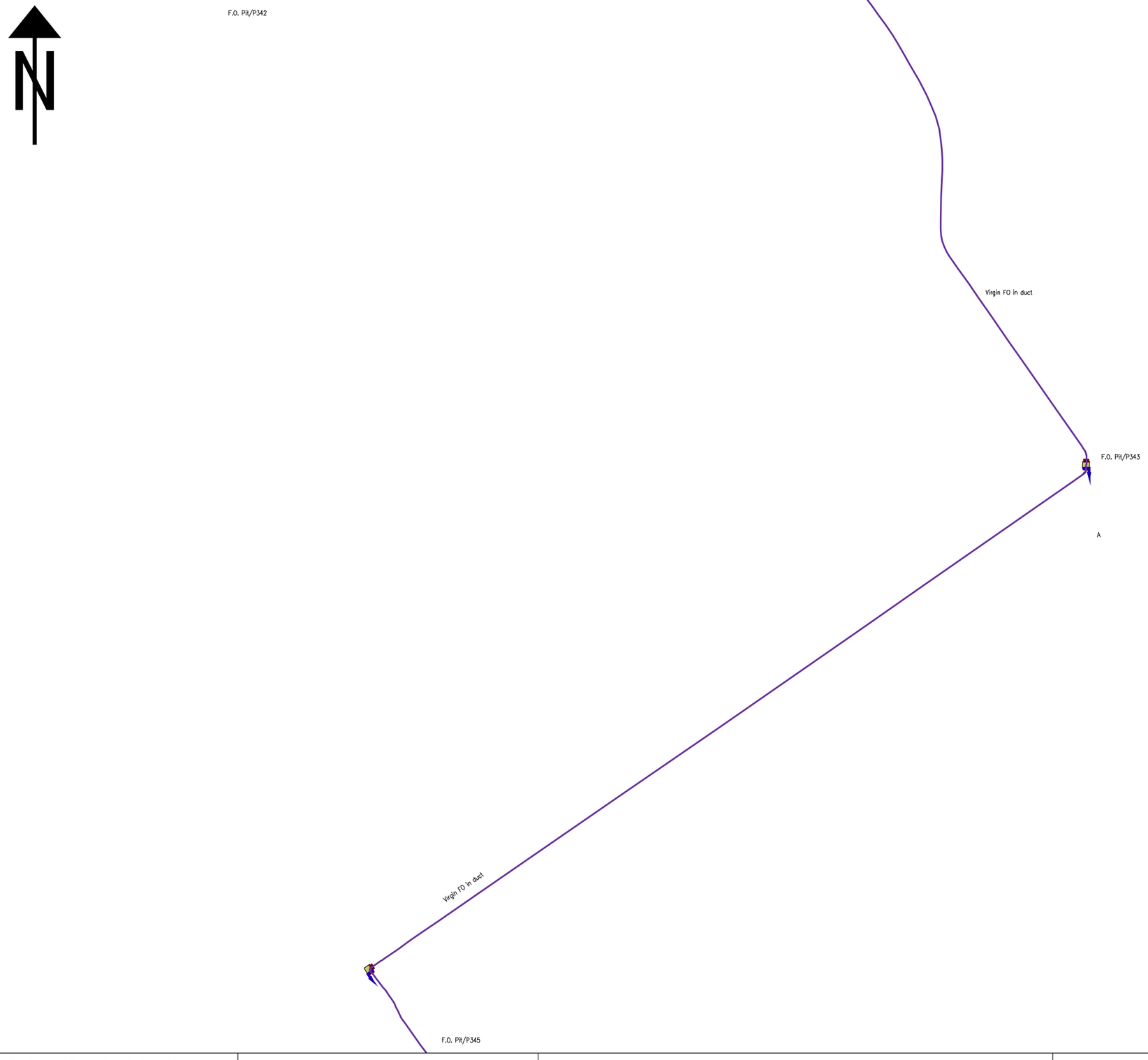
Landform Surveys
professional surveying solutions
quayside i4, ouseburn Building, albion row, newcastle upon tyne NE6 1LL
t: 0191 2650555 f: 0191 2765636
e: office@landform-surveys.co.uk www.landform-surveys.co.uk

CLIENT
WYG
Bradford Road, Manchester

TITLE
Topographic Survey

drawn	EH	date	30-06-17	drawing no	scale
checked	MR	date	30-06-17	C225B-001	1/500@AO
clients Ref					

Appendix B2 Statutory Service Information



NORMAL DEPTH TO THE TOP OF THE CABLE WHEN LAID				
	services	l.v.	h.v.	e.h.v.
FOOTPATH	0.40m	0.45m	0.60m	0.75m
ROAD CROSSING	0.60m	0.60m	0.75m	0.90m

l.v./services – up to 1000V.
h.v. – over 1000V. to 11,000V.
e.h.v. – 22,000V. to 132,000V.

WARNING

There may have been subsequent alterations to the surface levels. Trial holes must be taken to determine positions and depth of cables. HS (G) 47 Booklet from the Health and Safety Executive – Avoiding Danger from Buried Cables – should be consulted before commencing excavation work. (available from the HSE)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES THE HEALTH AND SAFETY GUIDANCE NOTE GS6 SHOULD BE CONSULTED. (AVAILABLE FROM THE HSE)

BASED UPON THE ORDNANCE SURVEY MAP WITH THE SANCTION OF THE CONTROLLER OF H.M. STATIONERY OFFICE. CROWN COPYRIGHT RESERVED.

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Registered Office: 55 Vastern Road,
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Subject to Revision Master held at

Scottish & Southern Electricity Networks

H.V. MAINS RECORD

Mapping Services Unit
01256 337294

ATKINS CHECKED
SM

Grid Ref: SJ86109899
Scale: 1:1250
Date: 30/06/2017

F.O. Pit/P342

F.O. Pit/P343

A

F.O. Pit/P345

NORMAL DEPTH TO THE TOP OF THE CABLE WHEN LAID				
	services	l.v.	h.v.	e.h.v.
FOOTPATH	0.40m	0.45m	0.60m	0.75m
ROAD CROSSING	0.60m	0.60m	0.75m	0.90m

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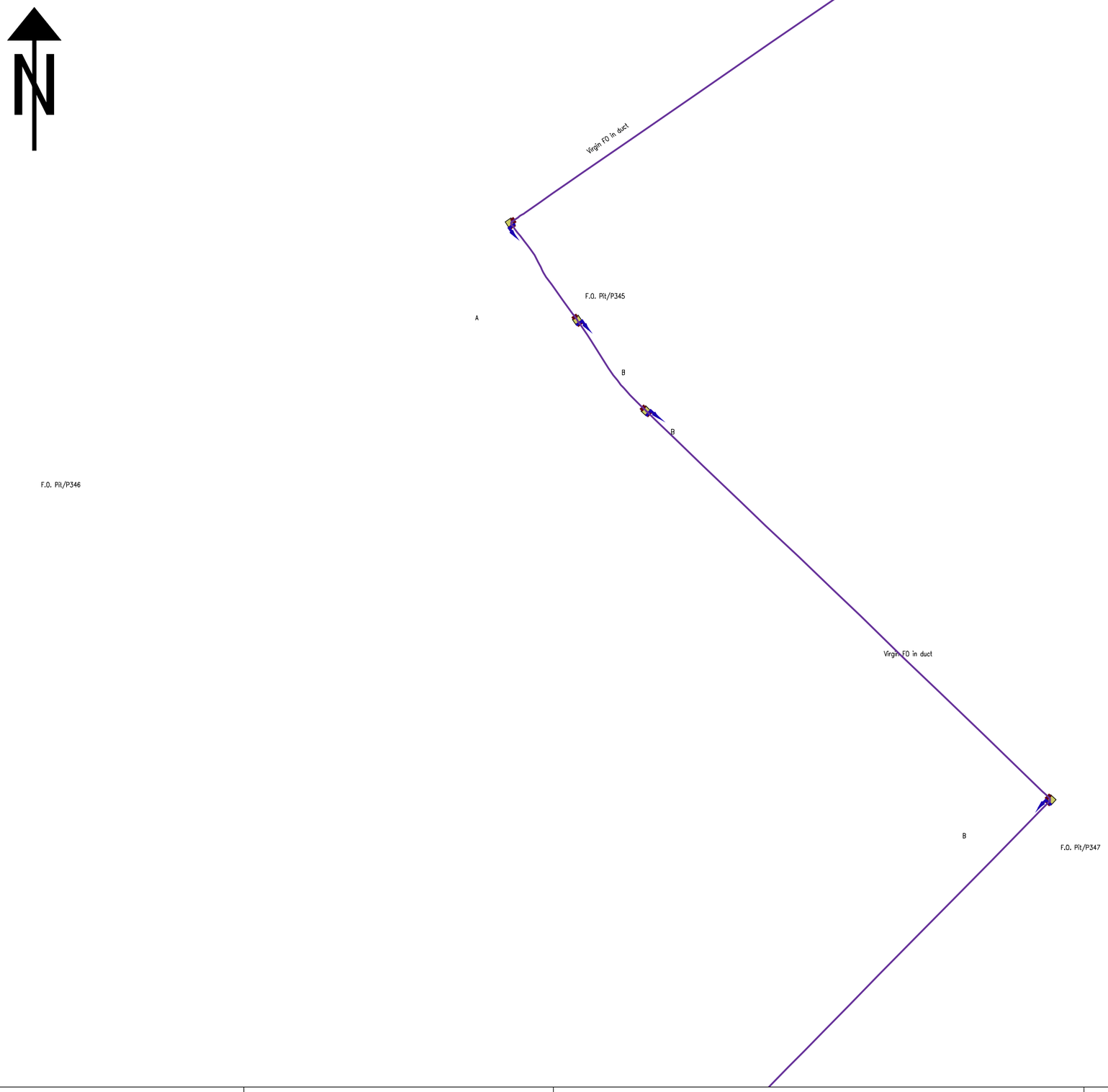
L.V. MAINS RECORD

Mapping Services Unit
01256 337294

Grid Ref: SJ86109899

Scale: 1:1250

Date: 30/06/2017



NORMAL DEPTH TO THE TOP OF THE CABLE WHEN LAID				
	services	l.v.	h.v.	e.h.v.
FOOTPATH	0.40m	0.45m	0.60m	0.75m
ROAD CROSSING	0.60m	0.60m	0.75m	0.90m

l.v./services – up to 1000V.
h.v. – over 1000V. to 11,000V.
e.h.v. – 22,000V. to 132,000V.

WARNING

There may have been subsequent alterations to the surface levels. Trial holes must be taken to determine positions and depth of cables. HS (G) 47 Booklet from the Health and Safety Executive – Avoiding Danger from Buried Cables – should be consulted before commencing excavation work. (available from the HSE)

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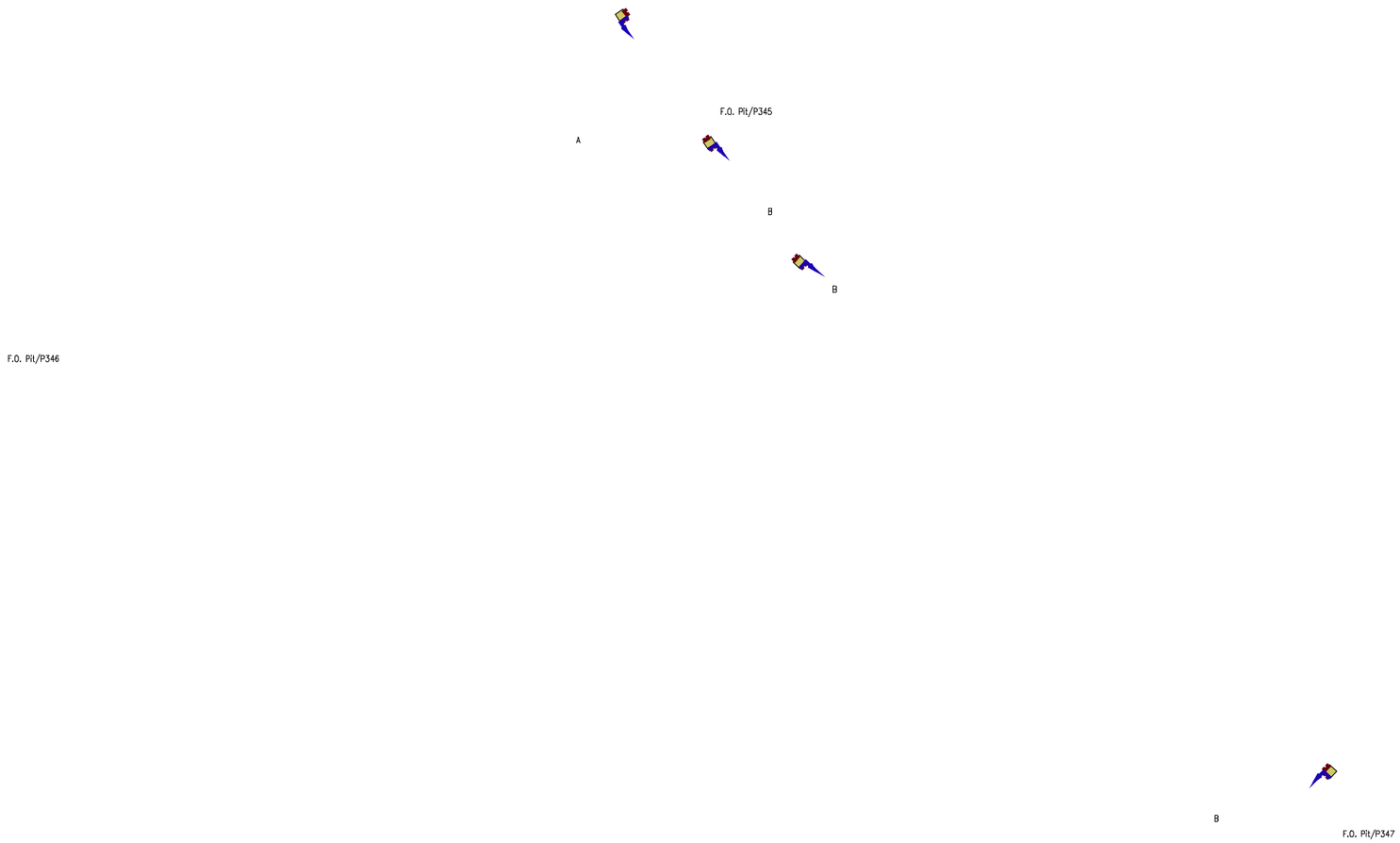
H.V. MAINS RECORD

Mapping Services Unit
01256 337294

Grid Ref: SJ86079877
Scale: 1:1250
Date: 30/06/2017



NORMAL DEPTH TO THE TOP OF THE CABLE WHEN LAID

	services	l.v.	h.v.	e.h.v.
FOOTPATH	0.40m	0.45m	0.60m	0.75m
ROAD CROSSING	0.60m	0.60m	0.75m	0.90m

l.v./services – up to 1000V.
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L.V. MAINS RECORD

Mapping Services Unit
01256 337294

Grid Ref: SJ86079877

Scale: 1:1250

Date: 30/06/2017

GUIDE TO INTERPRETING

MAINS RECORDS PLANS

PRODUCED BY MAPPING SERVICES

INTRODUCTION

The Health & Safety Executive have produced a document entitled ‘Avoiding danger from underground services’. Copies are available from HMSO’s accredited agents and good booksellers, Ref HS(G)47, ISBN 0118854925.

WHEN WORKING IN THE VICINITY OF ELECTRICITY CABLES AND OVERHEAD LINES PLEASE FOLOW THE DO’S & DON’T’S LISTED BELOW.

DO’S

Do Make sure that you have plans of the cables in the area before any excavation work starts. Remember that some cables such as service cables may not be shown on the plans. Cables owned by other companies are not shown, e.g. local authorities, Department of the Environment, National Grid Co. etc.

Do Make sure that you understand the plans that have been supplied to you. For detailed explanation of the symbols used by Scottish & Southern Energy to display the cable information see
Appendices.

Do Use a cable avoidance tool (CAT) to determine the position of the existing cables in the work area. The positions should be clearly marked and further tests made as work proceeds. **If in doubt, get advice from your supervisor.**

Do Hand dig trial holes over the indicated route of the cable, excavate alongside.

Do Ask for a cable to be made dead if it is buried in concrete. Please note that this is likely to be a costly process.

Do Watch for signs of cables as work progresses, such as marker tapes or cable covers which may be exposed.

Do Backfill carefully using stone free soil around cables, replacing marker tapes and covers.

Do Ensure that there is maximum clearance above all cable & joints.

Do Notify Scottish & Southern Energy immediately should accidental damage to cables occur however large or small. Arrange to keep people well clear of the cable that has been damaged. Do not backfill an area where cable damage has occurred.

DON’T’S

Don’t Operate a bulldozer, scraper, dragline or excavator unless you are satisfied that there are no buried cables or overhead lines in the working area.

Don’t Use picks, forks or pointed instruments in soft clay or soil where cables are present, exercise extreme caution where such instruments are used to free lumps of stone or to break up firmly compacted ground.

Don’t Use exposed cables as a convenient step or handhold.

Don’t Handle or attempt to alter the position of any cable.

REMEMBER THAT A DAMAGED CABLE MAY CAUSE EXTENSIVE LOSS OF SUPPLIES, MAKE EXPENSIVE REPAIRS NECESSARY AND CAUSE SERIOUS OR EVEN FATAL INJURY.

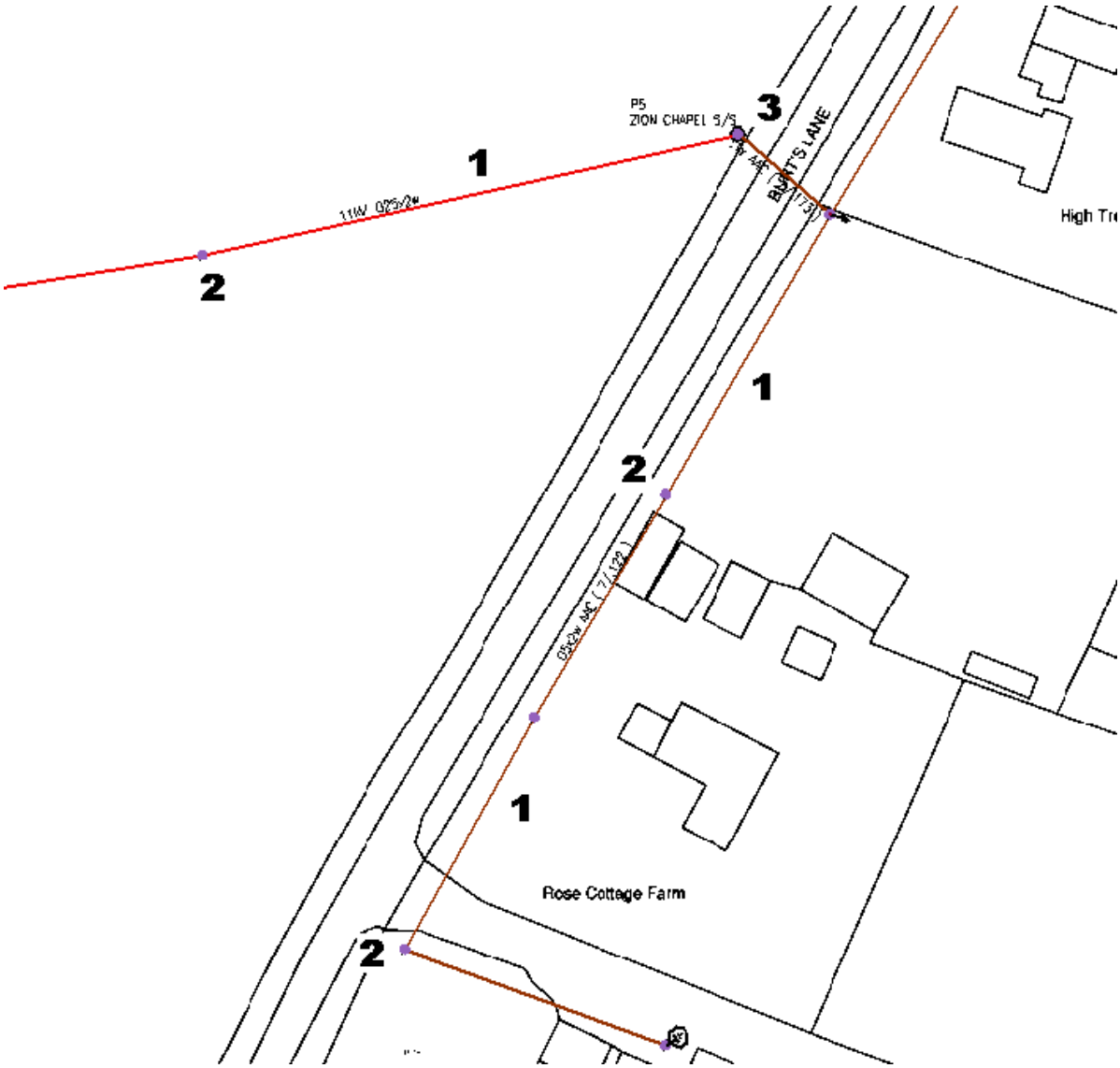
IF IN DOUBT ASK SCOTTISH & SOUTHERN ENERGY.

UNDERSTANDING THE CABLE INFORMATION ON THE PLANS.

AVERAGE DEPTH OF CABLES: Footpaths 0.6 metres
Road Crossings 0.75metres
NB These depths are only approximate, depths may vary. It should also be noted
That surface levels can change subsequent to the cables being laid.

Mains records symbols definitions and examples:

A) Overhead lines & Poles – These are depicted as follows:

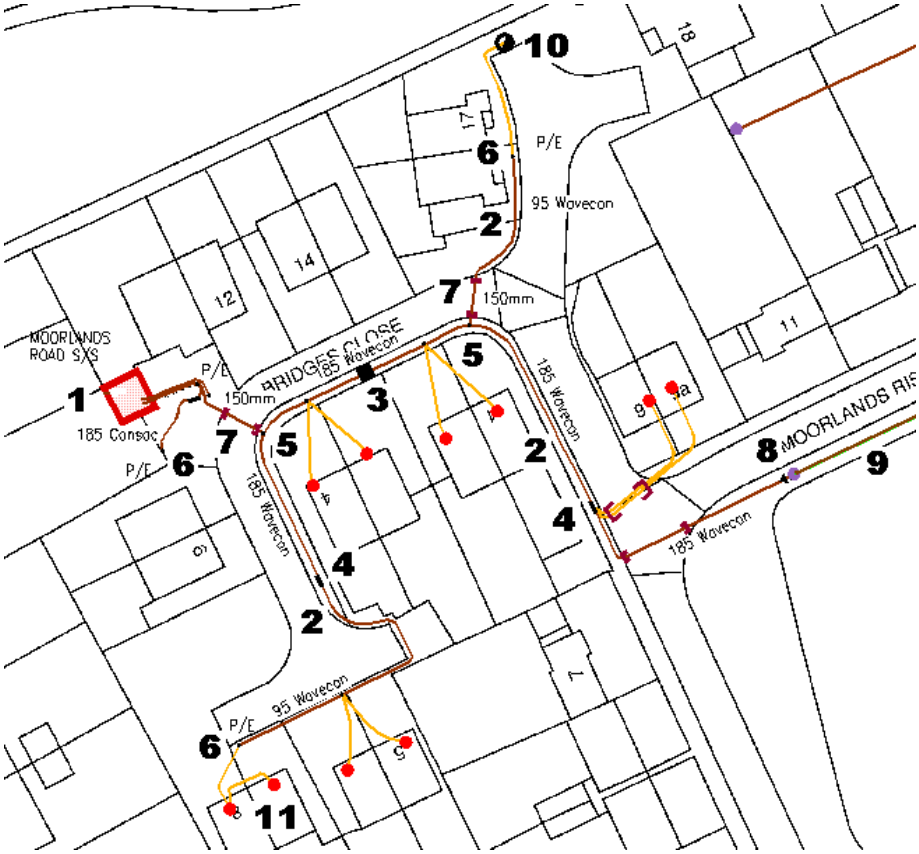


1. Overhead Line – These can be either High Voltage or Low Voltage, colour denotes voltage.

2. Poles.

3. Pole Mounted Transformer.

B) Typical example of Low Voltage cable records:



1. Sub Station

2. Low Voltage Underground cable.

3. Link Boxes: This is a box with a manhole cover marked as belonging to Scottish & Southern Energy containing links. Either two or four cables will lead away from a link box.

4. Straight Joint: This is where two separate cables are joined together.

5. Breech Joint: This is where another cable is attached to the main.

6. Pot End:This is the end of the cable. In certain circumstances service cables to properties can be taken from the pot end. These services may not be shown on the plans.

7. Road crossing duct where a cable is routed under a path or road.

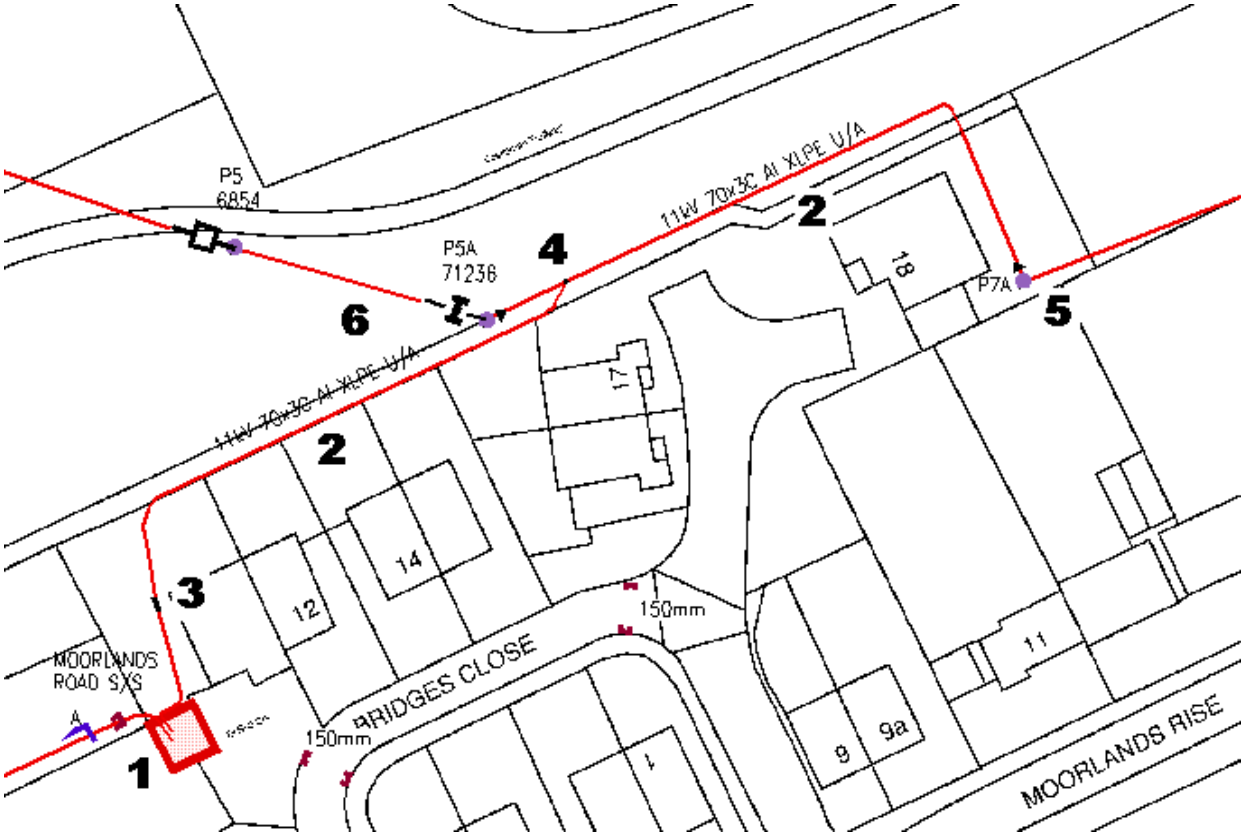
8. Cable terminations/Pole Box: Where underground cables are connected to overhead lines

9. Overhead line.

10. Street Lamps.

11. Services to properties: The service cable to an individual property are not always shown on the mains records that Scottish & Southern Energy supply.
In some cases a service can be looped from an adjacent property.
Some services are laid through ducts from the mains to the meter positon when laid.

C) Typical example of High Voltage cable record.



1. Sub Station

2. High Voltage Underground cable – Colour denotes voltage.

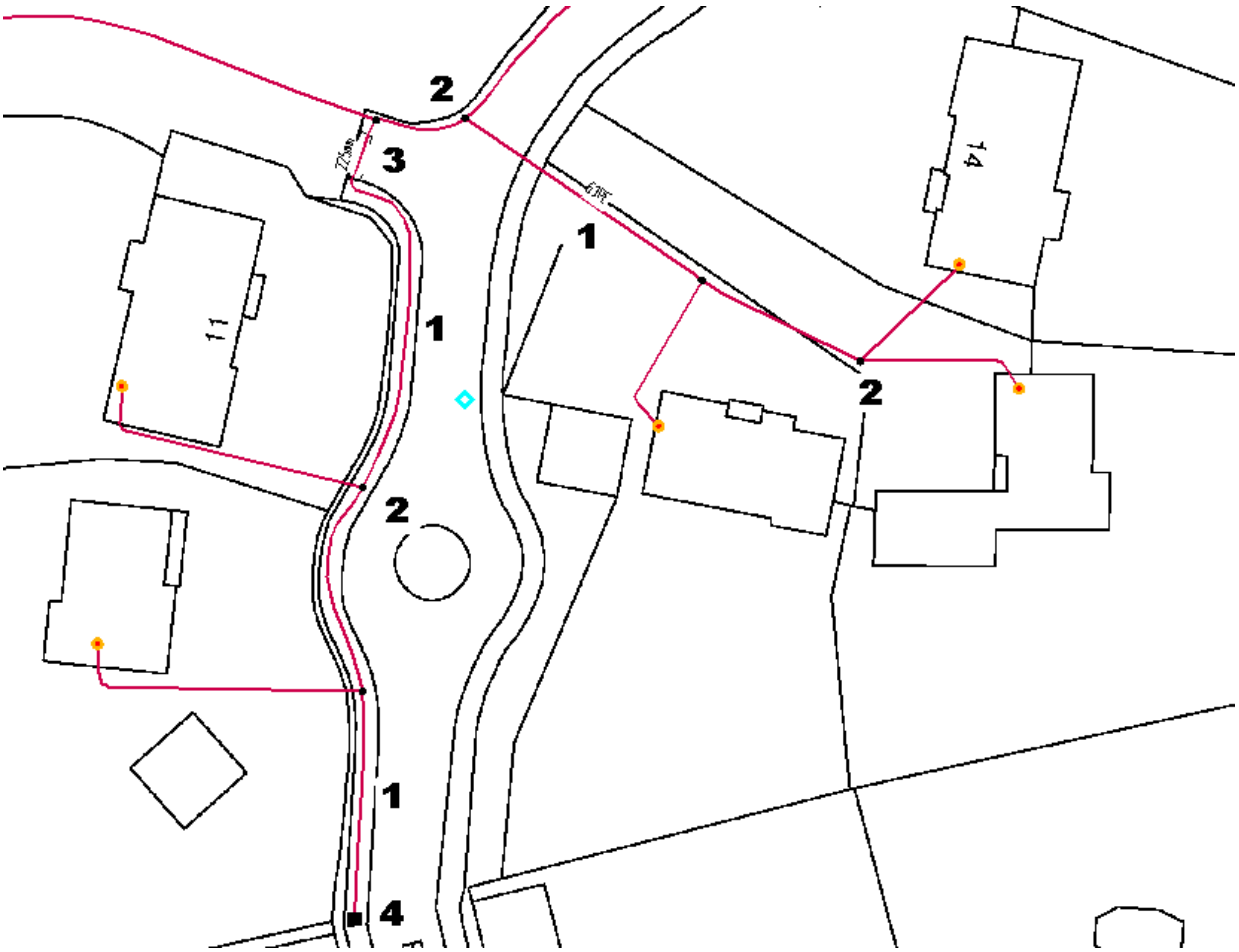
3. Straight Joint: This is where two separate cables are joined together.

4. Breech Joint: This is where another cable is attached to the main.

5. Cable terminations/Pole Box: Where underground cables are connected to overhead lines

6. Overhead Switch.

D) Typical example of Gas pipe record



1. Gas Pipes- Colour denotes pressure.

2. Gas joint

3. Road crossing duct where a pipe is routed under a path or road.

4. Connection Point. Position where network is connected to national gas suppliers network.

Further Notes.

The various sizes of cables and pipes are shown alongside the routes.

IF IN DOUBT ASK SCOTTISH & SOUTHERN ENERGY

GIS ELECTRIC SYMBOLS (SOUTH)

LV UNDERGROUND SERVICE CABLE
LV UNDERGROUND MAINS CABLE
2KV-3.3KV UNDERGROUND CABLE
6.6KV UNDERGROUND CABLE
11KV UNDERGROUND CABLE
22KV UNDERGROUND CABLE
33KV UNDERGROUND CABLE
66KV UNDERGROUND CABLE
132KV UNDERGROUND CABLE
LV OVERHEAD LINE
2-3.3KV OVERHEAD LINE
6.6KV OVERHEAD LINE
11KV OVERHEAD LINE
22KV OVERHEAD LINE
33KV OVERHEAD LINE
66KV OVERHEAD LINE
132KV OVERHEAD LINE
FIBRE OPTIC CABLE
PILOT CABLE
CIRCUIT BREAKER
SWITCH DISCONNECTOR
POLE BOX
STRAIGHT JOINT
TEE JOINT

TRIFURCATING JOINT
P/E POT END JOINT
C/E CAPPED END JOINT
SEALING END JOINT
SERVICE CONNECTOR JOINT
O/H CONNECTOR JOINT
WALL BOX JOINT

POLE
POLE MOUNTED TRANSFORMER

SUBSTATION
LINK BOX
PILLAR

MAJOR PIPELINE
ASSUMED ROUTE

A
CROSS SECTION

DUCTING
FS
FLYING STAY
PME EARTH
NEUTRAL EARTH
OIL/GAS GAUGE
OIL/GAS TANK
BALANCER
REGULATOR

PIT
SCHEMATIC CONNECTOR
SUPPLY LOCATION-PROPERTY
SUPPLY LOCATION-OTHER
SUPPLY LOCATION-STREET FURNITURE

GIS ELECTRIC SYMBOLS (NORTH)

FIBRE OPTIC CABLE

PILOT CABLE

6.6/11kV UNDERGROUND CABLE

33kV UNDERGROUND CABLE

132kV UNDERGROUND CABLE

LOW VOLTAGE UNDERGROUND CABLE

6.6/11kV OVERHEAD LINE

33kV OVERHEAD LINE

132/275kV OVERHEAD LINE

LOW VOLTAGE OVERHEAD LINE

POLES

TOWER

POLE TERMINATION

JOINTS

DUCTING

LINK BOX

PILLAR

SUBSTATION

WATER PIPELINE

OIL PIPELINE

GAS PIPELINE

SWITCH DISCONNECTOR

CIRCUIT BREAKER

SUPPLY POINT

GIS Gas Symbols

Medium Pressure Pipe

Low Pressure Pipe

Gas Ducting

Gas Supply Point

Gas Joint

End Closure

Pressure Reduction Station

Gas Utility Connection Point

Valve

GIS Environmental Guide

Countryside Agency

- Areas of Outstanding Natural Beauty (AONB)
- National Park

Environment Agency

- Borehole
- Water Extraction Point
- Sensitive Waterway
- Source Protection Zone
- Vulnerability Zone

Forestry Commission

- Access
- Ownership

English Heritage/Historic Scotland

- Monuments

SEPA

- Flood Area
- Flood Location

English Nature/Scottish Natural Heritage

- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- RAMSAR
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ancient Woodland

Areas of Concern

- Contaminated
- Cadmium
- Methane
- Heavy Metal-Unclassified
- Asbestos
- Ordnance
- Mercury
- Restricted Access

ATKINS CHECKED
SM

United Utilites Water Limited

Property Searches
Ground Floor Grasmere House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

Telephone 0370 751 0101

Property.searches@uuplc.co.uk

Atkins Communications Division
The Hub
500 Park Avenue
Almondsbury
Bristol
BS32 4RZ

Your Ref: 55699
Our Ref: 1301853
Date: 20/6/2017

FAO:

Dear Sirs

381 BRADFORD ROAD MANCHESTER M40 7BW

I acknowledge with thanks your request dated 16/06/17 for information on the location of our services.

Please find enclosed plans showing the approximate position of our 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 our 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 you requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please telephone us on 0370 7510101.

Yours Faithfully,

Karen McCormack
Property Searches Manager

TERMS AND CONDITIONS - WASTERWATER & 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)".

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1. 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.
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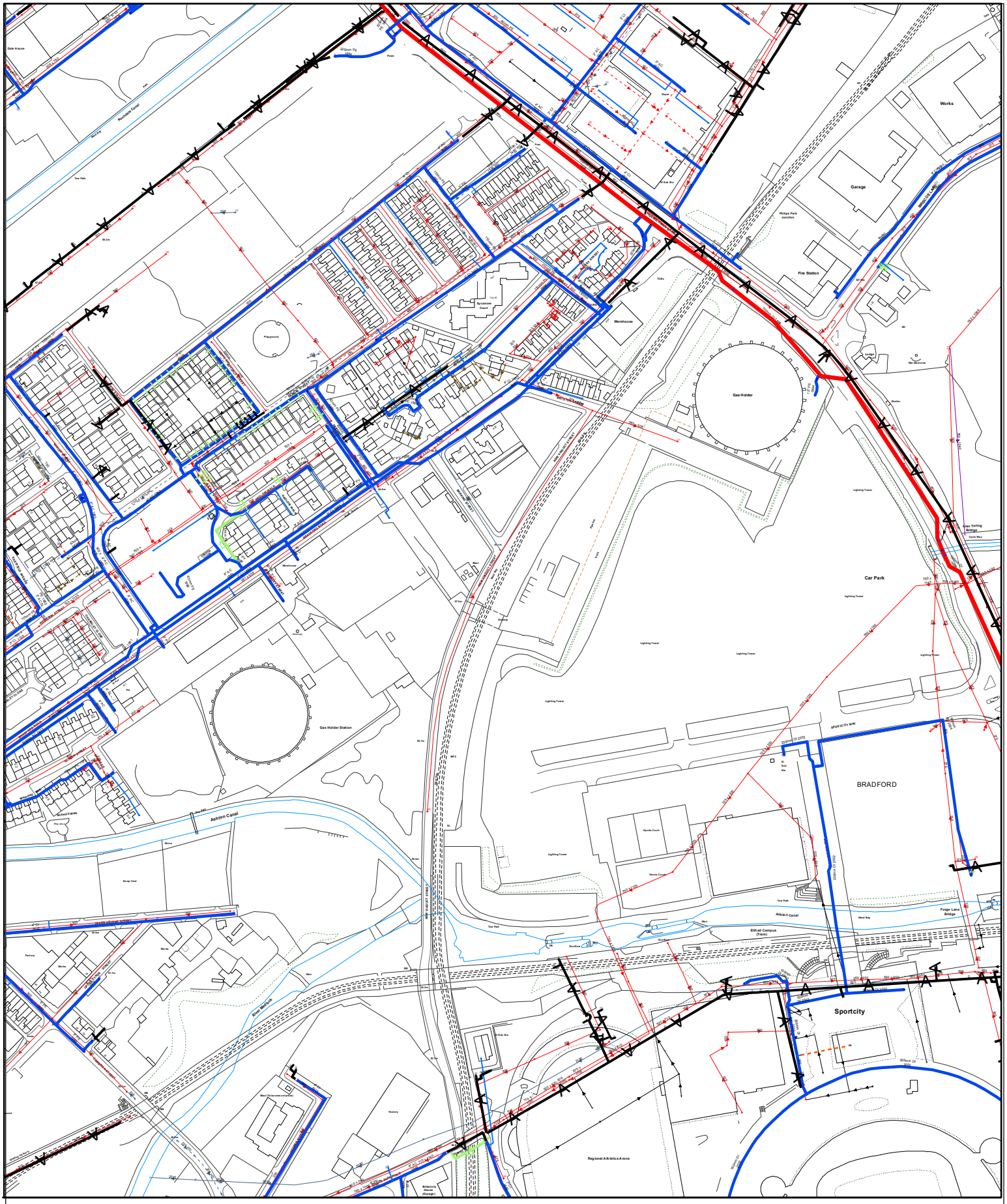
3. In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only and given in accordance with the best information available. The nature of the relevant system and/or its actual position may be different from that shown on the plan and UUWL is not liable for any damage caused by incorrect information provided save as stated in section 199 of the Water Industry Act 1991. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.



Date: 20/06/2017

Extract from maps of public sewers and water mains

Printed By:
Property Searches

381 Bradford Road Manchester M40 7BW

United Utilities
helping life flow smoothly

The position of this underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. Private service pipes may be shown where a known record is available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights [2016] Ordnance Survey 100022432.

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WASTE WATER SYMBOLOGY

Foul	Surface	Combined	Overflow	
				Manhole
				Manhole, Side Entry
				MainSewer, Public
				MainSewer, Private
				MainSewer, S104
				Rising Main, Public
				Rising Main, Private
				Rising Main, S104
				Highway Drain, Private

Overflow

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

Abandoned Pipe

- MainSewer
- Rising Main
- Highway Drain
- Sludge Main

Foul	Surface	Combined	
ST		ST	Septic Tank
			Vent Column
			Network Storage Tank
			Orifice Plate
			Vortex Chamber
			Penstock Chamber
			Blind Manhole

Foul	Surface	Combined	Overflow	
				Screen Chamber
				Discharge Point
				Outfall

- Control Kiosk
- Unspecified

Foul	Surface	Combined	
			WW Site Termination
AV	AV	AV	Air Valve
CA	CA	CA	Cascade
NRV	NRV	NRV	Non Return Valve
ES	ES	ES	Extent of Survey
FM	FM	FM	Flow Meter
GU	GU	GU	Gulley
HA	HA	HA	Hatch Box
HS	HS	HS	Head of System
HY	HY	HY	Hydrobrake / Vortex
IN	IN	IN	Inlet
IC	IC	IC	Inspection Chamber
			Bifurcation
CA	CA	CA	Catchpit
			WW Pumping Station

Foul	Surface	Combined	
			Sludge Pumping Station
		V	Sewer Overflow
			T Junction/Saddle
LH	LH	LH	LampHole
OI	OI	OI	OilInterceptor
PE	PE	PE	PenStock
			Pump
RE	RE	RE	RoddingEye
	SO	SO	Soakaway
SM	SM	SM	Summit
VA	VA	VA	Valve
VC	VC	VC	Valve Chamber
WO	WO	WO	Washout Chamber
DS	DS	DS	DropShaft
WTW		WWTW	WW Treatment Works

Legend

MANHOLE FUNCTION		SEWER SHAPE			
FO	Foul	CI	Circular	TR	Trapezoidal
SW	Surface Water	EG	Egg	AR	Arch
CO	Combined	OV	Oval	BA	Barrel
OV	Overflow	FT	Flat Top	HO	HorseShoe
		RE	Rectangular	UN	Unspecified
		SQ	Square		

SEWER MATERIAL			
AC	Asbestos Cement	DI	Ductile Iron
BR	Brick	VC	Vitrified Clay
CO	Concrete	PP	Polypropylene
CSB	Concrete Segment	PF	Pitched Fibre
CSU	Concrete Segment	MA	Masonry, Coursed
CC	Concrete Box Culverted	MA	Masonry, Random
PSC	Plastic / Steel	RP	Reinforced Plastic
GR	Glass Reinforced	CI	Cast Iron
GRP	Glass Reinforced	SI	Spun Iron
PVC	Polyvinyl Chloride	ST	Steel
PE	Polyethylene	U	Unspecified

CLEAN WATER SYMBOLOGY

PIPE WORK

Live	Proposed	
		Trunk Main - PressurisedMain
		Raw Water Aqueduct - PressurisedMain
		Raw Water Aqueduct - GravityMain
		LDTM Raw Water Distribution - PressurisedMain
		LDTM Raw Water Distribution - GravityMain
		LDTM Treated Water Distribution - PressurisedMain
		LDTM Treated Water Distribution - GravityMain
		Private Pipe - LateralLine
		Distribution Main - PressurisedMain
		Comms Pipe - LateralLine
		Concessionary Service - LateralLine

ABANDONED PIPE

- Trunk Main
- Raw Water Aqueduct
- LDTM Raw Water Distribution
- LDTM Treated Water Distribution
- Private Pipe
- Distribution Main
- Comms Pipe
- Concessionary Service

NODES/FURNITURES

Live	Proposed	
		End Cap
		CC Valve
		AC Valve
		Air Valve
		Sluice Valve
		Non Return Valve
		Pressure Management Valve
		Change of Characterstic
		Anode
		Chlorination Point
		De Chlorination Point
		Bore Hole
INLET	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant

Live	Proposed	
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
SP	SP	Strainer Point
AP	AP	Access Point
HB	HB	Hatch Box
IP	IP	IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

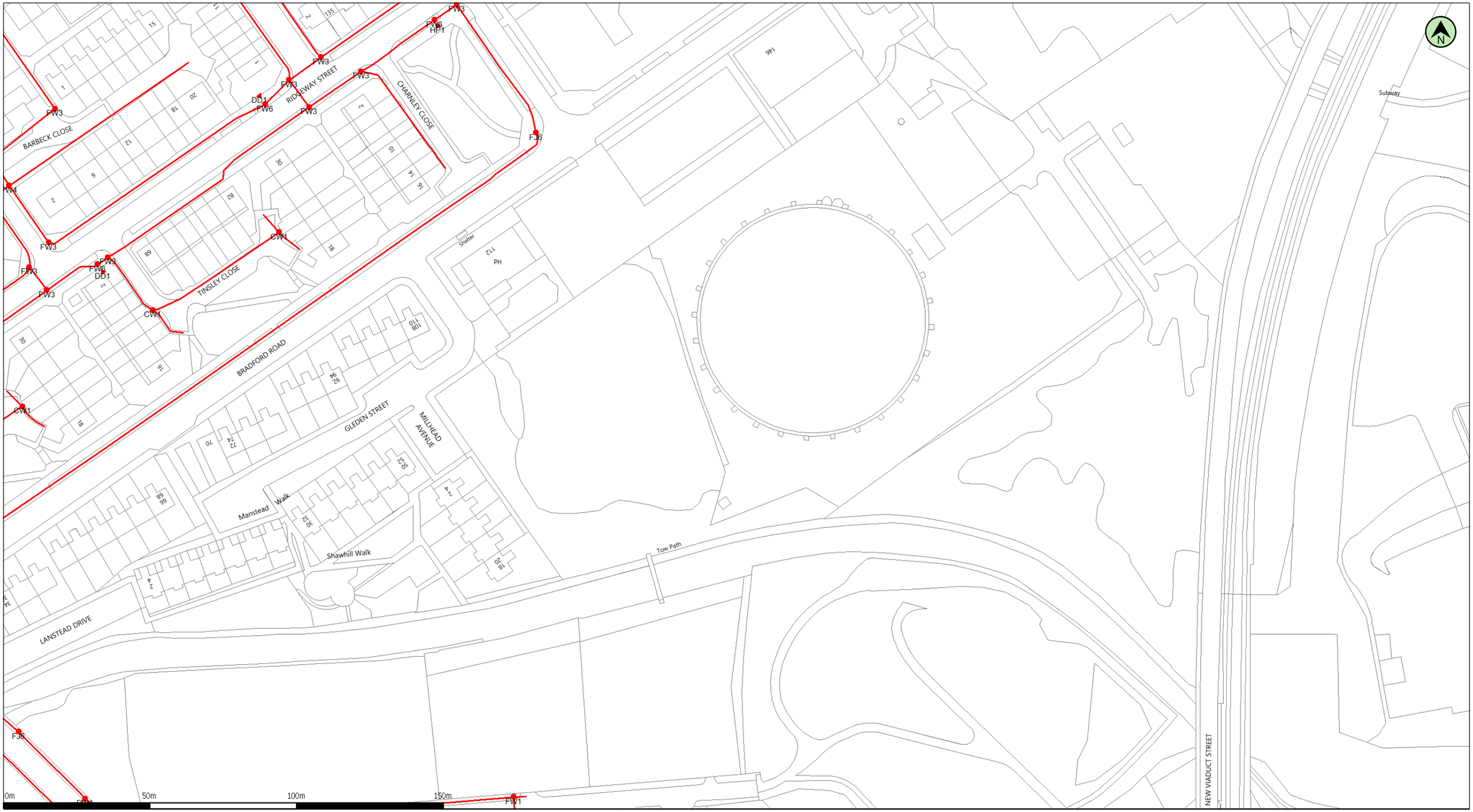
PROPERTY TYPES

Live	Proposed	
		Condition Report
PB	PB	Pipe Bridges
PT	PT	Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
		Private Treatment Works

Live	Proposed	
VH	VH	Valve House
		Water Tower
SR	SR	Service Reservoir
SR	SR	Supply Reservoir
Inlet AP	Inlet AP	Abstraction Point
M	M	Domestic meter
CM	CM	Commercial meter
T	T	Telemetry Outstation

Legend

MATERIAL TYPES		LINING TYPES	
AC	ASBESTOS CEMENT	CL	CEMENT LINING
CI	CAST IRON	TB	TAR OR BITUMEN
CU	COPPER	ERL	EPOXY RESIN
CO	CONCRETE		
DI	DUCTILE IRON	INSERTION TYPES	
GI	GALVANISED IRON		
GR	GREY IRON	DD	DIE DRAWN
OT	OTHERS	DR	DIRECTIONAL DRILLING
PB	LEAD	MO	MOLING
PV	uPVC	PI	PIPELINE
SI	SPUN IRON	SL	SLIP LINED
ST	STEEL		
UN	UNKONWN		
PE	POLYETHYLENE		



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Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2017 Ordnance Survey 100019209.

Duct, Trench | Chamber | Cabinet

tracey.brough@atkinsglobal.com

1

ATKINS CHECKED
SM

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Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2017 Ordnance Survey 100019209.

Duct, Trench | Chamber | Cabinet

tracey.brough@atkinsglobal.com

2

ATKINS CHECKED
SM

Murthy, Srinivasa

From: Ramanikanthan, Jayakanth
Sent: Tuesday, June 20, 2017 10:44 AM
To: Statutory Enquiries
Subject: RE: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017
Attachments: 399040 - 1.pdf; 399040 - 2.pdf; Data Key + Special Requirements.pdf

Please accept this email as confirmation that Vodafone: Fixed **does** have apparatus within the vicinity of your proposed works.

Please see attached network information.

IMPORTANT - PLEASE READ = Your Next Step?:-
Where apparatus is affected and requires diversion, please send all the scheme related proposals that affects the Vodafone Network to c3requests@vodafone.com with a request for a 'C3 Budget Estimate'. Please ensure you include a plan showing proposed works. (A location plan is insufficient for Vodafone to provide a costing). These estimates will be provided by Vodafone directly, normally within 20 working days from receipt of your request. Please include proof of this C2 response when requesting a C3 (*using the 'forward' option*). Diversionary works may be necessary if the existing line of the highway/railway or its levels are altered.

Kind regards

Plant Enquiries Team
T: 01454 662881
E: osm.enquiries@atkinsglobal.com

ATKINS working on behalf of Vodafone: Fixed

vodafone

This response is made only in respect to electronic communications apparatus forming part of the Vodafone: Fixed electronic communications network formerly being part of the electronic communications networks of Cable & Wireless UK, Energis Communications Limited, Thus Group Holdings Plc and Your Communications Limited.

PLEASE NOTE: The information given is indicative only. No warranty is made as to its accuracy. This information must not be solely relied upon in the event of excavation or other works carried out in the vicinity of Vodafone plant. No liability of any kind whatsoever is accepted by Vodafone, its servants, or agents, for any error or omission in respect of information contained on this information. The actual position of underground services must be verified and established on site before any mechanical plant is used. Authorities and contractors will be held liable for the full cost of repairs to Vodafone's apparatus and all claims made against them by Third parties as a result of any interference or damage.

From: atkinsstatutory.enquiries@atkinsglobal.com [mailto:atkinsstatutory.enquiries@atkinsglobal.com]
Sent: 14 June 2017 21:14
To: plantenquiries@catelecomuk.com; plantenquiries@energetics-uk.com; enquiries@environment-agency.gov.uk; plantenquiries@instalcom.co.uk; plantenquiries@mcnicholas.co.uk; plantenquiries@mcnicholas.co.uk; opburiedservicesenquiries@networkrail.co.uk; interoute.enquiries@plancast.co.uk; nrswa@sky.uk; osp-team@uk.verizon.com; osp-team@uk.verizonbusiness.com; National Plant Enquiry's <OSM.enquiries@atkinsglobal.com>
Cc: Statutory Enquiries <AtkinsStatutory.Enquiries@atkinsglobal.com>
Subject: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

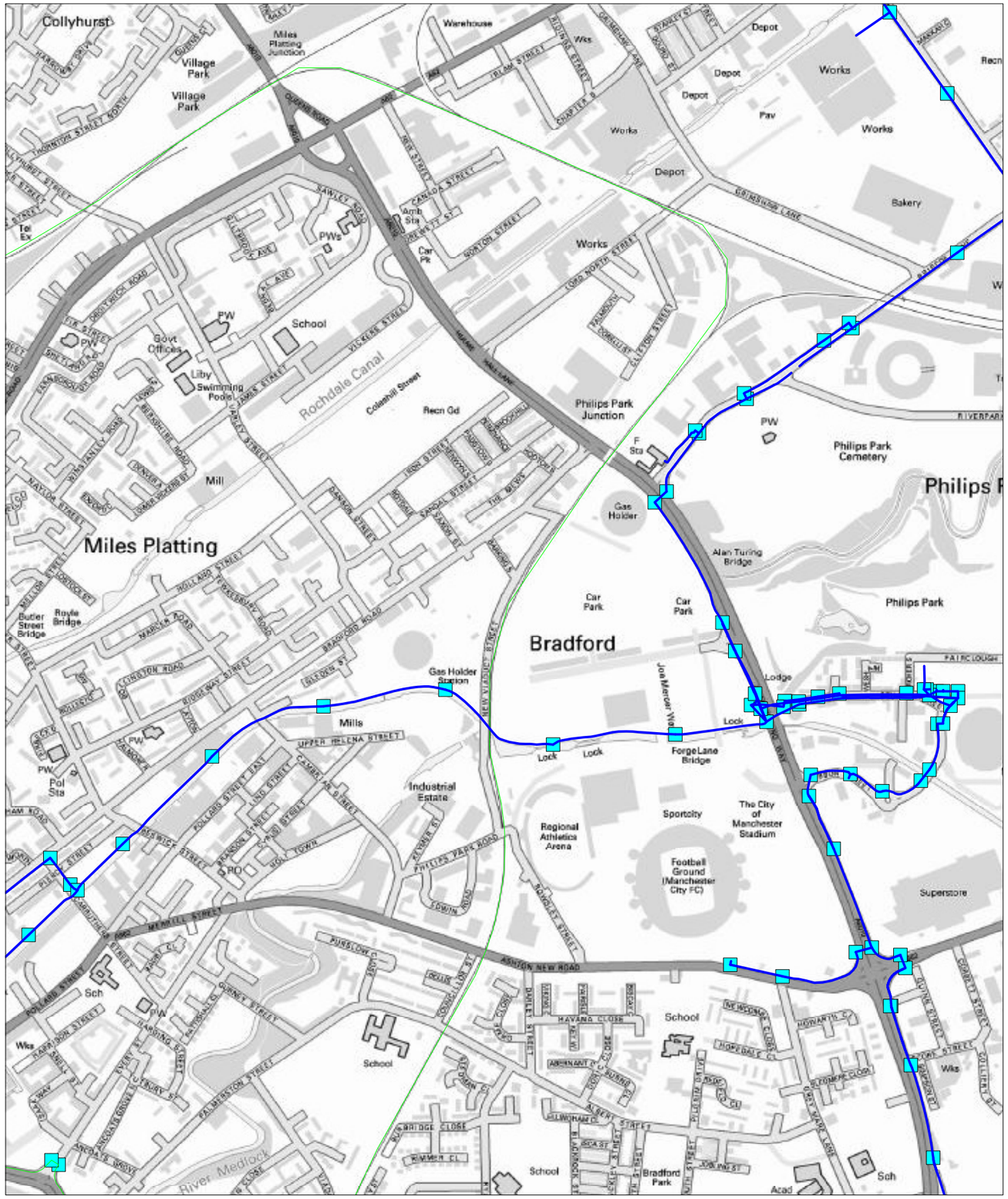
Map1

Plant

- **AsBuilt Ducts (UNC use only)**
  - Leased
  - Owned
  - Shared
  - Shared (SP)
- **AsBuilt Chambers**
- **Plan Ducts**
- **Plan Chambers**

Rasters

- **OS 1:10,000 Mapping**

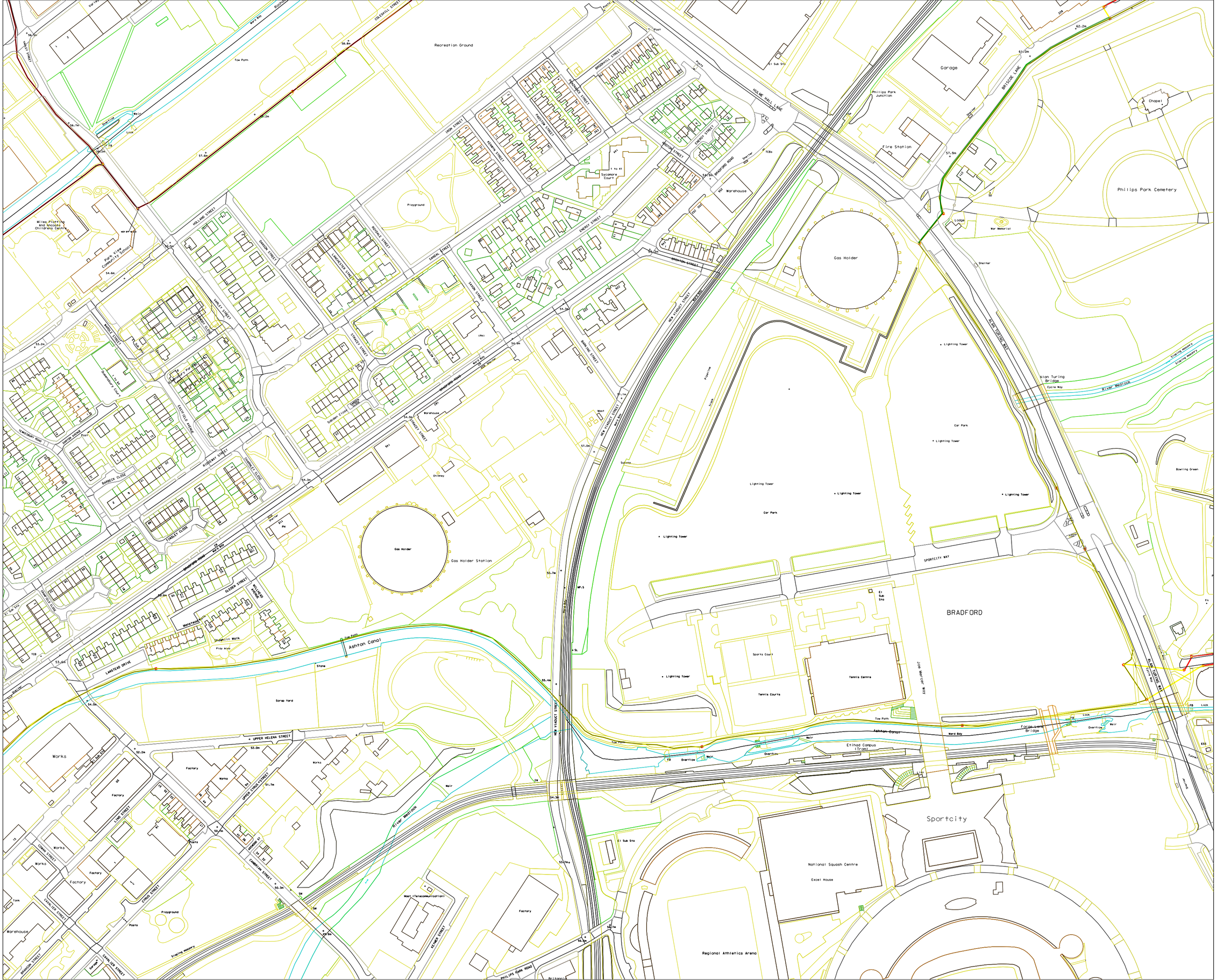


SCALE 1 : 8,893

200 0 200 400 600

METERS

N


Recreation Ground
Tow Path
COLEHILL STREET
Playground
Miles Platting And Newcastle Childrens Centre
Park View Community School
ROLLAND STREET
BRADFORD ROAD
Sycamore Court
Warehouse
Garage
Philips Park Junction
Fire Station
Chapel
Philips Park Cemetery
War Memorial
Lodge
Gas Holder
Gas Holder Station
Alan Turing Bridge
Cycle Way
River Medlock
Stanley Mount
Car Park
Lighting Tower
Bowling Green
SPORTCITY WAY
BRADFORD
Sports Court
Tennis Courts
Tennis Centre
JOHN MARCHANT WAY
Ashton Canal
Ward Bay
Forge Lane Bridge
Etihad Campus (Tram)
Sportcity
National Squash Centre
Excel House
Regional Athletics Arena
Scrap Yard
Works
Factory
Playground
Britannia
PHILIPS PARK ROAD
UPPER HELENA STREET
UPPER CROSS STREET
LIND STREET
CAVALIER STREET
CITRUS STREET
CAMBRIAN STREET
ALDERSON ST
CONGA STREET
BRANCH STREET
KEARNS STREET
Weir
Lock
Overflow
Footbridge
Tunnel
Sub Sta
Posts
Pillar
Chimney
Mast (Telecommunication)
Pipeline
Cycle Way

Vodafone Network Colour:

- Ex-Cable&Wireless UK Network (now Vodafone)
- Planned & Approved Route
- Planned Route – Awaiting Approval
- Other Licensed Operator (OLO)
- Ex-Thus Network (now Vodafone)
- Ex-Energis Network (now Vodafone)
- OLO

Other:

- Overhead Electricity Line (non Vodafone)
- Network Rail

Other Licensed Operator (OLO).

= Ex-Cable&Wireless UK, Energis and Thus fibre-optic cable within an OLO duct. Please contact all other operators for further details of their apparatus within that area.

Fibre Services
Special Requirements relating to the External Plant Network of Vodafone

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1. Introduction

This document sets out the procedure that will apply when Other Parties intend or are undertaking works in the vicinity of Vodafone apparatus.

2. Purpose of document

This document provides a means by which the Vodafone specific special requirements relating to their apparatus, regardless of it being situated in the public highway / road, private street, land or any other areas, is made aware to Other Parties.

3. Scope

This document will be presented to Other Parties or Contractors to encourage those undertaking works within the vicinity of Vodafone apparatus to refer to and comply with. This is in order to protect where necessary the Vodafone apparatus and to avoid damage to the apparatus and loss of service.

A National Joint Utilities Group (NJUG) document NJUG 9 titled "Recommendations for the Exchange of Records of Apparatus between Utilities" provides useful reference material.

It should be noted that, where appropriate, additional information on avoiding danger from underground apparatus is contained within the HSG47 guidance book titled "Avoiding Danger from Underground Services."

4. Vodafone Network and Apparatus

Damage to Vodafone apparatus is extremely disruptive and can be expensive to repair, especially where long lengths of cable have to be replaced.

In order to maintain the network integrity and minimise disruption to service, it is essential that disturbances are absolutely minimal. When working within the vicinity of Vodafone apparatus, extreme care is necessary in order to avoid costly repairs. The Other Parties / Contractor shall make every effort to ensure that disturbance of Vodafone apparatus is no more than is absolutely necessary for the completion of the works in accordance with their contract.

5. Plant records

It is the responsibility of the Other Parties undertaking works which may affect Vodafone apparatus to obtain all relevant Vodafone plant records from our agent Atkins Global prior to works commencing. This may be done by contacting the Atkins Global Plant Enquiries Team listed in Appendix B.

Plant records for such enquiries will generally be provided within 10 working days of receipt and in compliance with the New Roads and Street Works Act 1991 [NRSWA] requirements. If Vodafone plant is affected, the response will contain reference to this document. Other Parties and Contractors are advised to refer to the National Joint Utilities Group [NJUG] 9 Document which outlines recommendations for the exchange of records of apparatus between utilities.

6. Definitions

The following definitions are applicable in this document:

a) **Apparatus** means all electronic communications apparatus above surface, at the surface or sub-surface apparatus, Cable, Jointing Chamber and plant formerly being apparatus owned or used by the Code Operators Cable & Wireless UK, Energis Communications Limited, Thus Group Holdings Plc and Your Communications Limited including any associated cables or ducts owned, leased or rented by the said Code Operators now owned and used by the Code Operator Vodafone Limited ("Vodafone").

b) **Cable** means any polythene or other sheath containing optical fibres or metallic conductors.

c) **Depth of cover** means the depth from the surface to the topmost barrel of the duct nest, in the case of ducts encased in concrete, to the top of the concrete, and in the case of directly buried cable, the top of the cable.

d) **Jointing chamber** means any manhole, surface box or other chamber giving access to Vodafone apparatus or their network.

e) **Utility** means an organisation licensed to provide gas, water, electricity, Cable TV or telecommunications services.

f) **Developer** means an organisation licensed to develop industrial/residential premises or given license to connect to utility apparatus.

g) **Contractor** means the individual, firm or company contracted to undertake the work for a Utility or Other Parties.

h) **Other Parties** means the Utilities, Highway Authorities, Developers, Street Authority (Roads Authority - Scotland).

i) **Site** means the location of, or in the vicinity of, the various works.

7. Requirements

Prior to commencing any work or moving heavy plant or equipment over any portion of the site, the Other Parties or Contractor shall notify Vodafone of their intentions. This may be done by contacting Atkins Global, contact listed in Appendix B.

Upon receipt of this notification, Atkins Global will identify if Vodafone apparatus is affected. If any Vodafone apparatus is affected by the works then Atkins Global will provide necessary records and confirm details of Vodafone apparatus and network operated within the affected area or adjacent to the proposed work site.

7.1 Location of Plant

It is the responsibility of the Other Parties or Contractors to undertake adequate plant location procedures. These may include searches for metallic cables which must be performed by actively inducing a signal in a cable conductor via a transmitter. A passive search is not considered sufficient.

Before applying a tracing signal to the Vodafone apparatus, the Other Parties or Contractors shall seek confirmation from Atkins Global that the Vodafone apparatus will not suffer any disruption to its networks normal workings as a result of the nature of the signal being induced.

7.2 Trial excavations

Optic fibre cables are very susceptible to damage from excavation tools. They are not electrically conductive and cannot be located by radio induction methods. Once an approximate location is known, the exact location must be ascertained by means of hand dug pilot holes. Where the work to be carried out by the Other Party or Contractor involves excavation in the vicinity of our apparatus, the Other Party or Contractor shall, by trial excavation at his own expense, determine the exact location and depth of the Cable& Wireless Worldwide apparatus. All excavations adjacent to the Vodafone apparatus are to be carried out by hand until the extent and /or location of the apparatus is known.

All excavation work shall be executed in accordance with the current issue of Health and Safety series booklet HSG47, Avoiding danger from underground services.

8. Depths of cover

The Other Party or Contractor should note that the minimum depths of cover for Vodafone apparatus shall be maintained together with specified separation requirements. Where the minimum depths of cover specified by Vodafone cannot be maintained, the Other Party or Contractor shall at their own expense, carry out the instructions of Vodafone requirements for the protection or diversion of their apparatus.

The Other Party or Contractor should have particular regard to the possibility of encountering Vodafone apparatus (including ducts and cables), at depths of cover other than that reported.

Surface cables (such as cables on bridges or walls) which are liable to be placed in danger from the Other Parties or Contractors works shall be protected, at the Other Parties expense, as directed by the Vodafone representative.

9. Separation

Reference should be made to HSG47 to ensure that adequate separation is achieved. The following details outline the specific requirements of Vodafone and capture the HSG47 requirements.

9.1 High voltage cables

High voltage single core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 500 mm.

High voltage multi-core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 350 mm.

In exceptional circumstances where the above clearances cannot be maintained, the separating distance may be reduced to a minimum of 175 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the High Voltage cable and the Company Apparatus, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.2 Low voltage cables

Low voltage cables of less than 1000 V shall have a minimum clearance from Company Apparatus of 180 mm. In exceptional circumstances where the above clearance cannot be maintained, the separating distance may be reduced to a minimum of 75 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the services, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.3 Ancillary electrical apparatus

Lamp posts, traffic posts and other such ancillary electrical apparatus shall have a minimum clearance of 150 mm from underground Company Apparatus and 600mm clearance from above ground Company Apparatus.

9.4 High pressure gas mains and other Undertakers plant/equipment

High pressure gas mains shall have a minimum clearance of 450 mm from Company Apparatus. All other undertakers' plant and equipment, when running in parallel with Company Apparatus, shall have a minimum clearance of 200mm. Where gas mains cross Company Apparatus, the minimum clearance shall be 200mm. All other undertakers' plant and equipment, when running across Company Apparatus, shall have a minimum clearance of 100 mm.

9.5 Other Undertakers plant

Other undertakers' plant and equipment which runs in parallel with Company Apparatus shall have a minimum clearance of 200mm. All other undertakers' plant and equipment when running across Company Apparatus shall have a minimum clearance of 100mm.

9.6 Tramways

Each separating distance shall be individually agreed with the Company Representative.

10. Jointing chambers

10.1 Protection

Footway type jointing chambers are not designed to withstand carriageway loadings.

Where such chambers are liable to be placed at risk, either temporarily or permanently, from vehicular traffic or from the movement of plant and/or equipment, they will need to be adequately protected. Alternatively, they may have to be demolished and rebuilt to carriageway standards, at the Other Parties or Contractors expense under supervision of Vodafone representative.

All Vodafone jointing chambers and / or other access points shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and / or any further equipment required by Vodafone for the maintenance of its apparatus, must be maintained at all reasonable times.

10.2 Access

The covers to Vodafone jointing chambers and / or apparatus shall only be lifted by means of the appropriate keys and under the direct supervision of a Cable& Wireless Worldwide representative. Other Parties or Contractors shall not enter any Vodafone jointing chamber and / or apparatus unless under the supervision of a Vodafone representative and in any case not before the mandatory gas test has been carried out in the presence of Vodafone representative and such checks have shown it to be safe to enter the Vodafone chamber and / or apparatus. The Other Parties or Contractors shall be given reasonable access to Vodafone apparatus and chambers when required.

11. Notification periods

Where the Other Parties or Contractors works or the movement of plant or equipment may endanger Vodafone apparatus, the Other Party or Contractor shall give the Vodafone agent Atkins Global [as indicated at Appendix B] **at** least 7 working days notice in writing of the intended date to commence operations.

No excavation should be made without first consulting the relevant Vodafone apparatus layout drawings, which will be made available from the Vodafone agent Atkins Global on request and allowing 28 working days for processing the relevant drawings. However, should this not be possible, direct contact should be made to the Atkins Global Bristol Plant Enquiries Team as soon as possible to assess the situation.

When excavating, moving or backfilling (including use of Foamed Concrete for Reinstatements – FCR) around Vodafone apparatus, Atkins Global (as agent for Vodafone) shall be given adequate prior written notice of the Other Parties or Contractors intentions, in order that the works may be adequately supervised. Such notice shall not be less than 3 working days.

12. Excavation and backfill

All excavations adjacent to Vodafone apparatus are to be carried out by hand until the extent and or location of the Vodafone apparatus is known.

Use of mechanical borers and / or excavators shall not be used without the supervisory presence of a Vodafone representative or a given exemption.

Shuttering of the excavation or support to Vodafone apparatus, at the Other Parties or Contractors expense, shall be used as directed by the Vodafone representative.

At least 7 working days notice must be given to Vodafone in order that any special protective measures which may be required to protect Vodafone apparatus, at the Other Parties or Contractors expense, when equipment such as pile driving, explosives, laser cutting high powered RF equipment or RF test gear, is to be used in conjunction with the works.

Other Parties or Contractors are advised to refer to the National Joint Utilities Group [NJUG] 4 Document which outlines the identification of small buried mains and services.

13. Foam concrete

If foam concrete is being used as the backfill material, it shall not be used either above or within 500 mm of any Company Apparatus. A suitable material in accordance with the specification for the Reinstatement of Openings in Highways shall be substituted.

14. Attendance of Company Representative

If a situation requires the attendance on site of a Vodafone representative for a continuous period of more than 6 hours, suitable facilities shall be provided by the Other Party or Contractor, at their expense, to meet the office and ablution requirements.

15. Damage reports

In the event of any damage whatsoever occurring to Vodafone apparatus, the Other Party or Contractor shall immediately inform Vodafone by contacting Julia Burgoyne, (for contact details please refer to Appendix B).

All relevant costs of any subsequent repair and / or removal of the Vodafone apparatus shall be charged to the Other Party or Contractor, irrespective of who affects the repair.

The above requirements do not relieve the Other Party or Contractor of any of their obligations under their contract.

Appendix A - office address details

Glasgow Office

Vodafone
Pavillion 1
1 – 2 Berkeley Square
99 Berkeley Street
Glasgow
G3 7HR

Bristol Office

Vodafone
Unit 1,
Tamar Road
St Philips
Bristol
BS2 0TY

Manchester Office

Vodafone
Unit M
Atlas Business Park
Wythenshawe
Manchester
M22 5RR

Appendix B – Street Works Team Contacts for Vodafone

Function	Name	Job Title	Address	Phone	Mobile	Fax	Email Address
Co-ordination	Sandra Semple	National Street Works Manager	Glasgow Office (see above)	0141 303 2857	07775 792133	0141 300 9611	sandra.semple@cw.com
Customer Complaints	CMC	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Liability Claims	Julia Burgoyne	Major Incident Resolution Coordinator	Bristol Office (see above)	01454 895114	07803 259857	n/a	julia.burgoyne@cw.com
Diversionary Works	Samantha Wilkinson	C3 Diversionary Works Project Controller	Manchester Office (see above)	0161 423 2740	n/a	n/a	samantha.wilkinson@cw.com
Emergencies (24 Hour)	CMC	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Plant Enquiries- Including Thus Plc, (formerly Scottish Telecom), Your Comms (formerly Norweb), Energis & Mercury Communications	Plant Enquiries Team	n/a	Atkins Global PO Box 290 500 Aztec West, Almondsbury, Bristol, BS32 4RZ	01454 662881	n/a	01454 663330	Osm.Enquiries@atkinsglobal.com

16. About this Document

Content Owner
Price, David J

Changes since last version
Reformatted using the current Vodafone template.

End of Document

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COLT PLANT ENQUIRIES

C.A TELECOM UK LIMITED
Dockers Field Farm
Pean Hill
Whitstable
Kent CT5 3BJ

Email: plantenquiries@catelecomuk.com
Tel: 01227 768427

Our Reference: P011578

OVERSEEING ORGANISATION AGENT ACHEME REFERENCE

O.O Agent – Atkins Global
Contact – Statutory enquires
Title – Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester
Scheme Ref –N/A

Date: 23/06/2017

Dear Sir/Madam,

Thank you your enquiry for the above reference. We can confirm that Colt Technology Services do have apparatus near the above location within the scheme reference and enclose the relevant drawings showing the approximate location of Colt apparatus for purpose of initial plant enquiry. Detailed network location will be presented via Scheme Identification Study Process. All reasonable effort has been made to capture network however image may not reflect unprocessed new build track. Search is based on Overseeing Organisation Agent data supplied; we do not accept responsibility for O.O Agent inaccurate data.

If your proposed works are likely to affect or expose the Colt Technology Services apparatus in anyway please contact Colt Civils Team members below to discuss any plant protection/diversionary measures that may be required, as per the code of Practice Measures necessary where apparatus is affected under NRSWA 1991 Diversionary Works Scheme Identification & Preliminary C2 Enquires.

Clients request for C3 budget costs will trigger the onsite survey to ascertain the requirement's needed to ensure a safe area for the affected COLT network

Colt company policy negates any potentially detrimental effect on the network as well as protecting us from any potential costs and damages.

Please note as COLT moves to C3 status we will require as estimated start date for the project to allow for COLT policy lead-time's

Des.creighton@colt.net - London

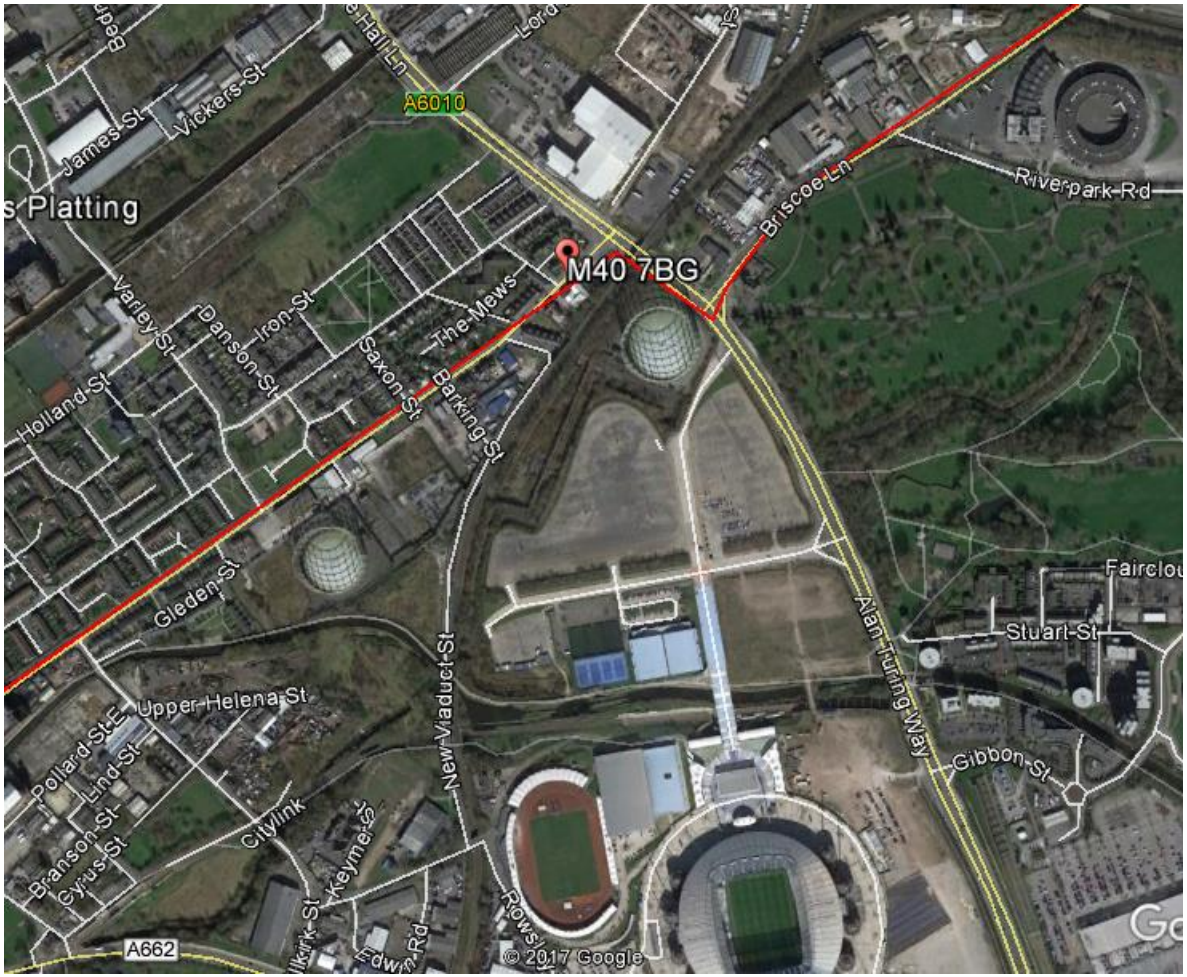
John.Richardson@colt.net- UK outside London M25

Paul.terry@colt.net- escalations

We would remind you that mechanical excavators or borers should never be used within 1500mm of any COLT Technology Service apparatus.

If we can be of any further assistance please do not hesitate to contact us.

Yours sincerely,
Plant Enquiry Team



CONFIDENTIAL

PREPARED BY C.A. TELECOM UK LTD

23rd June 2017

Our Ref: P011578

UTILITY UNDERTAKER

colt

Colt Technology Services
Beaufort House,
15 St Botolph Street,
London,EC3A 7QN

www.colt.net

PLANT ENQUIRY AGENT FOR Colt

C.A. TELECOM UK LIMITED

C.A. TELECOM UK LTD
Dockers Field Farm
Pean Hill
Whitstable
Kent CT5 3BJ

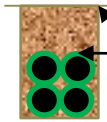
CONTACT Tel: 01227 768427
Fax: 01227 458884
email: plantenquiries@catelecomuk.com

MAP IMAGE PERMISSIONS

Centara supplied map
Promap

LEGEND

COLT DUCT



NOMINAL DEPTH OF COVER
250mm F/W
550mm C/W

NRSWA 1991 Diversionary Works

SCHEME & PRELIMINARY INQUIRIES C2
Colt Technology Services External Infrastructure general location indicated only for purposes of initial plant enquiry, detailed network location will be presented via Scheme Identification Study process. All reasonable effort has been made to capture network however image may not reflect unprocessed new build track.

OVERSEEING ORGANISATION AGENT REFERENCE

- O.O Agent – Atkins Global
- Contact – Statutory enquires
- Title – Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester
- Scheme Ref –N/A

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SM

Godwin, Shalom

From: online.plantenquiries@cityfibre.com
Sent: 30 June 2017 10:55
To: Statutory Enquiries
Subject: CityFibre Plant Enquiry, issued on 30/06/17 06:25. Reference 69c0urqibqfssl5.
Attachments: emap.pdf

You recently requested information pertaining to the above location and in relation to CityFibre Holdings Ltd plant.

Reference 69c0urqibqfssl5
User: OYScelliott
Title: 55699
Comment:

Please find attached a plan of the area of your interest that may contain plant which may be affected by your proposed works.

The validity of this response is 6 weeks, after such time a new enquiry would need to be made.

Please see the points of contact below if they are required:

Plant Enquiries
Rutherford House
Birchwood Park
Warrington
WA3 6ZH
asset.team@cityfibre.com

Please quote the Reference ID in the subject line in any correspondence.

Please be aware that all information included in this eMap is the property of the sender and subject to copyright. It is illegal to copy or send this information to any third party without the permission of the sender.

CityFibre

LEGEND

EXISTING PLANT

EXISTING PLANT

Select a bitmap

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Head Office
CityFibre Holdings Ltd
15 Bedford Street,
London,
WC2E 9HE

Tel: 0845 293 0774
Web: www.cityfibre.com

Asset Office
CityFibre Holdings Ltd,
Rutherford House,
Birchwood,
Warrington,
WA3 6ZH

Email: asset.team@cityfibre.com

Disclaimer:

Information shown on this plan is for general guidance only. No warranty is made as to its accuracy.
This plan must not be solely relied upon in the event of excavation or other works being carried out in the vicinity of Cityfibre plant.
No liability of any kind is accepted by Cityfibre, its agents or servants for any error, omission, discrepancy or deviation. This information is valid for the date printed.

Project

Plant Enquiry

Drawing

Existing Plant

Drawn by:

smallworld

Date: 30/06/2017

Drawing No.

CFH_EP_000001

Revision

001

Scale: 1:1250

A4

0m 100m 200m

N

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SM

Electricity North West
Data Management,
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk
Web: www.enwl.co.uk

Miss Chrissy Elliott
Atkins
The Hub 500 Park Avenue, Aztec West, Patchway
Almondsbury Bristol
BS32 4RZ

Our Reference: 10624388

Your Reference: 55699/AB

Dear Miss Chrissy Elliott

Electricity Network Plans

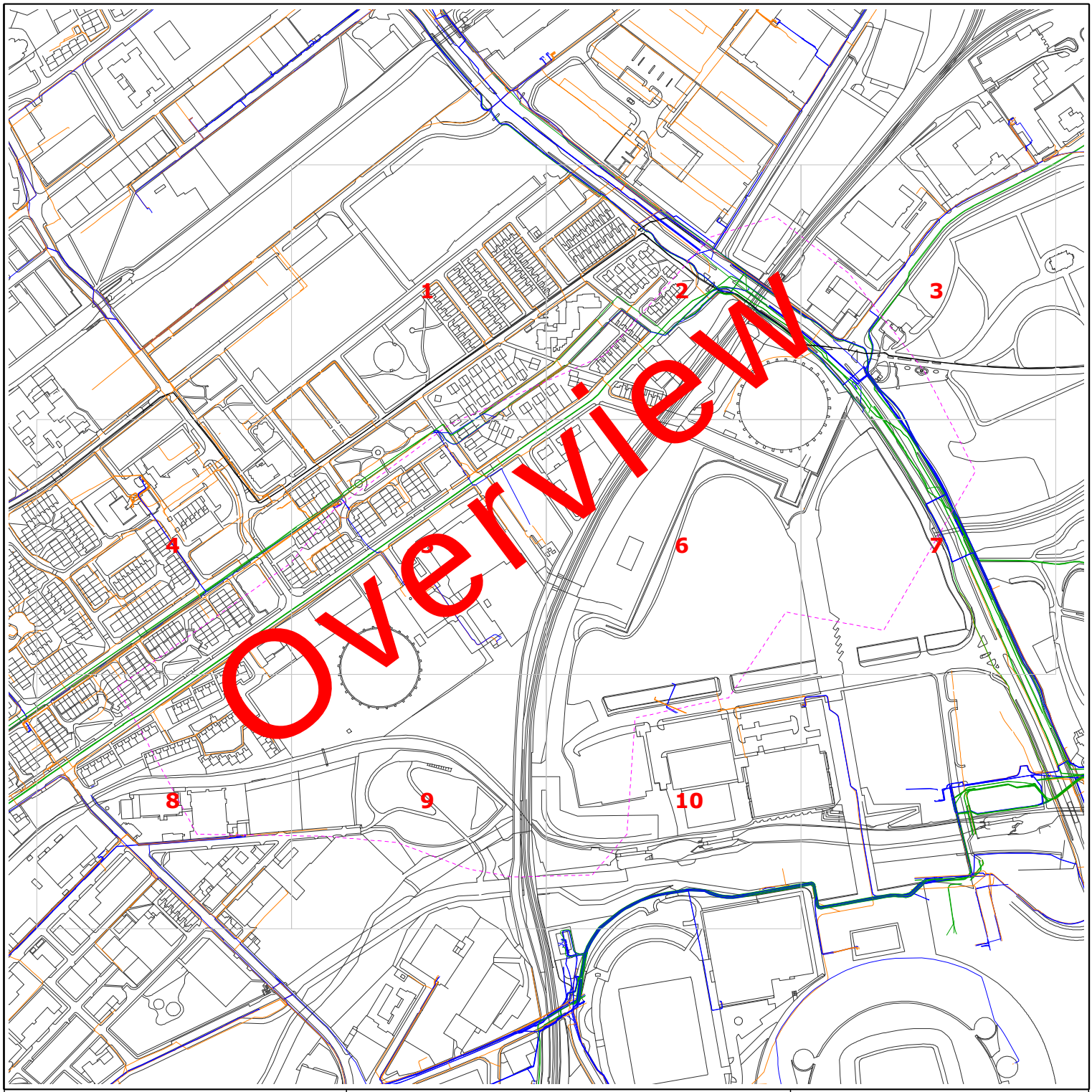
I acknowledge with thanks your request dated 14/06/2017 03:42:21 PM for information on the location of our services.

Please find enclosed plan(s) showing the approximate position of our apparatus known to be in the vicinity of this site.

I attach Conditions and information regarding electricity mains, which details contact numbers for additional services (i.e. new supplies, connections, diversion). In addition you should ensure they are made available to anyone carrying out any works which may affect our apparatus.

Yours sincerely,

Data Management



Requested by: Chrissy Elliott

Company: Atkins

Date Requested: 14/06/2017

Job Reference: 10624388

Your Scheme/Reference: 55699/AB

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

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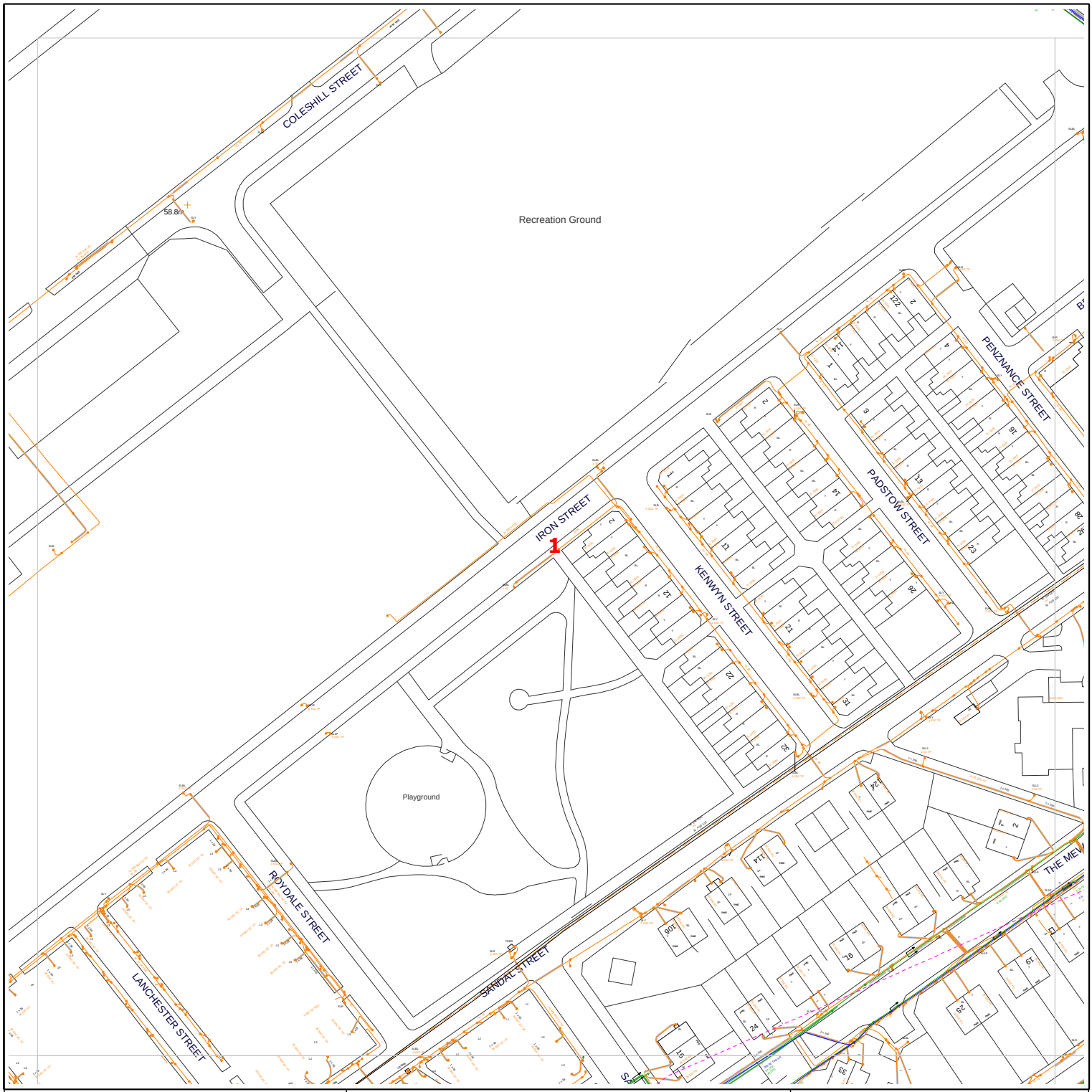

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Unknown Voltage	Brown	

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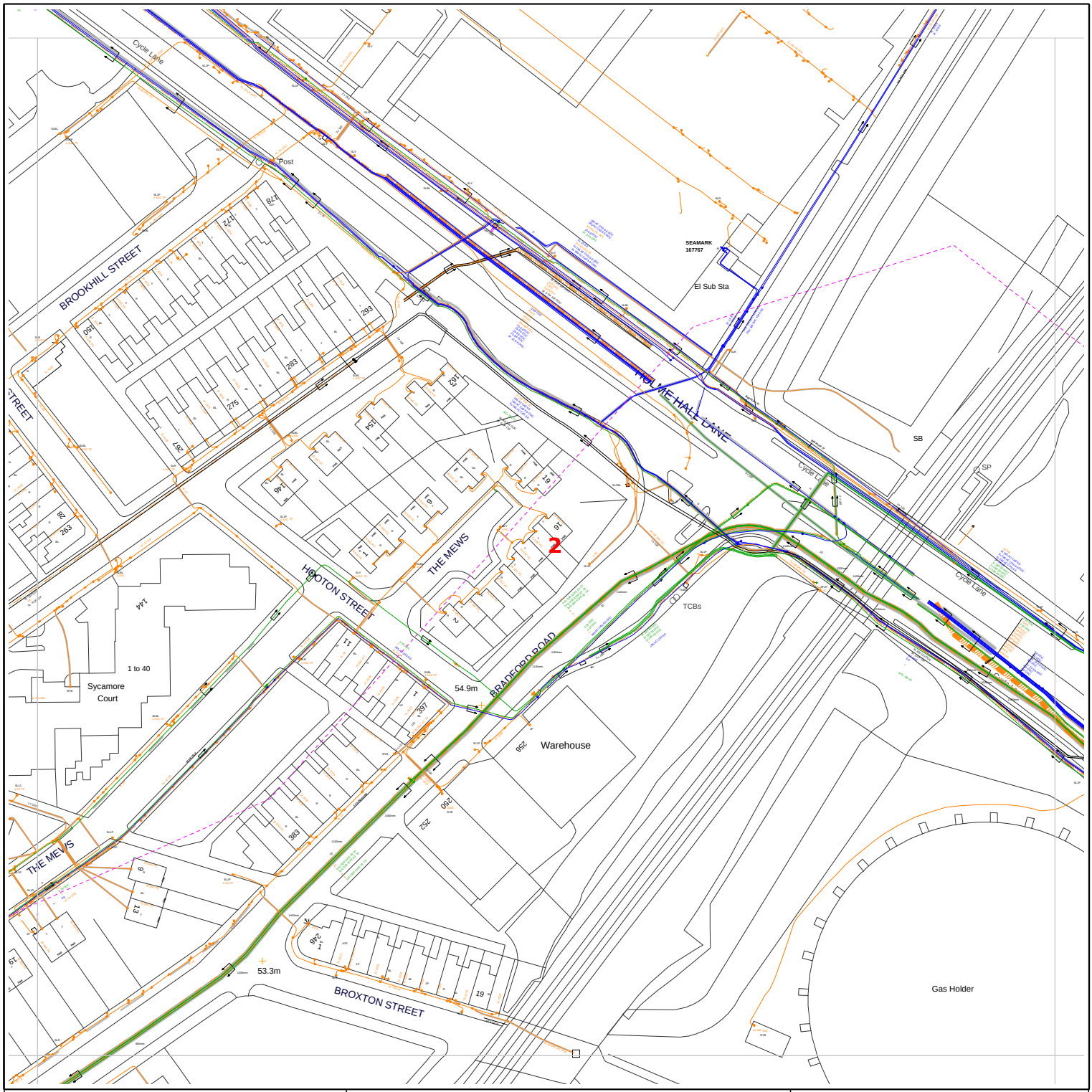

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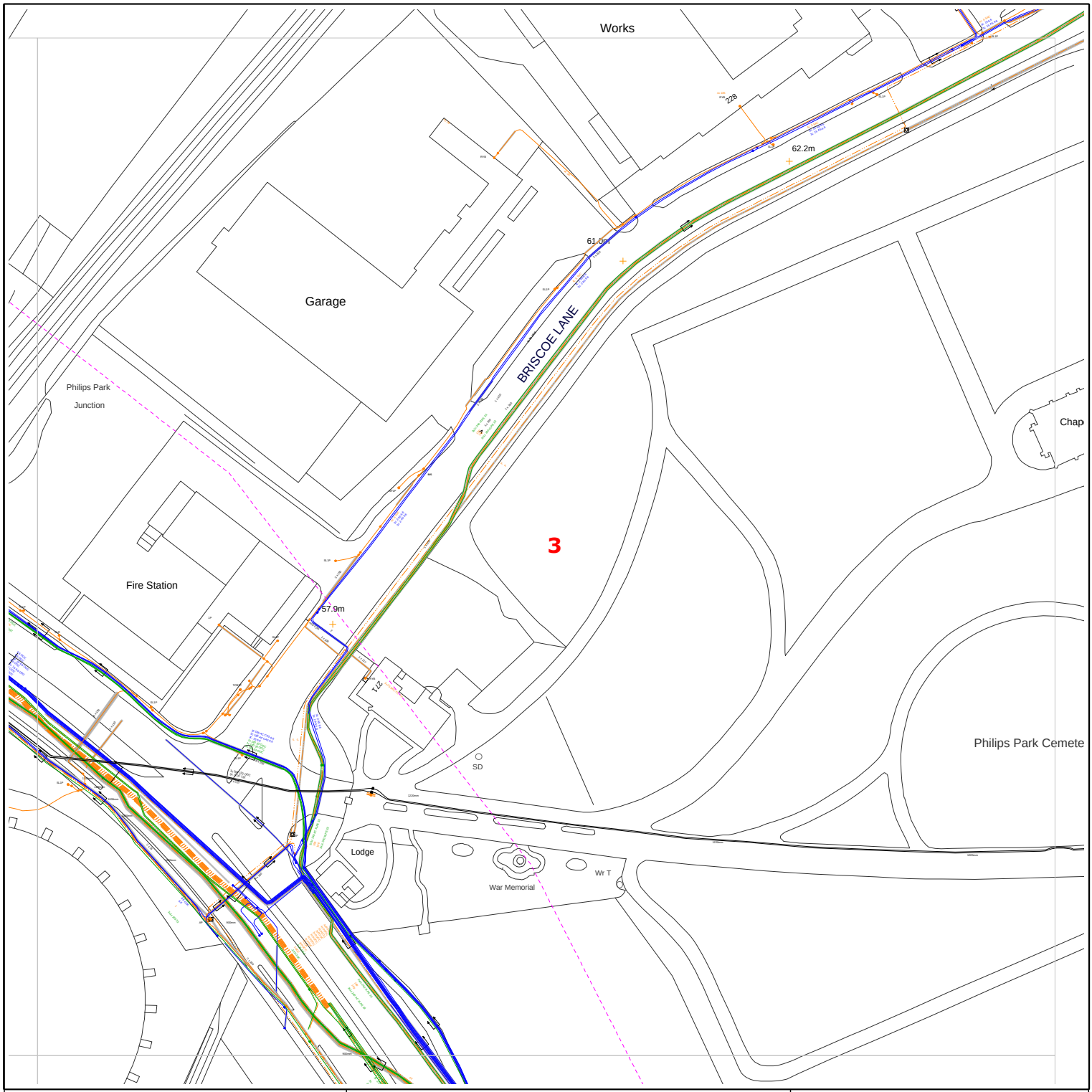

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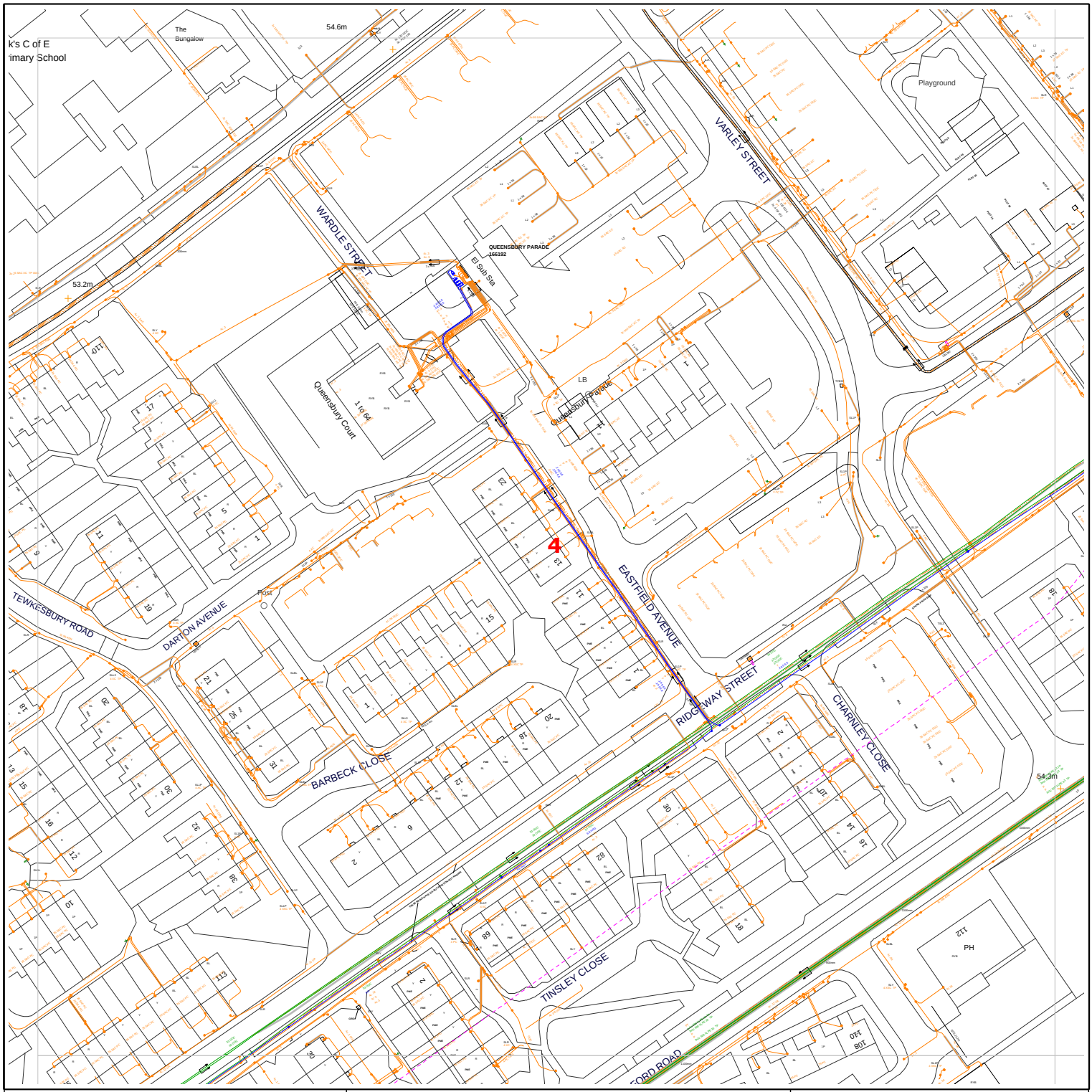

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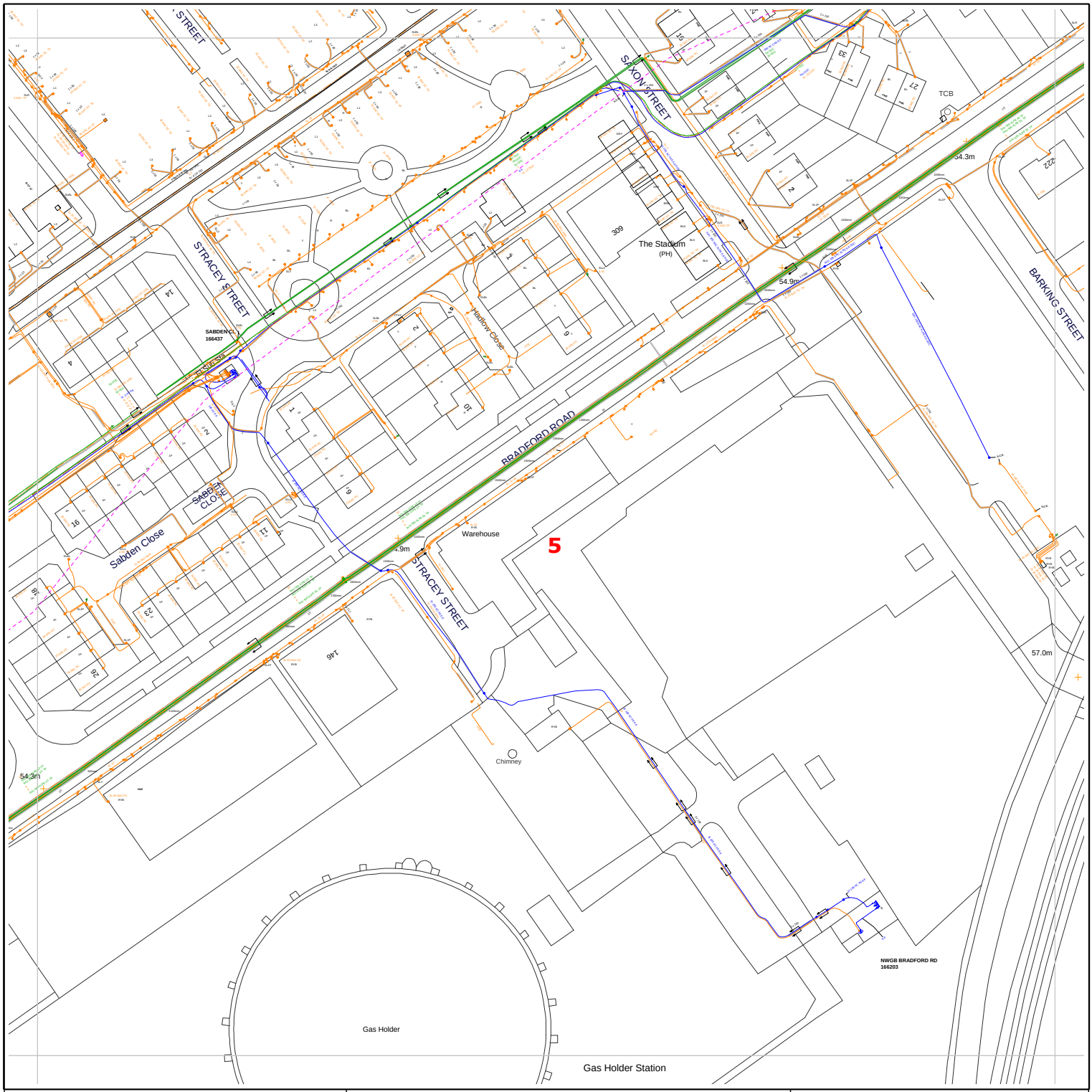

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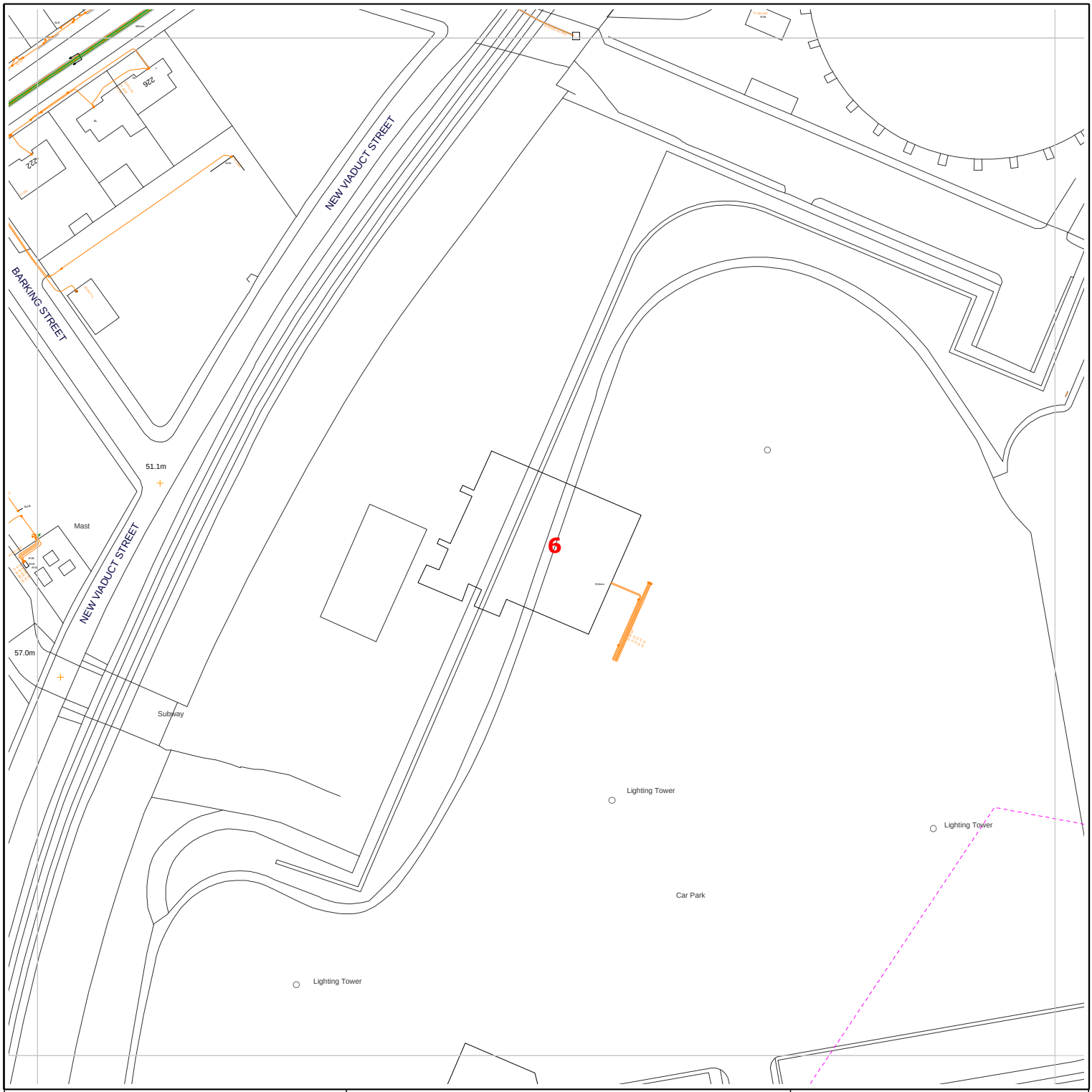

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Job Reference: 10624388

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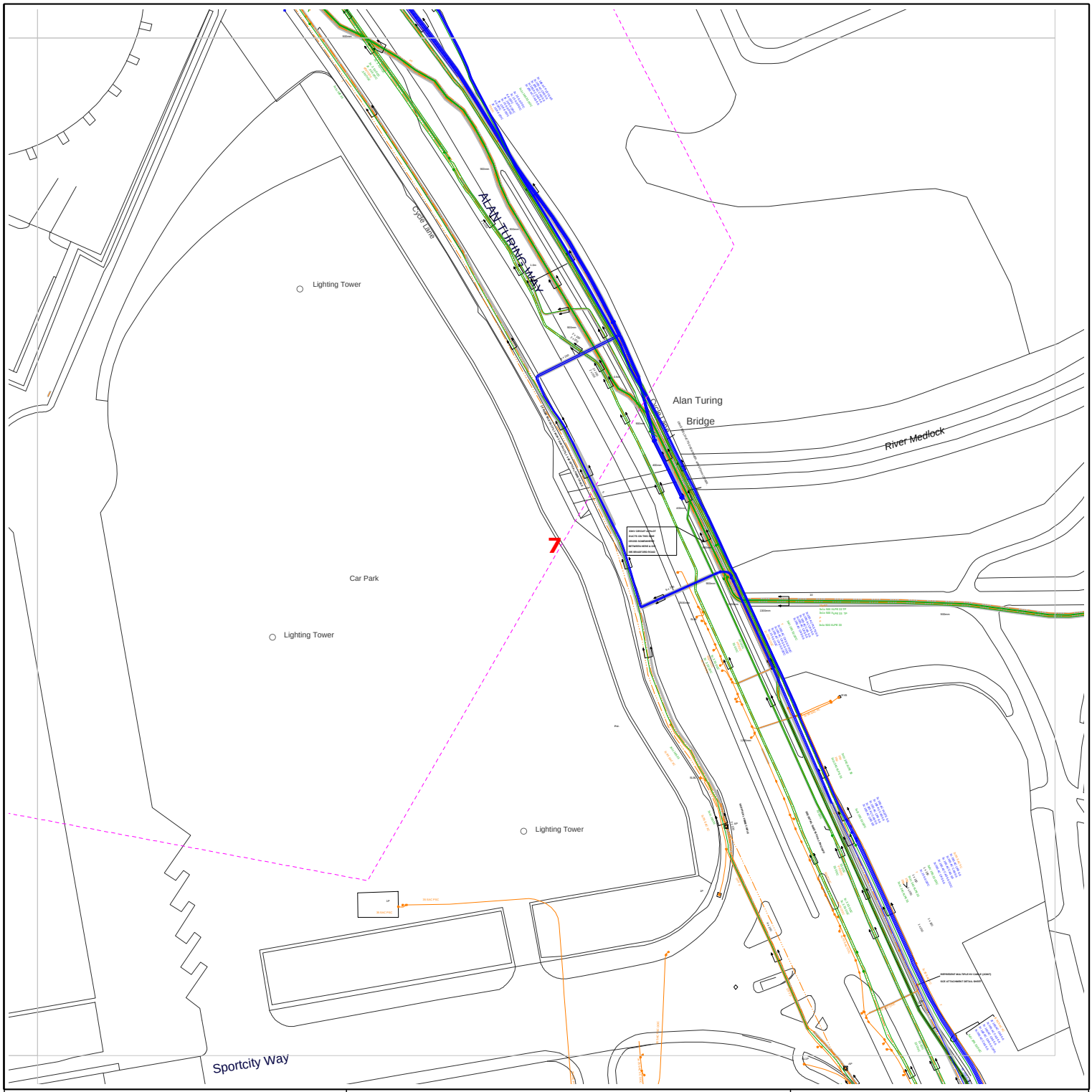

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22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

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Reference should be made to HSE Guidance, HS(G)47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Power Lines".

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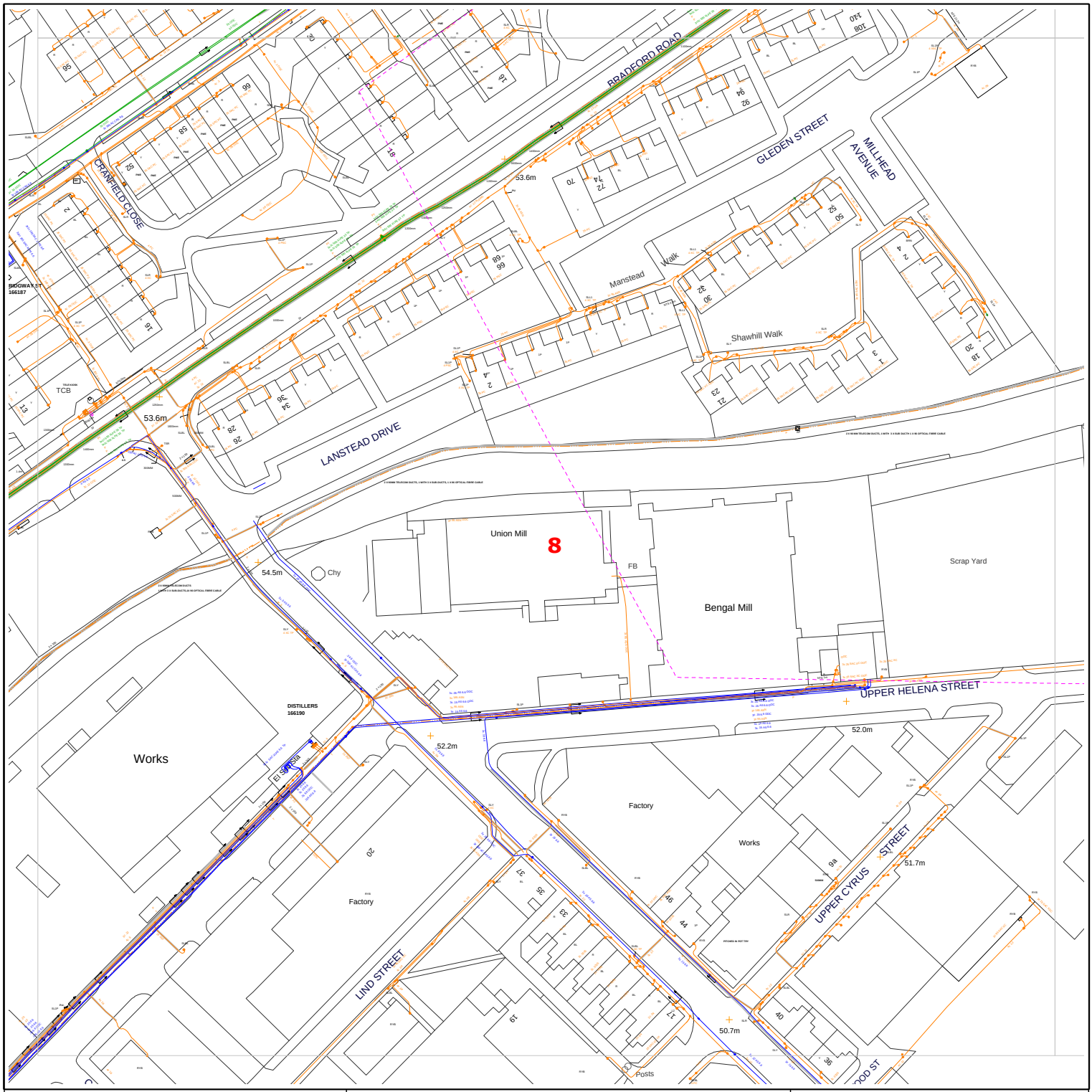

Requested by: Chrissy Elliott

Company: Atkins

Date Requested: 14/06/2017

Job Reference: 10624388

Your Scheme/Reference: 55699/AB

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

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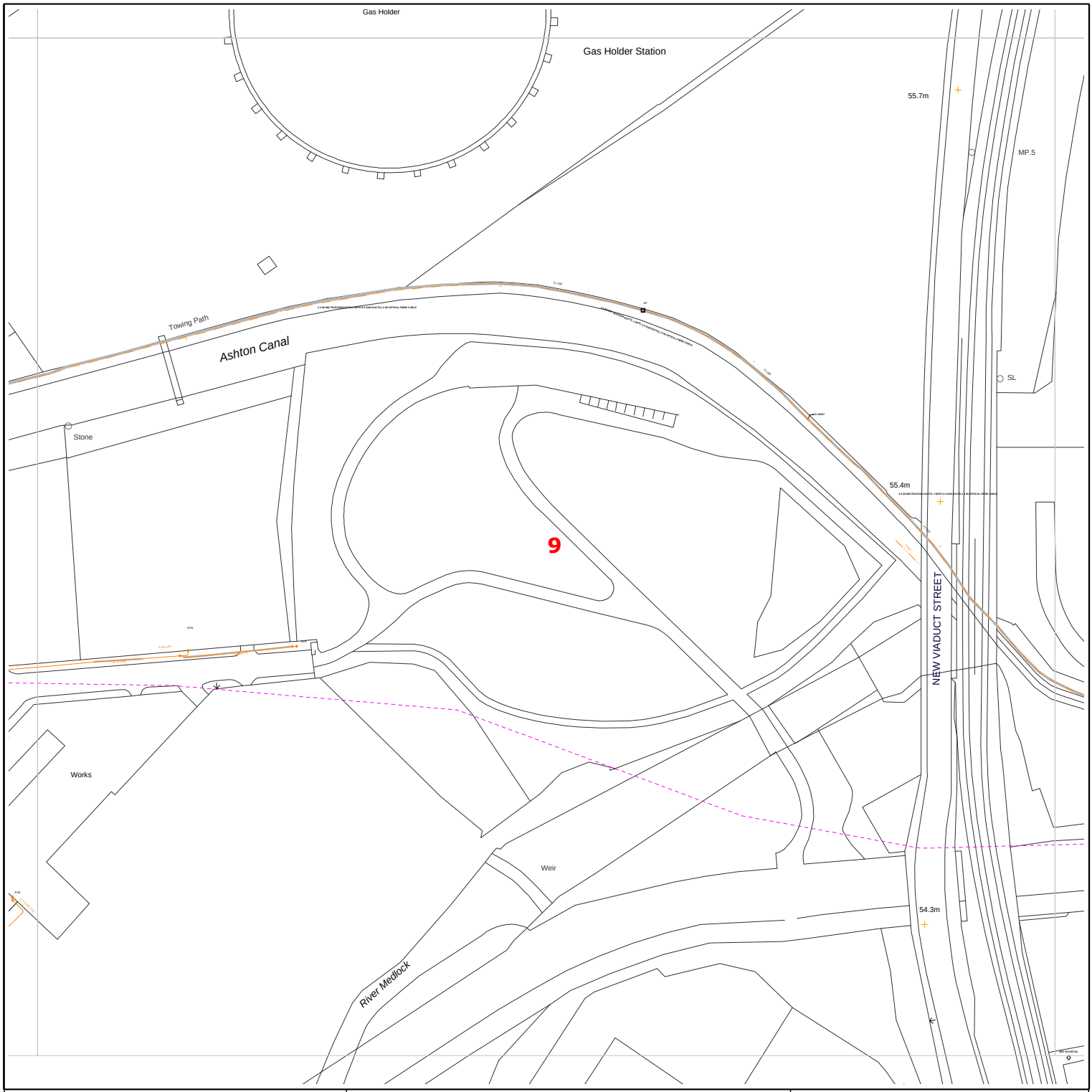

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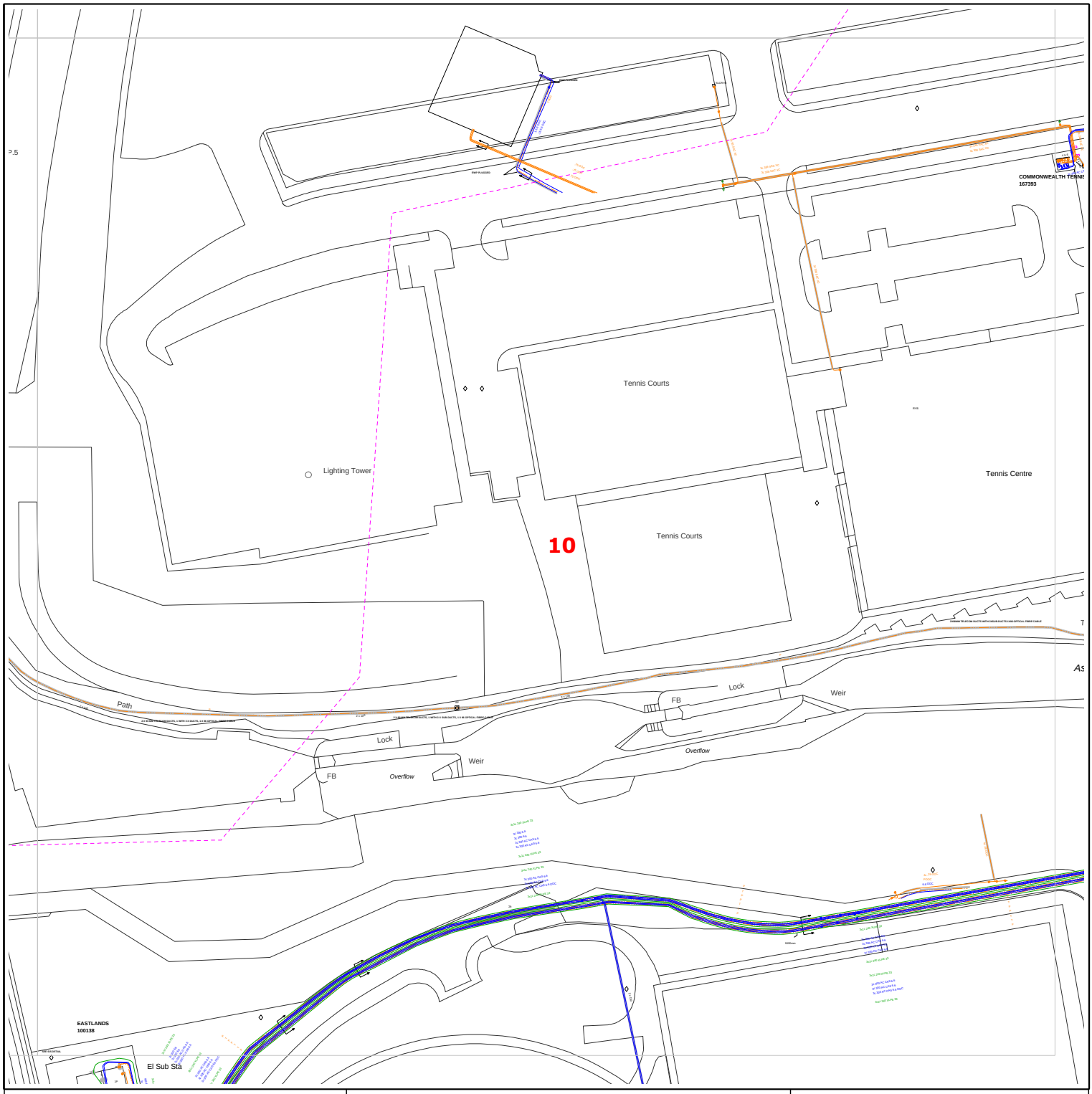

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Conditions and information regarding electricity mains

These general conditions and precautions apply to the electricity distribution system of Electricity North West Limited.

Please ensure that a copy of these conditions is passed to your representative and contractor on site.

1. There may be other Electricity North West Limited apparatus in the vicinity, which is not indicated on the cable records. Other apparatus may also be present which a third party owns other than Electricity North West Limited

2. Before any machines are used all of Electricity North West's underground apparatus should be located by manual excavation taking the appropriate safety precautions in accordance with the **Health and Safety Executive Guidance note HS(G)47 "Avoiding danger from underground services"**. This contains advice to site personnel when working near underground services.

   Underground services, particularly electricity and gas, can be dangerous. Damage to electricity cables can cause a dangerous flash, leading to severe burns or even death. Gas leaks can cause fire or explosion.

   Damage can result from excavation or penetration of the ground, e.g. by a road pin.

   Underground services may be found in roads, footpaths and on sites. Always assume that they are present. Treat any services found anywhere as live.

   Accidents have happened because people have mistaken one service for another, e.g. black plastic covered electricity cables look like black plastic water pipes and cast iron gas and water mains look alike. Check before you act.

3. Before starting work you must:

   - Make sure you have plans of the underground services in the area. This may not always be possible for emergency or unforeseen works. **Remember that service connection cables and pipes from the main to building or streetlight may not be shown**.
   - Use a cable and pipe locator to trace electricity cables and metal pipes.
   - Look for signs of service connection cables or pipes, e.g. a gas meter or service connection entry into a house or a streetlight.
   - Hand dig trial holes (as many as necessary) to confirm the position of services in close proximity to the area of work.

4. When you start work:

   - Hand dig near buried services whenever possible. Spades and shovels are safer than picks, pins or forks.
   - Remember that cables may be embedded in concrete. Electricity cables embedded in concrete **must** either be made dead before the concrete is broken out or another safe way of working agreed with the cable owner.
   - Watch out for signs of services as work continues.
   - Report damage to a cable, pipe or pipe coating however slight.
   - Do not use hand held power tools within 0.5m of he marked position of an electricity cable, unless this is impracticable and the line of the cable has been identified by plans and positively confirmed by a locator.
   - Do not use hand held power tools directly over the marked line of cable unless:

     a) You have already found the cable at that position by careful hand digging beneath the surface and it is at a safe depth (at least 300mm) below the bottom of the surface to be broken, or

     b) Physical means have been used to prevent the tool striking it.
   - If an excavator is used near an electricity cable keep everyone clear of the bucket while it is digging. Buckets should not be used near cable – hand dig.
   - Do not use exposed services as a convenient step or handhold.
   - Do not handle or attempt to alter the position of an exposed service.
   - Do not install plant close to an existing service.
   - Do not build existing services into a manhole or other structure or encase them in concrete.

Would you also ensure that all site operators have this information and if any electrical apparatus is damaged, they/you should contact Electricity North West Limited fault desk on **0800 195 4141 (option 1)**

5. Overhead lines are not necessarily shown on the Electricity North West Limited cable records but may be present. In the event of work being carried out adjacent to overhead lines (including access, storage etc.) please always ensure strict adherence to the requirements of the **Health and Safety Executive's Document GS6 "Avoidance of Danger from Overhead Electric Lines"**.

   Extreme personal danger can result from contact, or near contact, with live conductors or overhead lines.

   Treat all overhead lines and other electrical apparatus as live. If in doubt, get advice.

6. Electricity North West Limited must be consulted if work is to take place within 15 metres of overhead lines on steel towers or 9 metres of overhead lines on wood, concrete or steel pylons. (All distances should be measure at ground level from a position estimated by eye to be vertically under the outermost conductor at a tower or pole position) Any person involved in work in the vicinity of overhead lines should:

   - Understand and follow the instructions given on safe working areas and methods of work.
   - Make sure that warning notices are in the cabs of machines working in the vicinity of an overhead line.
   - Make sure that barriers and warning notices are erected as required.
   - Not tip soil or stack material underneath overhead lines as this may reduce the clearance to an unsafe distance.
   - Make sure when handling or using platforms, scaffold, poles, piping, ladders, hand tools etc., that they are kept at a safe distance from overhead lines.
   - Not steady a suspended load, skip, hoist wire, slings etc., unless satisfied that there isn't any danger from overhead lines.
   - Remember that when mobile plant, such as a crane or excavator, is operating near overhead lines , the raising or slewing of the jib may introduce danger.
   - Always keep overhead lines in view when manoeuvring mobile plant.
   - Never operate a machine unless carefully guided by an experienced banksman.
   - Not approach or touch any broken or fallen conductors or any plant in contact with an overhead line before Electricity North West Limited confirms that conditions are safe. Warn others to keep well clear.

   Machine operators should note that: if a machine comes into contact with an overhead line and cannot be disentangled by backing off, remain seated in the cab and warn others to keep clear of the machine until Electricity North West Limited confirms that conditions are safe. If it is essential to leave the machine while it is in contact with the overhead line, for example if it catches fire, jump well clear – and **do not** attempt to climb down in the normal way nor touch any part of the machine when on the ground.

7. Electricity North West Limited provides approximate locations of its electricity mains or apparatus according to its records but these records are not necessarily accurate or complete and do not always show the position of private cables from mains to properties. No person or company shall be relieved from liability for any damage caused by reason of the actual positions and/or depths being different from those indicated.

8. Care should be taken when excavating near cables. Known road crossings are highlighted on the enclosed plans. Should any cable, or Electricity North West Limited apparatus indicated on the attached plans, be affected by your proposals please contact us as follows:

   Data Management
   Linley House
   Dickinson St
   Manchester
   M1 4LF

   Telephone: **0800 195 4141 (option 2)**

   Details of diversion costs, if any, will be provided on request once your firm proposals have been submitted.

9. Please note that service cables may be affected by some of the works being carried out on site.

   If any services do require temporary disconnection please phone **0800 195 4141 (option 2)** for domestic and commercial disconnection, so that arrangement can be made to disconnect before work commences on site.

10. For information regarding supplies please contact us on **0800 195 4141 (option 2)**.

11. Please note that cable records supplied may not be up to date, or may be incomplete, if the area concerned is a new site.

12. For information regarding wayleave or easement agreements contact:

Manchester	**0161 604 1341**
Preston	**01772 848639**
Kendal	**01539 796082**

13. The latest cable records are always available for inspection during normal working hours and you should satisfy yourself that the information you have is up to date at the time you commence work. This service is consistent with the requirement of Regulation 36 of the Electricity Supply Regulations and paragraph 79 of the New Road and Street Works Act.

    Please contact Data Management on **0800 195 4141 (option 2)** to arrange an appointment to view the records.

304 Bridgewater Place
Birchwood Park
Warrington
WA3 6XG

www.enwl.co.uk

Registered in England and Wales
Registered Number 2366949

Murthy, Srinivasa

From: Cooke, Claire <Claire.Cooke@environment-agency.gov.uk> on behalf of GMMC Info Requests <Inforequests.gmmc@environment-agency.gov.uk>
Sent: Thursday, June 22, 2017 7:13 PM
To: Statutory Enquiries
Subject: FW: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017
Attachments: 55699-Map.pdf

Good Afternoon,

Thank you for your email.
Although the Environment Agency is 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.
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 in the subject heading stating "RESUBMIT:"
Thank you.

Kind regards,
Claire Cooke
Customer and Engagement Officer
Tel: 0208 474 9502
Email: Inforequests.gmmc@environment-agency.gov.uk

From: Enquiries, Unit
Sent: 22 June 2017 14:31
To: 'atkinsstatutory.enquiries@atkinsglobal.com' <atkinsstatutory.enquiries@atkinsglobal.com>
Subject: FW: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

Hello,

I have passed your enquiry to our customer team for the relevant area and they will be in touch with you shortly.

The Freedom of Information Act and Environmental Information Regulations state that a public authority must respond to requests for information within 20 working days, but we aim to respond to all enquiries as quickly as we can.

You can find more information about our service commitment by clicking on the link below:

https://www.gov.uk/government/publications/environment-agency-customer-service-commitment

Should you wish to contact the customer team directly, please use the contact details below.

Customers and Engagement
Environment Planning & Engagement
Environment Agency
Greater Manchester, Merseyside and Cheshire Area

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- internal use for any purpose, or offering a product or service based on the Information for indirect commercial advantage, by an organisation that is primarily engaged in trade, commerce or a profession.

Murthy, Srinivasa

ATKINS CHECKED
SM

From: esp@safedigs.co.uk
Sent: Wednesday, June 14, 2017 9:16 PM
To: Statutory Enquiries
Subject: ESP Utilities Group Plant Affected Notice LSBUD Ref. 10624388
Attachments: ESN012137.PDF; Guidelines when working in vicinity of gas apparatus up to 7barg MOP rev July 2016.pdf

14/06/2017

LinesearchbeforeUdig Ref: 10624388

Your Ref: 55699/AB

Dear Sir/Madam,

Further to your enquiry received on 14/06/2017 03:42:43 PM please find attached the ESP Utilities Group (ESP) response to your enquiry.

If your proposed work site was found to be in the vicinity of ESP plant, project drawing as laid extracts for these sites are enclosed (not to scale) for your information which show the approximate location of the ESP gas network close to the area of interest.

As your plans for the proposed work develop you are required to keep ESP regularly updated about the extent and nature of your proposed works in order for us to fully establish whether any additional precautionary or diversionary works are necessary to protect our gas network.

Arrangements can be set in place so that one of our representatives can meet on site (date to be agreed) and we will be happy to discuss the impact of your proposals on the gas network once we have received the details.

ESP are continually constructing new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your linesearchbeforeUdig enquiry.

The attached files are in PDF format, to view them you will need Adobe Acrobat Reader(R). You can download it free of charge from https://urldefense.proofpoint.com/v2/url?u=http-3A__get.adobe.com_reader&d=DwIGaQ&c=cUkzcZGZt-E3UgRE832-4A&r=cWjpnr1Nvb5GpbBsY43xvGOqQ_3PdNa9KLbP1Zgk_oio_5lXI2DtWBcADHfise3Q&m=DIxvuxJ7BfrZA-sbR-8ZXOxgsbSefhhLP_UwrMacvvU&s=6dIp7a7FN6tJsqUw8U3sMnvjGBS3mml4xZfrhjRrwuM&e=

Yours sincerely,

ESP Utilities Group Ltd

ESP Utilities Group Ltd can be contacted at:

Office Address: Hazeldean, Station Road, Leatherhead, Surrey, KT22 7AA

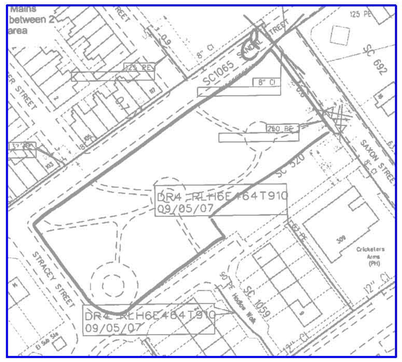
Office Tel: 01372 227560; Fax: 01372 377996; email: info@espipelines .com

DNSOP PROJECT
ALL DNSOP SERVICES
MUST BE 32mm

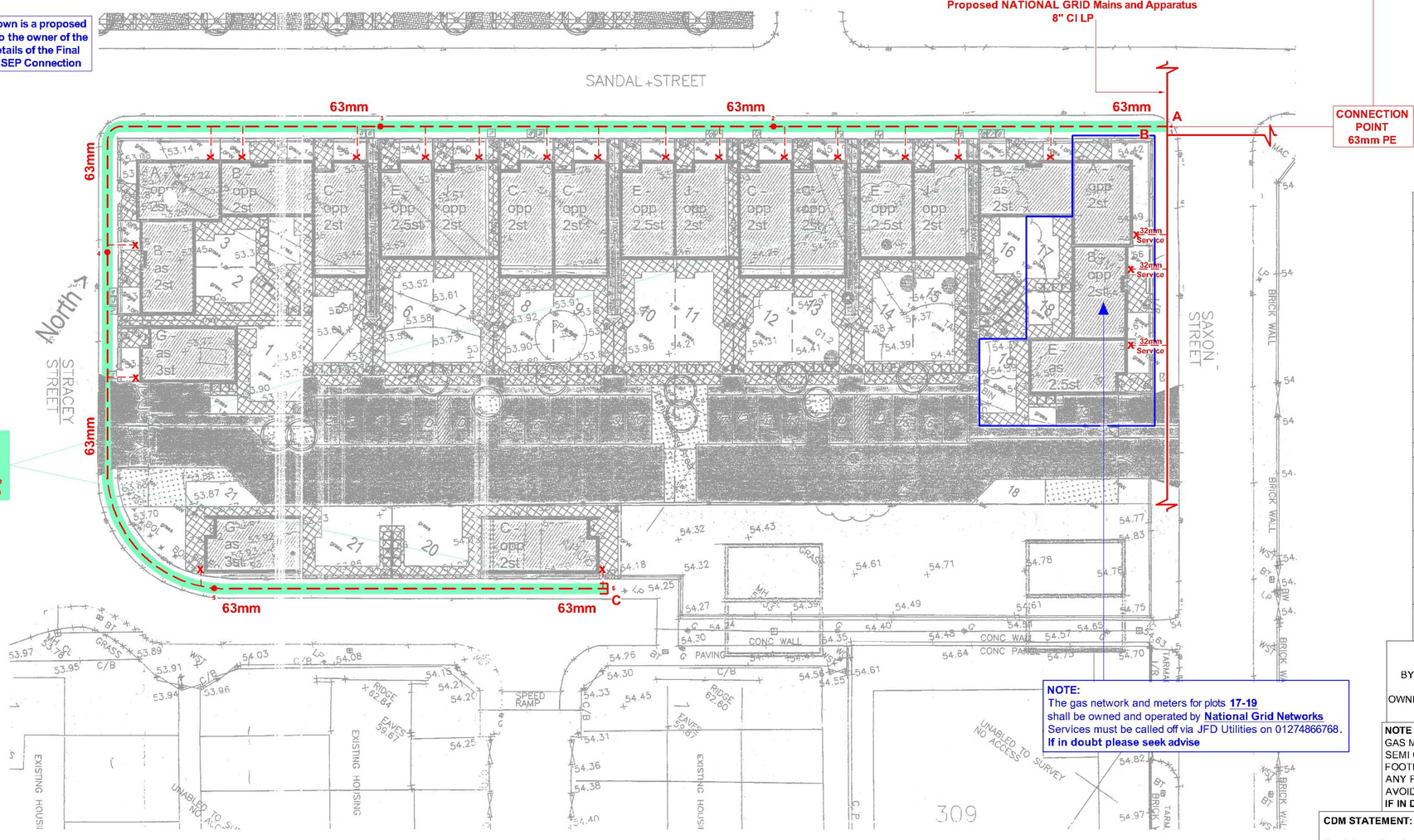
BGNHC CONSTRUCTION DRAWING

IMPORTANT NOTICE

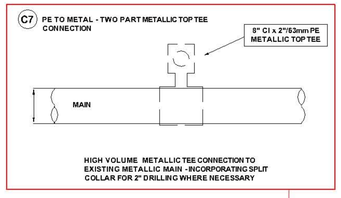
THIS SITE OPERATES AT LOW PRESSURE



The CSEP Connection shown is a proposed design only. Please refer to the owner of the Upstream Network for details of the Final As-Built drawing of the CSEP Connection



NOTE:
The gas network and meters for plots **17-19** shall be owned and operated by **National Grid Networks** Services must be called off via JFD Utilities on 01274866768.
If in doubt please seek advise



MATERIAL SPECIFICATION FOR LOW PRESSURE & MEDIUM PRESSURE PE MAINS

PIPE & FITTINGS

PE 80 (MDPE) pipes and fittings to Gas Industry Standard (formally National Grid Specifications):

GIS/PL2:2006 Specification for polyethylene pipes and fittings for natural gas and suitable manufactured gas
Part 2: Pipes for use at pressures up to 5.5 bar
Part 4: Fusion fittings with integral heating element(s)
Part 6: Spigot end fittings for electrofusion and/or butt fusion purposes

GIS/PL3:2006 Specification for self-anchoring mechanical fittings for natural gas and suitable manufactured gas

GIS/F2:2006 Specification for main sealing plugs and service connection fittings for use at pressures not greater than 2 bar

GIS/V4:2007 Specification for service isolation valves up to 50mm diameter for use up to 7 bar maximum operating pressures

GIS/V7:2006 Specification for distribution valves
Part 1: Metal-bodied line valves for use at pressures up to 16 bar and construction valves for use at pressures up to 7 bar
Part 2: Plastics bodied valves of sizes up to and including 180mm suitable for operation at pressures not exceeding 5.5 bar

DUCTING PROVISION FOR GAS MAIN/SERVICE ROAD CROSSINGS

Important: Ducting can only be used for perpendicular carriageway crossings.

Only one pipe is allowed per duct.

For Service Pipe the duct must be yellow and perforated along it's entire length.

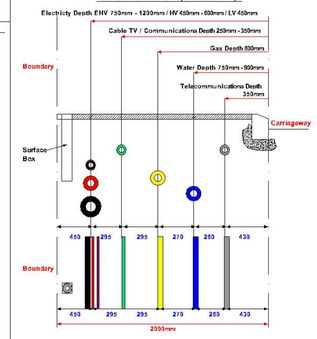
Note: BS4692 is a suitable standard for plastic ducting.

The table below provides information on duct sizes

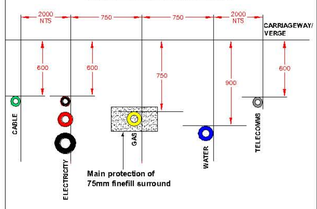
PE PIPE SIZE	MINIMUM DUCT SIZE
≤ 32mm	60mm (yellow perforated)
63mm	100mm
90mm	150mm
125mm	200mm
180mm	250mm

NOTES

TYPICAL FOOTPATH SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



TYPICAL ROAD/VERGE SECTION TO SHOW RELATIVE DUCT POSITIONS (Not to Scale)



MAJOR/MINOR DESIGN VARIATION CONTROL FORM

PPS NO:

British Gas

MAJOR VARIATION		INDICATOR		
Date	Description of Variation	Approved by	Variation recorded on drawing (please as appropriate)	
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO

MINOR VARIATION		INDICATOR		
Date	Description of Variation	Approved by	Variation recorded on drawing (please as appropriate)	
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO
00/00/2006	Variation Details	Name	YES	NO

NOTE
SPECIFICALLY EXCLUDES ANY WORKS BY BRITISH GAS FOR THE DIVERSION, ALTERATION OR MAKING DEAD OF ANY **TRANSCO / OTHER PGT** OWNED GAS DISTRIBUTION INFRASTRUCTURE ON THE SITE
IF IN DOUBT PLEASE SEEK ADVICE.

NOTE
GAS METER POSITIONS SHOWN ARE INDICATIVE ONLY. SEMI CONCEALED METER BOXES SHALL NOT OBSTRUCT FOOTPATHS, PASSAGE WAYS, DRIVES OR BE A TRIP HAZARD. ANY POSITION WHERE DAMAGE COULD OCCUR SHALL BE AVOIDED.
IF IN DOUBT PLEASE SEEK ADVICE.

CDM STATEMENT:

Any information given on this plan must be used only in conjunction with the Construction Health and Safety Plan prepared by the Principal Contractor. The Planning Supervisor must be consulted before any construction work commences. Any changes in design, or conditions arising or information becoming known at a later date that may adversely impact upon health and safety of any person, must be notified to the Planning Supervisor and Principal Contractor as soon as possible.

Key

GAS

- Proposed L.P Main < 75 mbar
- Existing L.P Main < 75 mbar
- Proposed M.P Main 75 mbar – 2 bar
- Existing M.P Main 75 mbar – 2 bar
- Proposed I.P Main > 2 bar – 7 bar
- Existing I.P Main > 2 bar – 7 bar
- Existing H.P Main > 7 bar – 24 bar
- Existing H.Pressure Main > 24 bar–38 bar
- Existing H.Pressure Main > 38 bar–70 bar

Change of size

Pressure Regulator

Guidance for Mains/Services Duct Sizes

Pipe Size for PE Pipe	Minimum Duct Size for Services Insertion
< 32mm	60mm (yellow perforated)
63mm	100mm
90mm	150mm
125mm	200mm
180mm	250mm

MATERIAL	DESCRIPTION
CI	Cast Iron Main
DI	Ductile Iron Main
ST	Steel main or service
MDPE (17.6)	Medium Density Polethylene (SDR Rating) main or service
HDPE (11)	High Density Polyethylene (SDR Rating) main or service

SIZE	DESCRIPTION
12"	Metallic main or service – Imperial (nominal bore)*
150mm	Metallic main or service – Metric (nominal bore)
3"	Polyethylene main or service – Imperial (nominal bore)
90	Polyethylene main or service – Metric (outside diameter) *Note:– for Steel 18" denotes the pipe size where the designation changes from nominal bore to outside diameter

PRESSURE	DESCRIPTION
LP	Low Pressure – up to 75 millibar gauge
MP	Medium Pressure – between 75 millibar and 2 bar gauge
IP	Intermediate Pressure – between 2 bar and 7 bar gauge
HP	High Pressure – above 7 bar gauge

ALL MAINS MDPE:
90mm and above: SDR 17.6
63mm SDR 11

CSEP Connection Ref:

Upstream Gas Transporter: NATIONAL GRID

PROJECT

Plots 1-21
Miles Platting Cell 7.5a
Sandal Street
Manchester M40 7EF

E.S.PIPELINES LIMITED

E S PIPELINES LIMITED
HAZELDEAN
STATION ROAD
LEATHERHEAD
SURREY
KT22 7AA

Tel No: 01372 227560
Fax No: 01372 377993

Design and constructed by British Gas
30 The Causeway
Staines
Middlesex
TW18 3BY
Tel No: 0800 072 5320

Design Copyright © British Gas

Rev By:	DETAILS OF REVISION	DATE
NAME	DETAILS	00/00/2008

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© This drawing is the Copyright of E S Pipelines Limited and may not be reproduced without written consent.

This plan shows only pipes owned by E S Pipelines Ltd in its role as a licensed Gas Transporter (GT),gas pipes owned by other GT's, and also privately owned, may be present in the area. Information with regard to such pipes should be obtained from the owners. The information shown on this plan is given without obligation, or warranty. The accuracy thereof cannot be guaranteed. All service pipes are not necessarily shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by E S Pipelines Ltd, its agents or servants, for any error or omission. Safe digging practices, as detailed in Health and Safety booklet HS(G)47 'Avoiding danger from underground services', must be used to verify and establish the actual position of mains, services and other plant on site before any Mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct or contract labour) working for you on or near gas apparatus. The information on this plan should not be referred to beyond 28 days following the date of issue.

TITLE:

GAS LAYOUT

DATE: 29/03/2011	SCALE: 1:250
DESIGNED BY: John Raphael	DRAWN BY: John Raphael
APPROVED BY: Jeff Hewitt	
DRAWING NO: ESN012137-PPS47226-A1-001	SHEET SIZE: A1

PRECAUTIONS TO BE TAKEN WHEN CARRYING OUT WORK IN THE VICINITY OF UNDERGROUND GAS PIPES

ADVICE TO SITE PERSONNEL

MANAGEMENT NOTE

Please ensure that a copy of this note is read by your site management and to your site operatives.

Early consultation with ESP Utilities Group prior to excavation is recommended to obtain the location of plant and precautions to be taken when working nearby.

This Guidance Note should be read in conjunction with the Health and Safety Executive guidance HSG47 "Avoiding danger from underground services".

Introduction

Damage to ESP Utilities Group's plant can result in uncontrolled gas escapes which may be dangerous. In addition these occurrences can cause expense, disruption of work and inconvenience to the public.

Various materials are used for gas mains and services. Cast Iron, Ductile Iron, Steel and Plastic pipes are the most widely found. Modern Plastic pipes are either bright yellow or orange in colour.

Cast Iron and Ductile Iron water pipes are very similar in appearance to Cast Iron and Ductile Iron gas pipes and if any Cast Iron or Ductile Iron pipe is uncovered, it should be treated as a gas pipe. ESP Utilities Group do not own any metallic gas pipes but their gas network infrastructures may be connected to Cast Iron, Ductile Iron or Steel pipes owned by Transco.

The following general precautions apply to Intermediate Pressure (2-7barg MOP), Medium Pressure (75mbarg-2barg MOP), Low Pressure (up to 75mbarg MOP) and other gas mains and services likely to be encountered in general site works and are referred to within this document as '**pipes**'.

Locating Gas Pipes

It should be assumed when working in urban and residential areas that gas mains and services are likely to be present. On request, ESP Utilities Group will give approximate locations of pipes derived from their records. The records do not normally show the position of service pipes but their probable line can be deducted from the gas meter position. ESP Utilities Group's staff will be pleased to assist in the location of gas plant and provide advice on any precautions that may be required. The records and advice are given in good faith but cannot be guaranteed until hand excavation has taken place. Proprietary pipe and cable locators are available although generally these will not locate plastic pipes.

Safe working Practices

To achieve safe working conditions adjacent to gas plant the following must be observed:

Observe any specific request made by ESP Utilities Group's staff.

Gas pipes must be located by hand digging before mechanical excavation. Once a gas pipe has been located, mechanical excavation must proceed **with care**. A mechanical excavator must not in any case be used within 0.5 metre of a gas pipe and greater safety distances may be advised by ESP Utilities Group depending on the mains maximum operating pressure (MOP).

Where heavy plant may have to cross the line of a gas pipe during construction work, the number of crossing points should be kept to a minimum. Crossing points should be clearly indicated and crossings at other places along the line of the pipe should be prevented.

Where the pipe is not adequately protected by an existing road, crossing points should be suitably reinforced with sleepers, steel plates or a specially constructed reinforced concrete raft as necessary. ESP Utilities Group staff will advise on the type of reinforcement necessary.

No explosives should be used within 30 metres of any gas pipe without prior consultation with ESP Utilities Group.

ESP Utilities Group must be consulted prior to carrying out excavation work within 10 metres of any above ground gas installation.

Where it is proposed to carry out piling or boring within 15 metres of any gas pipe, ESP Utilities Group should be consulted prior to the commencement of the works.

Access to gas plant must be maintained at all times during on site works.

Proximity of Other Plant

A minimum clearance of 300 millimetres (mm) should be allowed between any plant being installed and an existing gas main to facilitate repair, whether the adjacent plant is parallel to or crossing the gas pipe. No apparatus should be laid over and along the line of a gas pipe irrespective of clearance.

No manhole or chambers shall be built over or around a gas pipe and no work should be carried out which results in a reduction of cover or protection over a pipe, without consultation with ESP Utilities Group.

Support and Backfill

Where excavation of trenches adjacent to any pipe affects its support, the pipe must be supported to the satisfaction of ESP Utilities Group and must not be used as an anchor or support in any way. In some cases, it may be necessary to divert the gas pipe before work commences.

Where a trench is excavated crossing or parallel to the line of the gas pipe, the backfill should be adequately compacted, particularly beneath the pipe, to prevent any settlement which could subsequently cause damage to the pipe.

In special cases it may be necessary to provide permanent support to the gas pipe, before backfilling and reinstatement is carried out. Backfill material adjacent to gas plant must be selected fine material or sand, containing no stones, bricks or lumps of concrete, etc., placed to a minimum depth of 150mm around the pipes and well compacted by hand. No power compaction should take place until 300 mm of selected fine fill has been suitably compacted.

If the road construction is in close proximity to the top of the gas pipe, a "cushion" of selected fine material such as sand must be used to prevent the traffic shock being transmitted to the gas pipe. The road construction depth must not be reduced without permission from the local Highway Authority.

No concrete or other hard material must be placed or left under or adjacent to any Cast Iron pipe as this may cause fracture of the pipe at a later date.

Concrete backfill should not be used closer than 300 mm to the pipe.

Damage to Coating

Where a gas pipe is coated with special wrapping and this is damaged, even to a minor extent ESP Utilities Group must be notified so that repairs can be made to prevent future corrosion and subsequent leakage.

Welding or "Hot Works"

When welding or other "hot works" involving naked flames are to be carried out in close proximity to gas plant and the presence of gas is suspected, ESP Utilities Group must be contacted before work commences to check the atmosphere. Even when a gas free atmosphere exists care must be taken when carrying out hot works in close proximity to gas plant in order to ensure that no damage occurs.

Particular care must be taken to avoid damage by heat or naked flame to plastic gas pipes or to the protective coating on other gas pipes.

Leakage from Gas Mains or Services

If damage or leakage is caused or an escape of gas is smelt or suspected the following action should be taken at once:

- Remove all personnel from the immediate vicinity of the escape;
- Contact Transco's National Gas Escape Call Centre, on: **0800 111 999**;
- Prevent any approach by the public, prohibit smoking, extinguish all naked flames or other source of ignition for at least 15 metres from the leakage;
- Assist gas personnel, Police or Fire Service as requested.

REMEMBER – IF IN DOUBT; SEEK ADVICE FROM ESP UTILITIES GROUP.

ESP Utilities Group can be contacted at:

Office Address: Bluebird House, Mole Business Park, Leatherhead, Surrey, KT22 7BA

Office Tel: 01372 587 500; **Fax:** 01372 377 996

ATKINS CHECKED
SM

Murthy, Srinivasa

From: Chris Thompson <Chris.Thompson@tfgm.com>
Sent: Thursday, June 29, 2017 7:04 PM
To: Bhaskar, Aditya
Cc: Pramesh Mistry
Subject: RE: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017
Attachments: Sig20-Sig20_500.pdf; Sig21-Sig21_1000.pdf

Aditya,

Your Reference: 55699
Site Name: Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester

Our records show traffic control equipment in the vicinity of the above as detailed on the attached drawings.

If you suspect your works will affect these installations and require further details, please contact us via email to gmutc@tfgm.com

Should you vary the location of the works, please inform us so that further checks can be made.

The information relates to traffic control equipment managed by Transport for Greater Manchester, and is believed to be correct.

Kind regards,

Chris Thompson
Engineer
Urban Traffic Control – Highways

Transport for Greater Manchester
2 Piccadilly Place, Manchester M1 3BG
Direct line 0161 244 0965, Extension 700965
Mobile 07785 664942
www.tfgm.com

Please don't print this email unless you **really** need to.

From: GMUTC
Sent: 15 June 2017 09:24
To: Pramesh Mistry; Chris Thompson
Subject: FW: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

From: Bhaskar, Aditya [mailto:Aditya.Bhaskar@atkinsglobal.com] **On Behalf Of** Statutory Enquiries
Sent: 14 June 2017 16:46
To: contact@manchester.gov.uk; karen.whittaker@amey.co.uk; medc@manchester.gov.uk; GMUTC
Subject: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

Our Reference: 55699
Site Name: Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester

Fire Station

Duct to Fire Station Hurry Call

Siemens ST900 Controller

Hulme Hall Lane

Briscoe Lane

Alan Turing Way

Lodge

N

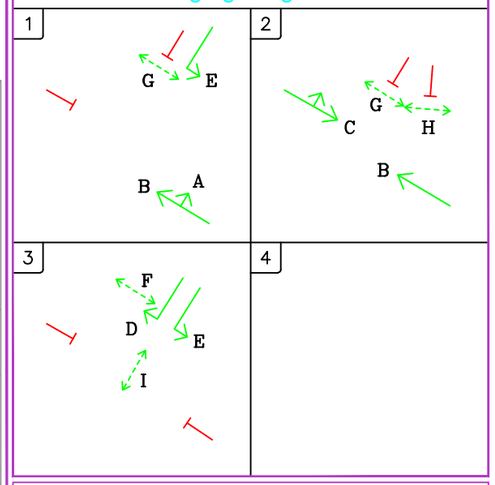
SL1 SL2 SL4 SL5

CABLING RUNS

CONTROLLER

SL1	2 x 2pr	20c	12	16c 10
		16c	9	
SL2	2 x 2pr	20c	13	12c 11
		20c	7	8c 5
SL3	2 x 2pr	20c	4	12c 6
		20c	3	12c 8
SL4	2 x 2pr	12c	2	
		12c	1	
SL5	2 x 2pr	4c	PE	
		8c	MVD Pole 3	
		12c	Fire Station Hurry Call	

Staging Diagrams



Notes
1. Fire Station Hurry call (PB) checked & operational. 09/05/13

REVISIONS		DATE	BY	APP
D	SAT – New ST900 after RTA	12/10/14	DJW	
C	ARP works incl. controller up-grade & new cabinet.	09/05/13	PM	
B	SCOOT duct and loops added	29/12/08	SLC	
A	Site survey	07/03/05	PM	

Hulme Hall Lane/Briscoe Lane
Manchester (20)

SCALE 1:500
0.0 5 10 15 20 25 30 metres

OS-REF	SJ8698	CHECKED ON SITE BY	
DATE	14/11/2006	CHECKED BY	
STATUS	Draft	DRAWN BY	HS
ORIGINAL DRAWING SIZE	A3	CAD FILE	Sig20.dwg
XREF	X3_ALAN-TURING-WAY_SCOOT		REV
DRAWING No.	A3/03/20/3		D

·A·G·M·A·
ASSOCIATION OF GREATER MANCHESTER AUTHORITIES
GREATER MANCHESTER URBAN TRAFFIC CONTROL UNIT

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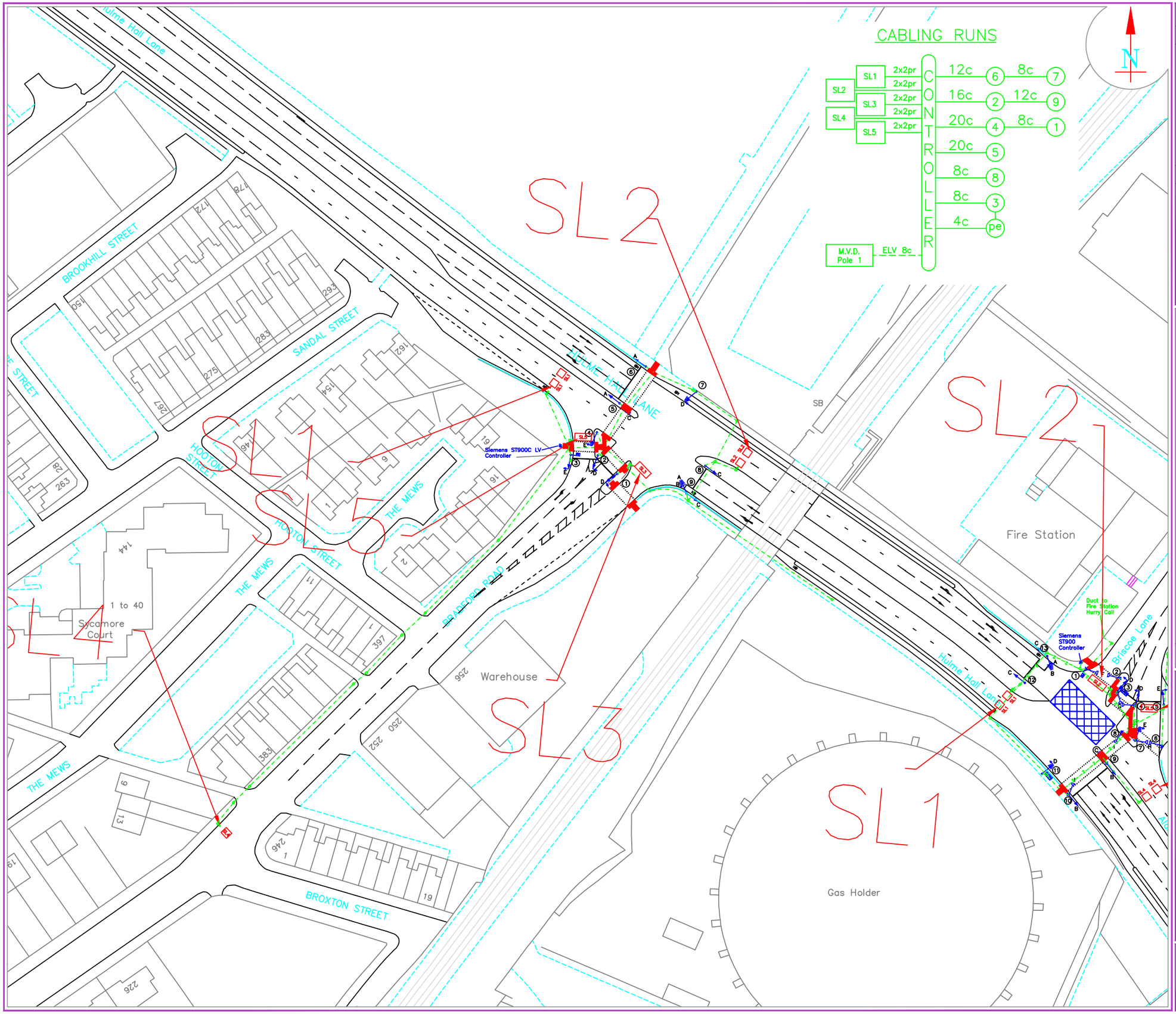
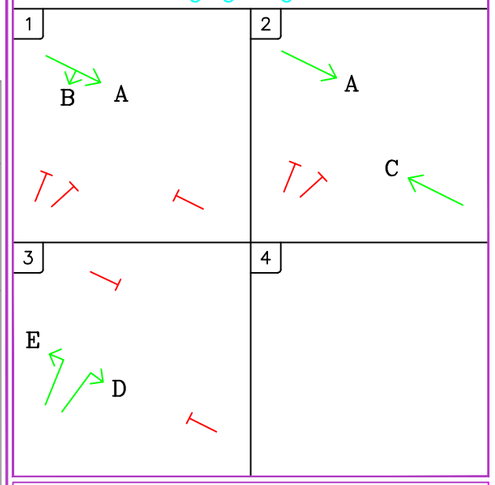


Staging Diagrams



C	ARP including controller upgrade.	02/07/13	PM	
B	SCOOT duct and loops added	30-12-08	SLC	
A	Site Survey	07/03/05	PM	
	REVISIONS	DATE	BY	APP

Hulme Hall Lane/Bradford Road Manchester (21)

SCALE 1:1000

0 5 10 15 20 25 30 35 40 45 50 55 60 metres

OS-REF	SJ8699	CHECKED ON SITE BY	
DATE	14/11/2006	CHECKED BY	
STATUS	Draft	DRAWN BY	HS
ORIGINAL DRAWING SIZE	A3	CAD FILE	Sig21.dwg
XREF	X3_ALAN-TURING-WAY_SCOOT		REV
DRAWING No.	A3/03/21/2		C

ASSOCATION OF GREATER MANCHESTER AUTHORITIES

GREATER MANCHESTER URBAN TRAFFIC CONTROL UNIT

·A·G·M·A·

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SM

Murthy, Srinivasa

From: Plantenquiries <Plantenquiries@instalcom.co.uk>
Sent: Monday, June 19, 2017 6:29 PM
To: Statutory Enquiries
Subject: RE: E06-17-2752 Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017
Attachments: 55699.pdf; Guide to Excavation.pdf; Instalcom Nominated Agent Authorisation Letter 2014 Final.pdf

Dear Sir or Madam,

With reference to your enquiry regarding the above noted location, we enclose the drawings on behalf of LEVEL 3 indicating the approximate position of services in this area.

If you need access to the railway / underground lines as part of your works could you please contact Peter Walton (peter.walton@level3.com) for further information about the location of this equipment.

We would draw your attention to the fact that while the position of the plant has been shown as accurately as possible, the information is intended as a general guide only and must not be relied upon in the event of any excavations or other work in the vicinity. **We would remind you that the onus remains on you to determine the exact position for example by a hand excavated trial hole.** Instalcom accepts no liability for claims arising from any inaccuracy, omissions or errors contained herein. If you would like to query the location further, please email us accordingly and we can arrange an in depth survey, which will be charged at a cost. Enclosed is a guide to excavation works around existing plant.
Instalcom responds to plant enquiries for LEVEL 3, GLOBAL CROSSING (UK) LTD, GLOBAL CROSSING PEC and FIBERNET UK LTD and FIBRESPAN LTD simultaneously and therefore you only need send one copy of a plant enquiry to cover all of these companies.

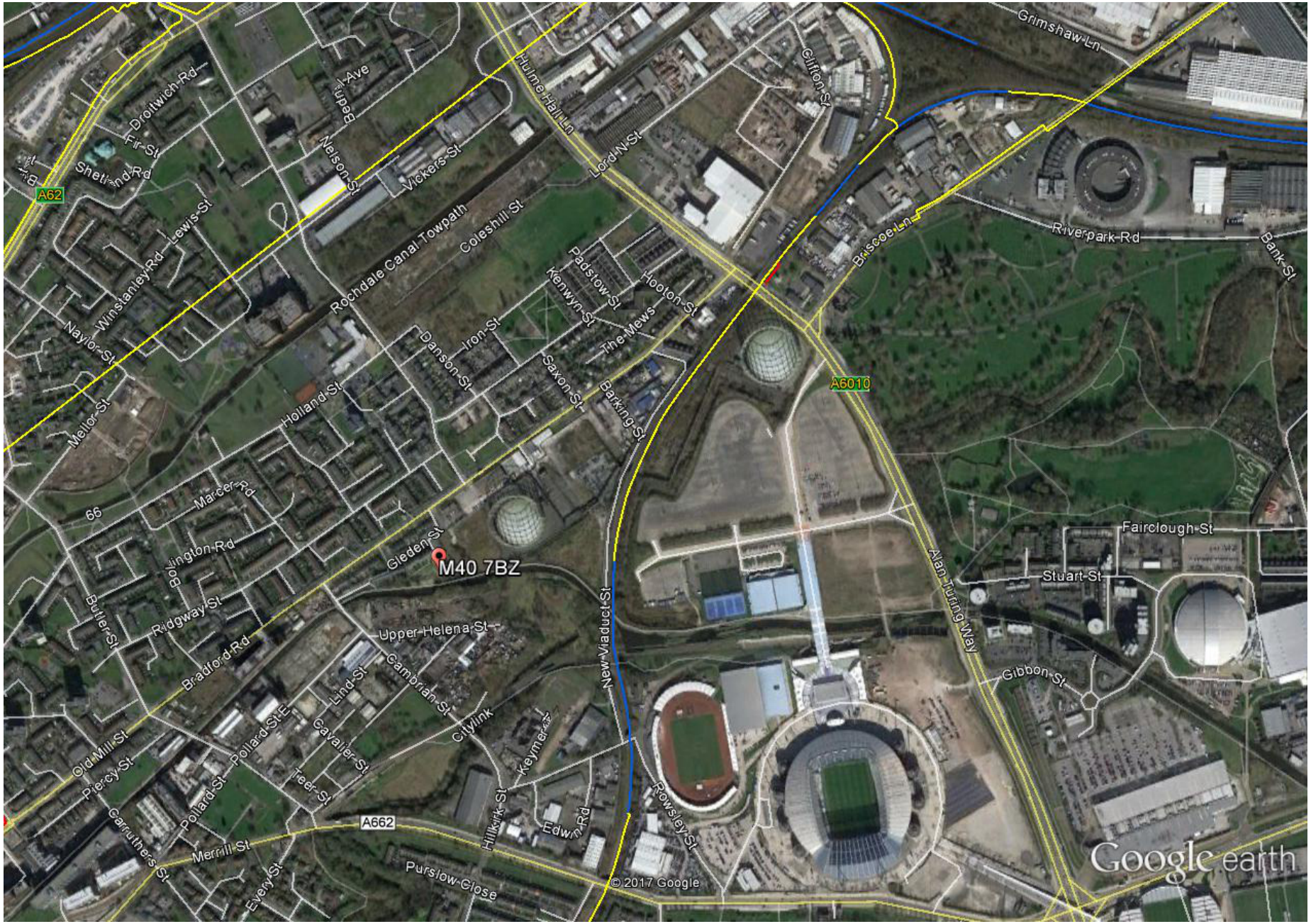
If you require any further information, please do not hesitate to contact me.

Regards

Plant Enquiries Dept
Instalcom Limited
Borehamwood Ind. Park
Rowley Lane
Borehamwood
WD6 5PZ

Office: +44 (0)208 731 4613
Fax: +44 (0)208 731 4601
Email: plantenquiries@instalcom.co.uk
Web: http://www.instalcom.co.uk

INSTALCOM



Google earth

feet 4000

km 1

SPECIAL REQUIREMENTS IN RELATION TO LEVEL 3 PLANT

1. In this special requirement, the following terms shall have the meanings assigned to it :-

   a. "Company" means Level 3.

   b. "Company Representative" means the staff of Level 3 or its Authorized Representatives and Agents.

   c. "Apparatus" means all surface or sub-surface equipment and plant including any associated cabling and/or ducting owned leased or rented by Level 3.

2. Before commencing any work or moving heavy plant or equipment over any portion of the site, the contractor shall confirm details of the Apparatus, owned, leased or rented by the Company, within the site with the Company Representative, who can be contacted at the following point: -

Instalcom Limited
Borehamwood Industrial Park
Rowley Lane
Borehamwood
Hertfordshire
WD6 5PZ
Tel: 0208 731 4600
Fax: 0208 731 4601
E-mail: plantenquiries@instalcom.co.uk

3. Where such details show that the works or the movement of plant or equipment may endanger the Apparatus of the Company the Contractor must give the Company Representative at least 7 days written notice of the date on which it is intended to commence such works of the movement of plant and equipment in order that the presence of any sub-surface apparatus can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of a Company Representative. The Contractor shall ensure that all Company Apparatus, particularly surface running cabling is adequately protected from damage and such protective measures shall be approved by the Company Representative.

4. In the event of a Company marker being disturbed for any reason, it shall not be replaced other than in the exact position of its former depth unless the repositioning is carried out at the direction and under the supervision of a Company Representative.

5. The Contractor shall take particular care in relation to the protection of Company Apparatus, where such Apparatus includes the presence within the site of optical fibre cabling. The contractor should particularly note that the damage to such Apparatus is extremely disruptive to the Company network and costly to reinstate. The Contractor shall make every effort to avoid the disturbance of Company Apparatus more than is absolutely necessary for the completion of the works in accordance with the contract.

6. When excavating around, moving or backfilling around Company Apparatus, the Company Representative shall be given adequate notice, which shall not be less than 3 days, of the contractor's intentions in order that he may supervise the works. The Contractor should note that the normal depth of cover for Company Apparatus and ducts are as follows: -

   a. Carriageways 600mm

   b. Footways 350mm

   c. Verges 450mm

   These minimum depths of cover should be maintained wherever possible.

   Where the minimum depths of cover cannot be maintained, the Contractor shall carry out the instructions of the Company Representative for the protection of Company Apparatus.

   Where cables are not in duct and the required depth of cover cannot be maintained, such cables as are affected shall be enclosed and protected in UPVC duct or equivalent materials as supplied by the Company and by the method directed by the Company Representative.

   With regard to excavation in the vicinity of Company Apparatus the Contractor should have particular regard to the possibility of reduced cover and the encountering of such Company Apparatus at depths of cover less than that given at **a, b and c above**.

7. All excavation adjacent to Company Apparatus is to be carried out by hand until the exact extent and/or location of Company Apparatus is known. Mechanical borers and/or excavators shall not be used within 1.0m of Company Apparatus without the supervisory presence of a Company Representative, To prevent any movement of Company Apparatus during excavations, complete shuttering shall be used as directed by the Company Representative if:-

   a. Excavation is deeper than the depth of cover of adjacent Company Apparatus.

   b. Excavation is within 1.0m of Company Apparatus in stable ground.

   c. Excavation is within 5.0m of Company Apparatus in unstable ground.

   If for the completion of the works, the Contractor intends using any of the following: -

   a. Pile driving equipment within 10.0m of Company Apparatus.

   b. Explosives within 20.0m of Company Apparatus.

   c. Laser equipment within 10.0m of Company Apparatus.

   The Contractor shall advise the Company Representative, giving at least 7 working days written notice in order that any special protective measure for the Company Apparatus affected may be arranged.

8. All Company manhole, joint box and /or other access points and chambers within the site shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and/or further equipment required by the Company for the maintenance of it's Apparatus, must be maintained at all reasonable times. The Contractor should particularly note that footway type jointing chambers are not specified for carriageway loadings and will need to be adequately protected and/or demolished and rebuilt under the supervision of a Company Representative where such chambers are likely to be placed at risk, either temporarily or permanently, from the movement of plant and/or equipment on the site.

9. The covers to Company chambers and/or Apparatus shall only be lifted by means of appropriate keys obtained from the Company Representative and under the direct supervision of the Company Representative. No employee of the Contractor or of any sub-contractor employed by the Contractor shall enter any chamber and/or Apparatus of the Company unless under the supervision of the Company Representative and in any case not before the mandatory gas check has been carried out in the presence of the Company Representative and such checks have shown it to be safe to enter the chamber and/or Apparatus of the Company.

   The Company Representatives shall be given reasonable access to all Company Apparatus and chambers when required.

10. In the event of any damage whatsoever to Company Apparatus, the Contractor shall immediately inform the Company Representative and report the occurrence immediately by contacting the Company as follows:-

Telephone:-

0208 731 4600
Mon-Fri Office Hours (Instalcom Head Office)

0208 510 3111/3101
Out of Office Hours (24Hr Level 3 Network Operations Centre)

11. The above requirements do not relieve the Contractor of any of his obligations under the Contract.

The accuracy of information on the plans cannot be guaranteed and no liability can be accepted for errors or omissions.

Damage to Communications Plant is Expensive – Please Take Care.

Level(3)

TO WHOM IT MAY CONCERN (APPLICANT)

Date as postmark

Re: On Rail Plant Protection and Diversionary Works.

History

Level 3 Communications UK Limited ("Level 3") has leased from Network Rail PLC ("Network Rail") telecommunication cabling lying alongside the railway track throughout the United Kingdom, under a Finance Lease dated 30 June 1994.

Level 3 has run cables on the railway infrastructure throughout the UK under the provision of the Network Rail Deed of Grant dated 31 March 1995.

Level 3 has two wayleave agreements with London Underground Limited to lay Fibre Optic cables in the London Underground environment dated 30th March 1994 and 24th April 1998.

Level 3 has a wayleave agreement with Serco and Docklands Light Railway to lay Fibre Optic cables alongside the Docklands Light Railway dated 18th March 2011

Level 3 has an agreement with City, Greenwich, Lewisham Rail Link PLC to lay cabling along the Lewisham extension of the Docklands Light Railway dated 11th February 2002.

Application

The Applicant is proposing to undertake civil engineering works on the On Railway infrastructure (either Network Rail, London or Underground Limited or Docklands Light Railway) and has requested Level 3 to divert cabling so that the civil engineering work may proceed, and also has requested Level 3 on completion of the civil engineering work, to replace the cabling along its original route

Please be advised that with effect from 1st June 2011, Level 3 has been employing a nominated Agent to deal with all On Rail Plant Protection and Diversionary Works on Level 3 behalf.

This will cover enquiries for and from the following list of Companies:

Level 3 Communications UK Limited
Level 3 Communications Limited
Level 3 Europe Limited
FiberSpan Limited
Global Crossing (UK) Telecommunications Limited

Level(3)

Global Crossing Europe Limited
GC Pan European Crossing UK Limited
Racal Telecommunications Limited
Racal - BR Telecommunications Limited
BR Telecommunications Limited
Fibernet UK Limited
Fibernet Limited
Fibernet Group Limited
Fibernet Holdings Limited
Fibernet Quest Limited
Frontier Telecommunications Ltd
Frontel Communications Ltd
TANet

The nominated Agent and contact details for Instalcom Ltd are:

Borehamwood Industrial Park

Rowley Lane

Borehamwood

Herts

WD6 5PZ

plantenquiries@instalcom.co.uk

Paul Alderton
paul.alderton@instalcom.co.uk
Mobile +44 7831 842772

The Applicant is required to liaise with the nominated Agent in order to make arrangements for the carrying out of the On Rail Plant Protection and Diversionary Works.

The nominated Agent is further authorised to collect all relevant costs associated with the On Rail Plant Protection and Diversionary Works.

The nominated Agent has signed CCN 003 to their Framework Agreement P2772 and P2830 which states that "Instalcom" shall be liable for any and all charges levied against Level 3 if Instalcom (including it's employees, subcontractors or Agent) has acted fraudulently or negligently or breached the Framework Agreement P2772 and P2830 including CCN 003.

Level(3)

For and on behalf of Level 3 Communications UK Limited: -

Signed.....A. Venables.....

Print.....A. VENABLES.....

Title: .....PROCUREMENT DIRECTOR.....

Date.....14 OCTOBER 2014.....

Enquiry Confirmation

LSBUD Ref: 10624388

Date of enquiry: 14/06/2017
Time of enquiry: 16:40

Enquirer

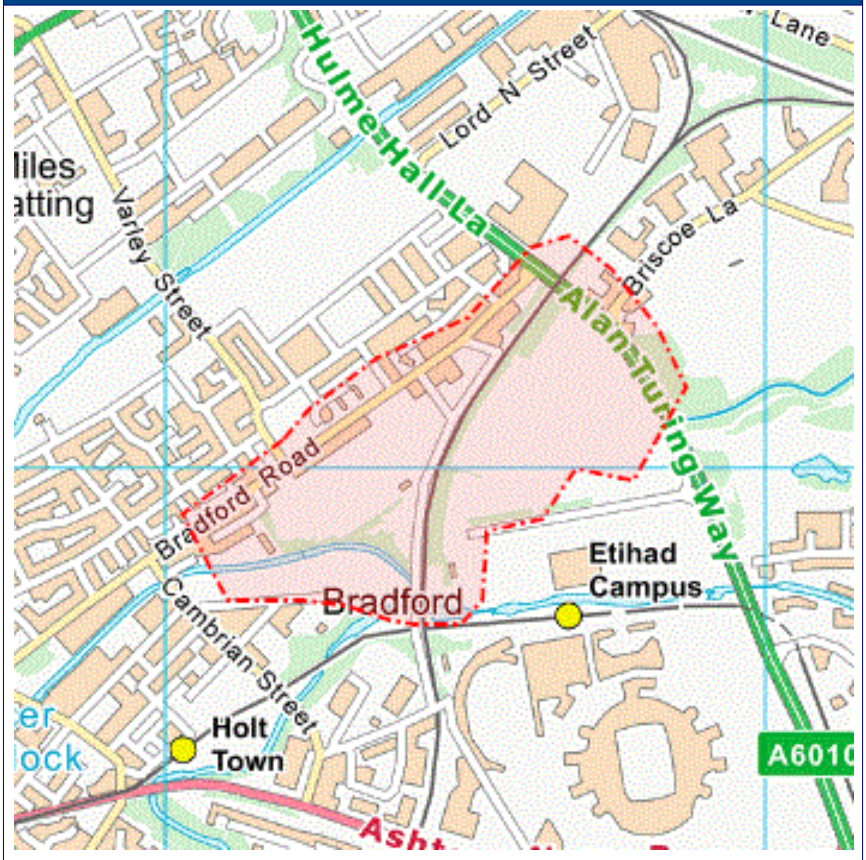
Name	Miss Chrissy Elliott	Phone	01454662397
Company	Atkins	Mobile	Not Supplied
		Fax	Not Supplied
Address	The Hub 500 Park Avenue, Aztec West, Patchway Almondsbury Bristol BS32 4RZ		
Email	atkinsstatutory.enquiries@atkinsglobal.com		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details

Scheme/Reference	55699/AB		
Enquiry type	Initial Enquiry	Work category	Utility Works
Start date	29/06/2017	Work type	Single excavation site
End date	29/09/2017	Site size	281230 metres square
Searched location	XY= 386580, 399170 Easting/Northing	Work type buffer*	25 metres
Confirmed location	386524 399072		

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen.

Site Map



V3.3.2

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Enquiry Confirmation

LSBUD Ref: 10624388

Date of enquiry: 14/06/2017
Time of enquiry: 16:40

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members			
Asset Owner	**Phone/Email**	**Emergency Only**	**Status**
Electricity North West Limited	08001954141	08001954141	Await response
ESP Utilities Group	01372227560	01372227560	Await response
National Grid Gas (Above 7 bar), National Grid Gas Distribution Limited (Above 2 bar) and National Grid Electricity Transmission	0800688588	Gas 0800111999 Electricity 0800404090	Await response

LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.

List of not affected LSBUD members		
AWE Pipeline	Gamma	Premier Transmission Ltd (SNIP)
BOC Limited (A Member of the Linde Group)	Gateshead Energy Company	Prysmian Cables & Systems Ltd (c/o Western Link)
BP Midstream Pipelines	Gigaclear PLC	Redundant Pipelines - LPDA
BPA	Humbly Grove Energy	RWEnpower (Little Barford and South Haven)
Carrington Gas Pipeline	IGas Energy	SABIC UK Petrochemicals
CATS Pipeline c/o Wood Group PSN	INEOS Manufacturing (Scotland and TSEP)	Scottish Power Generation
Cemex	INOVYN Enterprises Limited	Seabank Power Ltd
Centrica Energy	Intergen (Coryton Energy or Spalding Energy)	SGN
Centrica Storage Ltd	Lark Energy	Shell (St Fergus to Mossmorran)
CLH Pipeline System Ltd	Mainline Pipelines Limited	Shell Pipelines
Concept Solutions People Ltd	Manchester Jetline Limited	SSE (Peterhead Power Station)
ConocoPhillips (UK) Ltd	Manx Cable Company	Total (Finaline, Colnbrook & Colwick Pipelines)
DIO (MOD Abandoned Pipelines)	Marchwood Power Ltd (Gas Pipeline)	Transmission Capital
Dong Energy (UK) Ltd	Melbourn Solar Limited	Uniper UK Ltd
E.ON UK CHP Limited	Northumbrian Water Group	Vattenfall
EirGrid	NPower CHP Pipelines	Veolia ES SELCHP Limited
ENI & Himor c/o Penspen Ltd	Oikos Storage Limited	Western Power Distribution
ESSAR	Perenco UK Limited (Purbeck Southampton Pipeline)	Wingas Storage UK Ltd
Esso Petroleum Company Limited	Petroineos	Zayo Group UK Ltd c/o JSM Group Ltd
Fulcrum Pipelines Limited	Phillips 66	

Murthy, Srinivasa

ATKINS CHECKED
SM

From: Whittaker, Karen <Karen.Whittaker@amey.co.uk>
Sent: Thursday, June 15, 2017 1:32 PM
To: Statutory Enquiries
Subject: RE: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

Please find attached, street lighting maintained by Amey Street Lighting, please ensure that prior to works commencing on site Amey Street Lighting are notified

regards

Karen Whittaker
Operational Controller|Manchester Street Lighting | Highways
Amey

t: 0161 277 6777 | **m:** not applicable | **e:** Karen.Whittaker@amey.co.uk
Factory Lane| Harpurhey| Manchester | M9 8AB

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Putting People First | Delivering Great Service | Creating Better Solutions

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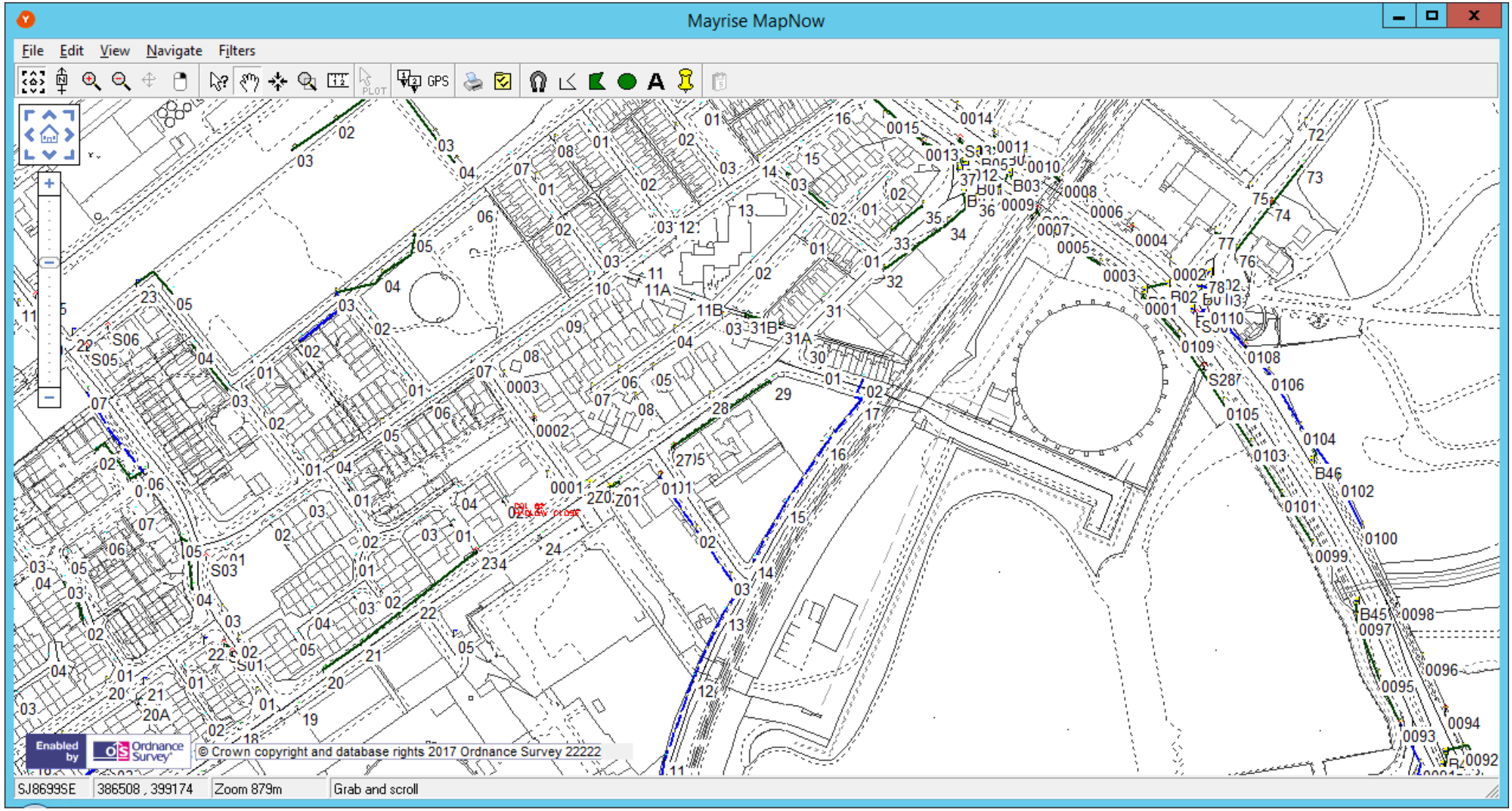
From: Bhaskar, Aditya [mailto:Aditya.Bhaskar@atkinsglobal.com] **On Behalf Of** Statutory Enquiries
Sent: 14 June 2017 16:46
To: contact@manchester.gov.uk; Whittaker, Karen; medc@manchester.gov.uk; gmutc@tfgm.com
Subject: Plant Enquiry - 55699 - Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester - Please respond by 29/06/2017

Our Reference: 55699
Site Name: Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester
Works Description: Demolition
Site Grid References: 386384 399052,386750 399209,386152 398920,386653 399296,386418 398808

To whom it may concern,

Please find enclosed a plant enquiry for your attention.

We request plans showing the location of your company's affected plant in relation to the entire site area shown within the boundary on the attached map. Grid references and postcodes relative to the site boundary are provided on the attached map to help you locate the site.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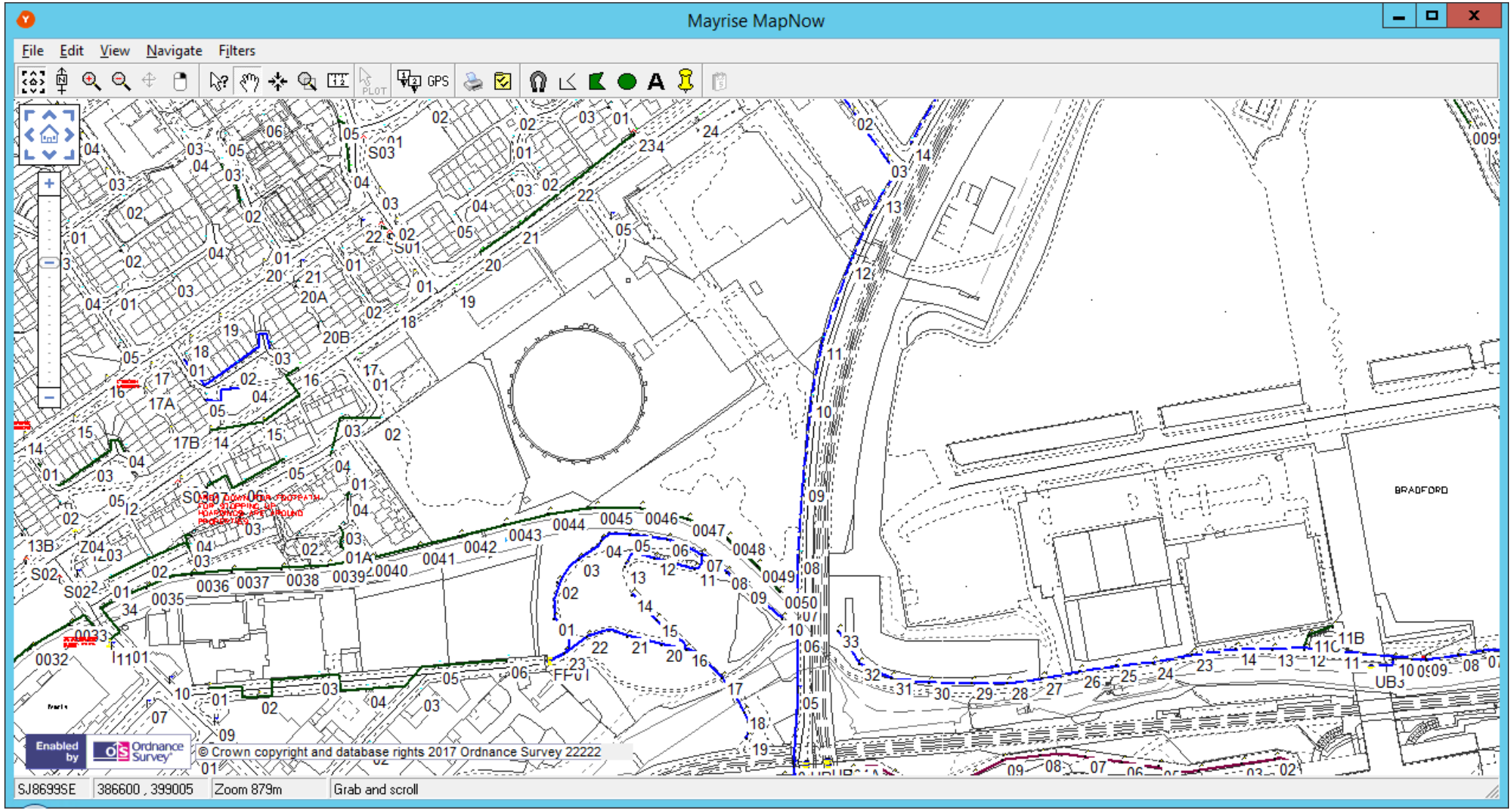
Zoom 879m
Grab and scroll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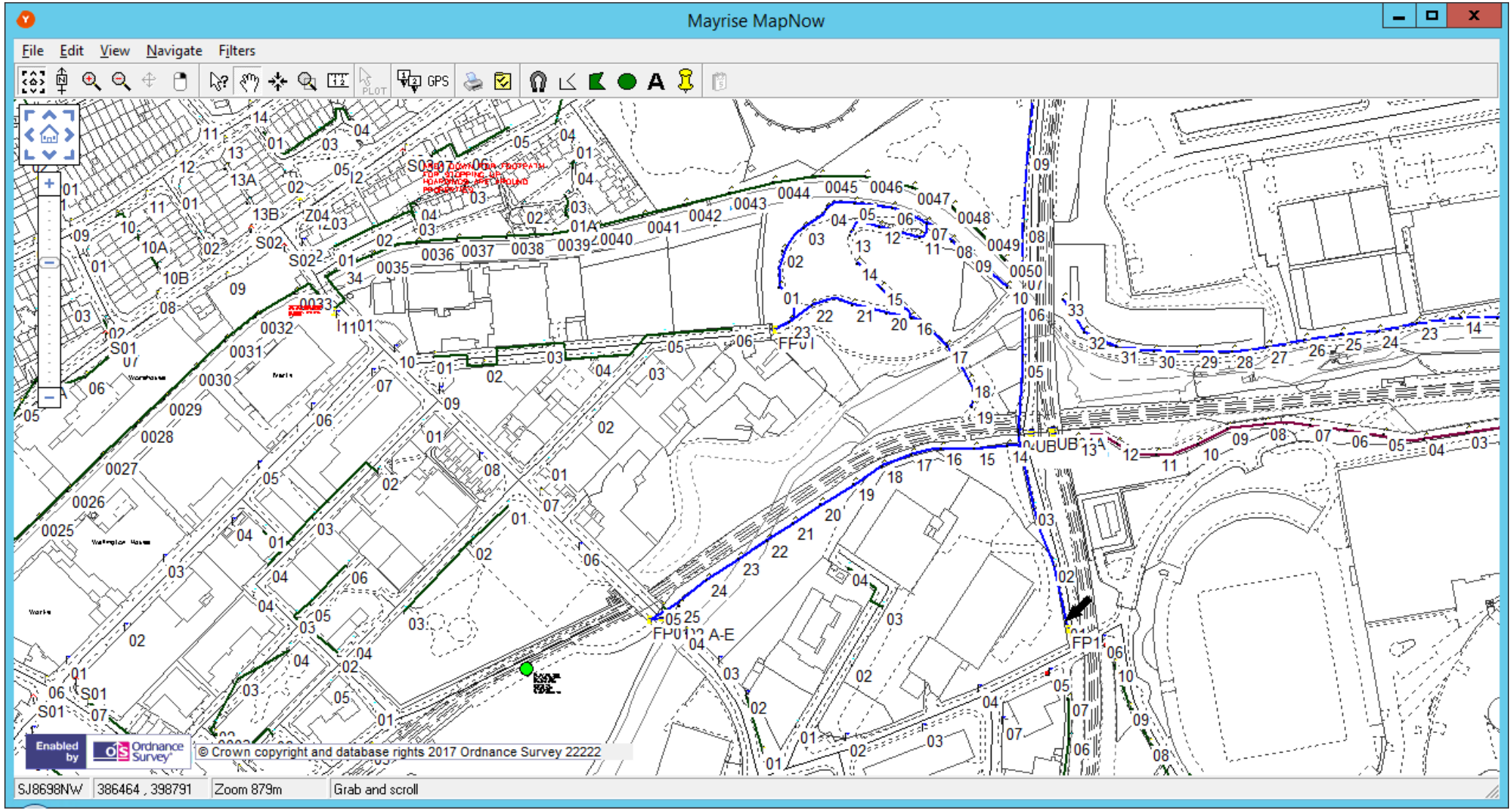
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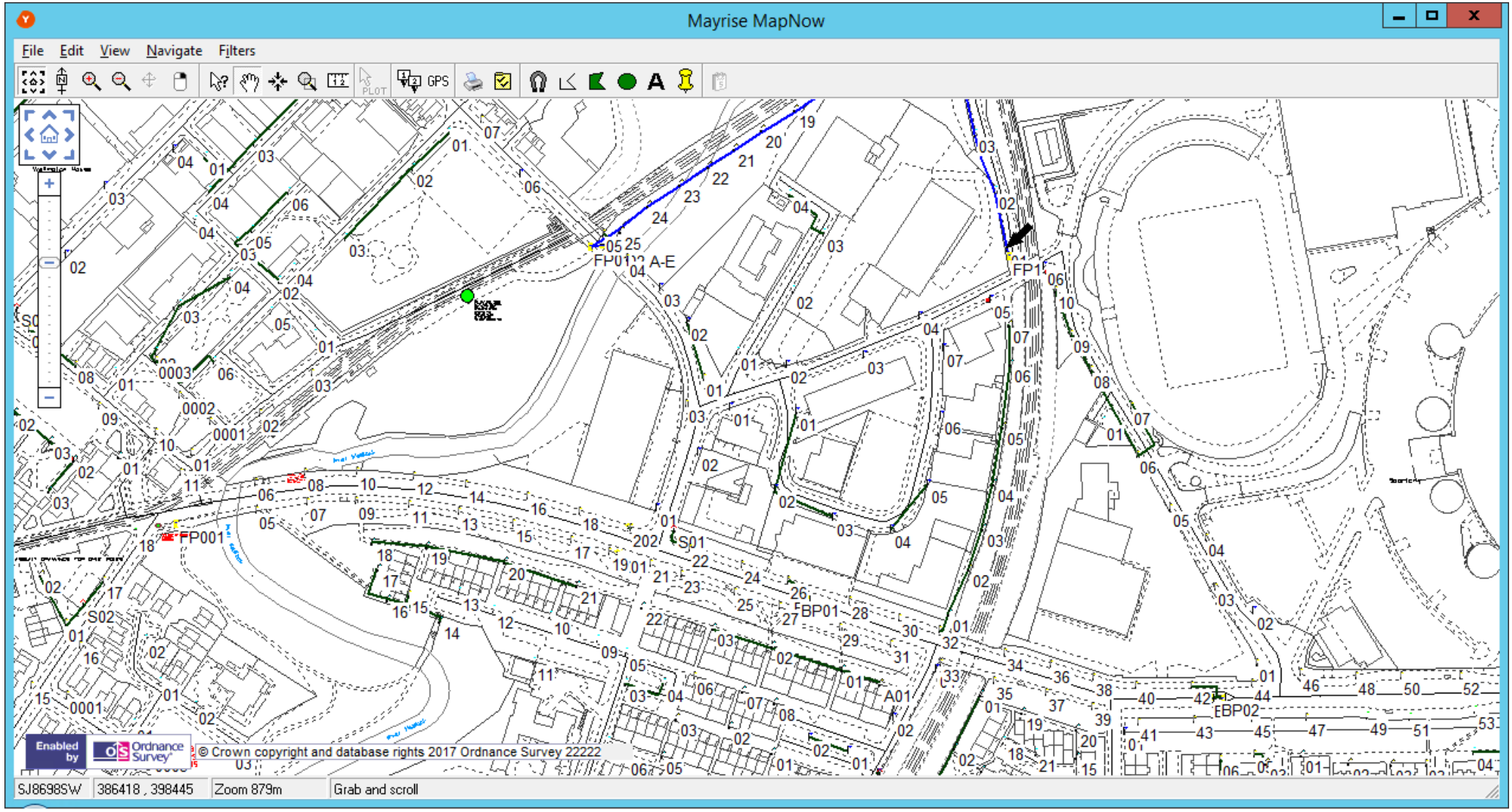
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Ordnance Survey
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SJ8698SW
386418 , 398445
Zoom 879m
Grab and scroll

Cadent
Your Gas Network

ATKINS CHECKED
SM

Plant Protection
Cadent
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@cadentgas.com
Telephone: +44 (0)800 688588

National Gas Emergency Number:
0800 111 999*

National Grid Electricity Emergency Number:
0800 40 40 90*
* Available 24 hours, 7 days/week.
Calls may be recorded and monitored.

www.cadentgas.com

Chrissy Elliott
Atkins Limited
The Hub
500 Park Avenue
Aztec West
Almondsbury
Bristol
BS32 4RZ

Date: 15/06/2017
Our Ref: NW_TW_Z1_3SL_337531-2
Your Ref: 55699 - LSBUD-170614-10624388
RE: Proposed Works, Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester

Thank you for your enquiry which was received on 15/06/2017.
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to Cadent Gas Ltd, National Grid Electricity Transmission plc's and National Grid Gas plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.
For details of Network areas please see the Cadent website (http://cadentgas.com/Digging-safely/Dial-before-you-dig) or the enclosed documentation.

As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. Plant Protection will endeavour to provide an initial assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.

In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near Cadent and/or National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to Cadent Gas Ltd, National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG) and apparatus. This assessment does **NOT** include:

- Cadent and/or National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to Cadent and/or National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact Plant Protection.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on the National Grid Website (http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982).

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to Cadent and/or National Grid's easements or wayleaves nor any planning or building regulations applications.

Cadent Gas Ltd, NGG and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the Plant Protection team via e-mail (click here) or via the contact details at the top of this response.

Yours faithfully

Plant Protection Team

ASSESSMENT

Affected Apparatus
The apparatus that has been identified as being in the vicinity of your proposed works is:

- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)
- Above ground gas sites and equipment

Requirements

BEFORE carrying out any work you must:

- **Note the presence of an Above Ground Installation (AGI) in proximity to your site. You must ensure that you have been contacted by Cadent and/or National Grid prior to undertaking any works within 10m of this site.**
- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent and/or National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 - 'Avoiding Danger from Underground Services' and GS6 – 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at http://www.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

High Pressure Gas Pipelines Guidance:
If working in the vicinity of a high pressure gas pipeline the following document must be followed: 'Specification for Safe Working in the Vicinity of Cadent and/or National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). This can be obtained from:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968

Dial Before You Dig Pipelines Guidance:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33969

Excavating Safely - Avoiding injury when working near gas pipes:
http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf

Standard Guidance

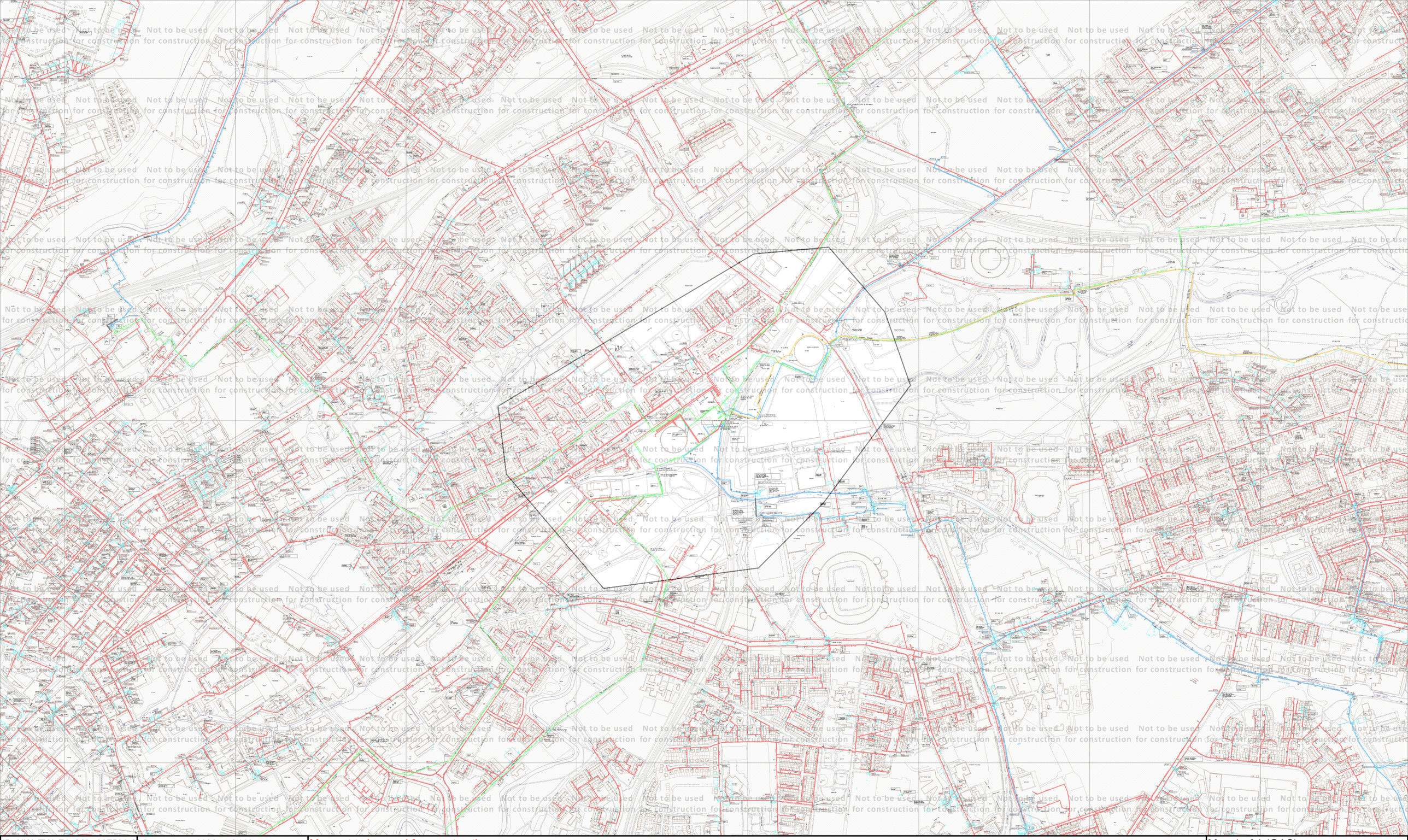
Essential Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982

General Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

Excavating Safely in the vicinity of gas pipes guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

Excavating Safely in the vicinity of electricity cables guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid Website:
http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/



ID: NW_TW_Z1_3SL_337531-2

View extent: 4120m, 2440m

Map not to be used for construction

Map 1 of 1 (GAS)

USER: RTD

DATE: 15/06/2017

DATA DATE: 14/06/2017

REF: 55699 - LSBUD-170614-106243

MAP REF: SJ8699
CENTRE: 386372, 399008

LP MAINS
MP MAINS
IP MAINS
LHP MAINS
NHP MAINS

0m 200m
Approximate scale 1:10000
on A3 Colour Landscape

Some examples of Plant Items:

Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

This plan shows those pipes owned by National Grid Gas plc in its 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.

MAPS Plot Server Version 1.9.0

Cadent
Your Gas Network

Requested by: Atkins Limited

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ENQUIRY SUMMARY

Received Date
15/06/2017

Your Reference
55699 - LSBUD-170614-10624388

Location
Centre Point: 386372, 399008
X Extent: 1210
Y Extent: 1000
Postcode: M40 7BG
Location Description: Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester

Map Options
Paper Size: A3
Orientation: LANDSCAPE
Requested Scale: 10000
Actual Scale: 1:10000 (GAS)
Real World Extents: 4120m x 2440m (GAS)

Recipients
stat.enquiries@atkinsglobal.com

Enquirer Details
Organisation Name: Atkins Limited
Contact Name: Chrissy Elliott
Email Address: stat.enquiries@atkinsglobal.com
Telephone: 01454662397 (01454662397)
Address: The Hub, 500 Park Avenue, Aztec West, Almondsbury, Bristol, BS32 4RZ

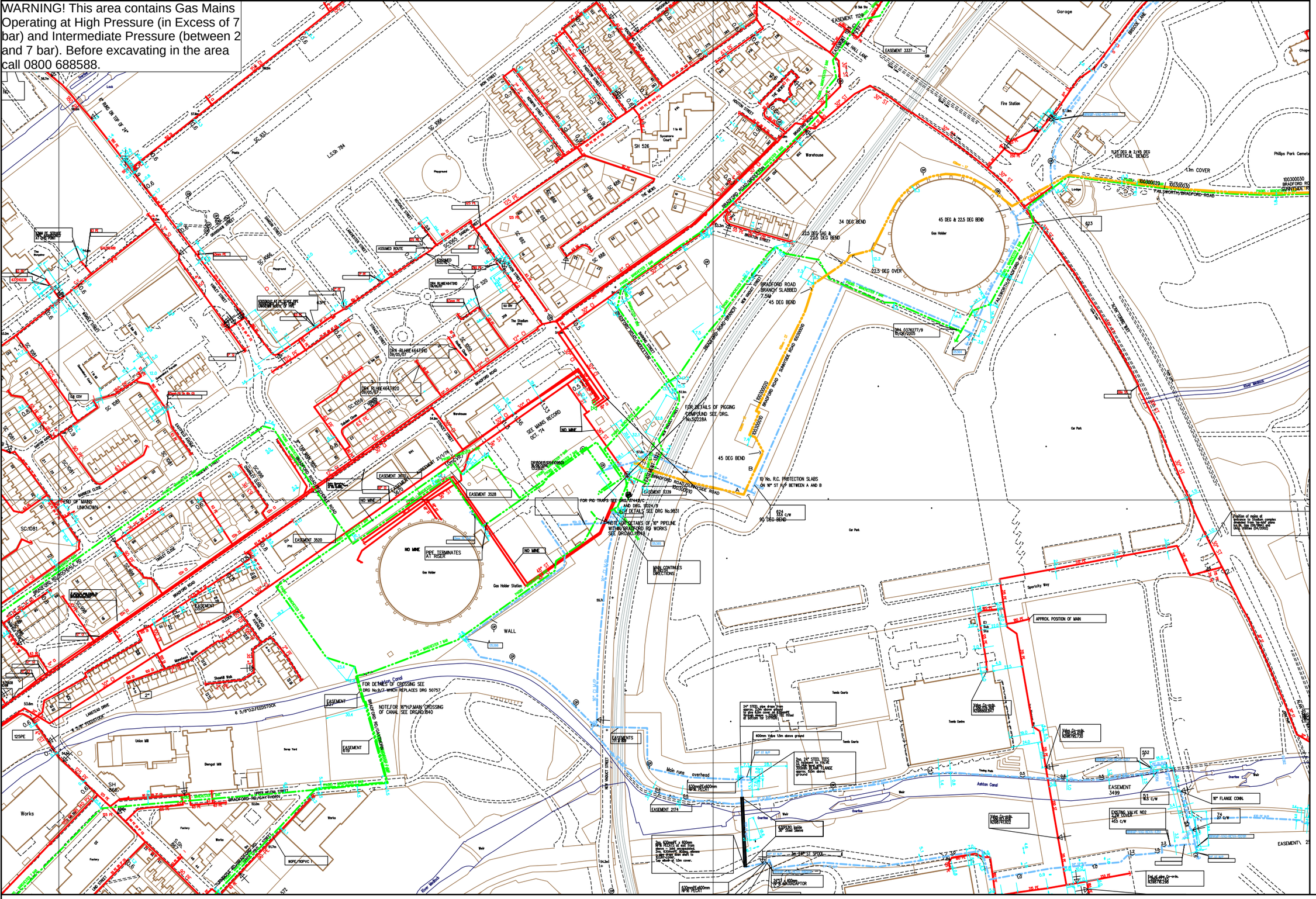
Description of Works
Demolition

Enquiry Type
Proposed Works

Activity Type
Demolition

Work Types
Work Type: Plans Only

WARNING! This area contains Gas Mains Operating at High Pressure (in Excess of 7 bar) and Intermediate Pressure (between 2 and 7 bar). Before excavating in the area call 0800 688588.



ATKINS CHECKED
SM

SCALE: Not to scale	LP MAINS
USER ID: pate6410	MP MAINS
DATE: 03/07/2017	IP MAINS
EXTRACT DATE: 01/03/2017	LHP MAINS
MAP REF: SJ8699	NHP MAINS
CENTRE: 386456, 399040	

Some examples of Plant Items:

Valve | Depth of Cover | Syphon | 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 5.6.7.0

Local Machine

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ATKINS CHECKED
SM

Underground Services Team
National Records Centre
Audax Road
YORK

YO30 4US
Tel:

NRSWA Asset Enquiries

Date: 26 June 2017

Your Reference **2017_16697**
Our Reference: **LNW168094 RP7**

Dear NRSWA,

Re: Underground Services Search: **OP Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester**

Please find information available as per the checklist.

The information contained herein is based on Network Rail's records and, where appropriate, third parties such as utility companies. The search enclosed does not cover a search of local council records. Also, schematic Signal and Telecom (S&T) cables plans are not provided as part of the search results, therefore you must assume S&T cables are present until proven otherwise.

Although at the date of this letter the information is as up to date as possible, it is NOT a statement of validity, accuracy or completeness as to any of the enclosed search information and must not be relied on as such.

Your risk assessment MUST take into account:

- That the information supplied, including the services shown on the map from the Rail Infrastructure Network Model (RINM), does not provide any guarantee as to the accuracy of the actual location of services on site and MUST be considered as for guidance purposes only.
- That new/unrecorded services are likely to be present
- That the enclosed Underground Services search information has been collated only for the ELR and Mileage boundaries as stated on the original request form

Included in your underground services search is a list of local engineers and managers you MUST contact before any ground disturbance is carried out, to check whether further information is held locally.

Further guidance can be obtained from the Health and Safety Executive publication HSG47 "Avoiding Danger from Underground Services" and the Network Rail Publication NR/L2/INI/CP1030.

Should you become aware of any additional underground services or assets within the locality during your investigations and/or works, including redundant assets, please identify them as a matter of urgency to the site manager. Records of the location of these assets should be kept for onward transmission and entry into the Hazard Directory.

Yours sincerely

Richard Purser

Distribution Administrator

UNDERGROUND SERVICES INFORMATION CHECKLIST

YOUR REF	2017_16697	**OUR REF**	LNW168094
LOCATION	**OP** Site off Bradford Road, New Viadu	**ELR**	PPA1
MILEAGE FROM	2.0330	**MILEAGE TO**	2.1120

Utility Company/Internal Source	Category	Enc	Notes
Site Map	GIS Systems	Yes	
Hazard Directory	Hazard	Yes	
Civils LNW	NRG	Yes	
eBrowser	NRG	No	NIL RETURN - see below

NIL RETURN: After interrogating the information made available to us, no records containing underground services information have been returned for this worksite.

However, reference must be made to the guidelines supplied with this underground services search, which contain important information on safe working practices.

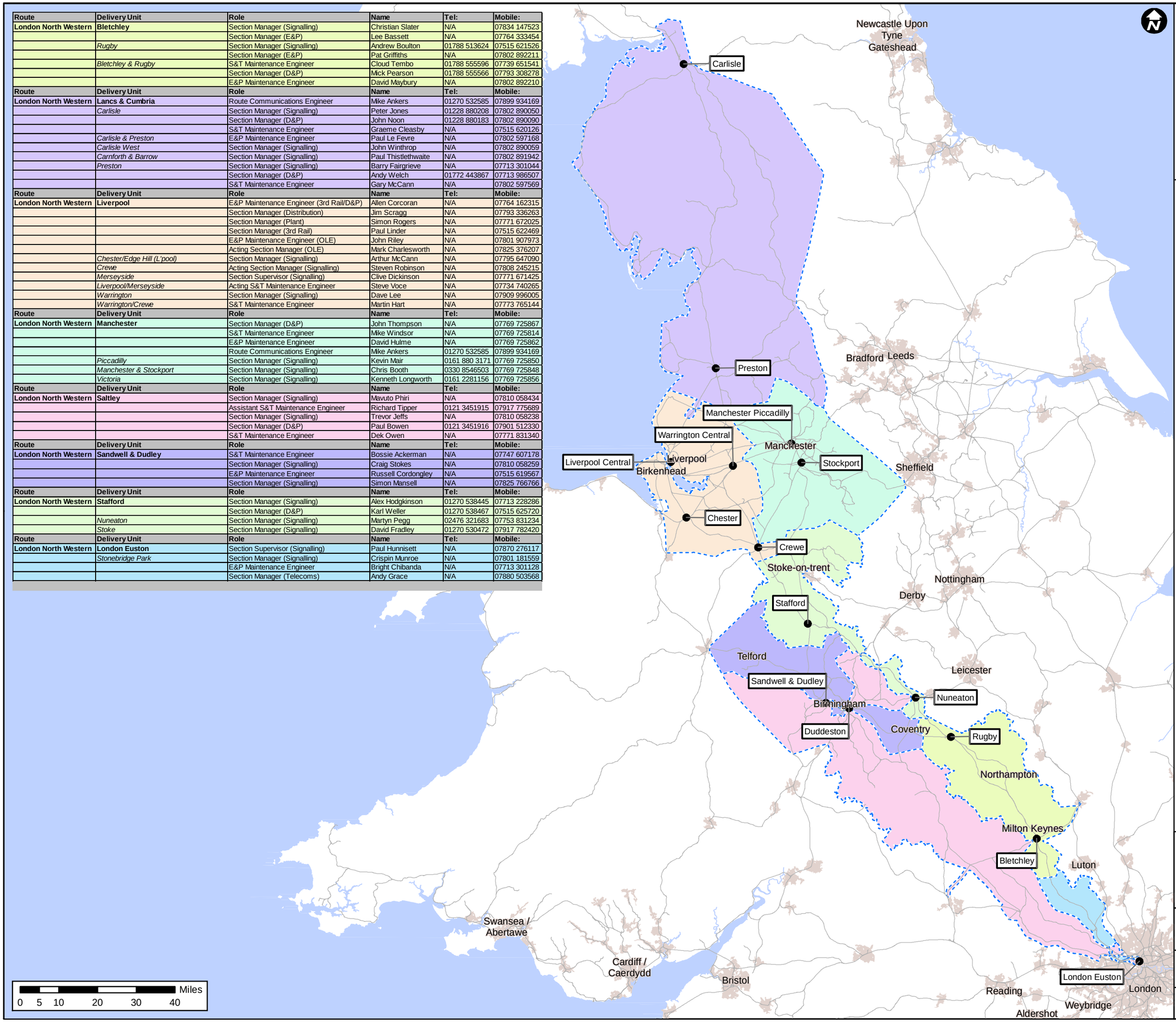
Upon receipt can you please check that the information provided agrees with this listing and if there are any discrepancies please contact the Underground Services Team at:

National Records Centre, Audax Road, York. YO30 4GS

buriedservicesnst@networkrail.co.uk

Checklist printed on: 26/06/17

Route	Delivery Unit	Role	Name	Tel:	Mobile:
London North Western	**Bletchley**	Section Manager (Signalling)	Christian Slater	N/A	07834 147523
		Section Manager (E&P)	Lee Bassett	N/A	07764 333454
	Rugby	Section Manager (Signalling)	Andrew Boulton	01788 513624	07515 621526
		Section Manager (E&P)	Pat Griffiths	N/A	07802 892211
	Bletchley & Rugby	S&T Maintenance Engineer	Cloud Tembo	01788 555596	07739 651541
		Section Manager (D&P)	Mick Pearson	01788 555566	07793 308278
		E&P Maintenance Engineer	David Maybury	N/A	07802 892210
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Lancs & Cumbria**	Route Communications Engineer	Mike Ankers	01270 532585	07899 934169
	Carlisle	Section Manager (Signalling)	Peter Jones	01228 880208	07802 890050
		Section Manager (D&P)	John Noon	01228 880183	07802 890090
		S&T Maintenance Engineer	Graeme Cleasby	N/A	07515 620126
	Carlisle & Preston	E&P Maintenance Engineer	Paul Le Fevre	N/A	07802 597168
	Carlisle West	Section Manager (Signalling)	John Winthrop	N/A	07802 890059
	Carnforth & Barrow	Section Manager (Signalling)	Paul Thistlethwaite	N/A	07802 891942
	Preston	Section Manager (Signalling)	Barry Fairgrieve	N/A	07713 301044
		Section Manager (D&P)	Andy Welch	01772 443867	07713 986507
		S&T Maintenance Engineer	Gary McCann	N/A	07802 597569
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Liverpool**	E&P Maintenance Engineer (3rd Rail/D&P)	Allen Corcoran	N/A	07764 162315
		Section Manager (Distribution)	Jim Scragg	N/A	07793 336263
		Section Manager (Plant)	Simon Rogers	N/A	07771 672025
		Section Manager (3rd Rail)	Paul Linder	N/A	07515 622469
		E&P Maintenance Engineer (OLE)	John Riley	N/A	07801 907973
		Acting Section Manager (OLE)	Mark Charlesworth	N/A	07825 376207
	Chester/Edge Hill (L'pool)	Section Manager (Signalling)	Arthur McCann	N/A	07795 647090
	Crewe	Acting Section Manager (Signalling)	Steven Robinson	N/A	07808 245215
	Merseyside	Section Supervisor (Signalling)	Clive Dickinson	N/A	07771 671425
	Liverpool/Merseyside	Acting S&T Maintenance Engineer	Steve Voce	N/A	07734 740265
	Warrington	Section Manager (Signalling)	Dave Lee	N/A	07909 996005
	Warrington/Crewe	S&T Maintenance Engineer	Martin Hart	N/A	07773 765144
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Manchester**	Section Manager (D&P)	John Thompson	N/A	07769 725867
		S&T Maintenance Engineer	Mike Windsor	N/A	07769 725814
		E&P Maintenance Engineer	David Hulme	N/A	07769 725862
		Route Communications Engineer	Mike Ankers	01270 532585	07899 934169
	Piccadilly	Section Manager (Signalling)	Kevin Mair	0161 880 3171	07769 725850
	Manchester & Stockport	Section Manager (Signalling)	Chris Booth	0330 8546503	07769 725848
	Victoria	Section Manager (Signalling)	Kenneth Longworth	0161 2281156	07769 725856
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Saltley**	Section Manager (Signalling)	Mavuto Phiri	N/A	07810 058434
		Assistant S&T Maintenance Engineer	Richard Tipper	0121 3451915	07917 775689
		Section Manager (Signalling)	Trevor Jeffs	N/A	07810 058238
		Section Manager (D&P)	Paul Bowen	0121 3451916	07901 512330
		S&T Maintenance Engineer	Dek Owen	N/A	07771 831340
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Sandwell & Dudley**	S&T Maintenance Engineer	Bossie Ackerman	N/A	07747 607178
		Section Manager (Signalling)	Craig Stokes	N/A	07810 058259
		E&P Maintenance Engineer	Russell Cordongley	N/A	07515 619567
		Section Manager (Signalling)	Simon Mansell	N/A	07825 766766
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**Stafford**	Section Manager (Signalling)	Alex Hodgkinson	01270 538445	07713 228286
		Section Manager (D&P)	Karl Weller	01270 538467	07515 625720
	Nuneaton	Section Manager (Signalling)	Martyn Pegg	02476 321683	07753 831234
	Stoke	Section Manager (Signalling)	David Fradley	01270 530472	07917 782420
Route	**Delivery Unit**	**Role**	**Name**	**Tel:**	**Mobile:**
London North Western	**London Euston**	Section Supervisor (Signalling)	Paul Hunnisett	N/A	07870 276117
	Stonebridge Park	Section Manager (Signalling)	Crispin Munroe	N/A	07801 181559
		E&P Maintenance Engineer	Bright Chibanda	N/A	07713 301128
		Section Manager (Telecoms)	Andy Grace	N/A	07880 503568



NetworkRail

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LEGEND

- Stations
- Rail Network
- IMDM Boundaries
- Urban Areas

IMDM Boundaries

- IMDM Bletchley
- IMDM Euston
- IMDM Lancs and Cumbria
- IMDM Liverpool
- IMDM Manchester
- IMDM Saltley
- IMDM Sandwell & Dudley
- IMDM Stafford

Local Contacts List - LNW IMDMs

Client: Buried Services
Job No: 10104 107 [Internal Use Only]

Scale : 1:1,450,000

Date : 09/02/2017

Produced By: Data Services - AIS
GeospatialReportingAnalysis@NetworkRail.co.uk

GEO-RINM

This material from the Rail Infrastructure Network Model (RINM) is a guide only and although every effort will be made to ensure that the information is correct you should be aware that the information may be incomplete, inaccurate or out of date. Network Rail shall not be liable for any loss or damage, which may arise from the use of any information, contained.

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Infrastructure Features

- Tunnel Bore

Infrastructure Network Model

- Track Link

OS MasterMap

Points

- General Feature, Positioned...
- General Feature, Positioned...
- Height Control, Bench Mark
- Historic Interest, Structure
- Inland Water, Culvert
- Political Or Administrative, Boundary...
- Rail, Structure
- Roadside, Structure
- Structure,
- Structure, Triangulation Point Or Pillar
- Terrain And Height, Spot Height

Symbols

- Bench Mark
- Boundary Half Mereing
- Direction of Flow
- Switch
- Road Related Flow

Line Features

- Building
- Building
- Building Overhead
- General Feature Edge
- General Feature

- General Feature Underground
- Top of Slope
- Bottom of Slope
- Bottom of Slope
- Narrow Gauge Railway
- Standard Gauge Railway
- Overhead Construction
- Validate General Feature
- Rail
- Mean High Water
- Mean High Water
- Mean Low Water
- Mean Low Water

Boundaries

- Political Or Administrative, County
- Political Or Administrative, District
- Political Or Administrative, Electoral
- Political Or Administrative, Parish
- Political Or Administrative, Parliamentary

Buried Services - Network Rail

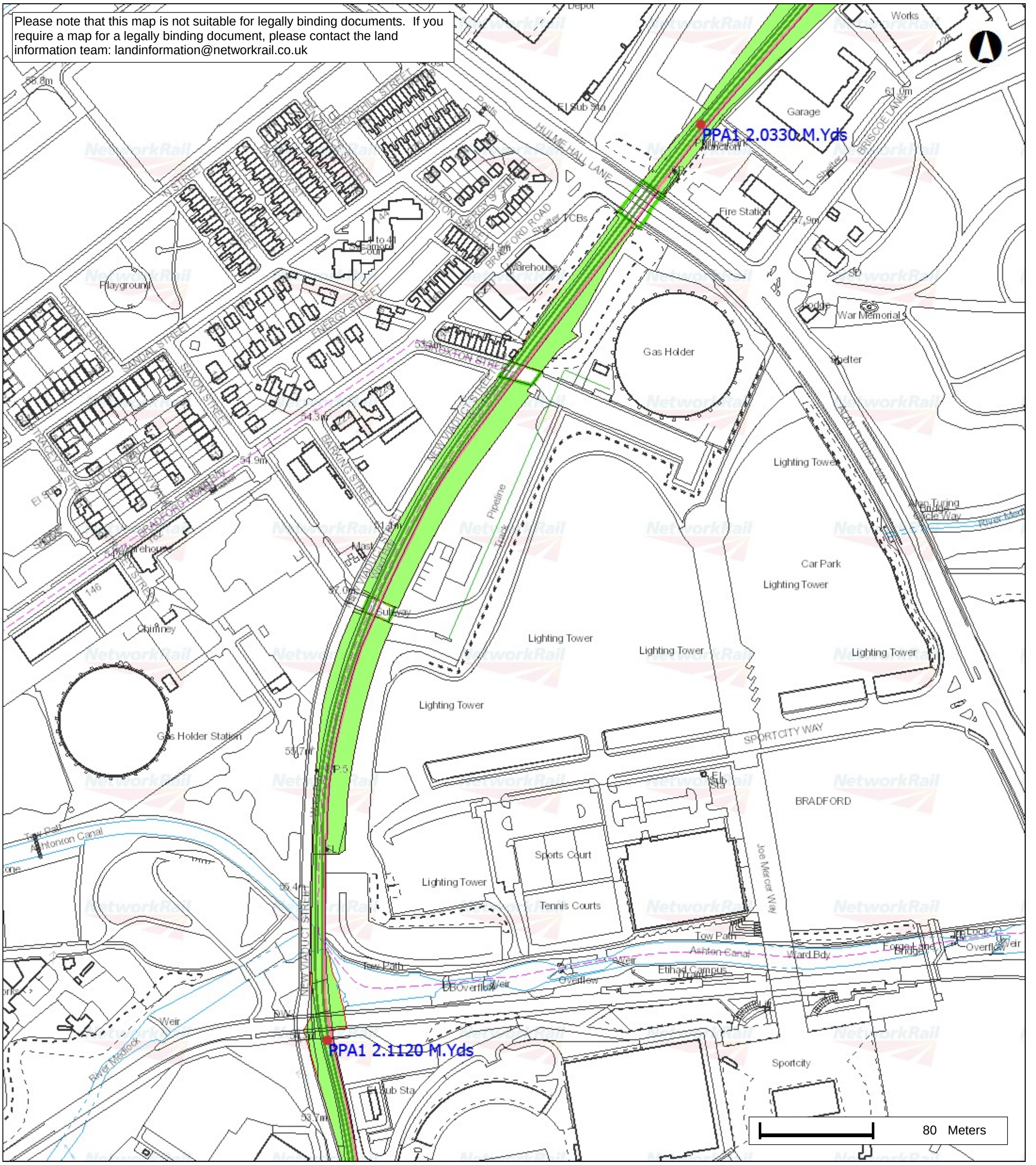
- Historic Cable Route

Land Information

Company Ownership

- Freehold Ownership
- Leasehold Ownership
- Prohibitive Interest
- Bridge (Rail over Rail)
- Bridge (Rail over River)
- Bridge (Rail over Road)
- Bridge (Road over Rail)
- Level Crossing
- Tunnel

Please note that this map is not suitable for legally binding documents. If you require a map for a legally binding document, please contact the land information team: landinformation@networkrail.co.uk



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NetworkRail

Legend

- Tunnel Bore
- Track Link

Points

- General Feature, Positioned Coniferous Tree
- General Feature, Positioned Nonconiferous Tree
- Height Control, Bench Mark
- Historic Interest, Structure
- Inland Water, Culvert
- Political Or Administrative, Boun Post Or Stone
- Rail, Structure
- Roadside, Structure
- Structure,
- Structure, Triangulation Point Or
- Terrain And Height, Spot Height

Symbols

- Bench Mark
- Boundary Half Mereing
- Direction of Flow
- Switch
- Road Related Flow

Line Features

- Building
- Building
- Building Overhead
- General Feature Edge
- General Feature
- General Feature Underground
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- Bottom of Slope
- Narrow Gauge Railway
- Standard Gauge Railway
- Overhead Construction
- Validate General Feature
- Rail
- Mean High Water
- Mean High Water
- Mean Low Water
- Mean Low Water

Boundaries

- Political Or Administrative, Coun
- Political Or Administrative, Distri
- Political Or Administrative, Elect
- Political Or Administrative, Paris
- Political Or Administrative, Parliamentary
- Historic Cable Route

Company Ownership

- Freehold Ownership
- Leasehold Ownership
- Prohibitive Interest
- Bridge (Rail over Rail)
- Bridge (Rail over River)
- Bridge (Rail over Road)
- Bridge (Road over Rail)
- Level Crossing
- Tunnel

LNW168094

Site off Bradford Road, New Viaduct Street

Scale	1 : 2,500
Plot Date	26/06/17 13:37
Printed By	

Output created from GeoRINM Viewer

National

Hazard

Directory

Terms and Conditions

The National Hazard Directory (NHD) is issued by Network Rail to provide information on those hazards recorded as present on Network Rail's infrastructure. Its' purpose is to alert users to the typical hazards they may come across whilst working on Network Rail's Infrastructure. The National Hazard Directory is maintained by Network Rail to provide its employees and contractors with information on known hazards present on the infrastructure in order to assist in the identification of the associated risks working 'on or near the line'.

The records are updated regularly and therefore Network Rail believe that the contents are reasonably accurate at the time of issue, but some of the information can vary in age and accuracy so for that reason Network Rail will give no warranty as to the suitability of its use. It is recommended that all searches (in particular for buried services) should be conducted together with a site specific risk assessment/site visit, taking into account the requirements of the appropriate track safety rules, rule books/industry standards and so on. Network Rail will accept no liability in respect of the content or subsequent use of the National Hazard Directory or any of the information contained within.

Users of the Directory must note that when working on or near the line that the appropriate requirements of the Rule Book, especially the provisions of the track safety rules, must be applied as appropriate to the activity concerned.

OnTrac Ltd does not warrant the use of the Network Rail National Hazard Directory or any of the information contained within and no representations or warranties are made as to completeness or accuracy of the data. The data should be used for reference purposes only. Accordingly, OnTrac Ltd will accept no responsibility for loss of profit or for any indirect, incidental or consequential damages.

National Hazard Directory

Customised Report

Search Criteria: ELR(s) = PPA1; Mileage From = 2.0330; Mileage To = 2.0330
Date: 26/06/2017

1 Hazards found.

ELR	ELR Name	Mileage From	Mileage To	Hazard Code	Hazard Description	Local Name	Track ID	Free Text
PPA1	PHILLIPS PARK NO 1 JN - ARDWICK JN (ARDWICK BCH)(PART CLOSED) (A12)	2.0022	2.1188	EKF	Landfill Gases	Bradford Road Gasworks. Miles Platting		LANDFILL GAS. This stretch of railway has been identified as being at risk from the migration of landfill gasses. Appropriate precautions should be taken. For further information please contact nationalminingengineer@networkrail.co.uk

Purser Richard

From:	Linton Tom on behalf of NRG Enquiries
Sent:	21 June 2017 10:19
To:	OP Buried Services Enquiries
Cc:	BS_Transmittals
Subject:	Underground Services search: **OP** Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester (LNW168094)
Attachments:	Details of drainage system.tif; Details of drainage system_2.tif; LNW168094.xlsx; Proximity of Work to Signal Equipment.tif

Thank you for your recent enquiry for buried services records from the NRG.

In reference to **OP** Site off Bradford Road, New Viaduct Street and Alan Turing Way, Manchester

	No records have been found
3	Record(s) sent via email
	Record(s) sent via CD/DVD
	Record(s) sent via SharePoint

Please note that all other aspects including the Utility Companies search results will be sent to you separately by the Underground Services Team.

Please direct all queries to undergroundservices@networkrail.co.uk.

Kind regards,
National Records Group

The information contained in these records is indicative only and should not be relied on for any purpose. No warranty or guarantee is given as to its accuracy or completeness and no liability is accepted by Network Rail for any errors or omissions or for the consequences of reliance on this information for any purpose. The actual position of infrastructure, plant, equipment and boundaries must be verified on site and the position of any underground cables or service pipes verified by cable detector or other suitable means. This information is confidential and should not be divulged to any other person or used for a purpose other than the purpose for which it was requested. The document may not be reproduced, stored in a retrieval system or transmitted in any form or by any means without the permission of Network Rail.

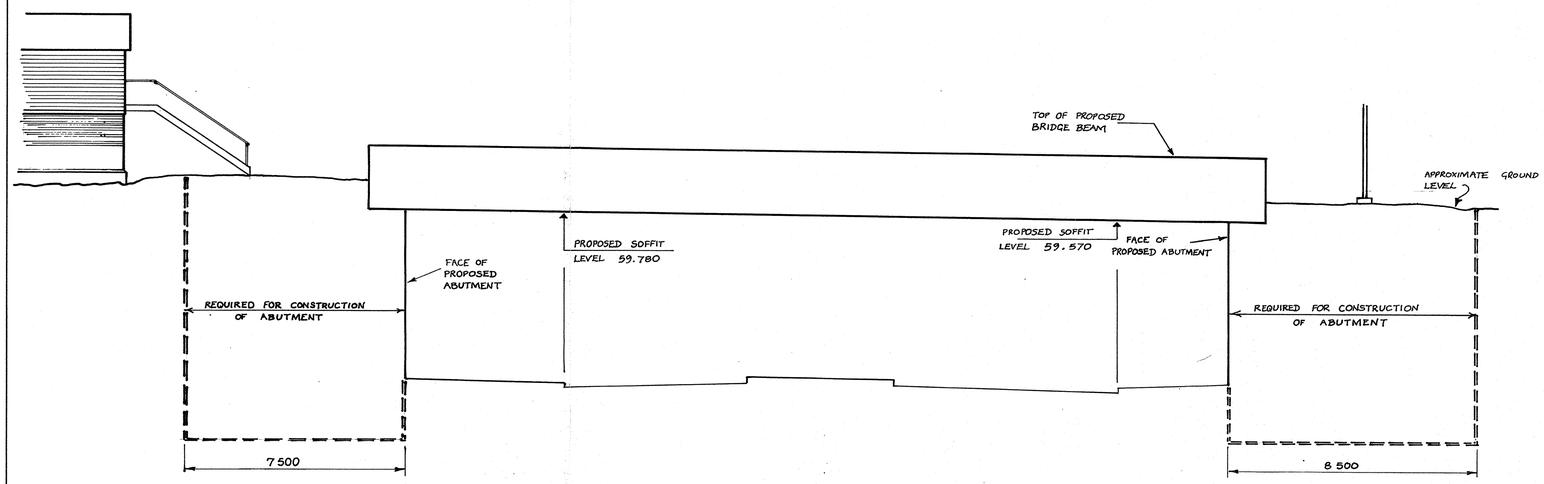
Tom Linton
Records Assistant

NetworkRail
Route Services

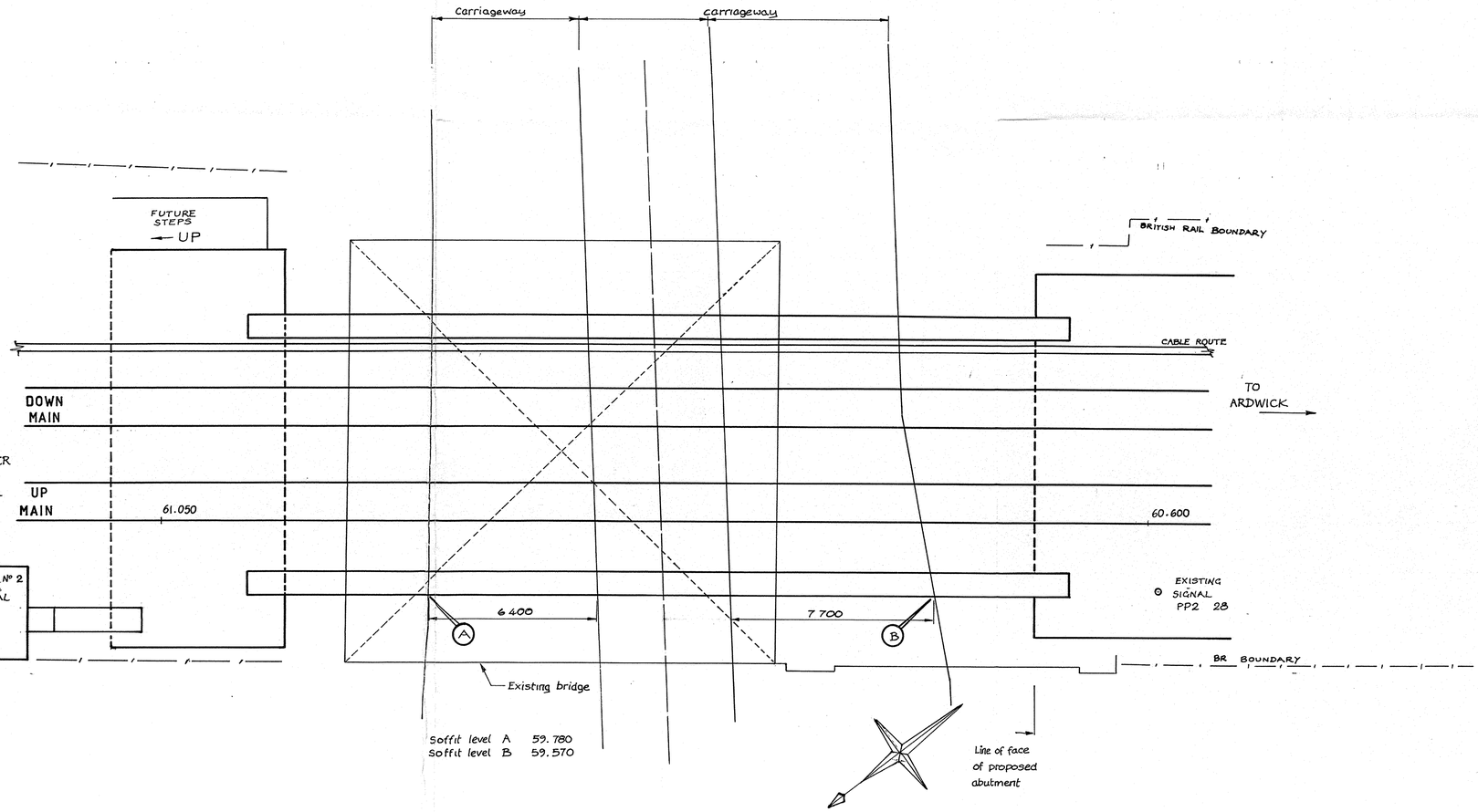
Route Services | National Records Group

National Record Centre | Audax Road | Clifton Moor | York YO30 4US
T 01904 386352 | **E** Tom.Linton@networkrail.co.uk
W networkrail.co.uk

everyone
home safe
every day

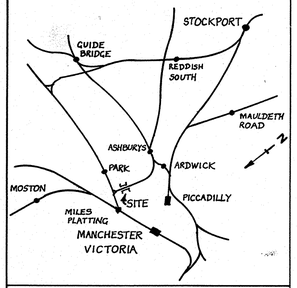


ELEVATION



PLAN Scale. 1:100

RAIL LOCATION PLAN



08 APR 1992
PRELIMINARY

Letter	Date	Description of revisions	By

British Railways Board © 1992

Regional Civil Engineer
British Rail London Midland
Stainier House
10 Holliday Street
Birmingham B1 1TG
Telephone 021-643-4444

J. DAVISON
Regional Civil Engineer

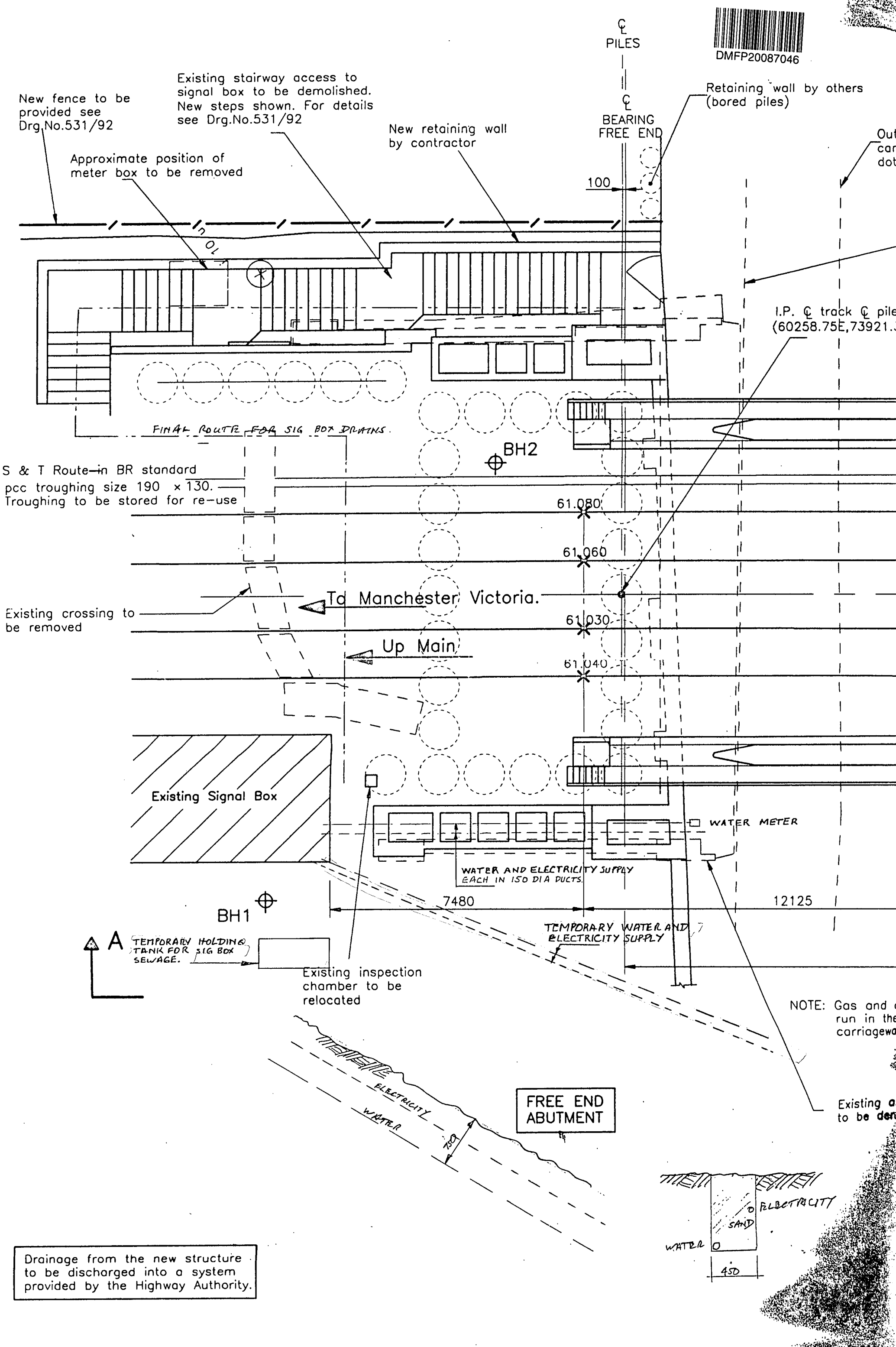
MANCHESTER AREA

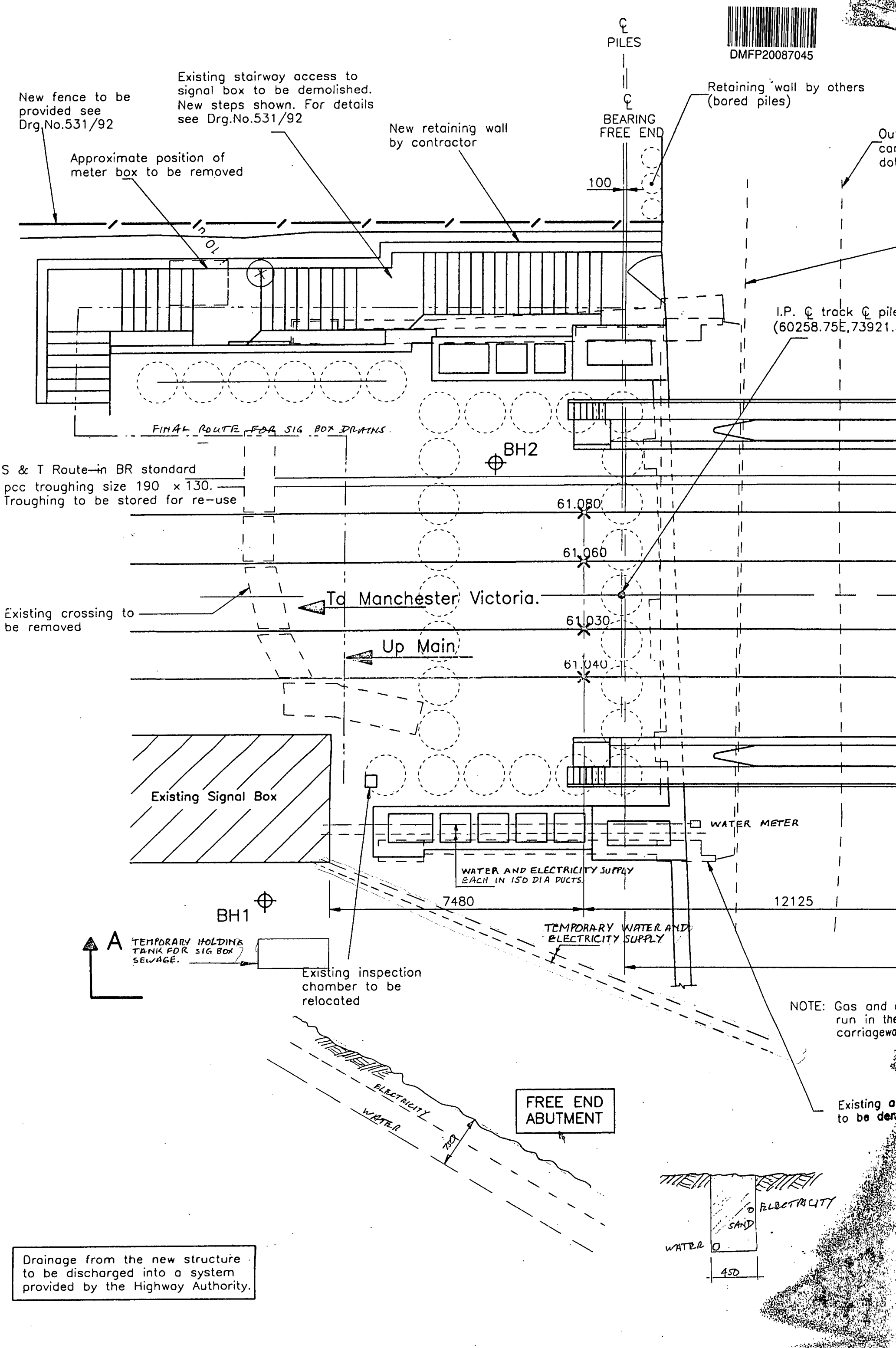
ARDWICK BRANCH U-B 2
PROPOSED BRIDGE REPLACEMENT

PROXIMITY OF WORK TO SIGNAL EQUIPMENT

Scale	1 : 100	
File Numbers	165063/WD22	DOPACS 231311
Drawing Number	165063/1	

DMFP20087049


DMFP20087046
℄ PILES
℄ BEARING FREE END
New fence to be provided see Drg.No.531/92
Existing stairway access to signal box to be demolished. New steps shown. For details see Drg.No.531/92
Approximate position of meter box to be removed
New retaining wall by contractor
Retaining wall by others (bored piles)
100
I.P. ℄ track ℄ pile
(60258.75E,73921.
FINAL ROUTE FOR SIG BOX DRAINS.
BH2
S & T Route in BR standard pcc troughing size 190 × 130. Troughing to be stored for re-use
61.080
61.060
To Manchester Victoria.
Existing crossing to be removed
61.030
Up Main
61.040
Existing Signal Box
WATER METER
WATER AND ELECTRICITY SUPPLY EACH IN 150 DIA DUCTS.
7480
12125
BH1
A
TEMPORARY HOLDING TANK FOR SIG BOX SEWAGE.
TEMPORARY WATER AND ELECTRICITY SUPPLY
Existing inspection chamber to be relocated
NOTE: Gas and
run in the
carriagewa
ELECTRICITY
WATER
150
FREE END ABUTMENT
Existing a
to be den
ELECTRICITY
SAND
WATER
450
Drainage from the new structure to be discharged into a system provided by the Highway Authority.


DMFP20087045
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Drainage from the new structure to be discharged into a system provided by the Highway Authority.

Description	Location	ructure Nar	ucture Num	ELR	it of Meas	age Start_M	age Start_M	age End_M
Plan Drawi	Alan Turing		2	PPA1		02	369	02
Plan Drawi	Alan Turing		2	PPA1		02	369	02
Proximity c	Alan Turing		2	PPA1		02	369	02

age End_M	awing Numl	Barcode	rofilm Num	umber (We	umber (We	n Number (	umber (LNE	ox number
369	^	DMFP2008	^	^	^	^	^	^
369	^	DMFP2008	^	^	^	^	^	^
369	165063/1	DMFP2008	^	^	^	^	^	^

ference (LN	CD Name	Number (L	le Number	ersion Num	eel Numbe	ame Numbe	(including	SOUTHERN
^	M0236_1						^	^
^	M0236_1						^	^
^	M0236_1						^	^

arks/ Comm	Territory
OS Ref SJ 8	LNW
OS Ref SJ 8	LNW
OS Ref SJ 8	LNW

ATKINS CHECKED
SM

openreach
a BT Group business
BT

Our Ref: Ref shown on map

email: nnhc@openreach.co.uk

Date of issue shown on map

Dear Customer,

NR & SW ACT 1991 – PROPOSED WORKS AT:

Prior to commencement of work: for free onsite guidance and accurate up to date location of BT plant please contact our Plant Protection Service by the following methods
Email Dial before you dig CBYD@openreach.co.uk
Visit the website www.openreach.co.uk/cbyd

Thank you for your request of describing the above proposals.

Enclosed are copies of our drawing marked up to show the approximate locations of BT 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 British Telecommunications plc apparatus which may exist at various depths and may deviate from the marked route.

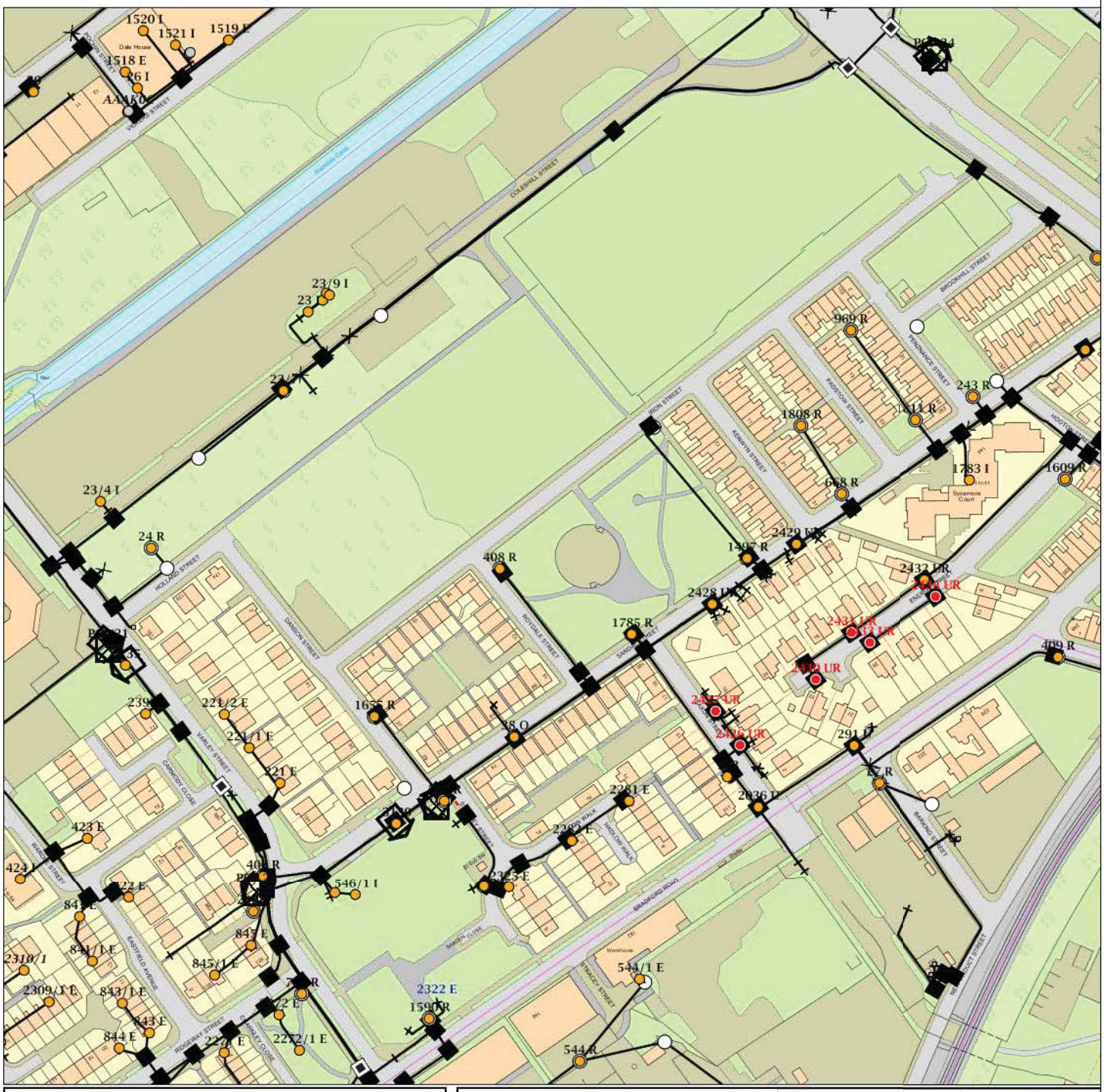
To avoid damage it is recommended that mechanical excavators or borers are not used within 600mm of British Telecommunications plc plant. If scaffolding is erected, please ensure that our equipment is not enclosed, blocked, covered or otherwise obstructed by the scaffolding.

In the event of BT apparatus being in the area of works we recommend that your plant/vehicle crossing is either resited, or apply for a budget estimate by submitting detailed plans to the above address, these will be forwarded to the appropriate department for their comments.

Please ensure you quote our reference on any future correspondence.

Yours faithfully,

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.

openreach BT

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

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KEY TO BT SYMBOLS

DP	Pole
Planned DP	Planned Pole
PCP	Joint Box
Planned PCP	Change Of State
Built	Split Coupling
Planned	Duct Tee
Inferred	Planned Box
Building	Manhole
Kiosk	Planned Manhole
Hatchings	Cabinet
	Planned Cabinet

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

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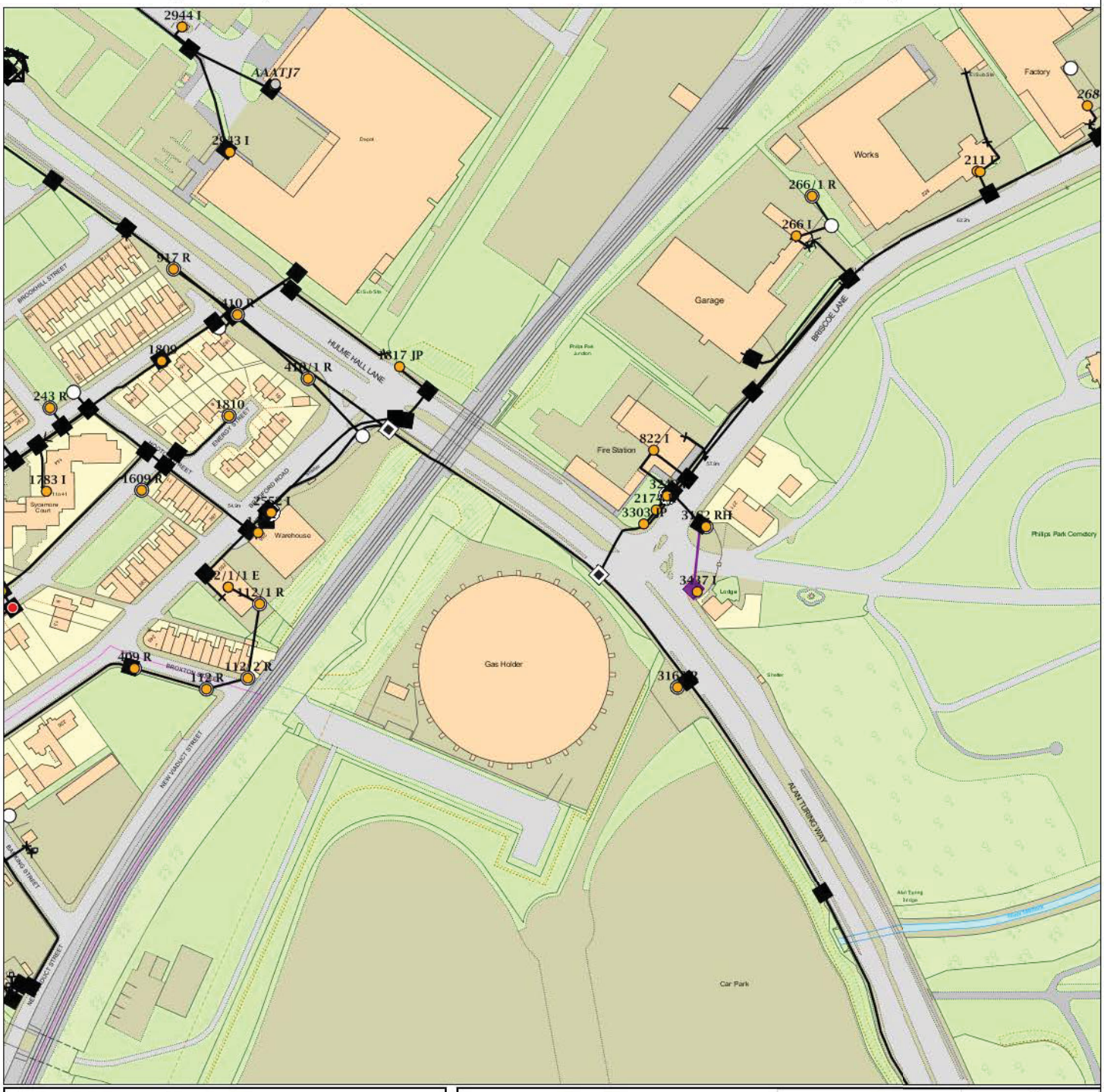
a BT Group business

BT Ref : EWA06486R
Map Reference : (centre) SJ8627699254
Easting/Northing : (centre) 386276,399
Issued : 30/06/2017 06:48:31

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Maps by email Plant Information Reply



IMPORTANT WARNING

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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.

openreach BT

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KEY TO BT SYMBOLS

DP	
Planned DP	
PCP	
Planned PCP	
Built	
Planned	
Inferred	
Building	
Kiosk	K
Hatchings	
Pole	
Planned Pole	
Joint Box	
Change Of State	+
Split Coupling	×
Duct Tee	▲
Planned Box	
Manhole	
Planned Manhole	
Cabinet	
Planned Cabinet	

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

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a BT Group business

BT Ref : JMC06481A
Map Reference : (centre) SJ8669799259
Easting/Northing : (centre) 386697,399
Issued : 30/06/2017 06:48:36

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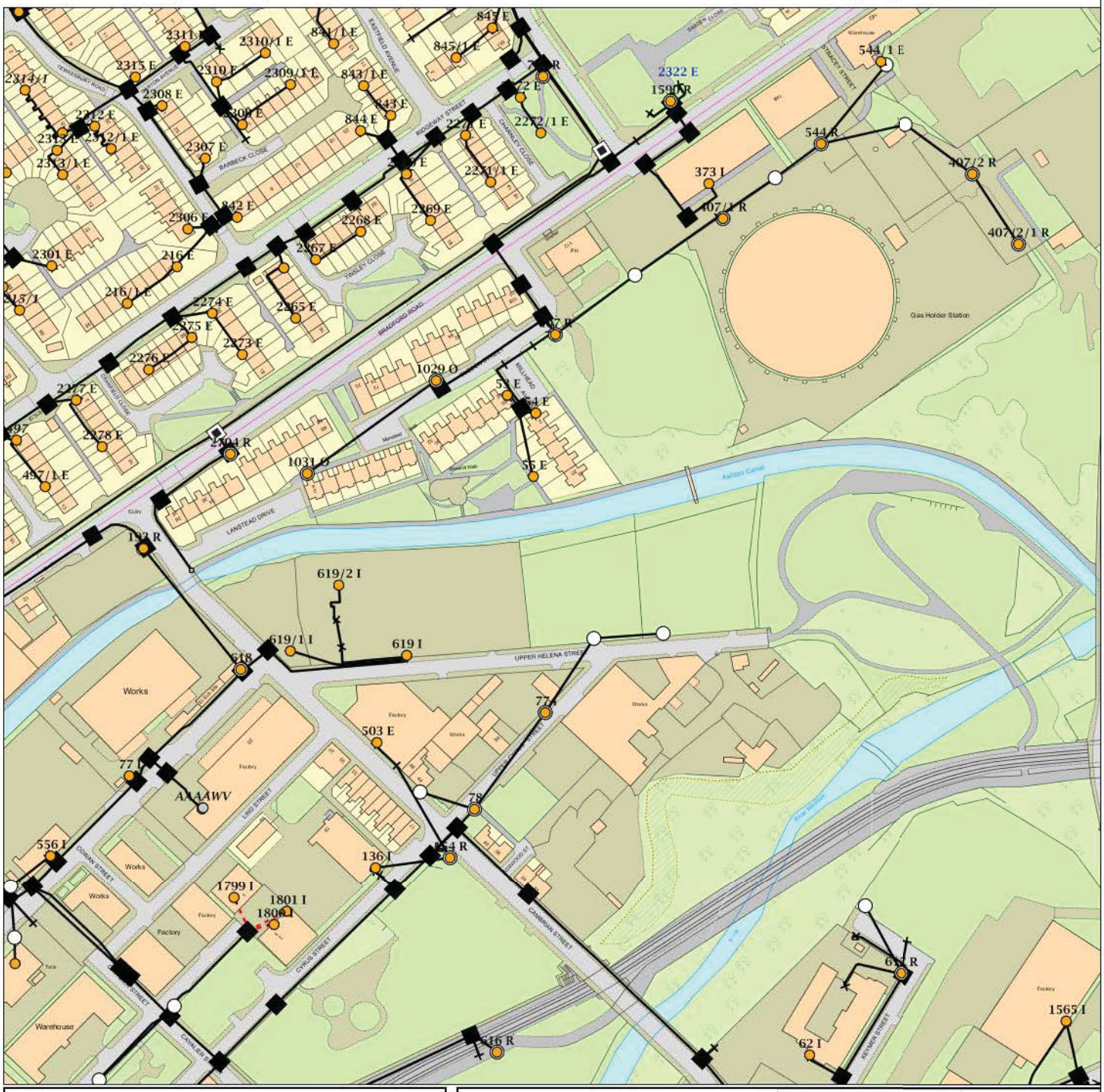
Maps by email Plant Information Reply



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KEY TO BT SYMBOLS

DP	Pole
Planned DP	Planned Pole
PCP	Joint Box
Planned PCP	Change Of State
Built	Split Coupling
Planned	Duct Tee
Inferred	Planned Box
Building	Manhole
Kiosk	Planned Manhole
Hatchings	Cabinet
	Planned Cabinet

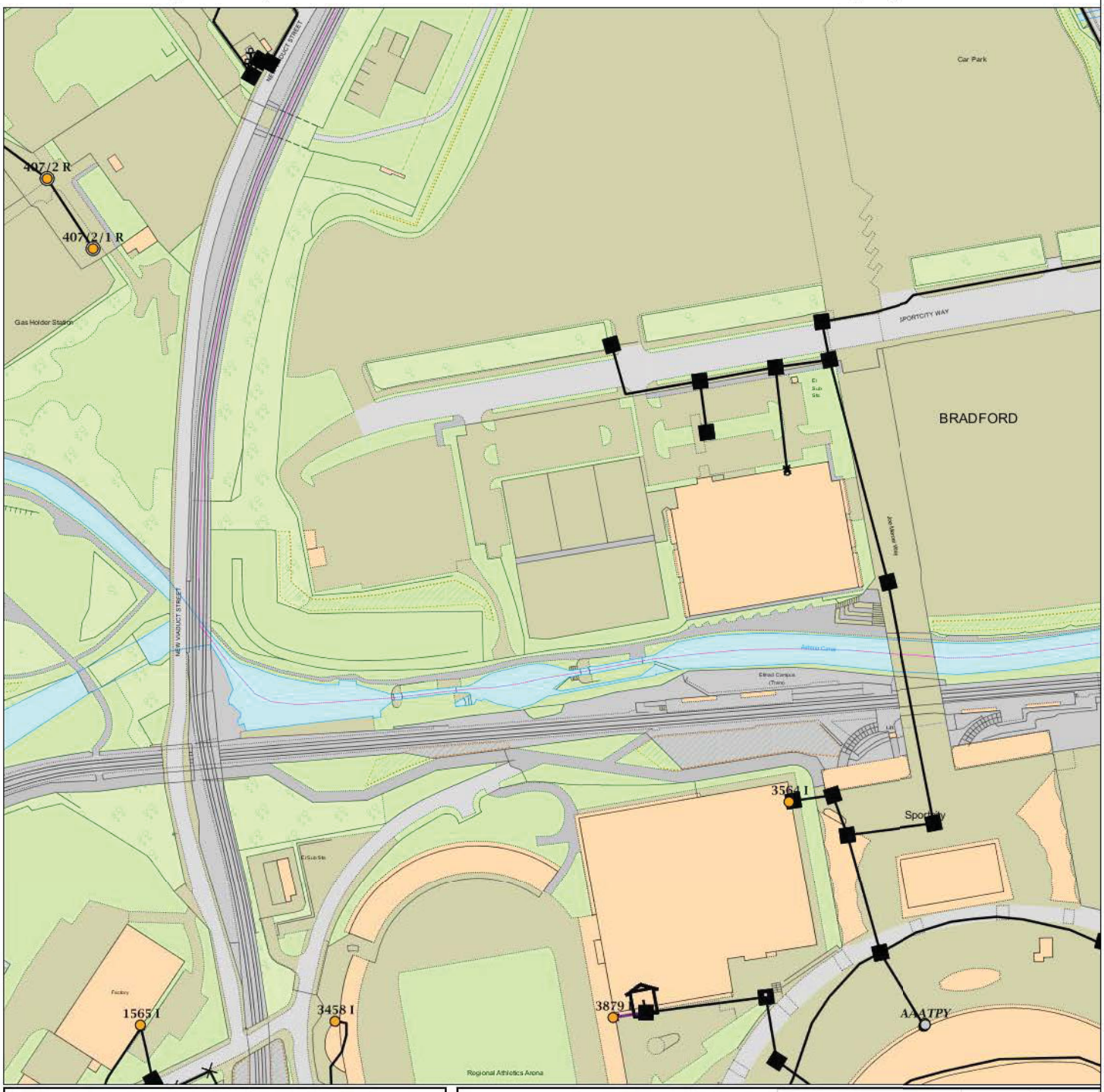
Other proposed plant is shown using dashed lines.
BT Symbols not listed above maybe disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation

openreach a BT Group business BT

BT Ref : ODT06485K
Map Reference : (centre) SJ8616698828
Easting/Northing : (centre) 386166,398
Issued : 30/06/2017 06:48:53

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Maps by email Plant Information Reply



IMPORTANT WARNING

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openreach BT

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email cbyd@openreach.co.uk

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KEY TO BT SYMBOLS

DP	Pole
Planned DP	Planned Pole
PCP	Joint Box
Planned PCP	Change Of State
Built	Split Coupling
Planned	Duct Tee
Inferred	Planned Box
Building	Manhole
Kiosk	Planned Manhole
Hatchings	Cabinet
	Planned Cabinet

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

openreach a BT Group business BT

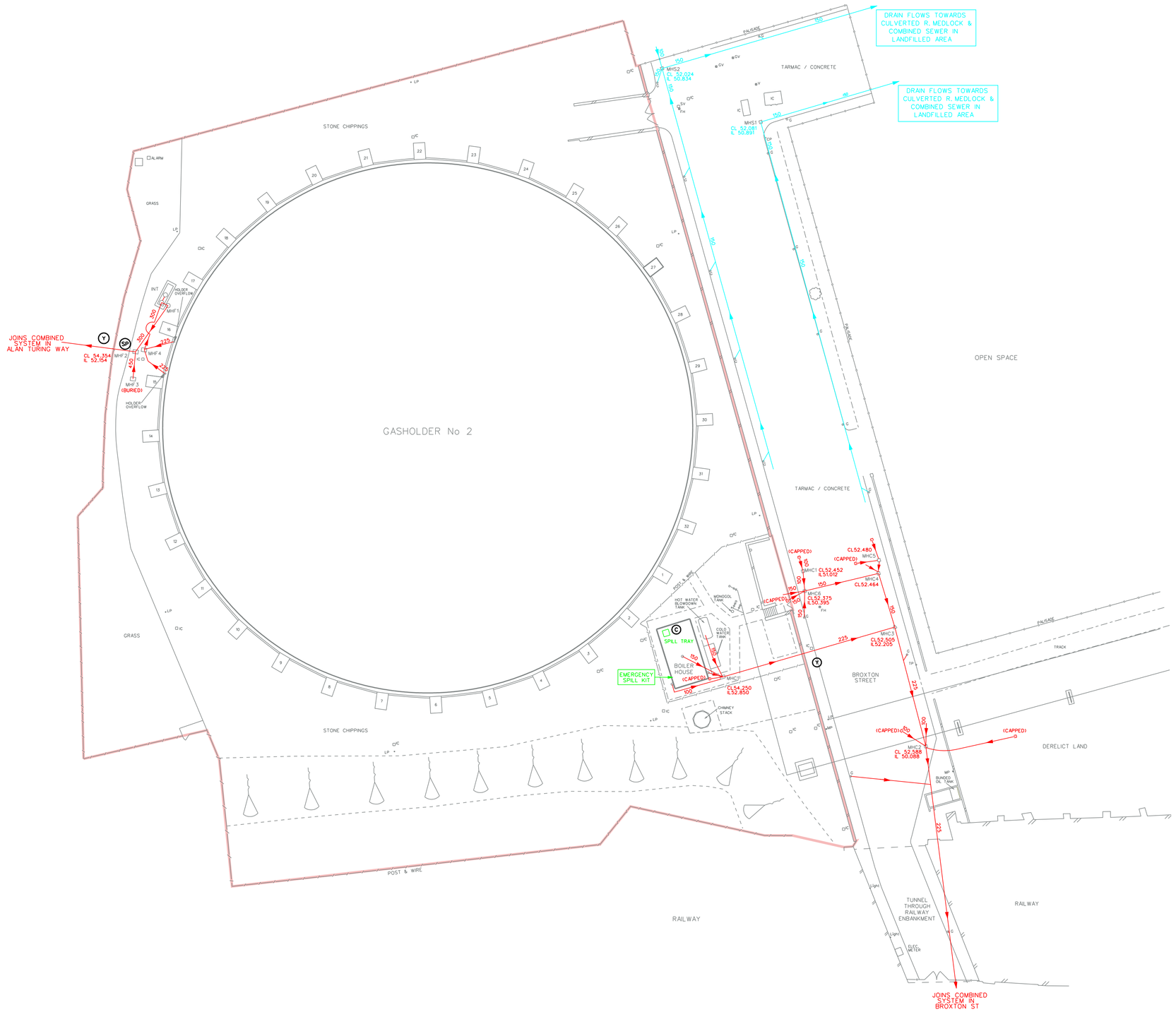
BT Ref : RRT06483Y
Map Reference : (centre) SJ8658898830
Easting/Northing : (centre) 386588,398
Issued : 30/06/2017 06:49:06

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Appendix B3 Drainage Plan

Drg No:	Site:	Title:
NW-BRADRD-N-002	BRADFORD RD. No. 2 HOLDER	DRAINAGE LAYOUT

DO NOT SCALE. IF IN DOUBT ASK. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.



KEY

225	FOUL DRAIN (DIA. IN MM)
225	STORM DRAIN (DIA. IN MM)
►	DIRECTION OF FLOW
MH2	MANHOLE COVER (WITH REF NO.)
G	DRAIN / GULLY COVER
INT	INTERCEPTOR
CL 52.66	COVER LEVEL (M)
IL 52.04	INVERT LEVEL (M)
ID 0.62	INVERT DEPTH (M)
NO	NOT OPERATIONAL
UTL	UNABLE TO LIFT
SP	SITE EXIT SAMPLE POINT
	WASTE (OR OTHER) STORAGE DETAILS
	AREA UNDER THE CONTROL OF NATIONAL GRID, NETWORK MAINTENANCE.
	AREA UNDER THE CONTROL OF NATIONAL GRID PROPERTY OR THIRD PARTY
	AREA UNDER THE CONTROL OF NATIONAL GRID OPERATIONS
X	SITE EXIT (SURFACE WATER)
Y	SITE EXIT (FOUL WATER)
C	DRUM STORAGE AREA
D	TOXIC / HAZARDOUS WASTE SKIP

UNCONTROLLED WHEN PRINTED

NOTES:
1. ALL DRAINS SHOULD BE POSITIVELY LOCATED PRIOR TO ANY CONSTRUCTION WORKS.
2. OTHER UNDERGROUND UTILITIES ARE NOT SHOWN.
3. GULLY CONNECTIONS ARE NOT PROVEN.
4. NOT ALL RAIN WATER PIPE CONNECTIONS ARE SHOWN.
5. SEE ASSOCIATED MANHOLE SHEETS FOR MANHOLE DETAILS.
6. SOME INFORMATION REPRODUCED FROM ARCHIVE DATA.

Rev	Rev Ref	Date	Drn by	Chk by	Apr by	Description

VLO 348 0602

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ENG Check By			1:350
Approved By			

Site: BRADFORD RD. No. 2 HOLDER

Title: DRAINAGE LAYOUT

Drg No: NW-BRADRD-N-002

Revision -

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Appendix B4 Ecology Survey

Bradford Road, Manchester

Ecological Appraisal

For National Grid Property Holdings

Confidential Report Contains Sensitive Information

July 2017

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Document Control

Project:	Bradford Road, Manchester
Client:	National Grid
Job Number:	A074754-431
File Origin:	Z:\Projects\Projects A074000 on\A074754-431 Bradford Road, Manchester\REPORTS

Issue 1	12 July 2017	FINAL
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Rev:	Date:	Updated by:	Verified by:	Description of changes:

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Executive Summary

Contents	Summary
Site Location	The site is situated on the east side of Greater Manchester, adjacent to Bradford Road and west of the A6010 (Alan Turing way). The site is centred at Ordnance Survey National Grid Reference SJ 86591 99187.
Proposals	The site is to be decommissioned as gasworks and the buildings are to be demolished. Plans for the site post demolition are not known at the time of writing.
Existing Site Information	Bradford Road Extended Phase 1 Habitat Survey, October, 2012 (WYG, 2012)
Scope of this Survey(s)	The purpose of the Extended Phase 1 Habitat Survey is to identify any potential ecological constraints to the proposed decommissioning works at the earliest opportunity, to minimise future delays to potential works and provide advice as to how works on site will avoid breaching any UK or European nature conservation legislation.
Results	Various potential constraints were identified including the presence of one active and two seasonally inactive outlier badger setts close to the gasholder and various structural features having the potential for roosting bats. One small area of Japanese rose, an invasive species, was found on site.
Recommendations	Further Survey • **Bats:** Further surveys required in order to determine presence/absence of roosts and foraging/commuting bats. • **Badgers:** Pre-construction survey for badgers to further assess likely impact of development. • **Invasive Species:** Invasive species specialist consulted for further survey and eradication of a small area of Japanese rose on site Mitigation • **Designated Sites:** Industry standard best practices relating to working in or near watercourses will need to be adhered to. • **Birds**: Demolition works and vegetation clearance (if necessary) should be timed to take place outside of the bird nesting season (March to September inclusive). • **Bats:** Night works should be avoided. Where this is not possible, sympathetic lighting should be used which minimises light spill onto site and the adjacent Ashton Canal. Enhancements • **Habitats:** Areas of semi-natural broad-leaved woodland on site should be retained in the interests of general biodiversity and enhanced through native planting.

Glossary

Badger Act	Protection of Badgers Act 1994
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BTO	British Trust for Ornithology
CEco	Chartered Ecologist
CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great crested newt
Habitat Regulations	Conservation of Habitats and Species Regulations 2010 (as amended)
HAP	Habitat Action Plan
Hedgerow Regulations	Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
JNCC	Join Nature Conservancy Council
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SNCO	Statutory Nature Conservation Organisations
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981

1.0 Introduction

1.1 Background

WYG was commissioned by National Grid Property Holdings in June, 2017 to undertake an Ecological Appraisal at the Bradford Road National Grid site in Manchester. This report presents the findings of that appraisal.

This report has been prepared by WYG Assistant Ecologist Mike Brown.

1.2 Site Location

The site is situated on the east side of Greater Manchester, adjacent to Bradford Road and bounded on the north-east side by the A6010 (Alan Turing way). The site is centred at Ordnance Survey National Grid Reference SJ 86591 99187. The survey area, hereafter referred to as 'the site' is shown on Figure 1 and comprises a gasholder and adjacent habitats.

1.3 Development Proposals

WYG understands that the site is scheduled to be decommissioned as gasworks and the gasholder and associated buildings on site are to be dismantled/demolished.

Plans for the site post demolition are not known at the time of writing.

1.4 Purpose of the Report

The objectives of this assessment are to carry out:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the sites and their zone of influence;
- A preliminary ecological appraisal involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;
- An assessment of the potential ecological receptors present on site, any constraints they pose to future development and any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

Note that, where possible, common names for flora and fauna have been used throughout this report for ease of reading.

2.0 Methodology

2.1 Desk Study

Previous Reports

The only previous report which WYG Ecology is aware of is the Bradford Road Extended Phase 1 Habitat Survey, 2012 (WYG 2012).

Local Ecological Records Centre

Information was requested from the Greater Manchester Ecology Unit (GMEU) for information on any nature conservation designations and protected or notable species records within 2 km of the site.

The data search covers:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts, bats and badger;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance;

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

Online Resources

A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations and information on any EPSL applications that have been granted in the local area since 2015.

For the purposes of biological recording, the country has been split up into so-called Vice Counties (VCs) which largely equate to the pre-1974 county system and whose boundaries remain fixed irrespective of modern political boundary changes. This enables continuity of recording and comparisons with data gathered in the past. The site is in VC 59 South Lancashire. There is no recent Flora for VC 59 although a rare and scarce plant list has been compiled by the local Botanical Society of the British Isles (BSBI) group and this has been used to evaluate the value of flora (both in terms of assemblage and individual species) recorded from the site. This resource is only available online, hosted by the National BSBI webpage (accessed 5th July 2017).

2.2 Field Surveys

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

Habitats

An extended Phase 1 habitat survey of the site was undertaken on 13th June 2017 by WYG Assistant Ecologist Mike Brown. The weather conditions were dry, with 90% cloud cover and an ambient air temperature of 19°C.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (Joint Nature Conservation Committee, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2010). The site was also appraised for its suitability to support notable flora, with regard to the CIEEM Guidelines for Preliminary Ecological Appraisal (2013).

Protected & Notable Species

The site was inspected for evidence of, and potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the NERC Act, and species included in the Greater Manchester Biodiversity Action Plan.

Great Crested Newt

The site was appraised for its suitability to support great crested newt *Triturus cristatus*. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published Herpetofauna Workers' Manual (Gent & Gibson, 2003).

Bats

Roosting bats – Buildings/structures/trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016) – hereafter referred to as the 'BCT Guidelines'. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1: Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat feature on site likely to be used by roosting bats.

Suitability	Description of Roosting Habitats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions & surrounding habitat.

Foraging/commuting bats

The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of the site:

Table 2: Categories of Habitat Suitability (BCT Guidelines)

Suitability	Description of Foraging and Commuting Habitats
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to CIEEM's *Guidelines for Preliminary Ecological Appraisal* (2013) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development*. Evidence of any current or historical presence of such species was recorded.

Invasive Species

The site was also searched for evidence of invasive plant species, such as Japanese knotweed, Himalayan balsam, giant hogweed, wall cotoneaster and rhododendron – however see Appendix A for a full list which was last revised in 2010.

2.3 Limitations

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in June which is inside the optimal survey window. As such this is not considered to be a limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

The separate area at the south end of the site (denoted as NGP3 in Fig.1) was not instructed to be surveyed. Furthermore, access was not possible into the small area delineated in red in Fig.1, called 'Saxon Street High Pressure Compound', but the habitat was satisfactorily viewed from the outside.

In order to determine presence or likely absence of protected species, multiple visits at suitable times of the year are usually required. As a result, these surveys focus on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

The details of this report will remain valid for a period of **two years** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be are any changes to the red line boundary or development proposals which this report was based on.

3.0 Baseline Conditions

3.1 Statutory Designated Sites

GMEU and MAGIC identified the following statutory designated site of nature conservation importance within 2km of the site:

Table 3: Statutory Designated Sites within 2km of site

Designation	Site Name	Distance & Direction	Summary of features
Local Nature Reserve (LNR)	Clayton Vale	700m East	Clayton Vale covers approximately 4 square miles of urban countryside and offers a number of different habitats for wildlife including: ponds, river, woodland and meadows.

3.2 Non-Statutory Designated Sites

Non-statutory sites are designated by Local Planning Authorities (LPA's) and are recognised as being of local conservation importance. GMEU identified three local wildlife sites, all Sites of Biological Interest (SBI's), within 2km (see Table 4 below).

Table 4: Non-Statutory Designated Sites within 2km of site

Designation	Site Name	Distance & Direction	Summary of features
SBI	Ashton Canal (west)	Immediately adjacent to the site, on south side	Important for submerged aquatic flora, including floating-leaved water plantain *Luronium natans*, a European Protected Species.
SBI	Rochdale Canal, Stott's Lane, Ducie Street Basin	500m north-west	Regionally important, as it supports aquatic habitat and species, including floating-leaved water plantain.
SBI	Bank Bridge Meadow	800m east	No details submitted.

3.3 Habitats

The habitats which have been identified through this assessment are mapped in the Phase 1 Habitat Plans of the site, shown in Fig. 2.

The habitats identified on site are detailed below.

Semi-natural Broad-leaved Woodland

The desk study using MAGIC found that Lowland Mixed Deciduous Woodland is present within 100 metres of the site, in Philips Park, on the east side of the A6010. Lowland Mixed Deciduous Woodland is designated as a Habitat of Principal Importance under the NERC Act 2006. The study also found that the designated Habitat of Principal Importance Wood-pasture and Parkland is present within 300 metres of the site, also on the east side of the A6010 in Philips Park.

The field survey found semi-natural broad-leaved woodland to be present along the western and southern edges of the site. The woodland along the western edge is situated on a steep slope. Dominant tree species are silver birch *Betula pendula* and willow *Salix* spp., with rowan *Sorbus aucuparia*, Swedish whitebeam *Sorbus intermedia*, sycamore *Acer pseudoplatanus*, alder *Alnus glutinosa*, Italian alder *Alnus cordata* and dogwood *Cornus* sp. also recorded (Photograph 1). The ground flora comprises predominantly bramble *Rubus fruticosus* agg. and moss species.

Photograph 1: Semi-natural broad-leaved woodland west of the gasholder.

The woodland along the western edge the site is situated on a steep slope.

A large area of immature self-seeded birch woodland occurs in the south-west extension of the site (Photograph 2) and this was mapped as semi-natural broad-leaved woodland, in accordance with JNCC guidelines. The ground flora there comprises predominantly bramble, Michaelmas-daisy *Aster nova-belgii* agg. and, in the damper areas, hard rush *Juncus inflexus* and field horsetail *Equisetum arvense.* Smaller areas of self-seeded birch and willow are present elsewhere on site.

Photograph 2: Self-seeded birch at south-west extension of the site.

Dense Scrub

Dense scrub is present along two sides of the approach drive to the gasholder on site, also along the eastern boundary of the south-western extension (Photograph 3) and a small area near the end of the south-west extension. Predominant species are bramble, butterfly-bush *Buddleja Sp*. and immature birch and willow, with occasional elder *Sambucus nigra,* dog rose *Rosa canina agg.* and rowan

Photograph 3: Dense scrub on site.

Scattered Trees

Scattered trees were present across mainly along the site boundaries. These comprised mostly willows and birch, with occasional sycamores and rowans.

Semi-improved Neutral Grassland

A small area of semi-improved neutral grassland occurs on the north side of the site, close to the gasholder (Photograph 4). This is thought to have originated as amenity grassland, as it is mapped as such in the 2012 Extended Phase 1 report (WYG,2012). It has since become colonised by species not associated with amenity grassland; species present include meadow buttercup *Ranunculus acris*, common vetch *Vicia sativa*, tufted vetch *Vicia cracca*, meadow vetchling *Lathyrus pratensis*, white clover *Trifolium repens*, broad-leaved dock *Rumex obtusifolius*, hawkweed *Hieracium* agg., ribwort plantain, *Plantago lanceolata*, creeping thistle *Cirsium arvense* and Yorkshire fog *Holcus lanatus*.

Photograph 4: Semi-improved neutral grassland

Tall Ruderal

Very limited areas of tall ruderal vegetation are present mainly along the fringes of hard standing and dense scrub areas. These areas were too restricted to be mapped. Typical species are Michaelmas-daisies *Aster novi-belgii* agg., rosebay willowherb *Chamerion angustifolium*, mugwort *Artemisia vulgaris*, common ragwort *Senecio jacobaea* , evening primrose *Oenothera* agg. and colt's-foot.

Ephemeral/Short Perennial

A narrow strip of ephemeral/short perennial vegetation occurs along the trackway on the south-west extension (Photograph 5), also where this trackway leads onto the railway bridge at the southern end of the site. This vegetation type includes a range of plant species, including garden lady's-mantle *Alchemilla mollis*, broad-leaved willowherb *Epilobium montanum*, common centaury *Centaurium erythraea*, long-stalked crane's-bill *Geranium columbinum*, hoary plantain *Plantago media*, greater plantain *Plantago major*, hop trefoil *Trifolium campestre*, black medick *Medicago lupulina*, perforate St John's-wort *Hypericum perforatum*, fox-and-cubs *Pilosella aurantiaca*, hawkweed *Hieracium* agg., red clover *Trifolium pratense* and common spotted-orchid.

Photograph 5: Ephemeral/short perennial vegetation along trackway.

Bare Ground

The majority of the areas immediately surrounding the gasholder on site are occupied by bare ground. There is a small area of bare ground at the south-west end the site where some concrete bays for storing materials previously existed.

Buildings and Built Structures

In addition to the one large gasholders, one building and a number of other built structures are present on site. These are described individually below (see Fig. 2 for locations).

Building 1 (B1)

This is a single storey building, located immediately south-west of the gasholder (Photograph 6). The walls and roof are constructed of corrugated metal. Formerly the boiler house for the site, it is in good condition, with no internal roof void.

Photograph 6: Building 1, metal boiler house.

Built Structure 1 (BS1)

A railway bridge borders the site on the west side (Photograph 7). The associated brickwork is starting to deteriorate, with noticeable cracks and crevices.

Photograph 7: Railway bridge on west of site.

Built structure 2 (BS2) and Built Structure 3 (BS3)

A road bridge (BS2) and railway bridge (BS3) are situated close together at the south-western corner of the site (Photograph 8). The associated brickwork is deteriorating, with cracks and crevices apparent in both.

Photograph 8: Railway and road bridges at south-western corner of the site.

Built Structure 4 (BS4)

This is the remaining structure of the disused gas tower.

Site Boundaries

The majority of the red line boundaries of the site consist of palisade metal fencing. Various internal divisions within the site are also bordered by palisade fencing.

The western boundary consists of a brick wall, which extends to a height of 5 metres at the south-western end. This is generally in reasonable condition, but shows some evidence of missing bricks and mortar at the south-western end (BS5 on site plan, Fig. 2).

3.4 Protected & Notable Species

3.4.1 Great Crested Newts

The desk study returned no records of great crested newts (GCN) within 2km of the site. A search on MAGIC found no records of Granted European Protected Species Applications for GCN within 2km of the site.

No GCN were observed during the site visits. GCN require ponds for breeding. There are no ponds present on site. An examination of the appropriate Ordnance Survey map and satellite imagery indicated that there were no ponds present within 500m of the site.

Although the woodland and scrub areas on site would provide suitable terrestrial habitat for GCN, the adjacent habitats, both within and outside the site, are unsuitable for GCN, being largely hardstanding, roads and urbanised areas. The Ashton Canal also forms a barrier to GCN entering the site from the south.

It is consequently concluded that the site is not likely to support GCN and **GCN are not regarded as a potential constraint to the proposed works** and are not considered any further in this report.

3.4.2 Reptiles

The GMEU data search returned two records of slow worm *Anguis fragilis* within 2km of the site. These were 1.3km to the north-east, at Newton Heath. The site is separated from Newton Heath by the busy A6010 main road and other extensive areas of urban development, however and there are no linkages of suitable habitat to the site.

No reptiles were observed during the field surveys, despite suitable weather conditions. Some of the habitats on site, especially the scattered scrub and grassland, offer limited potential to support common reptile species such as common lizard *Zootoca vivipara* and slow worm. The site also supports a number of potential refugia in the form of piles of wood, wood chip and rubble. However, the site is largely isolated by urban developments, roads and the Ashton canal from the wider area, with no connectivity to areas of suitable reptile habitat elsewhere.

Consequently, **reptiles are not considered likely to be a potential constraint to the proposed works**.

3.4.3 Bats

The GMEU and MAGIC data search returned 75 records of bats within 2km of the site, of which 11 were records of roosts. The majority of the records are of common pipistrelle *Pipistrellus pipistrellus,* and some of the records denote unspecified bat species, or unspecified *Pipistrellus* or *Myotis* species, but at least three other bat species have been recorded within 2km of the site; namely Daubenton's bat *Myotis daubentonii,* soprano Pipistrelle *Pipistrellus pygmaeus* and whiskered bat *Myotis mystacinus*.

The closest records to the site for bats and bat roosts are summarised in Table 5.

Table 5: Closest records of bats and bat roosts to site

Bat species	Location	Approximate Distance & Direction	Record details
Common pipistrelle	Ashton Canal	0.1km south-west	None specified
Common pipistrelle	Ashton Canal	0.2km south	Roost
Soprano pipistrelle	Not specified	0.3km north-east	None specified
Daubenton's bat	Not specified	1.0km south-east	None specified
Whiskered bat	Not specified	1.25km east	None specified

Roosting Potential

1. **Buildings**

There is one building on site (not including the gas holder which has no potential to support roosting bats).

This building has been assessed as having **low** suitability to support roosting bats as detailed in Table 6.

Table 6: Summary of bat roost suitability for onsite buildings

Building Reference	Assessed internally or externally?	Description of potential roost features (PRFs)	Bat roost suitability
Building 1 (B1).	Externally only	None – no suitable holes, cracks or voids.	Negligible

2. **Built Structures**

There are three built structures on site which have been assessed as offering **moderate** suitability to support roosting bats, all of which are bridges (BS1, BS2 and BS3). A stretch of boundary wall has been assessed as offering **low** suitability to support roosting bats. These built structures are summarised in Table 7 below.

Table 7: Built structures with bat roost potential.

Built Structure reference	Description of potential roost features (PRFs)	Bat roost suitability
Built Structure 1 (BS1).	Railway bridge with gaps, cracks and crevices in structure (Photographs 9 and 10).	Moderate
Built Structure 2 (BS2).	Road bridge with gaps, cracks and crevices in structure underneath (Photograph 11).	Moderate
Built Structure 3 (BS3).	Railway bridge with gaps, cracks and crevices in structure underneath (Photograph 12).	Moderate
Built Structure 4, section of boundary wall (BS4).	Approximately 50 metre long section of high boundary wall with gaps in the brickwork (Photograph 13).	Low

Photograph 9. Gaps in structure, BS1, indicating moderate bat roost potential.

Photograph 10: Gaps in structure of wall, BS1, indicating moderate bat roost potential.

Photograph 11: Gaps in structure, BS2, indicating moderate bat roost potential.

Photograph 12: Gaps in structure, BS3, indicating moderate bat potential.

Photograph 13: Section of high boundary wall, BS4, at south-west end of site, with gaps in brickwork indicating bat roost potential.

3. Trees

All the trees growing on site have **negligible** suitability for roosting bats. Most are willows and birches of insufficient age to possess features which might offer the shelter required by roosting bats.

Foraging and Commuting Potential

The area of semi-natural broad-leaved woodland and the dense and scattered scrub areas offer good potential for foraging bats, as they would support populations of night flying insects, on which bats feed. However, these habitats are limited in extent and the site predominantly contains hard standing areas, which offer very low potential for foraging bats. Also, more suitable habitats for foraging bats exist outside, but in close proximity to the site, such as Phillips Park, Victoria Mill Park, Village Park, Sand Hill and Clayton Vale.

There are linear features at on site which offer suitability as commuter routes for bats. A continuous line of trees and scrub borders the western and south-western side of the site and forms a link beyond the site to the Ashton Canal to the south. The Ashton Canal itself offers suitability as a foraging site and commuting route for bats, especially species that typically favour aquatic habitats such as Daubenton's bat. Other linear features at on site are fragmented and unlikely to be of significance for commuting bats.

Overall, the site is considered to have **low** suitability for foraging and commuting bats.

To conclude, roosting bats are considered a potential constraint to future works on site and require further survey. Foraging and commuting bats require further survey to inform mitigation but are not considered a constraint.

3.4.4 Badger

The desk study returned 10 records of badger *Meles meles* setts within 2km of the site, the closest being 0.4km away. The exact location of the badger setts is **confidential** but can be provided upon request.

Three badger setts are present on site in the steeply sloping broad-leaved woodland adjacent to the gasholder. An outlier badger sett, Sett A (TN1) consists of two holes close together (see Fig.2 for location and Photograph 14), with an accumulation of leaf litter indicating that they are seasonally inactive. Another outlier badger sett, Sett B (TN2) (Photograph 15) was constructed by badgers, but the presence of leaf litter at the entrance suggested that it was seasonally inactive. A third outlier sett, Sett C (TN3) (Photograph 16) consisted of a hole in current use by badgers, with evidence of a large amount of debris freshly excavated from the hole.

Photograph 14: Badger Sett A, TN1.

Photograph 15: Badger Sett B, TN2.

Photograph 16: Badger Sett C, TN3.

No other evidence of the presence of badgers, such as paths, latrines or signs of foraging, was found on site. The areas of hard standing offer no suitability for badgers to forage.

Badgers are considered a potential constraint to the proposed works on site and a pre-construction survey is required to determine whether the existing setts, or any new setts, would be disturbed or damaged by the proposed works and any future development.

3.4.5 Otter & Water Vole

The desk study returned no records of otter *Lutra lutra* within 2km of the site. A search on MAGIC revealed that at the time of writing, no European Protected Species Licences for otters have been granted within 2km of the site.

The desk study returned one record of water vole *Arvicola amphibius* within 2km of the site, at Clayton Vale, 1.4km to the east of the site. However, the site is separated from Clayton Vale by unsuitable habitat for water vole and the busy A6010.

The site lacks suitable habitat for otter and water vole, as there are no watercourses or areas suitable for foraging.

Consequently, **otter and water vole are not considered a constraint to the proposed works** on site, and are not considered further in this report.

3.4.6 Birds

The desk study returned records of a range of bird species being present within 2 km of the site. Three birds listed under Schedule 1 of the Wildlife & Countryside Act 1981 have been recorded within 2km of the site. These are little ringed plover *Charadrius dubius*, peregrine falcon *Falco peregrinus* and kingfisher *Alcedo athis*, all of which probably involve breeding birds. Schedule 1 listed species are a material consideration for planning.

Six BoCC Red Listed species have been recorded within 2km of the site. These are curlew *Numenius arquata*, herring gull *Larus argentatus*, house sparrow *Passer domesticus*, lapwing *Vanellus vanellus*, song thrush *Turdus philomelus* and starling *Sturnus vulgaris*. Four BoCC Amber List species have been recorded within 2km of the site. These are bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, kingfisher and reed bunting *Emberiza schoeniclus*.

Nine of the species recorded within 2km of the site are listed as UK Species of Principal Importance under Section 41 of the NERC Act (2006). These are the bullfinch, curlew, dunnock, herring gull, house sparrow, lapwing, reed bunting, song thrush and starling.

Notable bird species recorded within 2km of the site are summarised in Table 8 (note: where multiple records for one species have been provided, only the nearest record to the site has been listed in the table).

Table 8: Notable bird species recorded within 2km of the site

Common Name	Scientific Name	Status*	Approximate Distance and Direction from Site Boundaries
Bullfinch	*Pyrrhula pyrrhula*	BoCC Amber; NERC	0.6 km SE
Curlew	*Numenius arquata*	BoCC Red; NERC	1.2 km E
Dunnock	*Prunella modularis*	BoCC Amber; NERC	1.8 km NE
Herring gull	*Larus argentatus*	BoCC Red; NERC	1.1 km SW
House sparrow	*Passer domesticus*	BoCC Red; NERC; LBAP	1.0 km SW
Kingfisher	*Alcedo atthis*	WCA Sch1; BoCC Amber	0.3 km NW
Lapwing	*Vanellus vanellus*	BoCC Red; NERC	1.8 km NE
Little ringed plover	*Charadrius dubius*	WCA Sch1	1.2 km SE
Peregrine	*Falco peregrinus*	WCA Sch1	0.2 km SW
Reed bunting	*Emberiza schoeniclus*	BoCC Amber; NERC	1.8 km NE
Song thrush	*Turdus philomelos*	BoCC Red; NERC; LBAP	0.8 km SW
Starling	*Sturnus vulgaris*	BoCC Red; NERC	1.2 km NE

**Key*:

- WCA Sch1: Species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)
- NERC: Species of Principal Importance as listed under section 41 of the Natural Environment and Rural Communities Act (2006)
- BoCC: British Trust for Ornithology (BTO) Birds of Conservation Concern – Red, Amber (Green status species have not been included).
- LBAP: Included as a Priority Species under the Greater Manchester LBAP

During the site survey, the following bird species set out in Table 9 were observed, either through direct sightings or through hearing songs or calls.

Table 9: Bird species recorded on site during survey

Common Name	Scientific Name	Status*
Blackbird	*Turdus merula*	BoCC Green
Bullfinch	*Pyrrhula pyrrhula*	BoCC Amber; NERC
Dunnock	*Prunella modularis*	BoCC Amber, NERC
Magpie	*Pica pica*	BoCC Green
Peregrine	*Falco peregrinus*	WCA Sch1
Robin	*Erithacus rubecula*	BoCC Green
Whitethroat	*Sylvia communis*	BoCC Green
Willow warbler	*Phylloscopus collybita*	BoCC Amber
Woodpigeon	*Columba palumbus*	BoCC Green

A peregrine was observed perched on top of the gasholder for a short period of time, but it is not thought likely that peregrines are breeding on this gasholder, as no evidence of breeding behaviour was noted there (note that suspected breeding peregrines were observed on the gasholder at the adjacent Miles Platting site).

Little ringed plovers have been recorded within 2km of the site and this species favours areas of bare ground as nesting sites and therefore the bare ground and pioneer vegetation on site are considered to have suitable nesting habitat for this species, although little ringed plover was not recorded during the survey.

Kingfisher has been recorded within 2km of the site but this species favours waterways, so would be expected to favour the adjacent Ashton Canal, rather than the site itself.

There is potential for another Schedule 1 and BoCC Red List species, black redstart *Phoenicurus ochruros*, to be present on site, although it was not recorded during the current survey. This may be due to the fact that the survey was carried out outside the main song period for this species. Black redstart will nest in the walls and rooves of old buildings and are the subject of a Species Action Plan for Greater Manchester. No records of black redstarts were returned through the data search.

No other schedule 1 species are considered likely to be present on site.

There was no other evidence of nesting birds on site, although the disused buildings and the trees and scrub on site have suitability to support a range of nesting common bird species. The scrub and grassland on site also have suitability to be regularly used as foraging grounds for a range of common bird species.

Nesting birds are considered a constraint to the proposed works.

3.4.7 Invertebrates

The desk study returned one record of a notable invertebrate species being present within 2 km of the site. This was of cinnabar moth *Tyria jacobaeae*, a NERC Species of Principal Importance, recorded 0.5km north-west of the site.

During the survey, a number of common blue butterflies *Polyommatus icarus* were seen.

It is considered that, although the scrub and grassland areas of the site has suitability as breeding and foraging grounds for a number of invertebrate species, the habitats overall on site are not varied enough to warrant a specific invertebrate survey.

Invertebrates are not considered a constraint to the proposed works.

3.4.8 Other Notable Fauna

The desk study returned ten records of common toad *Bufo bufo* within 2km of the boundaries of the site. The closest was 0.6km to the south-east. Common toad is a NERC Species of Principal Importance. However, the site does not offer any potential breeding habitat for common toad, and is also isolated from any neighbouring breeding sites by unsuitable urban habitats and barriers such as walls. Consequently **common toad is not considered a constraint to the proposed works on site.**

Hedgehog *Erinaceous europaeus* is another NERC Species of Principal Importance with the potential to be present on site, as the species is adapted to urbanised areas and the scrub and grassland areas on site would provide suitable habitat for foraging and nesting. However, the data search produced no records of hedgehog within 2 km of the site and no signs of the presence of hedgehogs were observed during the survey. The presence of busy roads in the immediate vicinity of the site would present a barrier to their dispersal and ability to reach the site from adjacent habitats. Consequently**, hedgehogs are not considered a constraint to the proposed works.**

3.4.9 Plants

The desk study returned records of three species of protected and notable species of plants within 2km of the site. Floating-leaved water plantain *Luronium natans* is a European Protected Species and is also protected under Schedule 8 of the Wildlife and Countryside Act, 1981. It has been recorded along the Ashton Canal, 0.45km south of site. Grass-wrack pondweed *Potamogeton compressus* is a NERC Species of Principal Importance and has been recorded 1.2km southwest of site. Both these species are, however, strictly aquatic and unlikely to be present on site due to the lack of permanent water bodies.

The third notable plant species is yellow bird's-nest *Monotropa hypopitys* which is a NERC Species of Principal Importance and has been recorded 0.8km north-east of site. It is a saprophytic species of plant with no chlorophyll and is found in woods and scrub; most often those dominated by birches or willows.

No rare or notable plants were recorded during the survey. However, common spotted orchids were recorded on site. Whilst this species is not nationally rare or listed on the Greater Manchester BAP, orchids are often indicators of sensitive habitat and should be retained if possible. Nonetheless, **notable plants are not considered a constraint to the proposed works**.

3.4.10 Invasive Species

The desk study returned no records of invasive species within 2km of the site. However, the previous extended Phase 1 habitat survey of the site (WYG, 2012) recorded the presence of Himalayan balsam *Impatiens glandulifera*. This was not recorded on the current survey and it may have been eradicated since the 2012 visit was made.

The current survey found a very localised area of Japanese rose *Rosa rugosa* at on site (indicated as TN4 on Fig 2), Photograph 17. No other invasive species were found during the site survey. Japanese rose was added to the prescribed invasive species list of Schedule 9 in 2010. Consequently, **the presence of localised patches of the invasive species Japanese rose on site is considered a constraint to the proposed development.**

Photograph 17: Clump of Japanese rose on site.

3.5 Importance of Receptors

In line with the CIEEM PEA Guidelines, and based on the above baseline information, each ecological receptor recorded on site is considered to have the following importance, as defined within the CIEEM EcIA Guidelines (2016):

Table 9: Importance of Ecological Features

Feature	Importance	Rationale
Semi-natural Broad-leaved Woodland	Local	Good shelter, foraging and nesting habitat for mammals and birds.
Badger setts	Local	Badgers have a restricted distribution in local area.

Feature	Importance	Rationale
Roosting Bats	Unknown	Further night-time surveys required.

The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.

4.0 Relevant Planning Policy & Legislation

4.1 National Planning Policy Framework

The NPPF was adopted in March 2012. Section 11 of the NPPF, *Conserving and Enhancing the Natural Environment* replaces *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation*. However, government Circular *06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*, which relates to PPS9 remains valid and is referenced within Paragraph 113 of the NPPF.

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. The NPPF also states that '*planning policies should promote the protection of priority species populations linked to national and local targets*'.

Furthermore, central and local government policy now points towards ecological enhancement on development sites. The NPPF considers enhancement in the statement '*The planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes….and minimising impacts on biodiversity and providing net gains in biodiversity*'.

4.2 Biodiversity 2020: A strategy for England's wildlife & ecosystem services

Biodiversity 2020 replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix A for further details).

4.3 Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although no-longer accountable at a national level many are still managed and implemented at a local level.

The Greater Manchester Biodiversity Action Plan is the relevant document for this site and it contains the following Species & Habitat Action Plans:

Species Action Plans (SAP)

- Bats
- Bittern
- Black Redstart
- Farmland Birds (in development)
- Great Crested Newt
- Hares
- Native Black Poplar
- Twite

- Water Voles
- Willow Tit

Habitat Action Plans (HAP)

- Canals
- Grasslands
- Hedgerows
- Lowland Mosslands
- Native Woodland
- Ponds and Lodges
- Reedbeds
- Uplands
- Urban Managed Green Space

It should be noted that the existence of a SAP or HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

4.4 Local Plan

Manchester's Local Development Framework – Core Strategy Development Plan Document 2012-2027 is the key document in Manchester's Local Development Framework. It is a collection of planning documents which outline Manchester City Council's vision for the city in 2027 along with the planning policies which will be used to deliver that vision. Policy EN 15 *Biodiversity and Geodiversity* outlines measures for maintaining and enhancing the natural environment of Manchester. It states that:

"*The Council will seek to maintain or enhance sites of biodiversity and geological value throughout the city...developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate...any adverse impacts on biodiversity will need to be justified by the wider benefits of the proposal, assessed against other LDF policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and / or compensation.*"

Further details of the Manchester Core Strategy Development Plan 2012 -2027 can be found by following the link below:

http://www.manchester.gov.uk/info/200074/planning/6573/core_strategy_2012-2027

4.5 Legislation

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix A. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Disturbance of nesting wild birds;
- Disturbance of badgers and their setts;
- Disturbance and loss of potential roost sites for bats; and
- Cause or permit the spread of an invasive species into the wild.

5.0 Discussion

5.1 Designated Sites

Local Nature Reserve

Clayton Vale LNR (approximately 0.7km east of site) is considered sufficiently distant that the proposed demolition of the gas holder on site will have no impact on this designated site.

No other LNRs will be affected by the proposed demolition on site.

Sites of Biological Interest

All local SBIs are considered sufficiently distant so as not to be affected by the proposed demolition on site.

5.2 Habitats

Semi-natural Broad-leaved Woodland

The areas of semi-natural broad-leaved woodland at on site are not considered to be representative of the NERC Habitat of Principal Importance Lowland Mixed Deciduous Woodland or the Greater Manchester BAP habitat Native Woodland, because they are relatively poor in species composition and have originated from recently matured self-sown willow and birch scrub. Nonetheless, this woodland provides good shelter, foraging and nesting opportunities for mammals, including foraging bats, and nesting / foraging birds and good habitat for invertebrates also. The area of broad-leaved woodland on the western edge of site, on a steep slope, also contains badger setts (see Section 5.3). It is therefore recommended that the woodland is retained if possible during the proposed development, especially the area at the western edge (see Section 5.3 for further discussion on badgers). It is also recommended that the woodland is enhanced by planting of additional native trees.

Any clearance of woodland which is required will need to take place outside of the bird nesting season, which extends from March to September inclusive (see Section 5.3). It is also recommended that any clearance of woodland which is necessary is compensated for by the planting of native species of tree.

Other habitats

The areas of dense and scattered scrub on site offer potential foraging and nesting habitat for local wildlife such as birds and invertebrates and should be retained wherever possible. If it is not possible to retain these habitats, then vegetation clearance will need to take place outside of the bird nesting season, which runs from March to September inclusive (see Section 5.3).

The ephemeral/short perennial, ruderal, grassland and hard standing habitats present on site contain some interesting and unusual plants, such as orchids. However, none of these plants are listed as Rare or Scarce in VC59 according to the BSBI and the plant assemblages are not considered to be of particular value due to their small sizes making them especially vulnerable to vegetation succession and the growth of silver birch and willow scrub.

Consequently, they are assessed as of low value, especially as most of them are very limited in area, with the exception of the areas of hard standing. Again, however, these habitats have the potential to support nesting birds, especially ground nesting birds, and care should be taken to avoid disturbing and harming nesting birds during any construction and demolition operations.

Trees on and adjacent to the site should be protected from direct impact and from severance or asphyxiation of the roots in accordance with BS5837: 2012 "Trees in Relation to Design, Demolition and Construction – Recommendations" (British Standard, 2012).

5.3 Protected & Notable Species

Bats

All bats and their roosts receive full protection under the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Recommendations, 2010 (as amended). There are various buildings and built structures on site, which have been assessed during these surveys for potential to support roosting bats.

Based upon BCT (Collins, 2016) guidance, those built structures assessed as having **moderate** suitability to support roosting bats will require two separate survey visits during the active period of the year for bats, which is regarded as May to September, in order to assess the presence or absence of roosting bats. One of these surveys will cover the dusk period for bat emergence and the other will cover the dawn period for re-entry. The surveys should only be undertaken in suitable weather conditions, dry with a minimum air temperature of 10°C. The built structures assessed as having moderate potential for bat roosts are the three bridges, BS1, BS2 and BS3. As these bridges are located at the periphery of the site, they will only require further surveys if the bridges are likely to be impacted by the proposed development.

Those built structures assessed as having **low** suitability to support roosting bats will require one survey visit between May and September, which could be at dusk or dawn. This includes built structure (walls) BS4. Again, surveys will only be required if this built structure is likely to be impacted by the proposed development.

All the other buildings on site have been assessed as having **negligible** suitability for roosting bats, and do not require further surveys.

The site has been assessed as having **low** suitability for foraging and commuting bats. Consequently, based on BCT guidance (Collins, 2016), bat activity surveys are recommended, in order to assess the likely impacts of proposed developments on foraging and commuting bats. These bat activity surveys involve walking a transect which encompasses a representative sample of all the habitats present within the proposed development area and recording all the species and numbers of bats encountered and their activity patterns. These bat activity surveys should be undertaken once per season in Spring (April to May inclusive), Summer (June to August inclusive) and Autumn (September to October inclusive), in suitable weather condition. Additionally, static bat detector surveys should be undertaken, involving the placement of static bat detectors at one location per transect once each season between April and October, and recording for five consecutive nights.

It is recommended that during building demolition, works at night are avoided where possible to minimise disturbance and the impact of noise and light pollution on any bats foraging and commuting within and in proximity to the site. When works after dark cannot be avoided, any lighting should only be used where necessary and be designed to be sympathetic by minimising light spill.

Badgers

Three outlier badger setts were found in the broadleaved woodland adjacent to the Bradford road gasholder itself, with one being actively in use. This is a constraint to the decommissioning of that gasholder and any proposed development at that site.

Badgers and their setts are protected in the UK under the Protection of Badgers Act 1992, which makes it illegal for any person to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct an entrance to a badger's sett, or to disturb animals whilst within a sett. In addition, the likelihood of disturbing a badger sett, adversely affecting badgers' foraging territory or links between them, or significantly increasing the likelihood of road casualties amongst badger populations, are capable of being material considerations in planning decisions (NPPF, 2012).

Typically, works within 30m of any sett entrance have the potential to adversely affect that sett, however this distance might be increased depending on the activity (e.g. piling works). Works which would otherwise cause an offence under current legislation may in some cases be permitted under licence from the relevant statutory authority, which in this case is Natural England (NE). Licences are usually only valid between July and November inclusive in any given year. Licensed works usually involve either sett exclusion (i.e. closure of sett using badger mesh and one-way gates), or sett disturbance.

The locations of the badger setts, indicated in Fig.2, are approximately 30 metres from the gasholder itself and high up the steep wooded slope. **It is recommended that a pre-construction check for badgers is undertaken and this will determine which setts are active and, more exactly, the impact of any decommissioning/future construction work on badgers.**

Works taking place within 30m which will not damage or destroy a badger sett are likely to require a Natural England badger disturbance licence. This will allow works to proceed but may include specific conditions to minimise disturbance to the badger sett, such as restricted working hours, watching brief and further sett monitoring.

Birds

All breeding wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) against intentional disturbance, damage and destruction during the nesting season (generally considered to be March to September inclusive).

It is recommended that any vegetation clearance on site takes place outside of the nesting season for all birds, which extends from March to September inclusive. If restricting works to outside the bird nesting season is not possible, it is recommended that an Ecological Clerk of Works (ECoW) conducts a check for active bird nests immediately prior (no more than 24hrs) to when demolition and or clearance activities commence. Once complete, a five day window will allow for site works to commence should no active nests be identified. Should works cease for more than five days then a check for breeding birds would be repeated.

If a nesting bird is identified, the ECoW will advise on suitable working methods and exclusion zones to restrict works on site. Measures recommended will depend on the nature of the works in that area as well as any bird species identified to be nesting. Suitable working methods may result in delay(s) to undertaking site works within specific areas of site until the ECoW has advised that all the chicks have fledged.

Other Fauna

No other protected species of fauna are considered likely to be affected by the proposed demolition works. However it is recommended that site induction includes the following recommendations to reduce the risk of harming or disturbing protected species during the proposed demolition works:

- Emergency procedure: In the unlikely event that a protected/notable species, evidence of these or its resting place is located during site clearance then works in that area must cease until further advice has been sought from the ECoW;
- If any excavations must remain open overnight, it is recommended that access ramps are installed each night near to crossing points to allow any animals that accidently fall into the excavation a means of climbing out. Animals that may enter the site to forage at night include badger and fox. These ramps can be constructed of roughened planks of wood, or even a ramp of earth;
- Avoid-works at night where possible to minimise disturbance and the impact of noise and light pollution to wildlife foraging / commuting nearby to the site. When works after dark cannot be avoided, any lighting should only be used where necessary and be designed to be sympathetic by minimising light spill on the habitats adjacent to the works areas;
- Daily checks of any excavations should be made by contractors prior to commencing work to ensure that no animals have become trapped in the excavations. Should a trapped protected/notable species be found within the works, WYG should be immediately contacted for advice;
- Consideration should be given to the placement of any gravel storage, or piles of materials that may create mounds suitable for digging (e.g. burrow creation) or provide suitable habitat for bird species such as black redstarts. We would advise that any such piles are checked on a daily basis by contractor staff to ensure that no digging/burrowing activity has taken place. If the mounds are to be in place overnight, the safest approach may be to temporarily fence them to ensure that animals cannot access the fresh soil; and
- If injured or sickly animals are found then the animal should be admitted to a wildlife hospital or centre for relocation by an ECoW. If the injured or sickly animal is a protected species (e.g. badger, otter, bat, etc.) works in this area should cease immediately and an ecologist should be contacted for further advice.

Invasive Species

A small areas of the invasive species Japanese rose was found during the survey. It is recommended that an invasive species specialist is consulted to conduct further surveys of invasive species of plant and eradicate all invasive species found.

6.0 Summary & Recommendations

6.1 Designated Sites

Industry standard best practices relating to working in or near watercourses are required to in order to reduce the likelihood of adversely impacting on the Ashton Canal through accidentally allowing pollutants to enter.

6.2 Habitats

It is recommended that the semi-natural broad-leaved woodland on site is retained if possible during the proposed development, as it provides good shelter, foraging and nesting opportunities for wildlife, especially the area of woodland at the western edge of the site, which also contains badger setts. It is also recommended that the woodland on site should be enhanced by the planting of native species and that any removal of woodland should be compensated for by the planting of native species of tree.

Trees on and off site should be protected as much as possible from direct impact and damage during any development work.

6.3 Protected & Notable Species

Bats

Various built structures on site have the potential to support roosting bats and require further bat surveys, in order to accurately assess the presence or absence of roosting bats.

The habitats on site have been assessed as having low potential for commuting and foraging bats. Further surveys are required to accurately assess the impacts of the proposed development on foraging and commuting bats.

It is recommended that night works be avoided during the construction phase. Where this is not possible, sympathetic lighting should be used which minimises light spill.

Badgers

Outlier badger setts were found on the wooded slope at the western end of the site, one of which is currently in use. A pre-construction badger check is recommended, and a Natural England badger disturbance license may be required.

Birds

Demolition works and vegetation clearance (if necessary) should be timed to take place outside of the bird nesting season (March to September inclusive). Where this is not possible, an ECoW should attend site to perform a check for active nesting birds prior to demolition or vegetation clearance taking place. If a nesting bird is identified, the ECoW will advise on suitable working methods and exclusion zones to restrict works on site.

Other Fauna

No further surveys for other protected species of fauna are required.

It is recommended that best practice recommendations as outlined in Section 5.3 be included as part of the site induction for all individuals involved with the proposed demolition works.

Invasive species

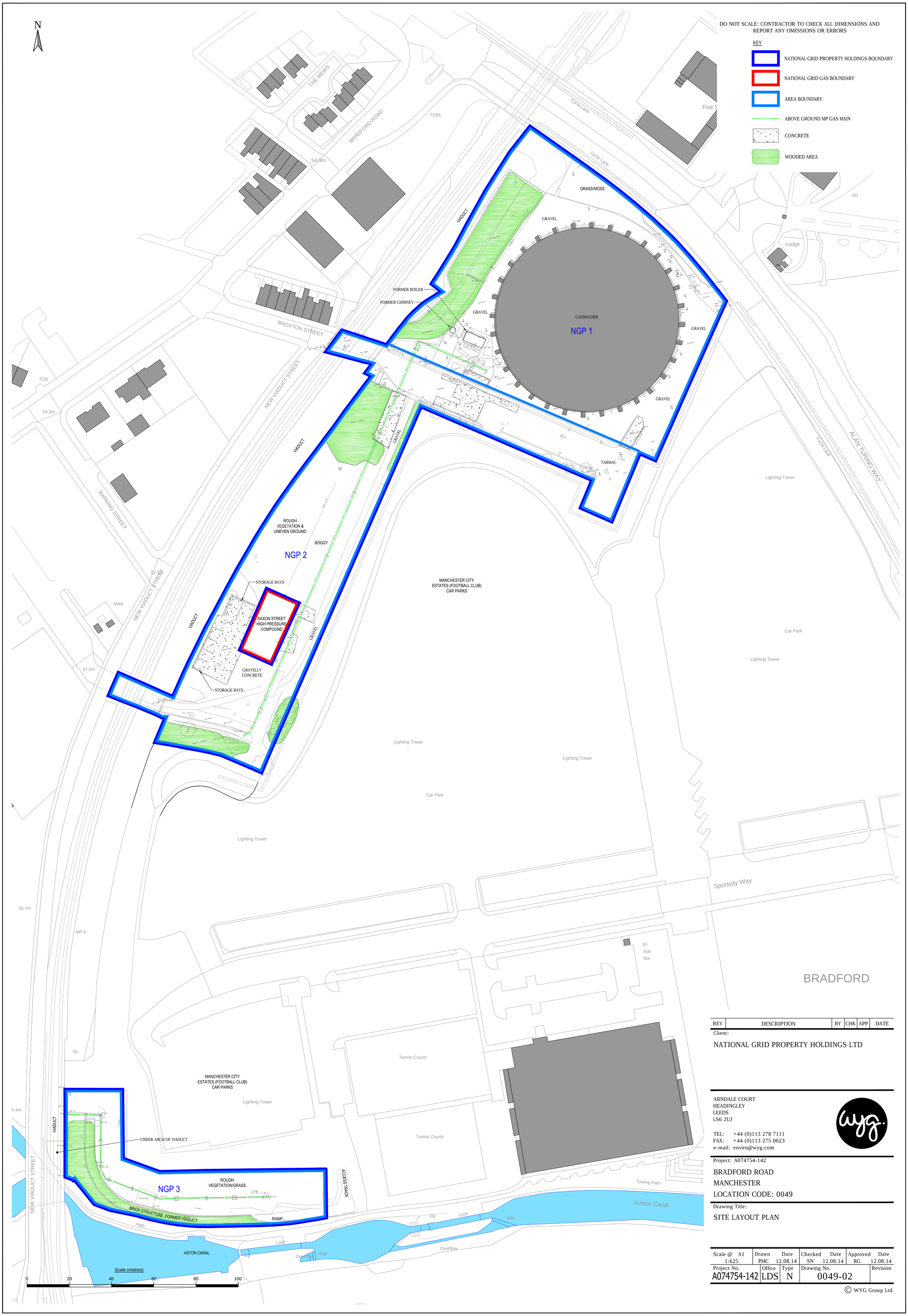
A small area of Japanese rose was found during the survey and it is recommended that an invasive species specialist is consulted to conduct further surveys and eradicate all invasive species.

7.0 References

- BSBI (2016). VC 59 Rare and Scarce Vascular Plant List. Published online, hosted by BSBI webpage – accessed 5th July 2017.
- Chartered Institute for Ecology and Environmental Management (2013). Guidelines for Preliminary Ecological Appraisal.
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed). The Bat Conservation Trust, London.
- Communities and Local Government (2012) National Planning Policy Framework.
- English Nature (2011). Badgers and Development. English Nature, Peterborough, UK.
- Gent, T. & Gibson, S. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.
- Greater Manchester Biodiversity Action Plan (2009) in http://www.gmbp.org.uk/site/index.php?option=com_content&task=view&id=9&Itemid=27
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.
- Langton, T.E.S, Beckett, C.L and Foster, J.P. (2001). Great Crested Newt Conservation Handbook. Froglife, Halesworth.
- Stace, C. (2010) New Flora of the British Isles (3rd edition). Cambridge University Press, Cambridge.
- WYG (2012). Bradford Road Extended Phase 1 Habitat Survey, October, 2012.

FIGURES

Figure 1 – Site Location Plan



REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

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LEEDS
LS6 2UJ

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Project: A074754-142

BRADFORD ROAD
MANCHESTER
LOCATION CODE: 0049

Drawing Title:

SITE LAYOUT PLAN

Scale @ A1	Drawn	Date	Checked	Date	Approved	Date
1:625	PMC	12.08.14	SN	12.08.14	RG	12.08.14

Project No.	Office	Type	Drawing No.	Revision
A074754-142	LDS	N	0049-02	

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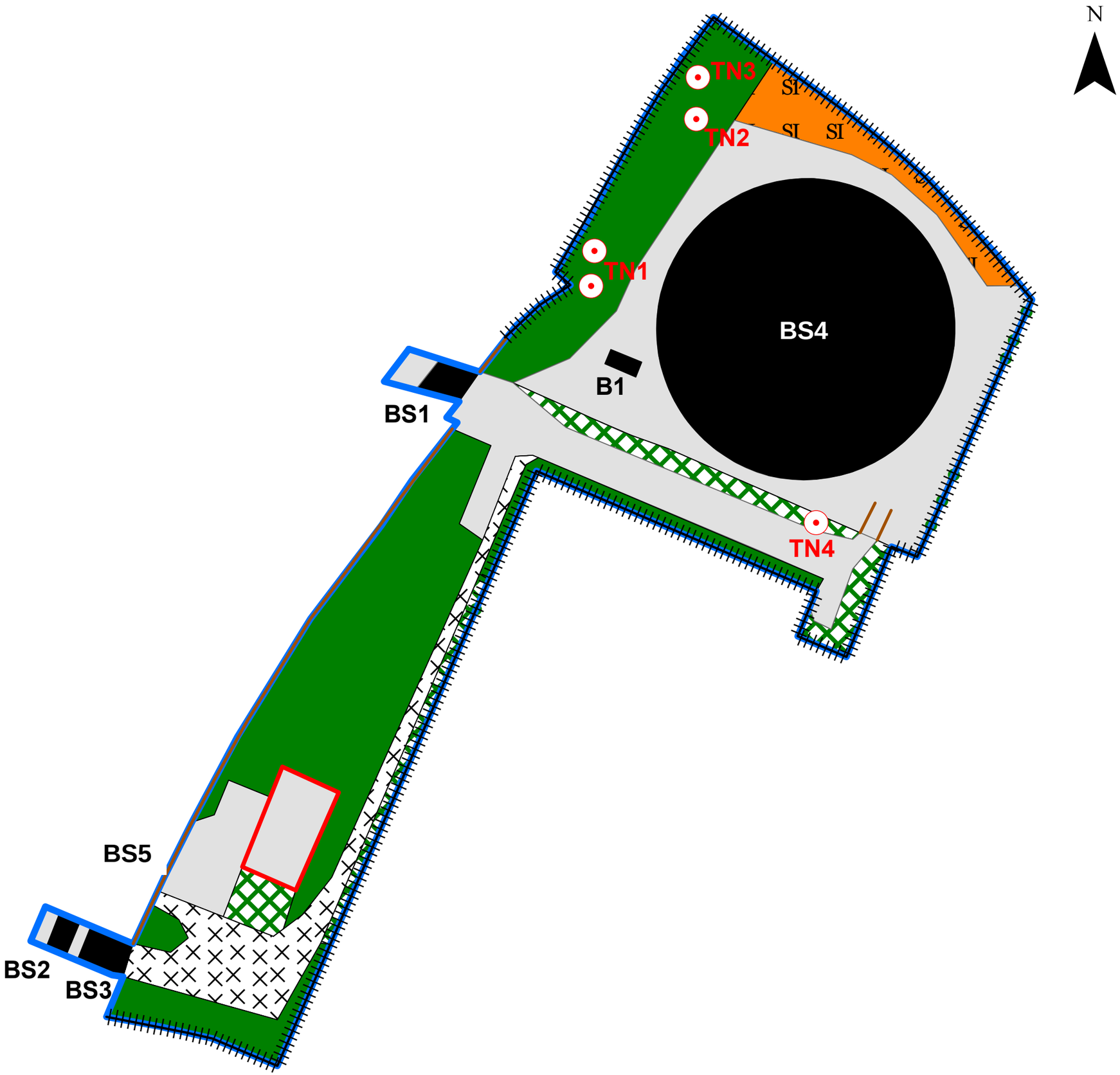
Figure 2 – Phase 1 Habitat Plan



Legend

- National Grid Property Holdings Ltd boundary
- National Grid Gas boundary
- Scattered tree
- Broadleaved woodland
- Dense scrub
- Semi-improved, neutral grassland
- Ephemeral/short perennial
- Building/Built structure
- Hard standing
- Wall
- Fence
- Target note
- B/BS Building/Built structure reference

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Environment

Project

Bradford Road

Drawing Title:

Ecological Appraisal walkover

Drawn by:	Date:	Checked By:	Date:	Approved By:	Date:
GWI	06.07.17	MB	06.07.17	RK	07.07.17

Project No:	Office	Type	Drawing No.	Revision:
A074754-431	45	94	Figure 2	v1

Appendix A – Wildlife Legislation

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the of the Convention, and regulate the exploitation of speices listed in Appendix 3. The regulation imposes legal obligations on participating countires to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directiv*e (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Fora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2010 (as amended) in England and Wales, and via the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (791409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2010 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Amendments made in 2012 stipulated that public bodies help preserve, maintain and re-establish habitats for wild birds.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	**Schedule 5 – European Protected Species of Plants**
Horseshoe bats *Rhinolophidae* - all species	Shore dock *Rumex rupestris*
Common bats *Vespertilionidae* - all species	Killarney fern *Trichomanes speciosum*
Wild cat *Felis silvestris*	Early gentian *Gentianella anglica*
Dolphins, porpoises and whales *Cetacea* – all sp.	Lady's-slipper *Cypripedium calceolus*
Dormouse *Muscardinus avellanarius*	Creeping marshwort *Apium repens*
Pool frog *Rana lessonae*	Slender naiad *Najas flexilis*
Sand lizard *Lacerta agilis*	Fen orchid *Liparis loeselii*
Fisher's estuarine moth *Gortyna borelii lunata*	Floating-leaved water plantain *Luronium natans*
Great crested newt *Triturus cristatus*	Yellow marsh saxifrage *Saxifraga hirculus*
Otter *Lutra lutra*	
Lesser whirlpool ram's-horn snail *Anisus vorticulus*	
Smooth snake *Coronella austriaca*	
Sturgeon *Acipenser sturio*	
Natterjack toad *Epidalea calamita*	
Marine turtles *Caretta caretta, Chelonia mydas, Lepidochelys kempii, Eretmochelys imbricata, Dermochelys coriacea*	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise case to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties			
Avocet	*Recurvirostra avosetta*	Osprey	*Pandion haliaetus*
Bee-eater	*Merops apiaster*	Owl, Barn	*Tyto alba*
Bittern	*Botaurus stellaris*	Owl, Snowy	*Nyctea scandiaca*
Bittern, Little	*Ixobrychus minutus*	Peregrine	*Falco peregrinus*
Bluethroat	*Luscinia svecica*	Petrel, Leach's	*Oceanodroma leucorhoa*
Brambling	*Fringilla montifringilla*	Phalarope, Red-necked	*Phalaropus lobatus*
Bunting, Cirl	*Emberiza cirlus*	Plover, Kentish	*Charadrius alexandrinus*

Bunting, Lapland	*Calcarius lapponicus*	Plover, Little Ringed	*Charadrius dubius*
Bunting, Snow	*Plectrophenax nivalis*	Quail, Common	*Coturnix coturnix*
Buzzard, Honey	*Pernis apivorus*	Redstart, Black	*Phoenicurus ochruros*
Capercaillie	*Tetrao urogallus*	Redwing	*Turdus iliacus*
Chough	*Pyrrhocorax pyrrhocorax*	Rosefinch, Scarlet	*Carpodacus erythrinus*
Corncrake	*Crex crex*	Ruff	*Philomachus pugnax*
Crake, Spotted	*Porzana porzana*	Sandpiper, Green	*Tringa ochropus*
Crossbills (all species)	*Loxia*	Sandpiper, Purple	*Calidris maritima*
Curlew, Stone	*Burhinus oedicnemus*	Sandpiper, Wood	*Tringa glareola*
Divers (all species)	*Gavia*	Scaup	*Aythya marila*
Dotterel	*Charadrius morinellus*	Scoter, Common	*Melanitta nigra*
Duck, Long-tailed	*Clangula hyemalis*	Scoter, Velvet	*Melanitta fusca*
Eagle, Golden	*Aquila chrysaetos*	Serin	*Serinus serinus*
Eagle, White-tailed	*Haliaetus albicilla*	Shorelark	*Eremophila alpestris*
Falcon, Gyr	*Falco rusticolus*	Shrike, Red-backed	*Lanius collurio*
Fieldfare	*Turdus pilaris*	Spoonbill	*Platalea leucorodia*
Firecrest	*Regulus ignicapillus*	Stilt, Black-winged	*Himantopus himantopus*
Garganey	*Anas querquedula*	Stint, Temminck's	*Calidris temminckii*
Godwit, Black-tailed	*Limosa limosa*	Swan, Bewick's	*Cygnus bewickii*
Goshawk	*Accipiter gentilis*	Swan, Whooper	*Cygnus cygnus*
Grebe, Black-necked	*Podiceps nigricollis*	Tern, Black	*Chlidonias niger*
Grebe, Slavonian	*Podiceps auritus*	Tern, Little	*Sterna albifrons*
Greenshank	*Tringa nebularia*	Tern, Roseate	*Sterna dougallii*
Gull, Little	*Larus minutus*	Tit, Bearded	*Panurus biarmicus*
Gull, Mediterranean	*Larus melanocephalus*	Tit, Crested	*Parus cristatus*
Harriers (all species)	*Circus*	Treecreeper, Short-toed	*Certhia brachydactyla*
Heron, Purple	*Ardea purpurea*	Warbler, Cetti's	*Cettia cetti*
Hobby	*Falco subbuteo*	Warbler, Dartford	*Sylvia undata*
Hoopoe	*Upupa epops*	Warbler, Marsh	*Acrocephalus palustris*
Kingfisher	*Alcedo atthis*	Warbler, Savi's	*Locustella luscinioides*
Kite, Red	*Milvus milvus*	Whimbrel	*Numenius phaeopus*
Merlin	*Falco columbarius*	Woodlark	*Lullula arborea*
Oriole, Golden	*Oriolus oriolus*	Wryneck	*Jynx torquilla*
Invasive plant species listed in Schedule 9			
Australian swamp stonecrop or New Zealand pygmyweed	*Crassula helmsii*	Japanese rose	*Rosa rugosa*
Californian red seaweed	*Pikea californica*	Japanese seaweed	*Sargassum muticum*
Curly waterweed	*Lagarosiphon major*	Laver seaweeds (except native species)	*Porphyra* spp
Duck potato	*Sagittaria latifolia*	Parrot's-feather	*Myriophyllum aquaticum*
Entire-leaved cotoneaster	*Cotoneaster integrifolius*	Perfoliate alexanders	*Smyrnium perfoliatum*
False Virginia creeper	*Parthenocissus inserta*	Pontic rhododendron	*Rhododendron ponticum*
Fanwort or Carolina water-shield	*Cabomba caroliniana*	Purple dewplant	*Disphyma crassifolium*
Few-flowered garlic	*Allium paradoxum*	Red algae	*Grateloupia luxurians*
Floating pennywort	*Hydrocotyle ranunculoides*	Rhododendron	*Rhododendron ponticum* × *Rhododendron maximum*

Floating water primrose	*Ludwigia peploides*	Small-leaved cotoneaster	*Cotoneaster microphyllus*
Giant hogweed	*Heracleum mantegazzianum*	Three-cornered garlic	*Allium triquetrum*
Giant kelp	*Macrocystis* spp.	Variegated yellow archangel	*Lamiastrum galeobdolon* subsp. *argentatum*
Giant knotweed	*Fallopia sachalinensis*	Virginia creeper	*Parthenocissus quinquefolia*
Giant rhubarb	*Gunnera tinctoria*	Wakame	*Undaria pinnatifida*
Giant salvinia	*Salvinia molesta*	Wall cotoneaster	*Cotoneaster horizontalis*
Green seafingers	*Codium fragile*	Water fern	*Azolla filiculoides*
Himalayan cotoneaster	*Cotoneaster simonsii*	Water hyacinth	*Eichhornia crassipes*
Hollyberry cotoneaster	*Cotoneaster bullatus*	Water lettuce	*Pistia stratiotes*
Hooked asparagus seaweed	*Asparagopsis armata*	Water primrose	*Ludwigia grandiflora*
Hottentot fig	*Carpobrotus edulis*	Water primrose	*Ludwigia uruguayensis*
Hybrid knotweed	*Fallopia japonica* × *Fallopia sachalinensis*	Waterweeds	*Elodea* spp.
Indian (Himalayan) balsam	*Impatiens glandulifera*	Yellow azalea	*Rhododendron luteum*
Japanese knotweed	*Fallopia japonica*		

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

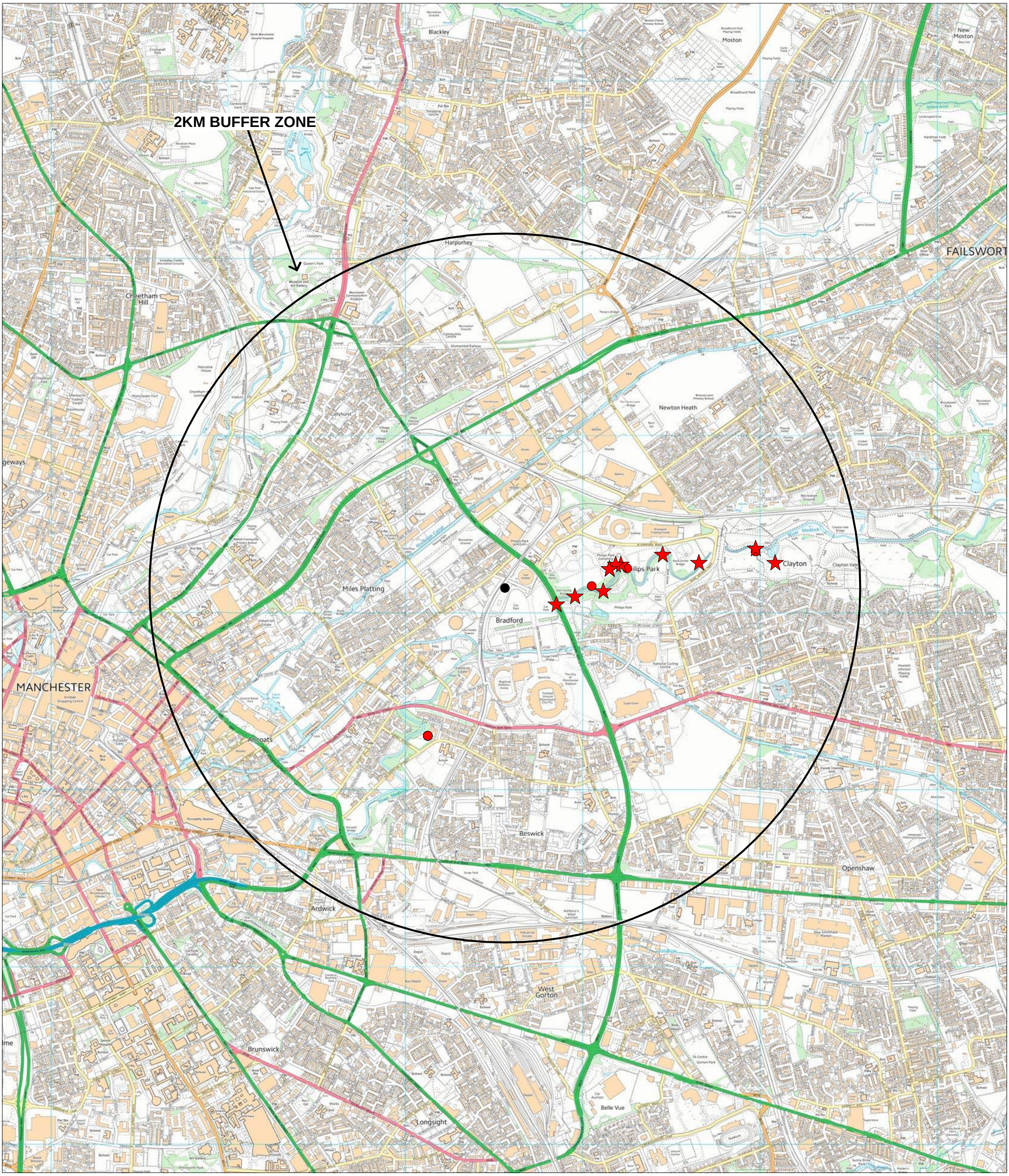
Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

Appendix B – Desk Study Data



KEY

BADGERS

★ **SETTS**

● **OTHER SIGNS**

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 86560 99139
BRADFORD ROAD - MAP 3
CONFIDENTIAL

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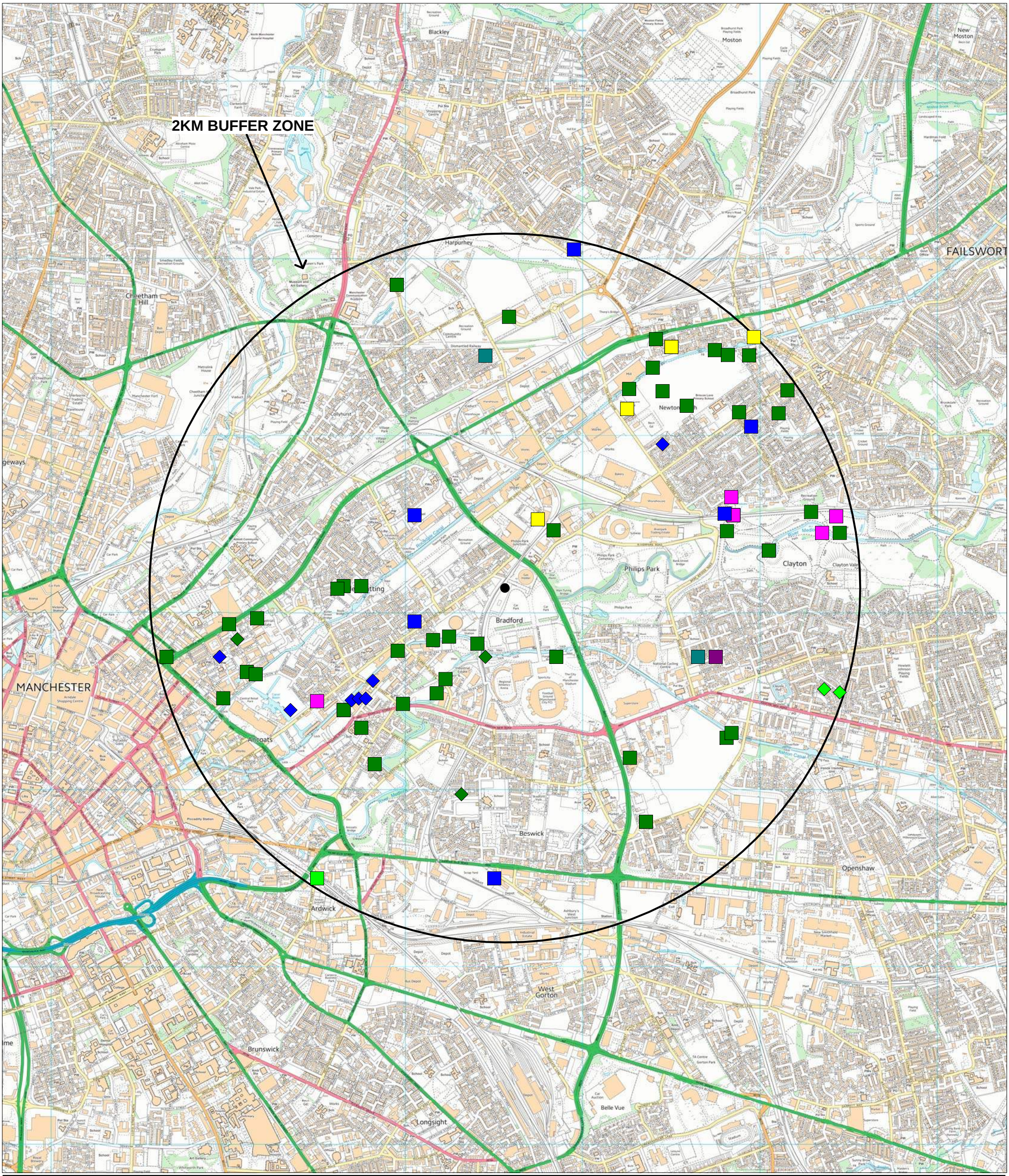

KEY

BAT ROOSTS

- BAT SP
- COMMON PIPISTRELLE
- PIPISTRELLE SP

BATS OTHER SIGNS

- BAT SP
- COMMON PIPISTRELLE
- DAUBENTON'S BAT
- MYOTIS SP
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE
- WHISKERED BAT

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 86560 99139
BRADFORD ROAD - MAP 4

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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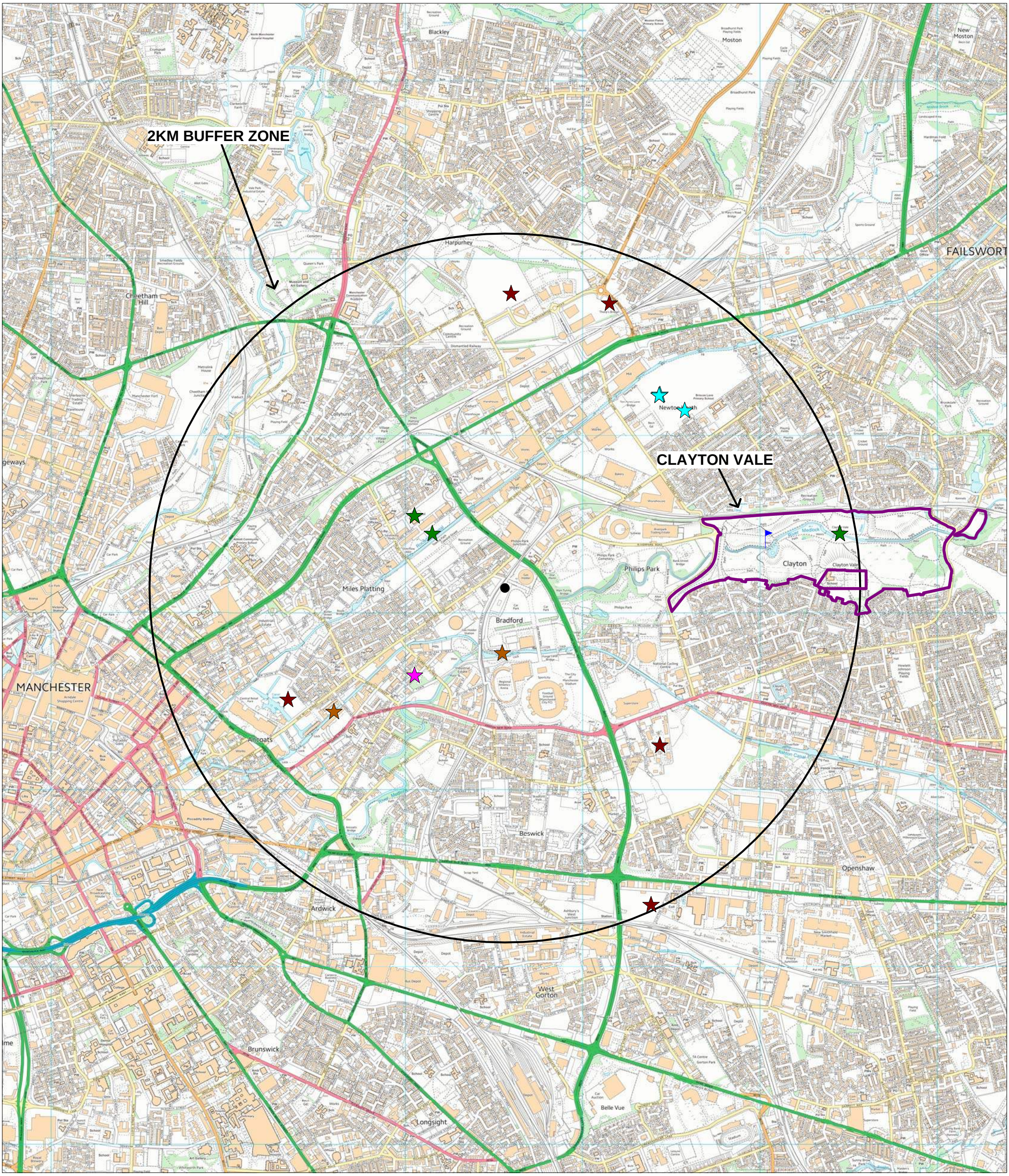

KEY

- WATER VOLE
- KINGFISHER
- LITTLE RINGED PLOVER
- PEREGRINE
- FLOATING WATER-PLANTAIN
- SLOW-WORM

LOCAL NATURE RESERVE

- LNR BOUNDARY

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ECOLOGICAL SEARCH - SJ 86560 99139
BRADFORD ROAD - MAP 2

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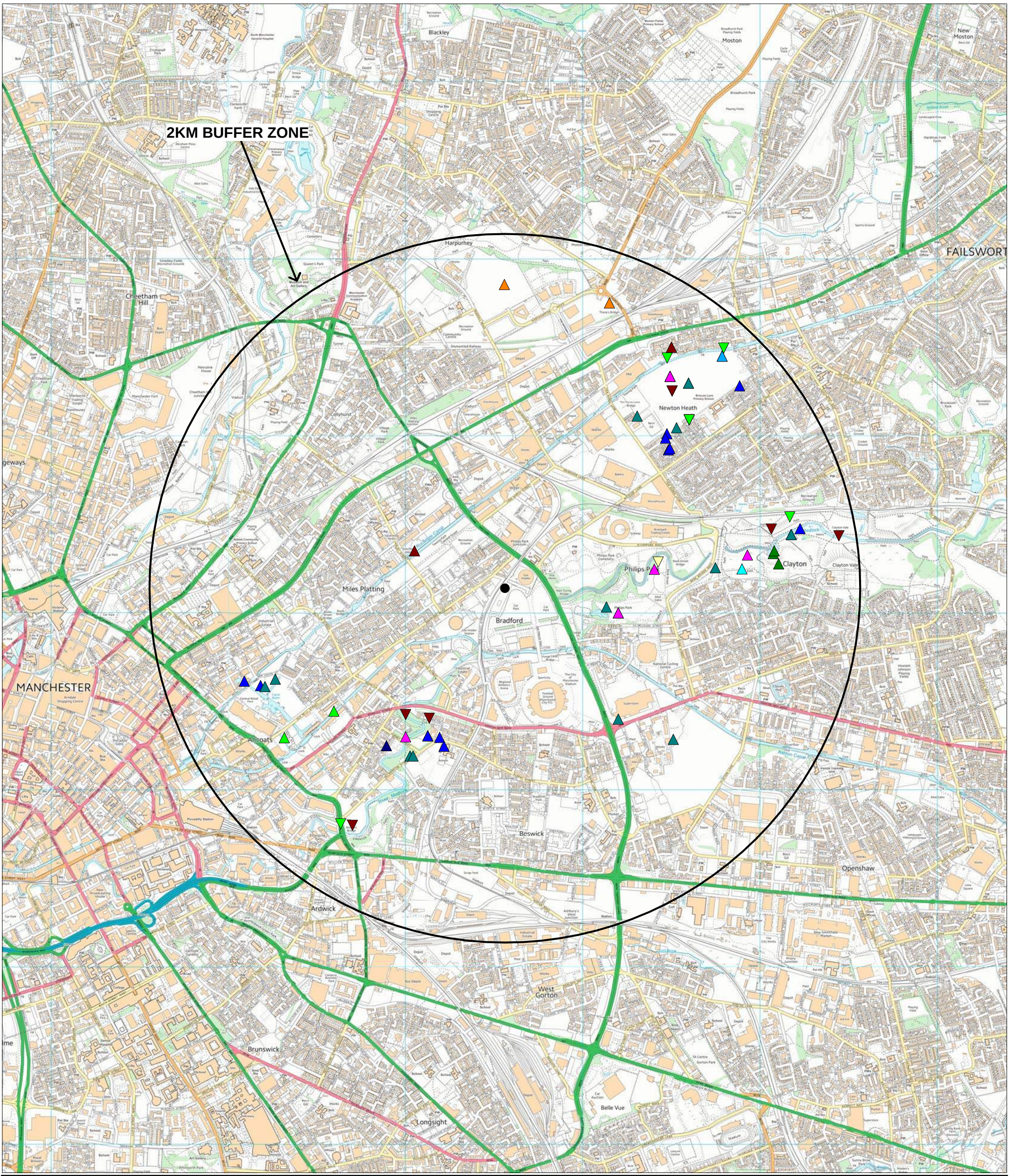

KEY

SECTION 41 SPECIES

- BULLFINCH
- CINNABAR
- COMMON TOAD
- CURLEW
- DUNNOCK
- GRASS-WRACK PONDWEED
- HERRING GULL
- HOUSE SPARROW
- LAPWING
- REED BUNTING
- SONG THRUSH
- STARLING
- YELLOW BIRD'S-NEST

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 86560 99139
BRADFORD ROAD - MAP 5

SCALE 1:20,000

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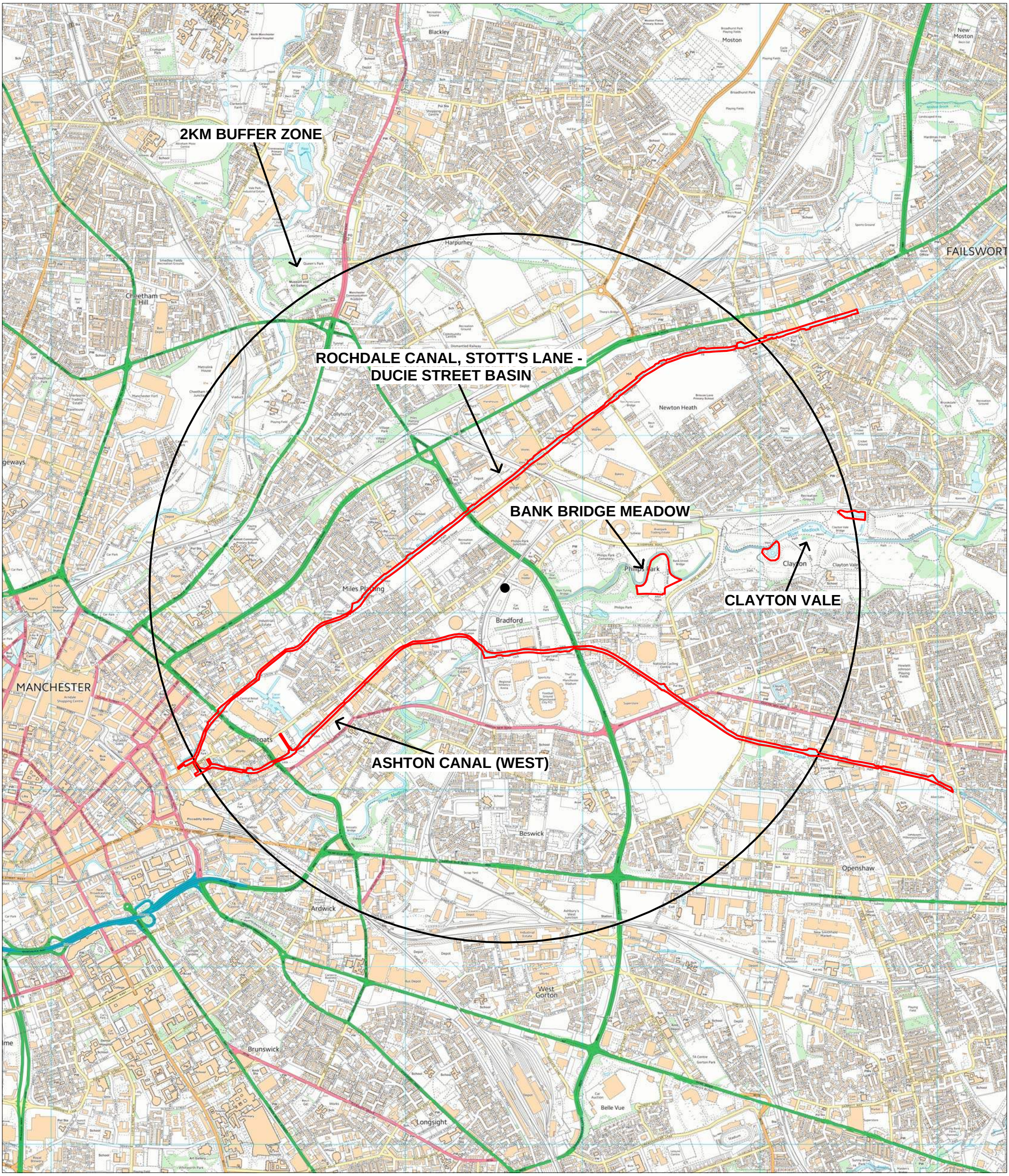

KEY

SITE OF BIOLOGICAL IMPORTANCE

SBI BOUNDARY

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ 86560 99139
BRADFORD ROAD - MAP 1

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Date Produced: 09/06/2017

Appendix C – Target Notes

Target Note	Description	Photograph
TN1	Badger Sett A	14
TN2	Badger Sett B	15
TN3	Badger Sett C	16
TN4	Japanese rose (invasive species)	17

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This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to WYG by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.

WYG Environment Planning Transport Ltd.

Appendix B5 Asbestos Survey

National Grid Property Holdings

Bradford Road Gasholder Station, Broxton Street, Manchester, M40 7BN

WYG Asbestos Demolition Survey Report

13 Jul 2017

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Document Control

Project:	
Client:	National Grid Property Holdings
Job Number:	J038013
File Origin:	21

Document Checking:

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Issue	Date	Status
1	23 Jun 2017	
2	13 Jul 2017	Report needs splitting into 2 sites.

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Appendix D – Analysis Certificates
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0.0 Executive Summary

Site Address	The site address is Bradford Road Gasholder Station, Broxton Street, Manchester M40 7BN.
General Site Description	The site comprises 1 buildings. The site is used as Boiler Room.
Date and type of survey undertaken	It is understood from the client that the survey was undertaken to provide a higher level of information to demolition contractors/assist with the compliance of the Control of Asbestos Regulations (CAR) 2012. A WYG Asbestos Demolition Survey was undertaken in accordance with HSG 264 Asbestos; The Survey Guide. The WYG Asbestos Demolition Survey was conducted on the 16 Jun 2017 by Dean Lambert of WYG Environment Planning Transport Ltd. Sample analysis techniques were UKAS accredited in accordance with HSG 248 – Asbestos: The Analysts Guide for Sampling, Analysis and Clearance Procedures, 2005.
Summary of Asbestos Containing Materials Identified	A total of 7 no. samples were analysed following the survey. Of these, 2 no. samples were confirmed as asbestos. This led to the identification of 2 no. items. These include the following material types: • Asbestos Cement
Areas of No Access	Every effort was made to access all areas of the site. Inaccessible areas and limitations of a WYG Asbestos Demolition Survey are detailed in Sections 4.2 and 4.3 of this report. Inaccessible areas should be presumed to contain asbestos containing materials (ACM's) until such time as an inspection can be made that proves otherwise, as required by the Control of Asbestos Regulations (CAR) 2012.
This sheet is intended to provide a summary only of the asbestos survey findings. It does not provide a definitive engineering analysis for the purposes of costing or construction and is subject to the limitations of this WYG Asbestos Demolition Survey.	

1.0 Introduction

1.1 General

WYG Environment Planning Transport Ltd (WYG) was commissioned by National Grid Property Holdings to undertake a WYG Asbestos Demolition survey at the Bradford Road Gasholder Station, Broxton Street, Manchester M40 7BN.

Dean Lambert undertook the survey on 16 Jun 2017.

1.2 Objectives

A WYG Asbestos Demolition survey was undertaken at the site in order to meet the following objectives:

- To identify the presence, location and condition of reasonably accessible asbestos containing materials (ACM's).
- To produce a report to identify areas of confirmed and suspected asbestos and to provide an indication as to their location, condition and extent.

1.3 Report Conditions

This report has been prepared in accordance with the accepted service details, terms and conditions of our accepted proposal letter Q037961. The report is further subject to the conditions detailed in Appendix A.

2.0 Site Details

2.1 Location

The site address is Bradford Road Gasholder Station, Broxton Street, Manchester.

2.2 Buildings

The site comprises 1 buildings. The site is used as Boiler Room.

Specific areas included within the survey scope are as follows:

- Boiler Room 2, Bradford Road Gasholder Station/Ground Floor/1 Boiler room
- Boiler Room 2, Bradford Road Gasholder Station/External/1 External

3.0 Survey Methodology

A WYG Asbestos Demolition survey, using the methodology set out in HSG 264 was undertaken. Each accessible area was inspected to locate materials presumed or strongly presumed to contain asbestos, all of which must be removed prior to demolition. Photographs of each sample location were taken, however where similar materials were identified these are referenced to similar homogeneous materials.

Each sample is assessed using a material assessment algorithm, which assigns a score of risk to each individual ACM based the following criteria:

- Product Type;
- Extent of Damage or Deterioration;
- Surface Treatment; and
- Asbestos Type

Each criterion has various scores and when all the scores for each are added together a value of risk is generated for the material. This is only a requirement of HSG 264 for Management Surveys; however, the algorithm values have been applied during this survey as we understand that contractors may visit the site prior to demolition. All samples were analysed by a UKAS accredited laboratory using Polarised Light Microscopy and Dispersion Staining techniques in accordance with HSG 248.

If the client has determined priority scoring for the identified ACM's, the combined material and priority assessment results can be used to establish the priority for those ACMs needing remedial action and the type of action that will be taken. There are various remedial options available: in many cases the ACMs can be protected or enclosed, sealed or encapsulated, or repaired. These options should be considered first. Where such actions are not practical, ACMs should be removed. Further information on risk assessments and management of asbestos is available in A comprehensive guide to managing asbestos in premises.

Sampling of suspect materials is completed in accordance with HSG264 and accreditation by UKAS to ISO17020. By its nature, sampling building materials may include a limited damage and WYG accept no responsibility for making good such areas, unless agreed in writing in advance of the survey.

4.0 Survey Conditions

4.1 Access Constraints

All areas within the scope of works were assessed (unless stated in Section 4.3) for the presence of ACM's and where ACM's were presumed and/or strongly presumed samples were taken. These presumptions are based upon surveyors experience associated with identification of a particular material.

4.2 Survey Limitations

Whilst the surveyors made every effort, WYG cannot guarantee that all asbestos containing materials have been identified, or that survey results are definitive. Specific areas of the site where suitable access was not available are recorded in Section 4.3 of this document.

Features that generally fall outside the scope of a WYG Asbestos Demolition survey include:

- Within solid floor voids (e.g. Concrete Slab), where no inspection hatch is present.
- Areas behind or above suspected asbestos containing materials[1]
- Within solid concrete floors where asbestos shuttering may have been used
- Within confined spaces etc. where reasonable access is unavailable[2]
- Within live plant or electrical apparatus
- Beneath lagging or cladding of live pipes where a burn hazard may be present
- Concealed pipe runs, where reasonable access in unavailable
- Areas that are considered to present a significant Health & Safety risk.
- Within live plant or electrical apparatus
- Areas where access may involve damaging the fabric of the building

[1] Areas behind or above suspected asbestos containing materials are required to be inspected by HSG264. Where such areas could not be identified prior to the commission of the survey, a provisional sum should have been allowed for by the client to enable the surveyor to return to site with a licensed asbestos contractor in order to gain access. Such access may also necessitate 14–day (ASB5) notification to the HSE and may require concurrent air monitoring to be carried out. Should this type of access have been required, we liaises and sought agreement from the project team before commencing beyond the agreed project scope.

[2] Where access is restricted due to confined space or other health & safety concerns, these areas will be detailed in the report and recommendations given for the most appropriate means of investigation, and if necessary, any additional costs which would be entailed. A strategy of using representative samples of suspected asbestos materials has been used to minimise the number of samples taken to a practical level and keep to a minimum the disturbance of potential asbestos containing materials at the site. Because of this strategy the results of the survey should be interpreted such that all visually similar materials in the same area must be assumed to be composed of the same material until proven otherwise.

In accordance with The Control of Asbestos Regulations 2012, it must be assumed that materials visually assessed as asbestos containing materials contain amphibole asbestos fibres (i.e. Amosite and Crocidolite), unless sampled to prove otherwise.

4.3 Areas of No Access

Table 1 Areas of No Access

Room Number	Room Name	Extent of Access Limitation, Including Reason
There were no inaccessible items in the survey.		

4.4 Survey Specific Notes

There is always a possibility that asbestos materials other than those highlighted by this report are present in those areas not accessed fully at the time of the survey.

Inaccessible areas should be presumed to contain amphibole asbestos and appropriate management planning should be implemented in order to control access and maintenance activities to these areas until such a time as they can be accessed and the presence or absence of asbestos containing materials can be confirmed.

A strategy of using representative samples of suspected asbestos materials has been used to minimise the number of samples taken to a practical level and keep to a minimum the disturbance of potential asbestos containing materials. Because of this strategy the results of the survey should be interpreted such that all visually similar materials in the same area must be assumed to be composed of the same material until proven otherwise.

In accordance with The Control of Asbestos Regulations 2012, it must be assumed that materials visually assessed as asbestos containing materials contain amphibole asbestos fibres (i.e. Amosite and Crocidolite), unless strongly presumed otherwise or sampled to prove otherwise.

Asbestos products and non–asbestos products in some areas of the building are located in close proximity to each other. Care must be taken when removing the asbestos in order that contamination of the non–asbestos materials is not caused, as this will increase disposal costs.

Material assessments have been undertaken on the various items inspected. These assessments are carried out according to the material assessment algorithm appended to this report, which is based on the assessment criteria in HSG 264.

5.0 Asbestos Register

Inspection Number	Area	Feature	Material Type – (Friability)	Asbestos Fibre	Material Assessment Score	Priority Assessment Score	Risk Assessment Score	Sample Number	Recommendations
5	Boiler Room 2, Bradford Road Gasholder Station, Ground Floor, Boiler room (1)	Flashguards within electrics	Asbestos Cement (Low)	(1) Chrysotile	3	N/A	N/A	CH002156	Remove if likely to be disturbed
6	Boiler Room 2, Bradford Road Gasholder Station, Ground Floor, Boiler room (1)	Asbestos cement debris to floor	Asbestos Cement (Low)	(1) Chrysotile	4	N/A	N/A	CH002157	Remove if likely to be disturbed

6.0 Recommendations

6.1 Summary

Survey inspection reports detail the ACM identified and its approximate extent, these reports are contained within Appendix B of this report. The asbestos register, Section 5.0 of this report summarises asbestos containing materials and presumed asbestos materials identified during the course of the survey.

6.2 Further Investigation

This WYG Demolition survey was carried out to a specific scope of works as per section 2.2 and was subject to the general limitations described in section 4.2 and the specific limitations described in section 4.3. There is a possibility that asbestos material may be present in those areas that were concealed or inaccessible at the time of the survey or otherwise fell outside the scope of this investigation. Prior to demolition or any activity that disturbs the fabric of the building in these excluded areas it is recommended that they are also subjected to a fully intrusive WYG Demolition asbestos survey, under controlled conditions where appropriate.

As any Demolition asbestos survey is limited by issues of practical access, all areas of the site should still be approached with caution during intrusive works. We suggest that the contractor has an appropriate procedure within his method statement such that if suspected asbestos materials are encountered, a sample can be taken to confirm the nature of the material prior to any work in that area.

6.3 General

If asbestos removal is required, it is recommended that a site–specific asbestos removal specification and method statements be produced in order to facilitate any asbestos removal works.

The waste generated from asbestos removal should be notified and disposed of in accordance with the Hazardous Waste (England & Wales) Regulations 2005, Amended 2009.

The contractor must ensure that adequate Duty of Care provisions are put in place for the transportation and disposal of wastes from the site in line with the obligations of the Environmental Protection Act 1990.

In accordance with Regulation 4 of The Control of Asbestos Regulations 2012, it is advised that a management plan is produced and a duty holder be appointed to coordinate and oversee the management of the asbestos at the site.

Where asbestos insulation materials are removed, the building manager should ensure that non–asbestos replacement materials are installed, to maintain fire proofing.

If asbestos containing materials (ACM's) are to remain in–situ across the premises, CAR 2012 requires a Duty Holder be appointed/identified, who will be responsible for producing and implementing an Asbestos Management Plan, as defined by HSG 227.

Due to the nature of a WYG Asbestos Demolition Survey there is always the possibility of asbestos being present within inaccessible areas and those areas outlined within Sections 4.2 and 4.3 of the report as outside the scope of this type of survey. If any work is to be carried out within these areas then materials encountered should be presumed to

contain asbestos unless there is strong evidence for a reasoned argument that the material does not contain asbestos. This can be achieved by taking a sample and having subsequent analysis undertaken on the sample in accordance with HSG 248.

Prior to demolition or any other works that might disturb the asbestos materials identified, they should be removed. It is recommended that a site–specific method statement be produced in order to facilitate the removal of the asbestos. It is advised that a competent person be appointed to coordinate and oversee the management of asbestos at the site.

The detailed extent of asbestos materials presented in this report are approximate values only and should not be used in isolation to prepare quotations for asbestos repair or removal. It is recommended that any asbestos repair or removal be evaluated by an asbestos removal contractor, who should attend site to confirm the extent of asbestos.

6.4 Asbestos Management Plan (AMP)

The Control of Asbestos Regulations 2012 stipulates under Regulation 4, that persons responsible by virtue of ownership, contract or tenancy of a non–domestic premise are responsible for undertaking a suitable and sufficient assessment for the presence of asbestos materials within those premises and implement an appropriate Asbestos Management Plan (AMP).

Areas highlighted in Sections 4.2 and 4.3 as areas of 'no access' should be presumed to contain amphibole asbestos and appropriate management planning should be implemented in order to control access and maintenance activities to these areas until such a time as they can be accessed and the presence or absence of asbestos containing materials can be confirmed.

Asbestos materials were encountered in the survey as detailed in Section 5.0. The AMP should stipulate the requirements for working in these areas identified as containing asbestos as well as the areas of 'no access' as stated in Sections 4.2 and 4.3. For example the requirements for working in these areas may be a permit to work system, appropriate risk assessments or by other means to ensure people are not exposed to asbestos.

The Approved Code of Practice L143: Managing & Working With Asbestos *(Control of Asbestos Regulations 2012)* outlines the procedures that should be followed when developing and implementing an AMP.

In accordance with Regulation 4 of The Control of Asbestos Regulations 2012, it is advised that a 'Duty Holder' be appointed to coordinate and oversee the management of asbestos at the site. The most appropriate person to be considered to be a Duty Holder is the person responsible for coordinating maintenance activities for the premises.

The Duty Holder has the responsibility to incorporate the results of this survey into an AMP for the building. The Duty Holder must ensure that an appropriate Priority Assessment is undertaken as detailed in HSG 227: *A Comprehensive Guide to Managing Asbestos in Premises,* taking into account factors such as:

- Normal Occupant Activity – assessment based upon the interaction of occupants and the area being assessed.
- Likelihood of disturbance – assessment based upon location of asbestos, its accessibility and quantity of material that has the potential to be disturbed.
- Human Exposure Potential – assessment based upon number of occupants, frequency of use and duration of use.
- Maintenance Activity – assessment based upon type of maintenance activity and frequency.

Combining the Material Risk Assessment with the Priority Assessment provides an overall assessment with respect to ACM's present within a building. This overall assessment will then determine the management requirements for the building.

WYG can assist in the process of risk assessment to further develop the AMP in accordance with L143 and HSG 227. Priority Assessment is outside the scope of our UKAS accreditation.

6.5 MMMF

A number of materials associated with Machine Made Mineral Fibre (MMMF) are present with areas in the building (e.g. within ceiling voids). These materials are covered by the COSHH regulations and persons working on or near these materials should undertake sufficient risk assessments and/or wear appropriate Personal Protective Equipment.

6.6 Fire Protection

Where asbestos insulation materials are removed, the building manager should ensure that non–asbestos replacement materials are installed, to maintain fire proofing.

If fire–rated materials are removed there may be a requirement to review and revise the site Fire Risk Assessment. WYG has a dedicated Fire Risk Assessment team, who would be pleased to provide further guidance in this respect required.

6.7 Other Safety Management and Compliance Services

We provide a range of safety management and compliance services to a variety of clients across the public and private sector. Services include:

Health and Safety Management

- Development and implementation of safety management systems such as OHSAS 18001, BS8800, HSG65
- Advice on preparing effective health and safety policies, procedures and systems of work
- Risk assessments (including workplace and work activity, manual handling, display screen equipment (DSE), CoSHH etc)
- Advice on setting key performance indicators for driving improvements in safety performance
- Accident and incident investigation
- Independent compliance audits
- Occupational exposure monitoring – dusts, fumes, vapours, etc
- Noise monitoring and noise control
- Indoor air quality and working environment investigation.

Legionella Assessment

- L8 compliant Legionella risk assessments
- Legionella awareness seminars and training
- Independent compliance audits

CDM Co–ordinator Services

- Principal Designer - Plan, manage and co-ordinate the pre-construction phase
- CDM Advisor - Indepedent construction, safety and management advice
- Gap analysis and audit
- Training Providers - Including workshops and advice on CDM

Fire and Explosion

- Regulatory reform (fire safety) order compliant fire risk assessments
- Expert advice on means of escape, structural protection, automatic detection and fire fighting systems
- Liaison with enforcing authorities
- Dangerous substances and explosive atmospheres regulations (DSEAR) risk assessment

Training

- Institution of occupational safety and health accredited courses:
- Directing safely
- Managing safely
- Working safely
- Executive update – key health and safety legislative requirements
- Health & safety responsibilities of line managers
- H&S risk assessments – a practical approach
- DSE safety and user awareness
- Handling loads, preventing injury – good manual handling practice
- COSHH assessment, assessor training
- CDM
- Asbestos awareness & training for non–licensable activities.

Asbestos Consultancy

- Asbestos surveys (management, refurbishment & demolition surveys)
- Removal specifications
- On–site inspection and monitoring of works
- Asbestos management plans
- Completion and validation reporting
- Asbestos awareness seminars and training
- Expert witness

7.0 Glossary of Terms

ACM	Asbestos Containing Material
AIB	Asbestos Insulating Board
AMP	Asbestos Management Plan
CAR	Control of Asbestos Regulations
EA	Environment Agency
HSE	Health and Safety Executive
HSG	Health and Safety Guidance
MMMF	Machine Made Mineral Fibre
NADIS	No Asbestos Detected in Sample
UKAS	United Kingdom Accreditation Service
WYG	WYG Environment Planning Transport Ltd

8.0 References

HSG 264	Asbestos: The Survey Guide, 2nd Edition, 2012
HSG 248	Asbestos: The Analysts Guide for Sampling, Analysis and Clearance Procedures, 2005.
CAR 2012	Control of Asbestos Regulations 2012, April 2012.

Appendices

Appendix A – Report Conditions for WYG Asbestos Demolition Survey

WYG ENVIRONMENT PLANNING TRANSPORT LTD

This report is produced solely for the benefit of National Grid Property Holdings, no account is taken for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a site inspection in the accessed areas as noted, the physical investigation as detailed, information supplied by those parties referenced in the text. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive dismantling and disturbance. The test results that are available can only be regarded as a limited but likely representative sample assessed against current guidelines. The impact of our assessment on other aspects of the development requires evaluation by other involved parties. The possibility of the presence of asbestos, perhaps in higher concentrations, elsewhere on the site, cannot be discounted.

Whilst the findings detailed within this report reflect our best assessment, because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categoric assurances that they will be accepted by authorities or funds without question as such bodies have unpublished, more stringent objectives. This report is prepared and written for the purposed uses stated in the report and should not be used in a different context without reference to WYG. In time improved practices or amended legislation may necessitate a re–assessment.

The report is limited to those aspects specifically reported on and is necessarily restricted and no liability is accepted for any other aspect. The opinions expressed cannot be absolute due to the limitations of time and resources accepted by the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report.

Appendix B – Inspection Reports

Priority Assessments have not been conducted as part of this survey.

Inspection Number	1	Reference Number:	CH002152
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	N.A.D.I.S

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Paint to boiler
Product Type	Well Bound Material
Extent Amount	50 m^2

Recommendation	

Product Score	Low Fibre Release - Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement, etc.)	0
Extent of Damage	Low damage - a few scratches or surface marks; broken edges on boards, tiles etc.	0
Surface Treatment	Reinforced plastics, resins, vinyl tiles, well bound materials, bitumen adhesives, damp proof course	0
Asbestos Type	No Asbestos Detected	0

Material Assessment Score	N/A

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	2	Reference Number:	CH002153
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	N.A.D.I.S

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Textiles to boiler
Product Type	Textiles/Paper
Extent Amount	10 lm

Recommendation	

Product Score	Medium Fibre Release - Asbestos insulating board, mill board, other low density insulation board, asbestos textiles, gaskets, rope and woven textiles, asbestos paper and felt	0
Extent of Damage	Low damage - a few scratches or surface marks; broken edges on boards, tiles etc.	0
Surface Treatment	Unsealed AIB, encapsulated lagging and sprays, ropes, textiles, paper	0
Asbestos Type	No Asbestos Detected	0

Material Assessment Score	N/A

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	3	Reference Number:	CH002154
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	N.A.D.I.S

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Gasket to boiler
Product Type	Reinforced Composite
Extent Amount	5 no.

Recommendation	

Product Score	Medium Fibre Release - Asbestos insulating board, mill board, other low density insulation board, asbestos textiles, gaskets, rope and woven textiles, asbestos paper and felt	0
Extent of Damage	Low damage - a few scratches or surface marks; broken edges on boards, tiles etc.	0
Surface Treatment	Enclosed sprays and lagging, Sealed AIB, asbestos cement, textured coating, gasket	0
Asbestos Type	No Asbestos Detected	0

Material Assessment Score	N/A

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	4	Reference Number:	CH002155
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	N.A.D.I.S

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Textile seal to electric box
Product Type	Textiles/Paper
Extent Amount	< 1 lm

Recommendation	

Product Score	Medium Fibre Release - Asbestos insulating board, mill board, other low density insulation board, asbestos textiles, gaskets, rope and woven textiles, asbestos paper and felt	0
Extent of Damage	Low damage - a few scratches or surface marks; broken edges on boards, tiles etc.	0
Surface Treatment	Unsealed AIB, encapsulated lagging and sprays, ropes, textiles, paper	0
Asbestos Type	No Asbestos Detected	0

Material Assessment Score	N/A

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	5	Reference Number:	CH002156
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	Asbestos Identified

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Flashguards within electrics
Product Type	Asbestos Cement
Extent Amount	4 no.

Recommendation	Remove if likely to be disturbed

Product Score	Low Fibre Release - Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement, etc.)	1
Extent of Damage	Good condition - no visible damage	0
Surface Treatment	Enclosed sprays and lagging, Sealed AIB, asbestos cement, textured coating, gasket	1
Asbestos Type	Chrysotile	1

Material Assessment Score	3

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	6	Reference Number:	CH002157
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	Asbestos Identified

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Asbestos cement debris to floor
Product Type	Asbestos Cement
Extent Amount	1 m2

Recommendation	Remove if likely to be disturbed

Product Score	Low Fibre Release - Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement, etc.)	1
Extent of Damage	Low damage - a few scratches or surface marks; broken edges on boards, tiles etc.	1
Surface Treatment	Enclosed sprays and lagging, Sealed AIB, asbestos cement, textured coating, gasket	1
Asbestos Type	Chrysotile	1

Material Assessment Score	4

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Inspection Number	7	Reference Number:	CH002158
Inspection / Sample	Sample taken	Inspection Cross Reference / Visual I.D.	N.A.D.I.S

Notes	

Building	Boiler Room 2, Bradford Road Gasholder Station
Floor Level	Ground Floor
Area / Room	1 Boiler room
Feature	Gasket debris to floor
Product Type	Reinforced Composite
Extent Amount	1 no.

Recommendation	

Product Score	Medium Fibre Release - Asbestos insulating board, mill board, other low density insulation board, asbestos textiles, gaskets, rope and woven textiles, asbestos paper and felt	0
Extent of Damage	High damage - or delamination of materials, sprays and thermal insulation. Visible asbestos debris	0
Surface Treatment	Enclosed sprays and lagging, Sealed AIB, asbestos cement, textured coating, gasket	0
Asbestos Type	No Asbestos Detected	0

Material Assessment Score	N/A

Normal occupant activity	N/A	N/A

Likelihood of disturbance	N/A	N/A
Accessibility	N/A	N/A
Extent / Amount	N/A	N/A
Average		N/A

Number of occupants	N/A	N/A
Frequency of use of area	N/A	N/A
Average time area is in use	N/A	N/A
Average		N/A

Type of maintenance activity	N/A	N/A
Frequency of maintenance activity	N/A	N/A
Average		N/A

Priority Assessment Score	N/A

Risk Assessment Score	N/A

Appendix C – Material Assessment Criteria

Material Assessment

Please note; non-asbestos containing materials are not scored.

Product Type

SAMPLE VARIABLE	SCORE	EXAMPLES OF SCORE VARIABLES
Product type (or debris from product)	1	Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi–rigid paints or decorative finishes, asbestos cement etc)
	2	Asbestos insulating board (AIB), mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt
	3	Thermal insulation (e.g. pipe and boiler lagging) sprayed asbestos, loose asbestos, asbestos mattresses and packing.

Extent of Damage

SAMPLE VARIABLE	SCORE	EXAMPLES OF SCORE VARIABLES
Extent of damage / deterioration	0	Good condition: no visible damage
	1	Low damage: a few scratches or surface marks, broken edges on boards, tiles etc.
	2	Medium damage: significant breakage of material or several small areas where material has been damaged revealing loose asbestos fibres
	3	High damage or de–lamination: of materials, sprays and thermal insulation. Visible asbestos debris

Surface Treatment

SAMPLE VARIABLE	SCORE	EXAMPLES OF SCORE VARIABLES
Surface treatment	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles, asbestos cement (with exposed face painted or encapsulated)
	1	Enclosed sprays and lagging, AIB with (exposed face painted or encapsulated), unsealed asbestos cement sheets etc.
	2	Unsealed AIB or encapsulated lagging and sprays
	3	Unsealed lagging and sprays

Asbestos Type

SAMPLE VARIABLE	SCORE	EXAMPLES OF SCORE VARIABLES
Asbestos type	1	Chrysotile
	2	Amphibole asbestos excluding crocidolite (ie. Amosite)
	3	Crocidolite

Total Material Assessment Scores (as per HSG227)

SCORE	RISK CATEGORY
>10	High Risk, significant potential to release fibres
7 - 9	Medium Risk
5 - 6	Low Risk
<4	Very Low Risk

Appendix D – Analysis Certificates

WYG Environment Planning Transport Ltd
Arndale Court, Headingley
Leeds, LS6 2UJ
Phone: 0113 278 7111
Fax: 0113 275 0623
email: asbestos.leeds@wyg.com
www.wyg.com

6060

ANALYSIS OF BULK MATERIALS FOR ASBESTOS

Client:	National Grid Property Holdings National Grid House, Warwick Technology Park, Gallows Hill, Warwick
Site:	Bradford Road Gasholder Station, Broxton Street, Manchester
Order Reference:	N/A
Number of Samples:	7
Sample(s) taken by:	Dean Lambert, WYG
Date Received:	16th June 2017
Date Analysed:	21st June 2017
Analysed by:	Tom Barker
Analysed at:	WYG EPT Ltd, Arndale Court
Method:	Samples of materials, referenced as shown above, have been analysed qualitatively to determine the presence of asbestos fibres. Fibres in the sample were identified using a stereo microscope, polarised light and dispersion staining in accordance with in-house Procedure 07 based on Appendix 2 of HSG 248 'Asbestos: The analyst's guide for sampling, analysis and clearance procedures'.
Report Number:	J038013
Report Date:	13 Jul 2017

RESULTS

Sample Reference	Location	Feature	Material Type	Type of Asbestos Detected
CH002152	1 - Boiler room	Paint to boiler	Well Bound Material	NADIS
CH002153	1 - Boiler room	Textiles to boiler	Textiles/Paper	NADIS
CH002154	1 - Boiler room	Gasket to boiler	Reinforced Composite	NADIS
CH002155	1 - Boiler room	Textile seal to electric box	Textiles/Paper	NADIS
CH002156	1 - Boiler room	Flashguards within electrics	Asbestos Cement	Chrysotile
CH002157	1 - Boiler room	Asbestos cement debris to floor	Asbestos Cement	Chrysotile
CH002158	1 - Boiler room	Gasket debris to floor	Reinforced Composite	NADIS

Key: NADIS = No Asbestos Detected in Sample

J038013

REPORTED BY T. R. Barker Name: Tom Barker Position: Bulk Analyst

Disclaimer.

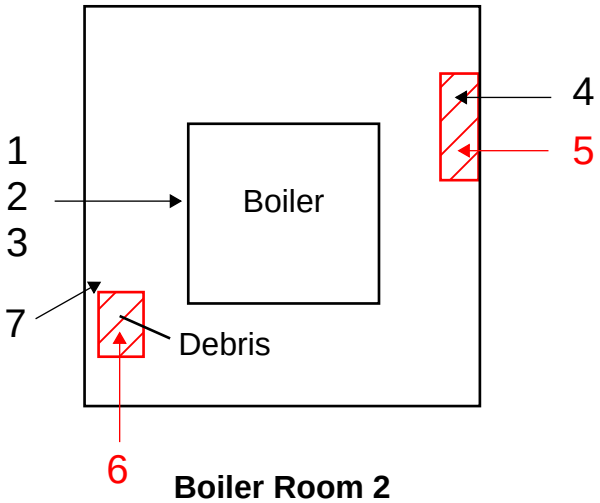
Opinions and interpretations, including the description of material type, are outside the scope of our UKAS accreditation. Results apply only to the sample(s) listed in the table above. WYG

Environment Ltd accepts no responsibility for errors which may have arisen during sampling or transportation and cannot take responsibility for the accuracy, representative nature and location of samples taken by external customers. This test report shall not be reproduced except in full without the written approval of WYG Environment Ltd

Appendix E – Descriptions of general items in each room

Area	Description of Materials
Boiler Room 2, Bradford Road Gasholder Station	
External	
1. External	Metal walls and ceiling concrete floor, plastic rain water goods
Ground Floor	
1. Boiler room	Metal ceiling and walls, concrete floor.

Appendix F – Site Sketches



Boiler Room 2

Asbestos Demolition Survey

Key:

Asbestos Present

No Access Rooms

Positive Inspection 1

Negative Inspection 2

Bradford Road Gasholder Station

Appendix B6 UXO Regional Map

REGIONAL UNEXPLODED BOMB RISK

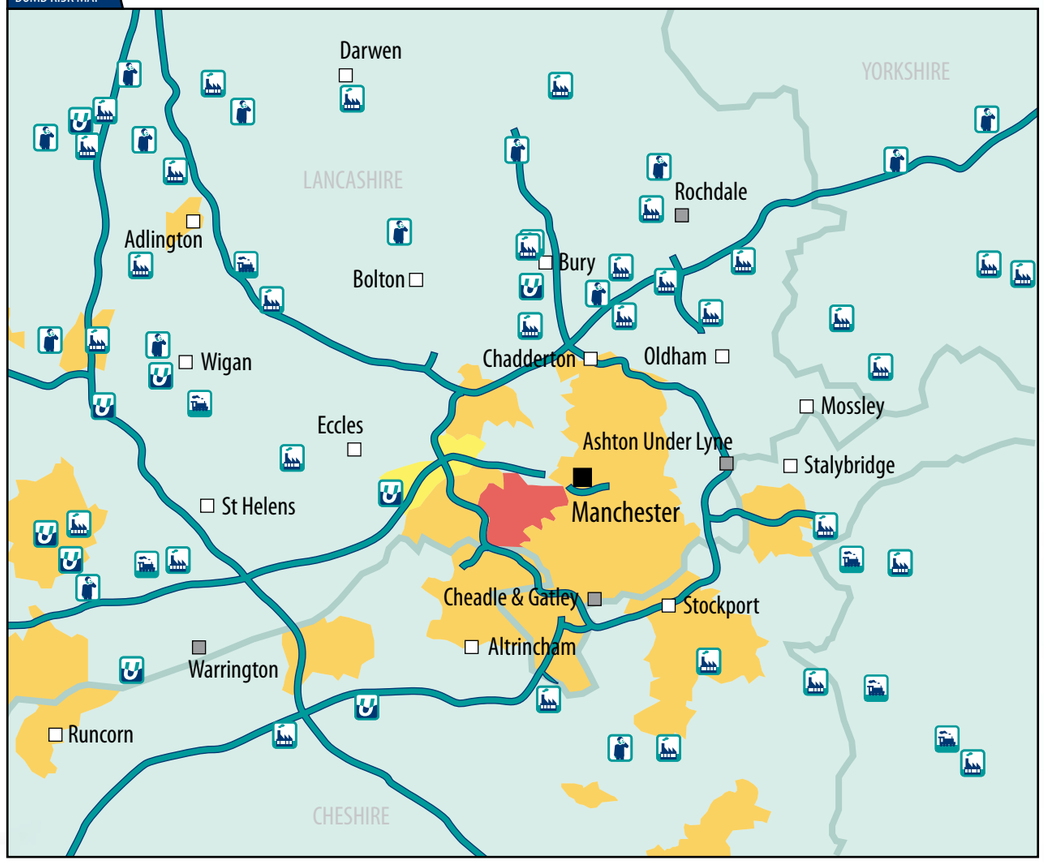
MANCHESTER

DENSITY OF BOMBS PER BOROUGH

Borough	High explosive	Anti-personnel	Incendiary
Bolton	45	0	0
Eccles	114	1	0
Manchester	712	18	7
Middleton	37	0	0
Oldham	25	1	0
Salford	406	29	16
Stretford	456	64	0
Swinton & Pendlebury	92	2	0
Urmston	122	5	0
Worsley	32	2	0

On average, 10% of high explosive and 50% of incendiary bombs failed to explode.

BOMB RISK MAP



OTHER WWII TARGETS

- military
- transport
- utilities
- industry
- docks
- other

BOMB TONNAGE

- >1000
- >500
- >100
- >0
- unverified

BOMB RISK

- high
- moderate
- low

The information in this regional UXB risk map is derived from a number of sources and should be read in conjunction with the "Users' Guide" (printed overleaf). Zetica cannot guarantee the accuracy or completeness of the information or data.

This map covers regions of coast with beaches, estuaries and alike. Further consideration of the bomb risk is required in these areas. The often inaccessible nature and changing ground conditions (e.g. movement of silt that may contain ordnance) means that historical bombing records for these areas are often poor or inaccurate and further assessment of the bomb risk may be required as part of a site specific study.

A FOUR-STEP PROCESS

- Risk assessment and method statement from a qualified explosive ordnance clearance (EOC) operative.
- Surface geophysical survey to allow shallow groundwork.
- MAGCONE detects UXBs and obstructions on piling layout to the no-risk depth.
- Detected UXBs can be dealt with by our EOC engineers and a Clearance Certificate issued for the site.

zetica

For more details on this and related services, telephone: +44 (0) 1993 886682 or visit our website: www.zetica.com

BOMB MAP USERS' GUIDE

Sources of information and explanation of bomb risk

Why?

Unexploded bombs (UXB) still present a risk to construction projects long after the end of the Second World War (WWII). UXBs often entered the ground unnoticed at high velocity and penetrated to a depth of several metres. Here they remain – vulnerable to disturbances from construction work. Beyond the depth of shallow excavation work, the greatest risk is to piling, drilling and probing crews. A piling rig could repeatedly hit a UXBs with considerable force before the crew realises an obstruction has been impacted. It could then be up to 72 hours before the detonator activates.

Who?

The responsibility for avoiding UXB risk usually lies with construction companies or house builders particularly those who are redeveloping urban sites. In addition, project engineering or environmental consultants are expected to advise their clients of a site's history. Other interested parties include those organisations whose employees are physically at most risk from intrusive works, normally piling companies, drillers or probing operators.

How?

UXB risk should be assessed for every site, but especially those in known heavily bombed areas or those situated near war-time strategic installations that were priority targets for enemy aircraft, for example, airfields. Zetica's regional bomb risk map is therefore a first point of reference from which the relative, potential abundance of UXBs can be judged. Consultants then advise their clients that an ordnance-risk desk study is required, which they may obtain from external sources. Construction companies or house builders who assess their own risk could choose to come direct to Zetica.

When?

Do not wait for the piling or drilling company to be on site before thinking about UXB risk – it will inevitably cause delays and higher costs. Request the regional bomb risk map from Zetica as soon as a site is being considered, and then use it to help you or your clients to decide if an ordnance-risk desk study is required.

Where?

Maps can be obtained for any county in England, Scotland, Wales or Northern Ireland – or for any London borough. They can help determine the areas that were most heavily bombed – but no part of the country should be considered 100% safe from UXB risk. Even remote rural areas can have a high risk if, for example, they were locations for decoy airfields or beacons that were lit to fool enemy pilots into thinking they had located a burning city that had been successfully hit by others in the raid.

How to use this regional map

This map is designed to give you an indication of the potential risk from UXBs in your area. If you are conducting work that involves excavation, piling or other disturbance of the ground, then you should use the map to identify the category of risk for your site.

The risk boundaries are a guide, compiled from data based on the political areas for which records are held; being just outside a high-risk area does not mean there is no UXB risk. You should use the map to assist in your decision of whether to investigate the UXB risk further.

Information on the regional risk remaining from UXBs in the UK

Zetica has built the largest UXB database of its kind in the UK. It includes a unique digital library of bomb census data, and maps showing key strategic points and bombing densities from the First and Second World Wars. The main sources of information include records from central government (Public Records Office), the Ministry of Defence, and the German Luftwaffe.

Using information from this database, Zetica has published maps of UXB risk on a regional, county and borough scale. The maps indicate relative degrees of UXB risk based on available records for bombing densities and known targeted areas for regions within the UK. The risk is broken down into individual boroughs, towns or cities. The data are based on the historical boroughs and are then overlaid onto the modern map. It is important to note that more-detailed research may be required for individual sites, particularly where proximity to a potential WWII target means the local risk may be higher.

High risk

Areas designated as high risk are those that show a high density of bombing hits (50+ bombs per 1000 acres) and abundant potential WWII targets. In high-risk regions, further action to mitigate UXB risk is considered essential.

Moderate risk

Moderate-risk regions are those that show a bomb density of between 11 and 50 bombs per 1000 acres and that may contain potential WWII targets. Action to mitigate the risk is considered essential, albeit more likely that a reduced scope of work is required compared with that needed for high-risk regions.

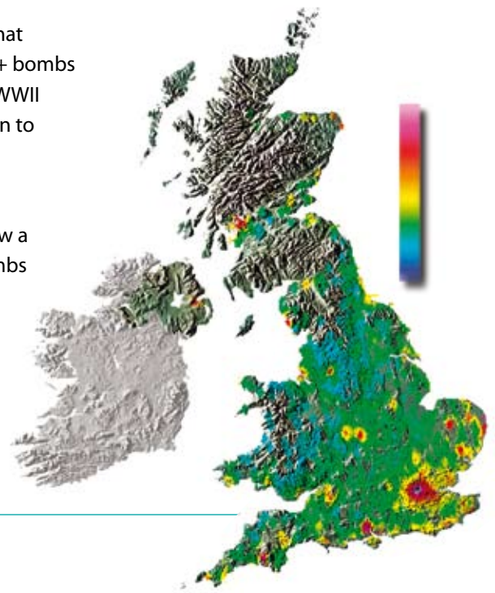
Low risk

Low-risk regions are those with a bombing density of up to 10 bombs per 1000 acres. These areas are considered to have a significant but low UXB risk. In general, further action to mitigate the risk is considered prudent, although not essential. Care is required when assessing the risk for specific sites where the risk may be higher because of local wartime activity.

Other WWII targets

Other regions with the risk of UXBs are key strategic points as defined by the government during WWII as representing potential enemy targets. Where these exist outside areas mapped as high, moderate or low risk, a site-specific assessment of the UXB risk may be required.

Relative UXB risk across UK



What to do if…

…you have a site that has a potential UXB risk

In the absence of current legislation requiring you to address the risk from UXBs, your responsibilities under health and safety legislation and regulations such as construction design and management require that you address all identified risks. The first stage is to request further advice from a professional adviser such as Zetica, or to gain more site-specific information by commissioning an ordnance-risk desk study. Then a strategy to deal with the risk can be established that is tailored to your proposed work.

…you find a suspect item or require advice

If during site works you find a suspect (ordnance-related) item, it is very important that you do not touch or move it (even if it has already been moved by an excavator). If it is clearly ordnance related, then dial 999 and ask for the police. Ensure that the area around the item is kept as clear as possible without placing yourself at risk. If you are unsure and do not wish to cause undue alarm, or you just require some advice, then you can call Zetica. We have experienced qualified UXB specialists on hand who can offer support and advice during any site works.

More-detailed procedures should be established in advance if you are in an area where the risk of finding a UXB is shown to be significant (moderate to high).

Site-specific desktop studies

Zetica is able to provide high-quality, site-specific UXB risk information for any residential, industrial or commercial property in the UK. These desktop studies provide details of the bombing density within an area and for the site itself, in order to indicate the risks of UXBs still being present. A risk assessment is provided to facilitate informed decision making on whether any further risk mitigation measures are required.

Appendix B7 Holder Water Analysis

Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781

WYG
Arndale Court
Arndale Centre
Otley Road
Leeds
LS6 2UJ

Attention :	Louise Ratliffe
Date :	23rd June, 2017
Your reference :	A074754-430
Our reference :	Test Report 17/10407 Batch 1
Location :	Bradford Road-Feasibility Study
Date samples received :	15th June, 2017
Status :	Final report
Issue :	1

Eight samples were received for analysis on 15th June, 2017 of which eight were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A074754-430
Location: Bradford Road-Feasibility Study
Contact: Louise Ratliffe
JE Job No.: 17/10407

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64			LOD/LOR	Units	Method No.
Sample ID	GH2A Upper	GH2A Lower	GH2B Upper	GH2B Lower	GH2C Upper	GH2C Lower	GH2D Upper	GH2D Lower					
Depth													
COC No / misc													
Containers	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G					
Sample Date	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017					
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017					
Dissolved Arsenic	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	3.0			<2.5	ug/l	TM30/PM14
Dissolved Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM30/PM14
Total Dissolved Chromium	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5			<1.5	ug/l	TM30/PM14
Dissolved Copper	<7	<7	<7	<7	<7	<7	<7	<7			<7	ug/l	TM30/PM14
Total Dissolved Iron	45	4546	32	4559	50	4898	52	4888			<20	ug/l	TM30/PM14
Dissolved Lead	<5	<5	<5	<5	13	<5	<5	<5			<5	ug/l	TM30/PM14
Dissolved Mercury	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM30/PM14
Dissolved Nickel	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM30/PM14
Dissolved Selenium	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM30/PM14
Dissolved Zinc	23	<3	46	<3	41	<3	20	3			<3	ug/l	TM30/PM14
PAH MS													
Naphthalene	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	ug/l	TM4/PM30
Acenaphthylene	0.015	0.020	<0.013	0.015	0.014	0.022	<0.013	0.020			<0.013	ug/l	TM4/PM30
Acenaphthene	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013			<0.013	ug/l	TM4/PM30
Fluorene	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014			<0.014	ug/l	TM4/PM30
Phenanthrene	<0.011	<0.011	<0.011	<0.011	0.086	<0.011	<0.011	<0.011			<0.011	ug/l	TM4/PM30
Anthracene	0.015	<0.013	<0.013	<0.013	0.014	<0.013	<0.013	<0.013			<0.013	ug/l	TM4/PM30
Fluoranthene	0.102	<0.012	0.100	<0.012	0.119	<0.012	0.017	<0.012			<0.012	ug/l	TM4/PM30
Pyrene	0.282	0.058	0.162	0.057	0.178	0.063	0.091	0.061			<0.013	ug/l	TM4/PM30
Benzo(a)anthracene	0.020	<0.015	<0.015	<0.015	0.043	<0.015	<0.015	<0.015			<0.015	ug/l	TM4/PM30
Chrysene	0.116	<0.011	0.084	<0.011	0.151	<0.011	0.045	0.015			<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene	0.280	<0.018	0.121	<0.018	0.164	<0.018	0.075	<0.018			<0.018	ug/l	TM4/PM30
Benzo(a)pyrene	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016			<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene	0.041	<0.011	0.014	<0.011	0.023	<0.011	<0.011	<0.011			<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	0.023	<0.011	<0.011	<0.011	0.013	<0.011	<0.011	<0.011			<0.011	ug/l	TM4/PM30
PAH 16 Total	0.894	<0.195	0.481	<0.195	0.805	<0.195	0.228	<0.195			<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	0.20	<0.01	0.09	<0.01	0.12	<0.01	0.05	<0.01			<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	0.08	<0.01	0.03	<0.01	0.05	<0.01	0.02	<0.01			<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	76	75	71	76	79	74	77	76			<0	%	TM4/PM30
Methyl Tertiary Butyl Ether	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM15/PM10
Toluene	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM15/PM10
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
p/m-Xylene	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	92	89	99	98	100	106	99	94			<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	92	90	101	100	102	104	102	98			<0	%	TM15/PM10
Fats Oils and Grease	810	<10	940	<10	950	<10	500	<10			<10	ug/l	TM5/PM30

Client Name: WYG
Reference: A074754-430
Location: Bradford Road-Feasibility Study
Contact: Louise Ratliffe
JE Job No.: 17/10407

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64					
Sample ID	GH2A Upper	GH2A Lower	GH2B Upper	GH2B Lower	GH2C Upper	GH2C Lower	GH2D Upper	GH2D Lower			Please see attached notes for all abbreviations and acronyms		
Depth													
COC No / misc													
Containers	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G	V H HN N Z P G					
Sample Date	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017	13/06/2017					
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid					
Batch Number	1	1	1	1	1	1	1	1			LOD/LOR	Units	Method No.
Date of Receipt	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017	15/06/2017					
TPH CWG													
Aliphatics													
>C5-C6	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>C6-C8	<10	<10	<10	25	<10	17	<10	<10			<10	ug/l	TM36/PM12
>C8-C10	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>C10-C12	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM5/PM30
>C12-C16	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM30
>C16-C21	20	<10	20	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM30
>C21-C35	790	<10	920	<10	950	<10	500	<10			<10	ug/l	TM5/PM30
Total aliphatics C5-35	810	<10	940	25	950	17	500	<10			<10	ug/l	TM5/TM36/PM30/PM12
Aromatics													
>C5-EC7	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC7-EC8	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC8-EC10	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC10-EC12	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM5/PM30
>EC12-EC16	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM30
>EC16-EC21	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM30
>EC21-EC35	<10	<10	170	<10	200	<10	110	<10			<10	ug/l	TM5/PM30
Total aromatics C5-35	<10	<10	170	<10	200	<10	110	<10			<10	ug/l	TM5/TM36/PM30/PM12
Total aliphatics and aromatics(C5-35)	810	<10	1110	25	1150	17	610	<10			<10	ug/l	TM5/TM36/PM30/PM12
Total Phenols HPLC	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	mg/l	TM26/PM0
Sulphate as SO4	8.0	3.5	7.7	0.8	7.1	1.6	5.6	1.2			<0.5	mg/l	TM38/PM0
Chloride	5.4	4.7	5.7	4.8	5.9	4.8	5.7	4.9			<0.3	mg/l	TM38/PM0
Nitrate as NO3	0.8	0.3	1.1	<0.2	0.7	4.4	1.0	<0.2			<0.2	mg/l	TM38/PM0
Total Cyanide	0.02	0.07	0.02	0.07	0.02	0.07	0.02	0.07			<0.01	mg/l	TM89/PM0
Ammoniacal Nitrogen as N	1.04	1.69	0.88	1.72	0.99	1.67	1.00	1.68			<0.03	mg/l	TM38/PM0
Ammoniacal Nitrogen as NH3	1.27	2.06	1.07	2.10	1.20	2.03	1.22	2.04			<0.03	mg/l	TM38/PM0
Dissolved Methane	8	1011++	<1	814++	<1	910++	7	524			<1	ug/l	TM25/PM0
Sulphide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			<0.01	mg/l	TM106/PM0
BOD (Settled)	1	2	2	1	1	2	2	2			<1	mg/l	TM58/PM0
COD (Settled)	21	18	23	13	26	13	20	16			<7	mg/l	TM57/PM0
Dissolved Oxygen	9	7	9	8	9	8	9	7			<1	mg/l	TM59/PM0
pH	7.25	7.22	7.25	7.22	7.22	7.19	7.26	7.21			<0.01	pH units	TM73/PM0
Total Organic Carbon	6	4	8	4	7	4	6	4			<2	mg/l	TM60/PM0
Total Suspended Solids	255	66	<10	17	83	22	<10	21			<10	mg/l	TM37/PM0
True Colour	58	54	56	560	48	64	61	73			<15	PCU	TM35/PM0

Client Name: WYG
Reference: A074754-430
Location: Bradford Road-Feasibility Study
Contact: Louise Ratliffe

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 17/10407						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/10407

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/10407

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM30/PM12	CWG GC-FID				
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM25	Determintaion of Dissolved Methane, Ethane and Ethene by Headspace GC-FID	PM0	No preparation is required.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7, 6010B and BS EN ISO 11885 2009	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.				
TM35	True and apparent colour by Hach Lange DR3800 spectrophotometer. Apparent colour includes dissolved and suspended matter. True colour is determinined after filtration of the sample.	PM0	No preparation is required.				
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.				
TM37	Modified USEPA 160.2 .Gravimetric determination of Total Suspended Solids. Sample is filtered and the resulting residue is dried and weighed.	PM0	No preparation is required.				

JE Job No: 17/10407

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM57	Modified US EPA Method 410.4. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometerically.	PM0	No preparation is required.				
TM58	Modified USEPA methods 405.1 and BS 5667-3. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as ammonia, nitrite and organic nitrogen which exert a nitrogenous demand.	PM0	No preparation is required.				
TM59	Determination of Dissolved Oxygen using the Hach HQ30D Oxygen Meter	PM0	No preparation is required.				
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser, the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDIR).	PM0	No preparation is required.				
TM73	Modified US EPA methods 150.1 and 9045D and BS1377:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.				
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.				
TM106	Determination of Sulphide by Skalar Continuous Flow Analyser	PM0	No preparation is required.				

Appendix B8 Paint Analysis

Certificate of Analysis

Certificate Number	17-03036-1
	19-Jul-17
Client	WYG Environmental Planning Transport Limited Quay West at MediaCityUK Trafford Wharf Road Trafford Park Manchester M17 1HH
Our Reference	17-03036-1
Client Reference	(not supplied)
Order No	(not supplied)
Contract Title	Gas Golder, Bradford Road, Manchester, M40 7BW
Description	4 Misc samples.
Date Received	20-Jun-17
Date Started	20-Jun-17
Date Completed	19-Jul-17
Test Procedures	Identified by prefix DETSn (details on request).
Notes	**This report supersedes 17-03036. Sample removed.** Opinions and interpretations are outside the laboratory's scope of ISO 10725 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Adam Fenwick
Contracts Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Misc Samples

Our Ref 17-03036-1
Client Ref
Contract Title Gas Golder, Bradford Road, Manchester, M40 7BW

			Lab No	1192142	1192143	1192144
			Sample ID	130617NS006	130617NS007	130617NS008
			Depth			
			Other ID	Metal Frame	Metal Frame	Metal Frame
			Sample Type	MISC	MISC	MISC
			Sampling Date	13/06/17	13/06/17	13/06/17
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	45	9.5	24
Beryllium	DETSC 2301#	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	0.5	2.3	2.7
Chromium	DETSC 2301#	0.15	mg/kg	75	190	600
Copper	DETSC 2301#	0.2	mg/kg	68	93	47
Iron	DETSC 2301	25	mg/kg	70000	85000	45000
Lead	DETSC 2301#	0.3	mg/kg	63000	4000	61000
Mercury	DETSC 2325#	0.05	mg/kg	0.18	0.61	0.61
Nickel	DETSC 2301#	1	mg/kg	17	52	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301	0.8	mg/kg	13	8.5	8.7
Zinc	DETSC 2301#	1	mg/kg	13000	6400	22000

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Misc Samples

Our Ref 17-03036-1
Client Ref
Contract Title Gas Golder, Bradford Road, Manchester, M40 7BW

Lab No	1192145
Sample ID	130617NS009
Depth	
Other ID	Metal Frame
Sample Type	MISC
Sampling Date	13/06/17
Sampling Time	n/s

Test	**Method**	**LOD**	**Units**	
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	170
Beryllium	DETSC 2301#	0.2	mg/kg	0.5
Boron, Water Soluble	DETSC 2123#	0.2	mg/kg	1.0
Chromium	DETSC 2301#	0.15	mg/kg	110
Copper	DETSC 2301#	0.2	mg/kg	280
Iron	DETSC 2301	25	mg/kg	290000
Lead	DETSC 2301#	0.3	mg/kg	30000
Mercury	DETSC 2325#	0.05	mg/kg	0.75
Nickel	DETSC 2301#	1	mg/kg	93
Selenium	DETSC 2301#	0.5	mg/kg	0.9
Vanadium	DETSC 2301	0.8	mg/kg	54
Zinc	DETSC 2301#	1	mg/kg	1500

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 17-03036-1
Client Ref
Contract Gas Golder, Bradford Road, Manchester, M40 7BW

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1192142	130617NS006 MISC	13/06/17	PG		
1192143	130617NS007 MISC	13/06/17	PG		
1192144	130617NS008 MISC	13/06/17	PG		
1192145	130617NS009 MISC	13/06/17	PG		

Key: P-Plastic G-Bag

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Appendix B9 No.1 Sheet

COPY SENT TO AREA ON :

BRITISH GAS

REGIONAL PLANT DEPT.

REPORT OF EXAMINATION OF GASHOLDER WATER-SEALED TYPE — BASIC RECORD

NAME: BRITISH GAS NORTH WESTERN EAST AREA

LOCATION: BRADFORD ROAD M10 7BL

GASHOLDER No.: 2 Date of inspection:

SITUATION:

HOLDER BUILT BY: Ashmore Benson & Pease Ltd Date of completion: 1910

TANK BUILT BY: E. Nuttall & Co Date of completion: 1910

LIFT ADDED BY: Date of completion:

TYPE (i.e. Column, Spiral or Rope Guided): Column Guided in Brick Tank

CAPACITY (exclusive of Crown): 10,000,000 cu.ft. (283,170 cu.m.)

CAPACITY OF CROWN: 589,500 cu.ft. (16,693 cu.m.)

LIFTS	Top	Second	Third	Fourth	Fifth
Diameter	273'0"	276'0"	279'0"	282'0"	
Depth	42'0"	40'6"	40'6"	40'6"	
Pressure (in. w.g.)/(mbar)	4.5	6.5	8.5	10.5	
No. of Columns ~~Spiral Guides or Ropes~~	32				

GUIDE FRAMING (General Description): 32 Latticed Columns linked together with 6 tier latticed girders.

CROWN—RISE: 20'0"

Number and Type of Manholes: 7 Flat Covers

Position and Number of Gas and Air Vents: 1 6" &1 10" Valves in centr plate

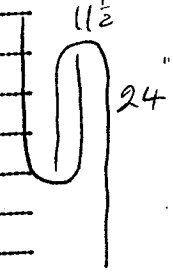
SHEETING THICKNESS

Crown: Outer Row: $\frac{3}{4}$" Other Rows:

Sides: Top Row: $\frac{5}{8}$" Intermediate Rows:

Bottom Row: $\frac{1}{2}$"

CUPS & GRIPS (Size and construction, with sketch): $11\frac{1}{2}$" x $\frac{1}{2}$" ~~Pressed Cups & Grips~~



TOP CURB & CROWN FRAMING (Construction—See Sketch Sheet): Top curb 6" x 6" x $\frac{7}{8}$" angle Stationary steel crown framing - 32 6" x 5" x 25 lb RSJ main bars with tie bars and bracing

TYPE OF LADDER: Vertical with 6 rest platforms and backcages

TANK

Diameter: 285'0" Depth: 44'6" Construction: Brick

Position in Relation to Ground Level: Top curb at ground level

Rest Blocks: Not known Number: Size:

MATERIAL USED FOR CONSTRUCTION OF

Gasholder: Steel Rivetted

Tank: Brick and Puddle Clay

INLET & OUTLET CONNECTIONS

Size: 3'6" dia

Position of Each: South West Together or separated: Together

TYPE OF SAFETY SEAL

On Inlet Connection: ~~None~~ Livesey Box

On Outlet Connection: ~~None~~ Livesey Box

SIGNATURE DATE

FORM No. 751/65

CG.455 7/83

BRITISH ENGINE BOILER & ELECTRICAL INSURANCE CO. LTD

THE MANCHESTER STEAM USERS ASSOCIATION

DISC CUTTING

REPORT OF EXAMINATION OF GASHOLDER

(WATER-SEALED TYPES)

These Report Forms include all the information required on the standard Gasholder Record Sheets published by the Institution of Gas Engineers.

OWNERS North Western Gas Board, Manchester Group, Manchester Undertaking

UNDERTAKING

IDENTIFICATION NO. 2 PURPOSE Town Supply

SITUATION Bradford Road, Newton, Manchester

BUILT IN 1910 by Holder Newton Bean & Rose Co. Ltd.

Tank

INNER LIFT RE SHEETED 1953. SECOND LIFT INTER SHEETING RENEWED 1955

PUT TO WORK 1910 LIFT ADDED IN

TYPE (i.e. Column, Spiral or Rope Guided) Column Guided in Brick Tank

CAPACITY Nominal 10,000,000 cu ft

Working (i.e. Calculated) 10,000,000 cu ft

LIFTS

	Top	Second	Third	Fourth	Fifth
Diameter	273'-0	276'-0	279'-0	282'-0	—
Depth	42'-0	40'-6	40'-6	40'-6	—
Pressure (WG")	4 3/4	6 1/2	8 1/2	10 1/2	—
No. and Size of Spiral Guides or Ropes	5"	7 1/4"	9.4	11.4	—

INNER LIFT GUIDES 7" PRIMER THEN COLOUR ANTIS

Column Guided and Guide Framed Holders (No. and height of Columns and General Description of Framework).

32 Steel Lattice Columns 169' 6" high x 8'0" x 4'0" at base

6 tier steel lattice Girders

6 tier flat steel diagonal Bracing } R.S.O for dimensions

CROWN Rise 20'-0" No. and Type of Manholes 3 Flat Covers 2 Chimney Boxes

SHEETING THICKNESS Crown: Outer Row 3/4 Other Rows 8 lbs

Sides: Top Row 5/8 Intermediate Rows 9 lbs

Bottom Row 1/2 Other Lifts 1/2 - 9 lbs 1/2

CUPS AND GRIPS (Size and Construction, i.e. Pressed, Channel or Built-up) 11 1/2" x 1/2" Pressed Plate Cups

TOP CURB AND CROWN FRAMING (Construction, from Maker's Drawings) 6" x 6" x 3/8" Steel angle Curb Stationary Framing. 32 - 6" x 5" x 25 lbs R.S.J. members 32 - 6" x 5" x 25 lbs R.S.J. secondary beams & supporting rings 6" x 5" x 25 lbs R.S.J. & Purlins 4" x 3 1/2" x 3/8" steel angle purlins. The roof [illegible]

TYPE OF LADDER Steel ladder 3" x 3/8" flat bars with 3/4" dia rings [illegible] 8" x 5" x 28 lbs R.S.J.

TANK Diameter 285'-0 Depth 44'-6 Construction Brick Tank

Position in relation to Ground Level Top level of Ground level

MATERIAL USED FOR CONSTRUCTION OF Gasholder Steel

Tank Brick & Puddle Clay

INLET AND OUTLET CONNECTIONS—Size 3'-6" dia

Position: South East, Together or Separated Together at S.W.

BRITISH ENGINE, BOILER & ELECTRICAL INSURANCE COMPANY LIMITED,
24 FENNEL STREET, MANCHESTER 4.

THE INSTITUTION OF GAS ENGINEERS

GASHOLDER RECORD SHEET
(In conformity with Safety Recommendations IGE/SR/4 Gasholders)

IGE/GR/110
(quote this number when ordering)

WATER-SEALED GASHOLDER RECORD

NAME OF UNDERTAKING: BRITISH GAS NORTH WESTERN — EAST AREA

ADDRESS OF SITE: BRADFORD ROAD MANCHESTER

GASHOLDER No.: 2 GAS STORED: NATURAL GAS

SITUATION:

HOLDER BUILT BY: ASHMORE, BENSON, PEASE AND CO. Date of completion: 1910

TANK BUILT BY: AS ABOVE Date of completion: 1910

LIFT ADDED BY: N. A. Date of completion:

TYPE (i.e. Column, Spiral or Rope Guided): COLUMN GUIDED IN BRICK TANK

CAPACITY (exclusive of Crown): 10.000.000 scf

CAPACITY OF CROWN: –

LIFTS

	Top	Second	Third	Fourth	Fifth
Diameter	273' 0"	276' 0"	279' 0"	282' 0"	
Depth	43' 0	40' 6"	40' 6"	40' 6"	
Pressure (in. w.g.)/(mbar)	4½" WG	6½" WG	8½" WG	10½" WG	
No. of Columns Spiral Guides or Ropes					

GUIDE FRAMING (General Description): 32 STEEL LATTICE COLUMNS 169' 6" HIGH X 8' 0 X 4' 0 AT BASE, 6 TIERS LATTICE GIRDERS (STEEL), 6 TIERS FLAT STEEL DIAGONAL BRACINGS

CROWN—RISE: 20' 0"

Number and Type of Manholes: 3 FLAT COVERS, 2 LINESEY BOXES

Position and Number of Gas and Air Vents:

SHEETING THICKNESS

Crown: Outer Row: ¾" Other Rows: 8 ISWG

Sides: Top Row: ⅝" Intermediate Rows: 9 ISWG

Bottom Row: ½"

CUPS & GRIPS (Size and construction, with sketch): 11½" x ½" PRESSED PLATE CUPS

TOP CURB & CROWN FRAMING (Construction—See Sketch Sheet): 6" x 6" x ⅞" STEEL ANGLE CURB

STATIONARY FRAMING: 32 – 6" x 5" x 25 lbs RSJ MAIN BARS

32 6" x 5" x 25 lbs RSJ SECONDARY BARS

TYPE OF LADDER: STEEL LADDER 3" x ⅝ FLAT SIDES ¾" DIA RINGS

TANK

Diameter: 285' 0" Depth: 44' 6" Construction: BRICK

Position in Relation to Ground Level: TOP CURB AT GROUND LEVEL

Rest Blocks: Number: Size:

MATERIAL USED FOR CONSTRUCTION OF

Gasholder: STEEL

Tank: BRICK AND PUDDLED CLAY

INLET & OUTLET CONNECTIONS

Size:

Position of Each: SOUTH WEST Together ~~or separated~~:

TYPE OF SAFETY SEAL

On Inlet Connection:

On Outlet Connection:

SIGNATURE: J A Jepson DATE: AUGUST 1988

BRITISH GAS

REPORT OF EXAMINATION OF GASHOLDER
WATER-SEALED TYPE — BASIC RECORD

NAME: BRITISH GAS NORTH WESTERN EAST AREA

LOCATION: BRADFORD ROAD

GASHOLDER No.: 2 — Date of inspection: 16.7.91

SITUATION:

HOLDER BUILT BY: Ashmore Benson & Pease Ltd — Date of completion: 1910

TANK BUILT BY: E. Nuttall & Co — Date of completion: 1910

LIFT ADDED BY: — Date of completion:

TYPE (i.e. Column, Spiral or Rope Guided): Column Guided in Brick Tank

CAPACITY (exclusive of Crown): 10,000,000 cu.ft. (283,170 cu.m.)

CAPACITY OF CROWN: 589,500 cu.ft. (16,693 cu.m.)

LIFTS	Top	Second	Third	Fourth	Fifth
Diameter	273'0"	276'0"	279'0"	282'0"	
Depth	42'0"	40'6"	40'6"	40'6"	
Pressure (in. w.g.)/(mbar)	4.5	6.5	8.5	10.5	
No. of Columns ~~Spiral Guides or Ropes~~	32				

GUIDE FRAMING (General Description): 32 Latticed Columns linked together with 6 tier latticed girders.

CROWN—RISE: 20'0"

Number and Type of Manholes: 7 Flat Covers

Position and Number of Gas and Air Vents: 1 6" &1 10" Valves in c plate

SHEETING THICKNESS

Crown: Outer Row: $\frac{3}{4}$" — Other Rows:

Sides: Top Row: $\frac{5}{8}$" — Intermediate Rows:

Bottom Row: $\frac{1}{2}$"

CUPS & GRIPS (Size and construction, with sketch): ~~$11\frac{1}{2}$" x $\frac{1}{2}$" Pressed Cups & Grips~~

TOP CURB & CROWN FRAMING (Construction—See Sketch Sheet): Top curb 6" x 6" x $\frac{7}{8}$" angle Stationary steel crown framing - 32 6" x 5" x 25 lb RSJ main bars with tie bars and bracing

TYPE OF LADDER: Verticalwith 6 rest platforms and backcages

TANK: Diameter: 285'0" — Depth: 44'6" — Construction: Brick

Position in Relation to Ground Level: Top curb at ground level

Rest Blocks: Not known — Number: — Size:

MATERIAL USED FOR CONSTRUCTION OF: Gasholder: Steel — Tank: Brick and Puddle Clay

INLET & OUTLET CONNECTIONS: Size: 3'6" dia. — Position of Each: South West — Together or separated: Together

TYPE OF SAFETY SEAL: On Inlet Connection: None — On Outlet Connection: None

BRITISH GAS PLC QUALITY SYSTEMS AND QUALITY AUDITS SURVEYOR No. G. HICKSON SIGNATURE

SIGNATURE: — DATE: 22.7.91

FORM No. 751/65

CG.455 7/73

Appendix B10 Dumpling Survey

BRADFORD RD. HOLDER SITE – SURVEY No.2

Dumpling Profiling of Holder No. 2

Survey carried out w/c 28th April 2014

-The dumpling in Holder No. 2 is of a solid construction ie brick, stone, concrete.

-The crown support structure of Holder No. 2 is STEEL.

- Oil is present between the lifts and the outer annulus in Holder No.2.

- Included in the survey is an historical drawing indicating the dumpling which shows the same shape as the recent survey.

- The tank depth has been confirmed at 14m. The historical drawing indicates 13.6m which is only a discrepancy of 400mm.

- The dumpling volume & percentage, in relation to the overall holder tank volume, is as follows :-

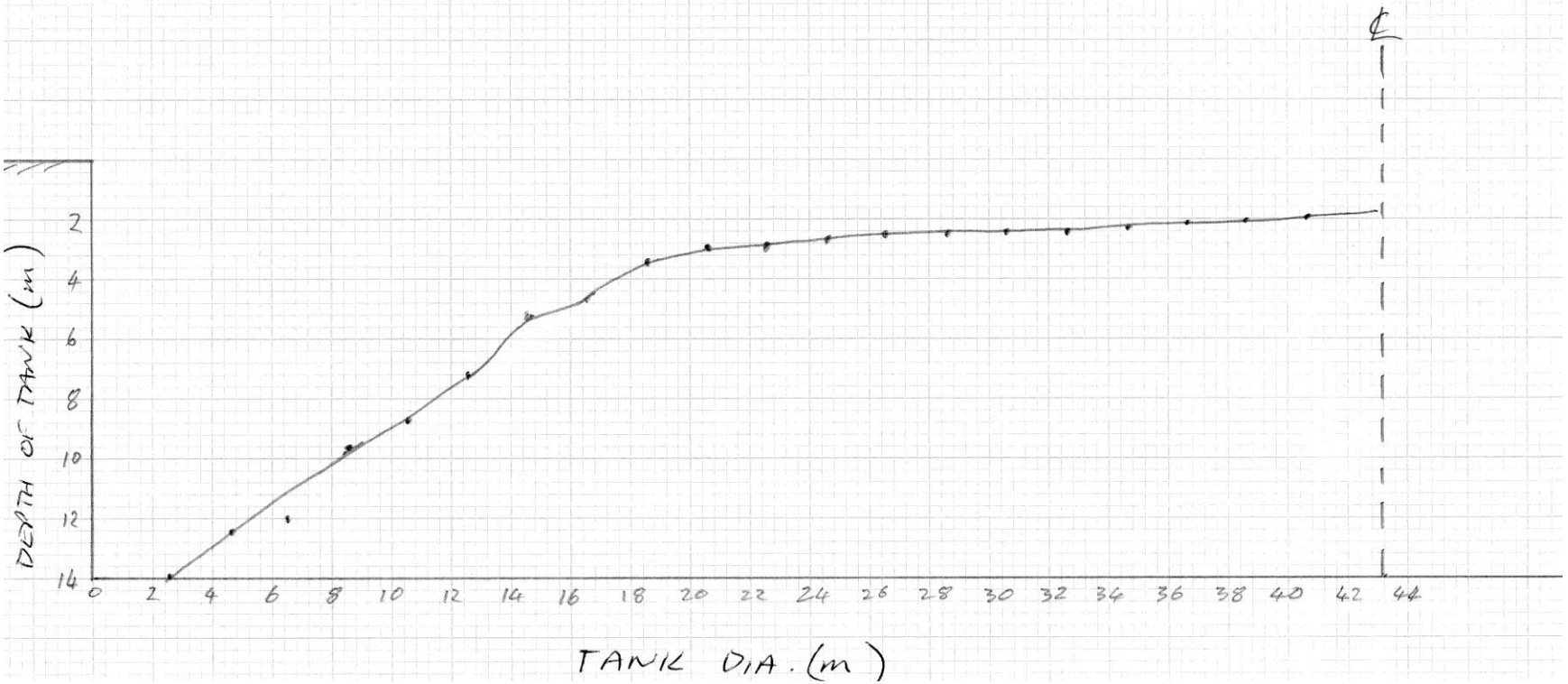
- Holder No.2 - Dumpling Volume 37367m3 – 45.02% of Tank Volume.

BRADFORD RD. No. 2. (SURVEY No. 2)

VOL. OF DUMPLING = 37367 m^3

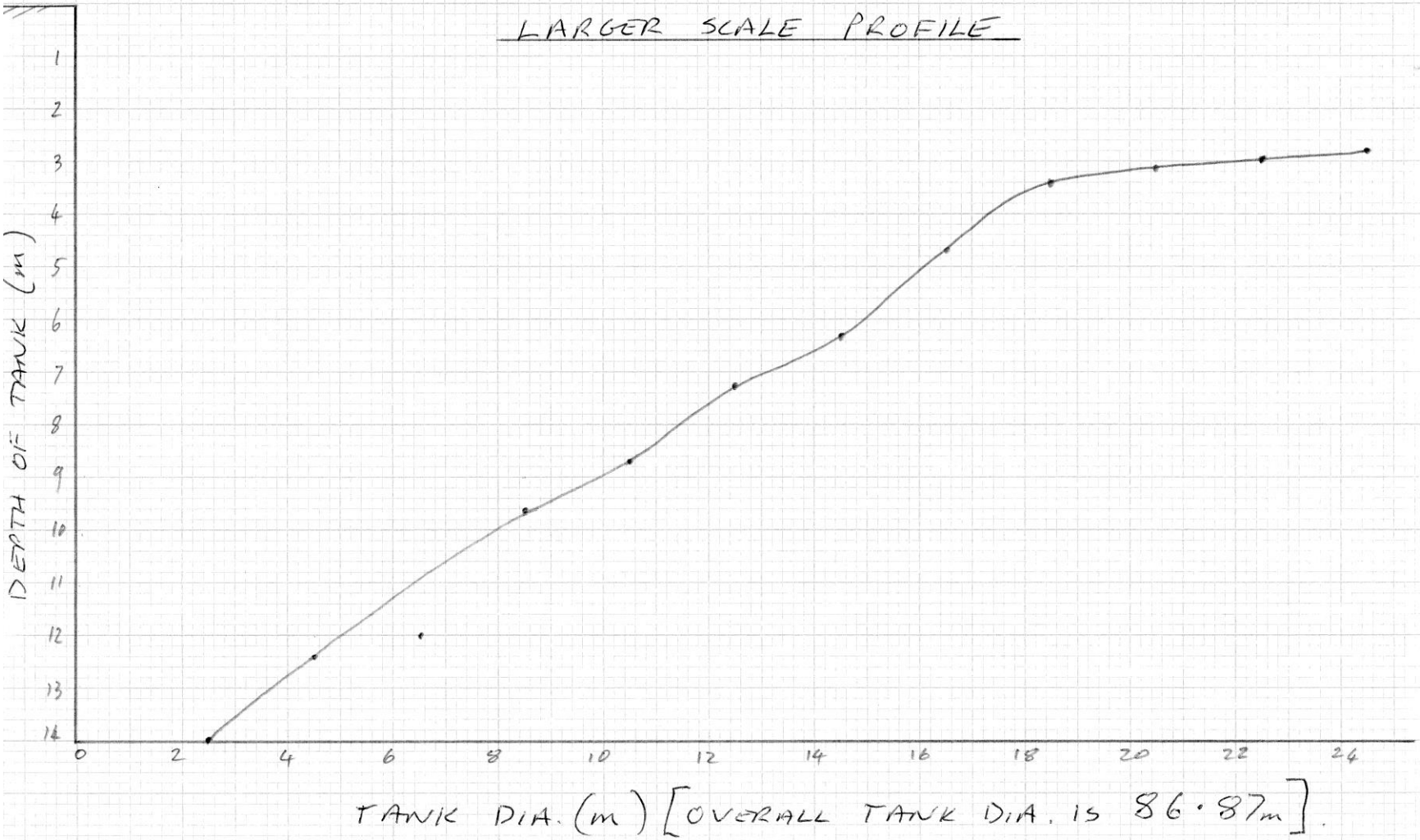
VOL. OF TANK = 83007 m^3

% OF DUMPLING IS 45.02%



BRADFORD RD. No. 2 (SURVEY No. 2)

LARGER SCALE PROFILE



M197

DRAWING No 1

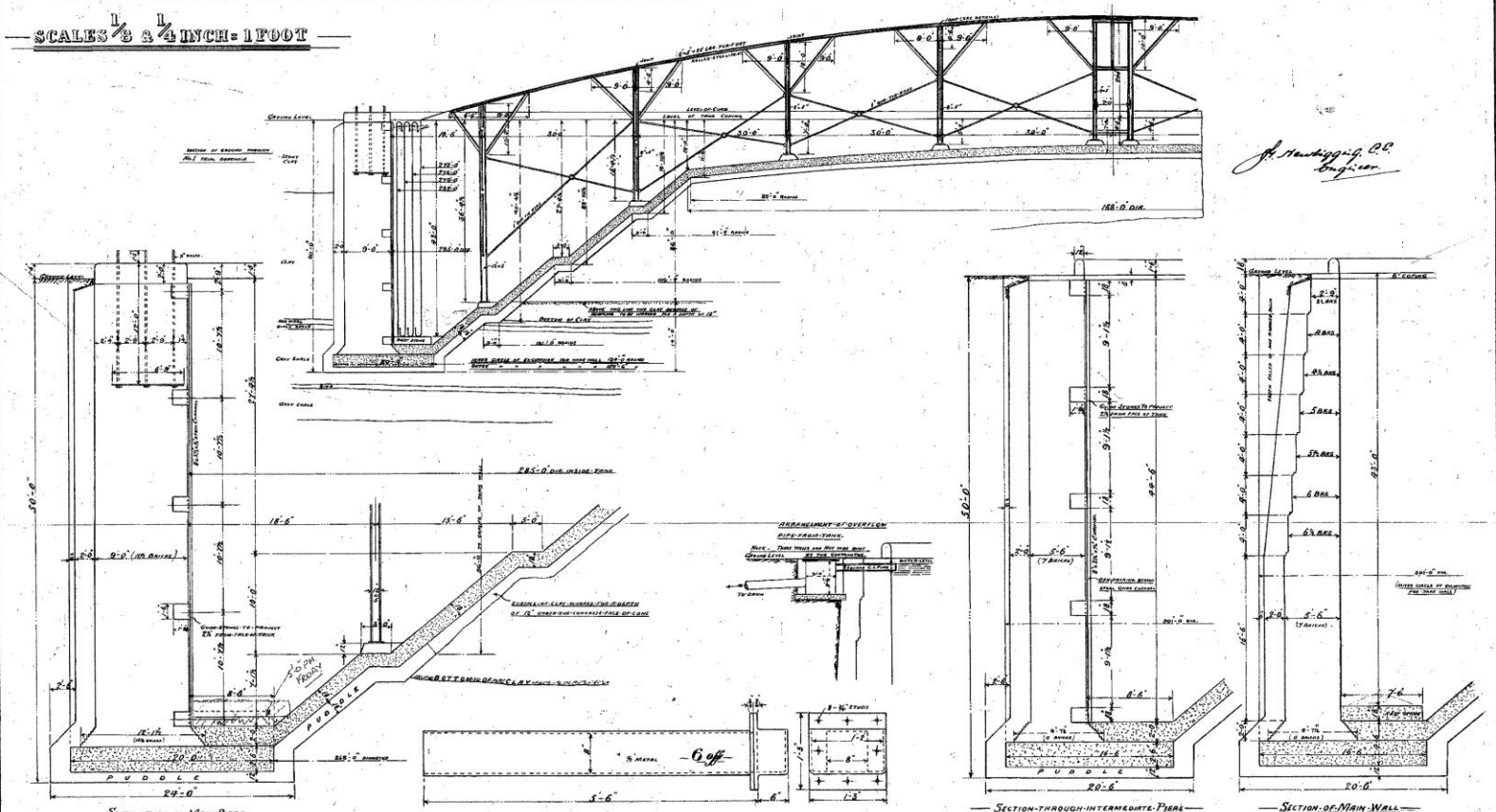
MANCHESTER CORPORATION GAS WORKS

No 2 Holder,

BRADFORD ROAD STATION

SECTIONAL ELEVATION OF GAS HOLDER TANK 285'-0" DIA X 44'-6" DEEP — DETAILS OF PIERS & WALL

SCALES 1/8 & 1/4 INCH = 1 FOOT



J. Hastings C.E. Engineer

35

B/2021

MAC/BRD/EIT/44

Gas Holder Dumpling Survey Record Sheet

Holder Site: BRADFORD RD.	Holder Number TWO

Measurement Points	Staff Reading	Extension Length	Total
Ground, Level With Tank Top (datum Point)	4·190 Mtr	3 Mtr	7·190 Mtr
Tank outer anulus	4·200 Mtr	17 Mtr	21·200 Mtr
Distance From Tank Wall			
2·5	4·200 Mtr	17 Mtr	21·200 Mtr
4·5	4·570 Mtr	15 Mtr	19·570 Mtr
6·5	4·200 Mtr	" Mtr	19·200 Mtr
8·5	3·760 Mtr	13 Mtr	16·760 Mtr
10·5	2·890 Mtr	" Mtr	15·890 Mtr
12·5	4·430 Mtr	10 Mtr	14·430 Mtr
14·5	2·530 Mtr	" Mtr	12·530 Mtr
16·5	1·880 Mtr	" Mtr	11·880 Mtr
18·5	1·550 Mtr	9 Mtr	10·550 Mtr
20·5	1·330 Mtr	" Mtr	10·330 Mtr
22·5	1·130 Mtr	" Mtr	10·130 Mtr
24·5	970 Mtr	" Mtr	9·970 Mtr
26·5	830 Mtr	" Mtr	9·830 Mtr
28·5	690 Mtr	" Mtr	9·690 Mtr
30·5	590 Mtr	" Mtr	9·590 Mtr
32·5	530 Mtr	" Mtr	9·530 Mtr
34·5	450 Mtr	" Mtr	9·450 Mtr
36·5	380 Mtr	" Mtr	9·380 Mtr
38·5	310 Mtr	" Mtr	9·310 Mtr
40·5	250 Mtr	" Mtr	9·250 Mtr
LAST HOLE TO CENTRE	Mtr	Mtr	Mtr
3 MTRS	Mtr	Mtr	Mtr
	Mtr	Mtr	Mtr

Distance from tank wall to inner lift	1·800 MTR
Distance from tank top to water level	600MM

Survey team J. BUTTERWORTH. G. ROBERTS.

Date of survey 2/5/14

Gas Holder Dumpling Survey Record Sheet

Holder Site: BRADFORD ROAD.	Holder Number TWO

Action		
Drill at 4 points and dip for presence of oil	Oil present ?	~~Yes~~/No
Drill to identify crown support material	Structure material type ?	~~Wood~~/Steel
Oil present in the tank outer anulas	Depth of oil ?	~~None~~/~~Skim~~/~~More~~

Further information/comments

OIL IN BETWEEN THE LIFTS ON THE OUTER ANULUS.

Appendix B11 Isolation Certification - Awaiting

Appendix B12 NRO Documentation - Awaiting

Appendix B13 Discharge Consent

Service Delivery
Thirlmere House
Lingley Mere Business Park
Lingley Green Avenue
Great Sankey
Warrington WA5 3LP

Telephone 01925 234000
www.unitedutilities.com

National Grid Gas plc
t/a National Grid
1-3 Strand
London
WC2N 5EH

RCTE: Kate Smethurst
Direct Line: 0161 368 4560

Date: 27 March 2006

FAO The Company Secretary

Dear Sir

TRADE EFFLUENT – WATER INDUSTRY ACT 1991 - Gas Holder Bradford Road Number 2 North Bradford Road Miles Platting Manchester M40 7AZ

Further to your TRADE EFFLUENT NOTICE dated 27 January 2006, I enclose your CONSENT TO THE DISCHARGE OF TRADE EFFLUENT.

This document is issued by virtue of Statutory Powers granted by the Water Industry Act 1991 and as such a "true copy" has now been placed on public record. The Consent to Discharge relates solely to the trade effluent described in your Trade Effluent Notice and you must notify United Utilities Water PLC of:

a) any proposed changes to the nature and composition of the effluent;

b) any proposed changes to the rate of discharge and/or daily volume;

c) any proposed change of name of your Company (or trading name);

d) permanent termination of the discharge.

The conditions laid down in the Consent are the only conditions under which United Utilities Water PLC will undertake to receive your effluent into the foul sewer. Any failure to comply with such conditions is an offence under the Water Industry Act 1991.

I would draw your attention to clause 4 of the consent, which provides that the maximum permitted amount of trade effluent discharge in any one day of 24 hours may be exceeded with the prior written approval of United Utilities Water PLC. This letter provides such approval for the one day per year on holder commissioning.

In accordance with our Charges Scheme, an application fee of **£205** has already been raised for this Consent.

United Utilities Water PLC
Registered in England & Wales No. 2366678
Registered office: Dawson House, Great Sankey
Warrington WA5 3LW

Document: Consent
WwTW: Davyhulme
Reference: 694TLN26T026

In respect of clause 10a) of the Consent, I understand that representative samples of the trade effluent may be obtained from manhole marked SP pn the drawing ref 51615C attached to this consent. In any legal proceedings it shall, for the purposes of Chapter 3 of part IV of the Water Industry Act 1991, be presumed until the contrary is shown that any samples of the discharge taken at manhole marked SP is a sample of trade effluent discharging into the foul sewer at Alan Turing Way. You should note that officers designated in writing by United Utilities Water PLC shall have right of safe access at all reasonable hours without notice for the purpose of obtaining a sample of trade effluent.

The volume of trade effluent discharged is estimated at 1,507m3/annum, based on 1m/annum rainfall running off one holder of average diameter, 43.8m

I confirm that trade effluent accounts will be raised annually in arrears. I confirm that a fixed strength will apply to this discharge. The values for COD are 66 mg/l and SS 38 mg/l and these have been agreed between us.

It will not be necessary for you to install additional apparatus to measure the trade effluent as required by clause 10b) of the Consent. If circumstances change I will write to you again revoking this exemption.

Measured sewerage charges will be based on the water supply meter to the premises and these charges , where appropriate, will transfer from your water supply bill to your trade effluent bill from the date of this consent.

Yours faithfully

Area Planning and Strategy Manager
Asset Strategy and Planning

United Utilities Water PLC
Registered in England & Wales No. 2366678
Registered office: Dawson House, Great Sankey
Warrington WA5 3LW

Document: Consent
WwTW: Davyhulme
Reference: 694TLN26T026

WATER INDUSTRY ACT 1991

CONSENT TO THE DISCHARGE OF TRADE EFFLUENT

Whereas **National Grid Gas plc t/a National Grid**

(hereinafter called "the Trader" whose Head Office or Registered Office is at

1-3 Strand London WC2N 5EH

Is the **owner/occupier** of the trade premises at:

Gas Holder

Bradford Road Number 2 North

Bradford Road

Miles Platting Manchester

M40 7AZ

and by the Trade Effluent Notice dated **27 January 2006**

Have applied to UNITED UTILITIES WATER PLC (hereinafter called "the Company") for consent to discharge trade effluent from the said trade premises into the sewers.

Under the provisions of the above mentioned Act the discharge of trade effluent in accordance with the said Trade Effluent Notice would not be lawful without the consent of the Company.

NOW THEREFORE in exercise of the powers conferred upon them by the above Act the Company HEREBY CONSENT to the discharge of trade effluent by the Trader from the said premises into their sewers SUBJECT TO THE FOLLOWING CONDITIONS:

Nature of discharge

1a) Subject to the provisions of conditions 6,7,8 and 9 below the nature or composition of the trade effluent to be discharged under this Consent shall be solely as specified in the said Trade Effluent Notice and shall consist solely of waste water derived from **natural gas storage/distribution**

1b) The trader shall give to the Company prior written notice of any change in the process or the process materials or any other circumstances likely to alter the constituents of the trade effluent as set out in condition 1(a). In such circumstances, no substance of which the Company has not had previous notice, may be discharged unless and until the Company has agreed to accept the substance at a limit imposed by the Company which shall then be deemed to be incorporated in this Consent by agreement and shall not prejudice the right of the Company to serve a Direction earlier than two years from the date of such incorporation.

The Trader shall also give not less than seven days written notice to the Company of any change in the name of the occupier or owner.

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Registered in England & Wales No. 2366678
Registered office: Dawson House, Great Sankey
Warrington WA5 3LW

9/5027-9/01

Sewer affected

2. The sewer into which the trade effluent may be discharged and the point of discharge is the foul sewer situate at manhole marked SP on the attached plan

Suitable sampling facilities shall be maintained at Manhole marked SP on the drawing no.51615C attached to this Consent. In any legal proceedings, it shall, for the purposes of Chapter 3 of part IV of the Water Industry Act 1991, be presumed until the contrary is shown that any sample of the discharge taken at Manhole marked SP is a sample of the trade effluent discharging into the foul sewer at Alan Turing Way.

Connections

3. No connections shall be made to the said sewer without the prior approval of the Company and all such connections shall be constructed and maintained to the satisfaction of the Company at the expense of the Trader

Maximum volume of discharge

4. The maximum amount of the trade effluent discharged in any one day of twenty four hours shall not exceed **15** m^3 without prior written consent of the Company.

Maximum rate of discharge

5. The highest rate at which the trade effluent may be discharged shall not exceed **4** litre/sec.

Matters to be eliminated prior to discharge to sewers

6. The following matters shall be eliminated from the trade effluent before it is discharged into the sewers of the Company:

a) petroleum spirit;

b) calcium carbide;

c) carbon disulphide;

d) except as provided in paragraph 7 hereof, the prescribed substances listed in Schedule 1 to The Trade Effluents (Prescribed Processes and Substances) Regulations 1989, as amended from time to time, insofar as they are in concentration greater than the background concentration (as defined in the said Regulations);

e) where the trade effluent derives from a prescribed process mentioned in Schedule 2 to the said Regulations, and except as provided in paragraph 7 hereof, asbestos (as defined in the said Regulations) and chloroform in a concentration greater than the background concentration (as defined in the said Regulations);

f) organo-halogen compounds including pesticide residues and degreasing agents;

g) any substances which either alone or in combination with each other or with any other matter lawfully present in the said sewers would be likely to;

i cause a nuisance or produce flammable, harmful or toxic vapours either in the sewers or at the sewage works of the Company;

ii injure the sewers or interfere with the free flow of their contents or affect prejudicially the treatment and disposal of their contents or have injurious effects on the sewage treatment works to which it is conveyed or upon any treatment plant there;

United Utilities Water PLC
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Warrington WA5 3LW

iii be dangerous to or cause injury to any person working in the sewers or at the sewage treatment works;

iv affect prejudicially any watercourse, estuary or coastal water into which the treated effluent will eventually be discharged.

Matters to be limited prior to discharge to the sewer

7. The trade effluent shall not contain

a) sulphides, hydrosulphides, polysulphides and substances producing hydrogen sulphide on acidification in excess of **1** mg/l

b) cyanides and cyanogen compounds which produce hydrogen cyanide on acidification in excess of **1** mg/l

c) sulphates as SO_4 in excess of **1000** mg/l

d) toxic metals in excess of **10000** ug/l either individually or in total ie Antimony, Beryllium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Tin, Vanadium, Zinc;

e) separable grease and oil in excess of **100** mg/l

f) Methane in solution in excess of **0.14** mg/l

Temperature

8. No trade effluent shall be discharged which has a temperature higher than 43.3^0C (110^0F)

pH value

9. No trade effluent shall be discharged having a pH of less than **6** or greater than **10**

Inspection chamber

10. a) An inspection chamber or manhole shall be provided and maintained by the Trader in a suitable position in connection with each pipe through which the trade effluent is discharged and shall be so constructed and maintained as to enable a person readily to obtain at any time samples of the trade effluent so discharged, to the approval of the Company

b) Suitable apparatus for measuring and automatically recording the volume and composition of trade effluent discharged shall be provided and maintained in working order by the Trader in connection with every such pipe, unless otherwise exempted in writing by the Company

c) If the measuring and recording apparatus as aforesaid ceases to function satisfactorily, then the Company shall have the right to make estimates of the volume and composition of the trade effluent until such time as the said apparatus is again operating to the satisfaction of the Company.

d) Records shall be kept by the Trader of the volume, rate of discharge, nature and composition of the trade effluent discharged to the sewer, together with any records required to be kept by the Trader under the provisions of any Notice of Determination issued by the Secretary of State under Sections 120 and 132 of the Water Industry Act 1991. Such records shall be kept available for inspection at all reasonable times by an authorised officer of the Company and copies shall be sent to the Company on demand.

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e) The foregoing provision of this condition shall be deemed to be complied with if other methods of sampling the trade effluent, determining its nature and composition, and measuring and recording the discharge are agreed and confirmed in writing by the Company.

Payment

11. Payment shall be made to the Company on demand of charges in respect of the reception, conveyance, treatment and disposal of the trade effluent in accordance with the Company's Charges Scheme in force from time to time.

Dated **27 March 2006**

Issuing Office Asset Strategy and Planning
Lingley Mere
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP

Signed

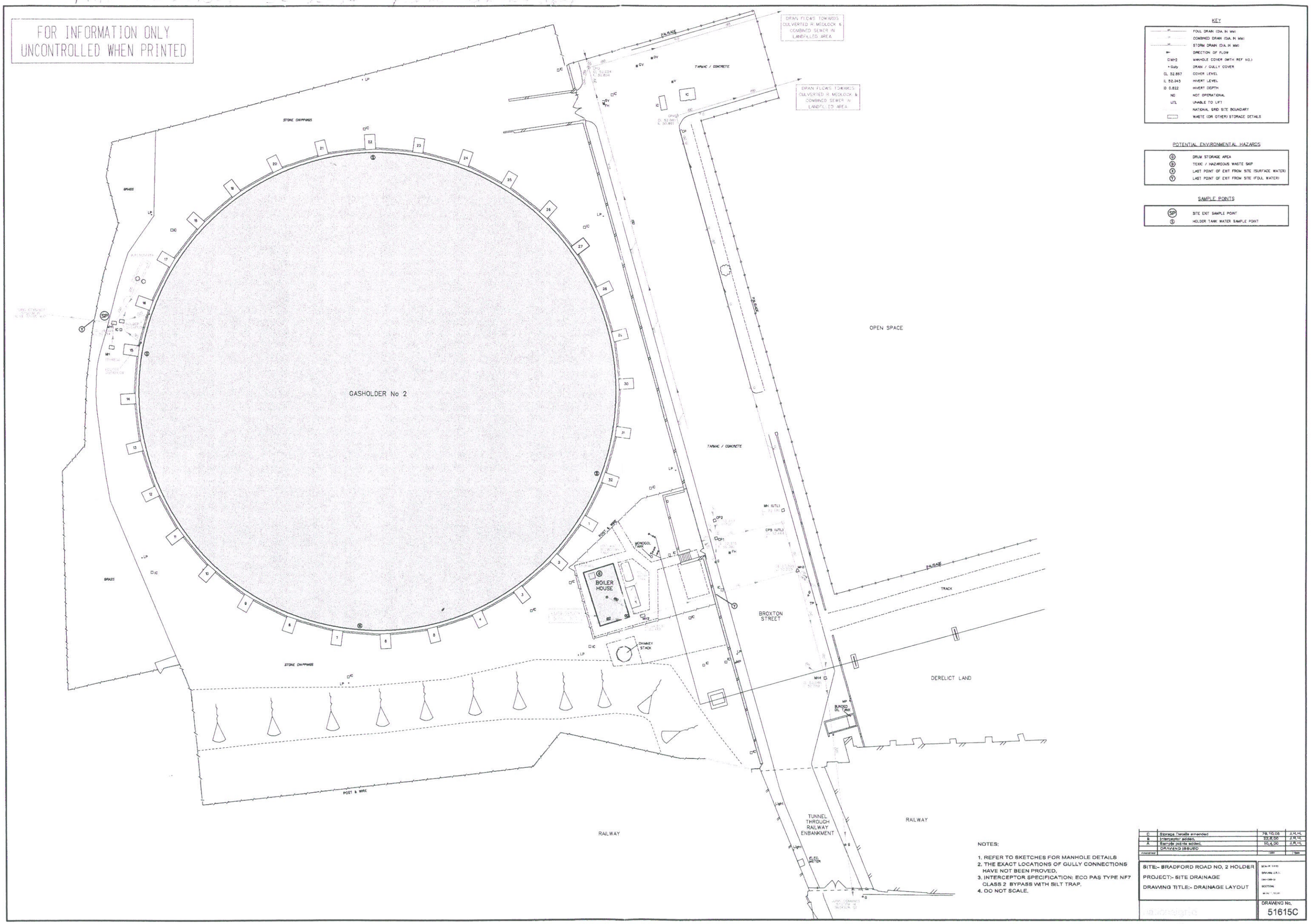
AREA PLANNING AND STRATEGY MANAGER
for and on behalf of United Utilities Water PLC

Your attention is drawn to Section 122 of the Water Industry Act 1991 which provides that any person aggrieved by any conditions attached to this Consent may appeal to the Director General of Water Services.

United Utilities Water PLC
Registered in England & Wales No. 2366678
Registered office: Dawson House, Great Sankey
Warrington WA5 3LW

9/5027-9/01

FOR INFORMATION ONLY
UNCONTROLLED WHEN PRINTED



NOTES:

1. REFER TO SKETCHES FOR MANHOLE DETAILS
2. THE EXACT LOCATIONS OF GULLY CONNECTIONS HAVE NOT BEEN PROVED.
3. INTERCEPTOR SPECIFICATION: ECO PAS TYPE NF7 CLASS 2 BYPASS WITH SILT TRAP.
4. DO NOT SCALE.

Amended	Issue	Date	Drawn
C	Bypass Details amended	28.10.08	J.R.H.
B	Interceptor added.	22.8.08	J.R.H.
A	Sample points added.	10.4.08	J.R.H.
	DRAWING ISSUED		

SITE:- BRADFORD ROAD NO. 2 HOLDER

PROJECT:- SITE DRAINAGE

DRAWING TITLE:- DRAINAGE LAYOUT

SCALE: 1:1000
DRAWN: J.R.H.
CHECKED:
SECTION:
DATE:

DRAWING No.
51615C

~G1002