

**London Borough of Hounslow
Garage Block at Oxford Court (Site 7)**

Utility Mapping Survey

Site Report

Project No. 1716

Prepared by:
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Utility Surveyor: Guy Collis

Topographical Surveyor: Oriol O'cathail

Date of Survey: April 2019

Drawings Number Issued to the Client: 1716_Site 7_P.dwg

Type of Survey: Underground Utility Location & Mapping Survey.

Survey Grid: ORDNANCE SURVEY - Related to OS Active Network using GPS.

Survey Datum: ORDNANCE SURVEY - Levels related to OS Active Network using GPS.

Accuracies: Depth by Electromagnetic Detection: +/- 10% of Depth.

Plan position by Electromagnetic Detection: +/- 10% of Depth.

Depth by GPR: +/- 10% of depth (in Normal Ground Conditions)

Plan position by GPR: +/- 10% of Depth.

Specification Notes:

1. All survey works carried out in the areas defined by Arcadis.
2. All drawings must be read in conjunction with record information.
3. Field distortions from any above ground metallic objects i.e. temporary heras fences, temporary safety barriers or parked vehicles can limit the locatable signal due to interference from above ground fields.
4. 40Seven provided all available statutory authority information but cannot be guaranteed to be the latest information available.
5. All services have been surveyed robustly using a combination of Electromagnetic Detection & Ground Penetrating Radar (GPR). All utility positions were surveyed in using a Robotic Total Station.

Existing Service Records Provided to Field Surveyor

Service	Provider	Remarks
Media	Zayo	Job Reference: 15223657
Telecom	Openreach	TQ1971378290
Gas	Cadent	TQ1978
		NOTE: Other existing statutory undertakers' records were not available at the time of the survey or during the course of post processing.

Field Equipment

Type	Make	Model	Company I.D No.	Operator(s) Initials
Electrolocation Instrument	RD	8000	PDL002 TXT002	GC
Ground Radar	Mala	HDR Pro	ELP 007	GC
Electronic Total Station	Trimble	S3	Rob 42	OC

Utility Location & Mapping Survey Results

Service	Comment Number	Successes / Problems Differences between survey & "Stats"
Drainage	1	Surface water inspection chamber located inside the survey extents. Routes were located by sonding techniques. Unable to fully prove route due to blocked pipe.
	2	Gully's located inside the survey extents. Routes were located by sonding and sounding techniques. Unable to fully prove some routes due to silted and blocked pipes.
	3	Parked vehicle in inspection chamber GC02. Unable to lift inspection chamber. Route assumed to be surface water. Please see photos.
	4	No statutory record information available at time of survey.
Electric	1	Several streetlight cable routes located within the survey extents. These routes have been located and traced by direct connection to the streetlight columns.
	2	Electric route located and traced by active induction techniques in the survey extents. Route was traced to substation inside the survey extents.



Service	Comment Number	Successes / Problems Differences between survey & "Stats"
	3	Inspection chamber GC03 with combined services of electric and water. Electric cables were connected to and traced by direct connection to the cables.
	4	A full passive power sweep was performed utilizing radio frequency equipment.
	5	No statutory record information available at time of survey.
Telecom	1	Telecommunication routes located within inspection covers in the footpath. Routes have been located and traced by direct connection to the cables inside the inspection cover and service providers added to the drawing where they were able to be identified.
	2	Routes that could not be completed / proven have been transferred from records where necessary.
Ducting Routes	1	Several empty ducting routes located throughout the survey areas. All available routes have been traced by inserting a locating device into the empty ducting route.
CATV	1	CATV routes located in the survey extents. These routes have been located and traced by direct connection to the cables inside the inspection covers.
	2	No statutory record information available at time of survey.
Water	1	Polyethene water pipe located inside inspection chamber GC03 with electric cables also inside the inspection chamber. Unable to locate water route due to pipe being polyethene.
	2	No statutory record information available at time of survey.
Gas	1	No gas located inside the survey extents at time of survey.
	2	Routes that could not be completed / proven have been transferred from records where necessary.
Other	1	One unknown route located and traced by active induction. Unable to associate any fittings or features in the vicinity to help establish utility types.
GPR Scans	1	The radar reflects changes in the electrical properties of materials in the sub-surface. The data prevents definition of unknown targets.
	2	A PAS128 M3P GPR survey has been carried out across the sites where possible.
	3	GPR images shown within this report are not necessarily indicative of actual routes / anomalies detected.

Service	Comment Number	Successes / Problems Differences between survey & "Stats"
	4	Several unknown targets detected within the survey extents although only partially in several areas due to losses of reflection. Unable to associate any fittings or features in the vicinity to help establish utility types.

Site Notes:

1. Survey was undertaken in the areas defined by Arcadis.
2. No access to buildings in survey extents.
3. Various utilities on site could not be proven or completed and the appropriate comments have been added to the drawing.
4. Services plotted outside survey extents should not be considered to be exhaustive.
5. Through non-intrusive surveying techniques, it always remains possible that there are additional services within the survey boundary that we have not been able to detect. We recommend that care is taken on site and that all service.

Site Photos:

Photo 1



Description: General view of the survey extents.

Photo 2



Description: General view of the survey extents.

Photo 3



Description: General view of the survey extents.

Photo 4



Description: General view of the survey extents.

Photo 5



Description: Parked vehicle over inspection chamber GC02.

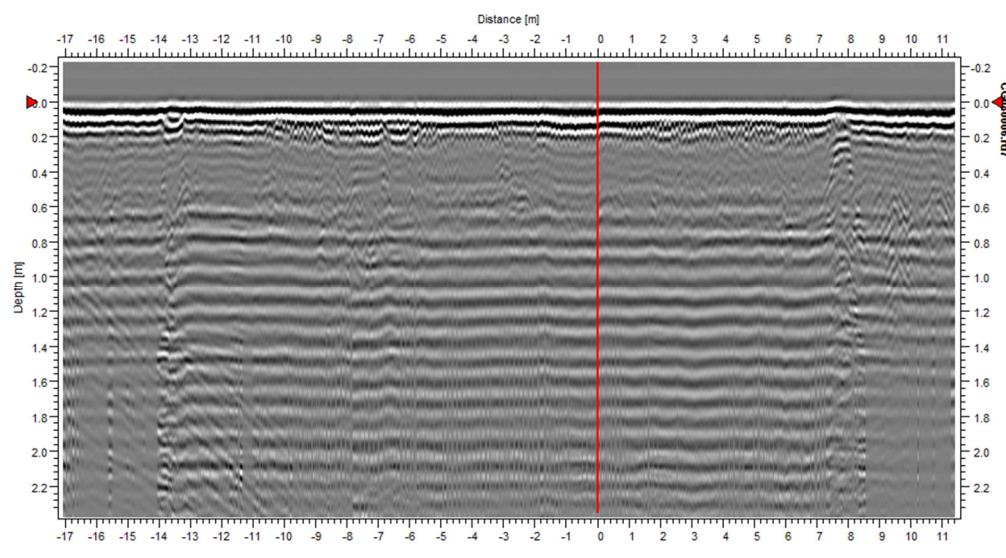
Photo 6



Description: combined services inside inspection chamber. Inspection chamber GC03.

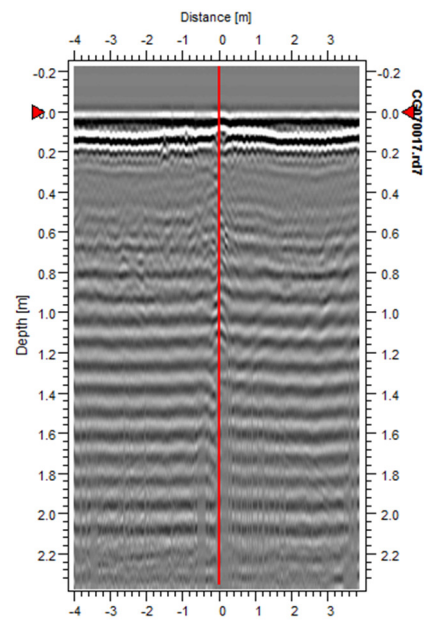
GPR Images:

GPR 1



Description: Ground Penetrating Radar Image

GPR 2



Description: Ground Penetrating Radar Image

CAD Operators Comments:

1. Survey work corresponds to Utility Surveyor's fieldwork.
2. All record information added where necessary.
3. Services shown outside the survey extents should not be considered to be exhaustive.

QA Managers Comments:

1. All procedures have been followed.
2. Checked that all topographical features have utilities connected, or if not are appropriately notated.
3. Checked all guided information has been transferred correctly where appropriate.
4. Services shown outside the survey extents should not be considered to be exhaustive.

Project Managers Comments:

1. All statutory authority records should be checked prior to commencing any work.
2. A full electromagnetic and GPR survey carried out across the site.
3. GPR works by emitting electromagnetic signals into the ground and analysing signal returns. The use of GPR is strongly dependent upon local soil properties. Depth of penetration is limited by the presence of clays or other highly conductive materials. There must be a significant electrical contrast between the target and the host materials.
4. Numerous unknown routes were detected by GPR, although it was not possible to decipher function. Future intrusive works (eg: trial pits) are recommended to gather further information.
5. It is recommended that statutory authority records are acquired and read in conjunction with this information, as no guarantee can be made for the completeness of this drawing.