
Estimated Fence Position
Estimated Wall Position
87.97
86.45
85.51
86.23
83.56
90
88.14
82.77
83.52
84.49
82.42
83.17
87.31
83.44
79.58
83.93
84.39
82.35
80
78.64
80.43
80.57
81.12
80
77.23
79.42
80
78.40
80
78.11
76.14
80
75.57
74.17
77.22
76.46
76.20
74.89
72.70
75.42
77.01
74.76
73.70
73.79
72.55
70.63
73.36
75.37
73.69
71.97
71.46
71.34
69.42
70.29
71.38
70
70.72
70
70
69.11
69.69
70
69.29
67.10
70
68.54
67.73
67.66
67.55
66.62
66.81
67.40
67.32
66.23
66.22
65.50
65.75
65.64
64.30
63.03
63.04
62.19
61.53
60.95
61.53
60
60.35
60

GENERAL SYNOPSIS

This survey has been carried out in accordance with PAS 128: 2014 & our version of the Royal Institution of Chartered Surveyors (RICS) specification for Measured Surveys of Land, Buildings and Utilities. Our survey extents have been agreed and confirmed with formal acceptance of 32482BWUG-01 from STEENSEN VARMING. If you have any queries regarding the final services layout, please may we ask you to carefully read all the information within this title block in its entirety before continuing to do so.

TOPOGRAPHICAL/.DWG DRAWING INFORMATION

TOPOGRAPHICAL SURVEY DATE 04/2018

SURVEY TYPE	DESCRIPTION	EFFECT ON SURVEY RESULTS
TOPO	ATLANTIC GEOMATICS	ALL COVERS AND STREET FURNITURE ADDED
OUTDATED		BY SURVEY SOLUTIONS AS APPROXIMATE
OS		POSITION.
NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
GRAVESTONES AND UNEVEN GROUND.	SURVEYED WHERE POSSIBLE IN PATHS

SURVEY RECOMMENDATIONS

LIST RECOMMENDATIONS TO IMPROVE SURVEY DATA

Due to the geophysical nature of subsurface technology, we always recommend excavation works to be carried out for verification, especially within critical areas.

We would suggest an up to date, more detailed and comprehensive topographical survey.

PAS 128: 2014 QUALITY LEVEL GUIDE

Q-LEVEL	DESCRIPTION	ACC.	Q-LEVEL	DESCRIPTION
QL-D	Service positions taken from records.	Undefined	QL-B2	Horizontal & vertical location using only one geophysical technique.
QL-C	Visual evidence of service existence but undetectable by geophysical technology.	Undefined	QL-B1	Horizontal & vertical location using multiple geophysical techniques.
QL-B4	Undetectable service present shown as an assumed route. (AR)	H: +/- 500mm V: N/A	QL-A	Horizontal & vertical position verification by open excavation, manholes and/or inspection chambers.
QL-B3	Horizontal location by one geophysical technique but with none or poor depth information.			

DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/types and service data recorded from ground level. All connections from DPs, Gullies, Drains, VP's, RE's and lampholes have been proven wherever possible using audible connections (AC) and/or sonde instrumentation where applicable. Where these methods have proved unsuccessful then assumed (AR) straight line connections will be shown.

CCTV DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/type and service data recorded from ground level. Pipework has been traced, accessed and collected for post processing. Drainage layout, including manhole covers not located by topographical survey, may be taken from CCTV chainage and will be shown as indicative only.

Electricity

Elec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

British Telecoms

BT cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Due to current laws and legislation protecting all BT apparatus, cabling can only be located remotely. We therefore compare all our telecom findings against record information to produce the final service layout. In some instances, where high amount of cable ducts are present, we may only be able to identify a linear centre peak signal rather than identifying all the individual duct positions. For further information regarding Telecoms apparatus, please contact Openreach directly.

Cable TV & Communications

CTV and/or Com cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Fibre Optic

FO cables will have been predominantly located using GPR methodology. This is due to the materials used within fibre optic cabling. In some rare instances, tracer cabling or conductible non fibre optic cabling will be present within some or all ducting. When this is the case, both EML and GPR methodology will be combined to identify service network and achieve greater quality levels.

Lighting, Traffic Signal & Security Cables

LC, TS and/or Sec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Gas & Water Inc. Fuel Pipes and Hot Water Pipes

GM/GS and/or WM/WS pipe work will have been attempted and located using both EML & GPR methodology with electronically derived depths shown for the former and depths to crown levels shown for the latter.
When the Gas/Water pipe work is constructed using conductible materials, then we are able to to employ multiple geophysical techniques to identify service network and achieve greater quality levels. When a non conductible material is used, GPR methodology will be employed to locate and plot the final service layout.

Ground Penetrating Radar

GPR methodology is used to identify and locate all non metallic, non conductible piping and cabling. We also employ GPR to obtain a greater accuracy levels on EML located services. The GPR has a greater success rate on pipe or service diameter upward of Ø63mm,C63mm, as size increments increase, so does the chance of detection. The GPR can produces varying results and as such, wouldn't be used as an independent utility surveying instrument.

Unidentified Traces

All UITs will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Every effort has been made to identify the service but in this instance, is not achievable. We recommend excavation work to determine identity and depth where applicable.

Scarring (QL-C)

Scarring has been identified on site with a potential of an undetectable service present.

Assumed Routes & Taken from Records (QL-B4/D)

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UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

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Ø	Diameter	DI	Depth To Invert	RCC	Rectangular Conc Chamber
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CBC	Circular Brick Chamber	EOT	End Of Trace ⟶	UTC	Unable To CCTV
CCC	Circular Conc Chamber	IBD	Internal Backdrop	UTDO	Unable To Determine Outfall
CL	Cover Level	IL	Invert Level	UTL	Unable To Lift
CPC	Circ Plastic Chamber	OH	Overhead	UTS	Unable To Survey
CrL	Crown Level	PDR	Poor Depth Response	UTT	Unable To Trace
CU	Camera Under Water ⟶	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
COM	COMMUNICATIONS CABLE(S)
CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
O/E	OVERHEAD ELECTRIC CABLE(S)
FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW	COMBINED SEWER
CW RM	COMBINED WATER RISING MAIN
EW	EFFLUENT WATER
▶	FOUL SEWER
FW RM	FOUL WATER RISING MAIN
RM	RISING MAIN
▶	SURFACE WATER SEWER
SW RM	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

N

NORTH Indicative

DRAWING NOTES

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Any areas on the drawing where services or features have not been shown are not necessarily clear of services or features but are an indication that no items have been identified during our investigations. All reasonable care and normal good practice should still be employed during design and construction processes.

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All services, drainage and utilities routes are assumed straight between access points, unless otherwise stated. The numbers of cables in runs will not be shown unless specifically requested. All services are below ground unless indicated.

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DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH
NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 1 OF 9

CLIENT				SCALE
STEENSEN VARMING				1:250
SURVEYOR	SURVEY DATE	CHECKED BY	APPROVED BY	DWG STATUS
LJT	20/10/2021	JAB	GSB	FINAL
DRAWING NUMBER			REVISION	ISSUE DATE
32482BWUG-01				28/10/2021

RICS chartered ICES THE SURVEY ASSOCIATION ISO 9001 REGISTERED FIRM QMS ISO 14001 : 2015 REGISTERED

Original Sheet Size A0H

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OS		POSITION.
NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
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IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

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CU	Camera Under Water →	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
COM	COMMUNICATIONS CABLE(S)
CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
O/E	OVERHEAD ELECTRIC CABLE(S)
FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW	COMBINED SEWER
CW RM	COMBINED WATER RISING MAIN
EW	EFFLUENT WATER
	FOUL SEWER
FW RM	FOUL WATER RISING MAIN
RM	RISING MAIN
	SURFACE WATER SEWER
SW RM	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

DRAWING NOTES

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DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY
SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH
NOTTINGHAM YEOVIL

PROJECT TITLE HIGHGATE CEMETERY, SWAINS LANE, LONDON, N6 6PJ.				
DRAWING DETAIL UTILITIES AND DRAINAGE SURVEY. SHEET 2 OF 9				
CLIENT STEENSEN VARMING				SCALE 1:250
SURVEYOR LJT	SURVEY DATE 20/10/2021	CHECKED BY JAB	APPROVED BY GSB	DWG STATUS FINAL
DRAWING NUMBER 32482BWUG-02			REVISION	ISSUE DATE 28/10/2021

RICS
chartered ices
THE SURVEY ASSOCIATION
ISO 9001 REGISTERED FIRM
QMS ISO 14001 : 2015 REGISTERED

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NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
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IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

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GM/GS and/or WM/WS pipe work will have been attempted and located using both EML & GPR methodology with electronically derived depths shown for the former and depths to crown levels shown for the latter.
When the Gas/Water pipe work is constructed using conductible materials, then we are able to to employ multiple geophysical techniques to identify service network and achieve greater quality levels. When a non conductible material is used, GPR methodology will be employed to locate and plot the final service layout.

Ground Penetrating Radar

GPR methodology is used to identify and locate all non metallic, non conductible piping and cabling. We also employ GPR to obtain a greater accuracy levels on EML located services. The GPR has a greater success rate on pipe or service diameter upward of Ø63mm,C63mm, as size increments increase, so does the chance of detection. The GPR can produces varying results and as such, wouldn't be used as an independent utility surveying instrument.

Unidentified Traces

All UITs will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Every effort has been made to identify the service but in this instance, is not achievable. We recommend excavation work to determine identity and depth where applicable.

Scarring (QL-C)

Scarring has been identified on site with a potential of an undetectable service present.

Assumed Routes & Taken from Records (QL-B4/D)

Assumed routes (AR) are shown if there is evidence that a service exists but we are unable to trace it whilst on site. The surveyor will attempt to locate various risers/ics/valves/meters (service evidence) etc. around site area to successfully determine an assumed route between these points. If there is little evidence on site but they believe a service is still present, then a common sense approach to an assumed route shall be employed.

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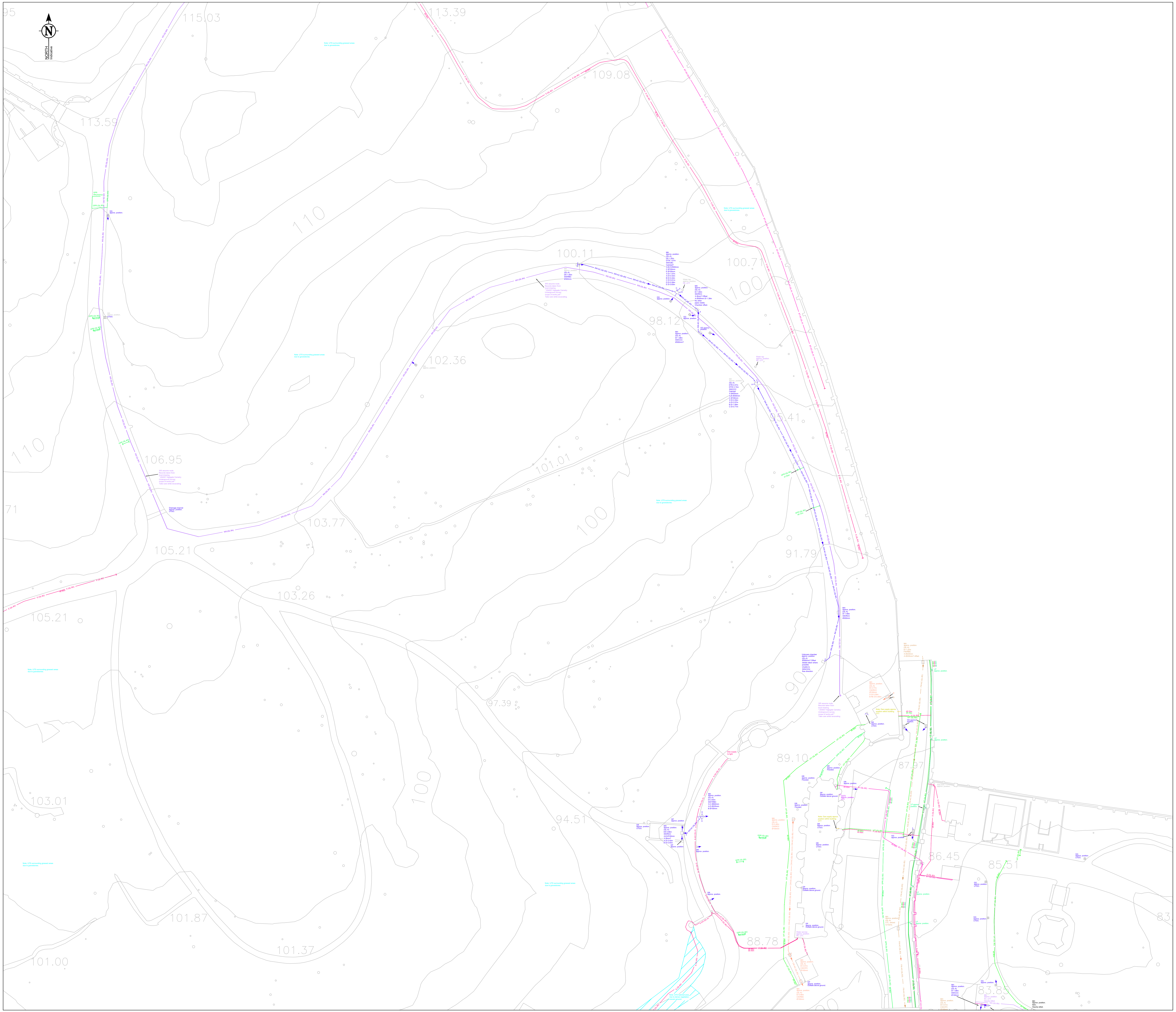

UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

1D 5C	1 Duct 5 Cables	DCr	Depth To Crown	RBC	Rectangular Brick Chamber
Ø	Diameter	DI	Depth To Invert	RCC	Rectangular Conc Chamber
AC	Audible Connection	DS	Depth To Silt	RE	Rodding Eye
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CU	Camera Under Water ⊣	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
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CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
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FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW ▶	COMBINED SEWER
CW RM ▶	COMBINED WATER RISING MAIN
EW ▶	EFFLUENT WATER
▶	FOUL SEWER
FW RM ▶	FOUL WATER RISING MAIN
RM	RISING MAIN
▶	SURFACE WATER SEWER
SW RM ▶	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

N

NORTH Indicative

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

DRAWING NOTES

All below ground details shown have been identified from above ground without excavation. Survey Solution use electro-magnetic and/or ground penetrating radar (GPR) methods to investigate for underground utilities, services and features. Results using these methods are not infallible and we recommend trial excavations are carried out for verification of positions, depths and identification.

Any areas on the drawing where services or features have not been shown are not necessarily clear of services or features but are an indication that no items have been identified during our investigations. All reasonable care and normal good practice should still be employed during design and construction processes.

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Drainage pipe sizes will be obtained without entering the chamber and therefore should be treated as approximate. Pipe dimensions which have not been obtained visually will be taken from records when available.

All services, drainage and utilities routes are assumed straight between access points, unless otherwise stated. The numbers of cables in runs will not be shown unless specifically requested. All services are below ground unless indicated.

Services, utilities and features may not have been surveyed if obstructed or not reasonably visible or accessible at the time of survey.

Survey Solutions accept no responsibility for the completeness or accuracy of either the topographical survey or base mapping on this project.

All critical dimensions and measurements should be checked and verified with any errors or discrepancies notified to Survey Solutions immediately. The accuracy of the digital data is the same as the plotting scale implies. All dimensions are in metres unless otherwise stated.

The contractor must check and verify all site and building dimensions, levels, utilities and drainage details and connections prior to commencing work.

Do not scale from this drawing.

DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 3 OF 8

CLIENT				SCALE
STEENSEN VARMING				1:250
SURVEYOR	SURVEY DATE	CHECKED BY	APPROVED BY	DWG STATUS
LJT	20/10/2021	JAB	GSB	FINAL
DRAWING NUMBER			REVISION	ISSUE DATE
32482BWUG-03				28/10/2021

Original Sheet Size A0H

GENERAL SYNOPSIS

This survey has been carried out in accordance with PAS 128: 2014 & our version of the Royal Institution of Chartered Surveyors (RICS) specification for Measured Surveys of Land, Buildings and Utilities. Our survey extents have been agreed and confirmed with formal acceptance of 32482BWUG-01 from STEENSEN VARMING. If you have any queries regarding the final services layout, please may we ask you to carefully read all the information within this title block in its entirety before continuing to do so.

TOPOGRAPHICAL/.DWG DRAWING INFORMATION

TOPOGRAPHICAL SURVEY DATE 04/2018

SURVEY TYPE	DESCRIPTION	EFFECT ON SURVEY RESULTS
TOPO	ATLANTIC GEOMATICS	ALL COVERS AND STREET FURNITURE ADDED
OUTDATED		BY SURVEY SOLUTIONS AS APPROXIMATE
OS		POSITION.
NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
GRAVESTONES AND UNEVEN GROUND.	SURVEYED WHERE POSSIBLE IN PATHS

SURVEY RECOMMENDATIONS

LIST RECOMMENDATIONS TO IMPROVE SURVEY DATA

Due to the geophysical nature of subsurface technology, we always recommend excavation works to be carried out for verification, especially within critical areas.

We would suggest an up to date, more detailed and comprehensive topographical survey.

PAS 128: 2014 QUALITY LEVEL GUIDE

Q-LEVEL	DESCRIPTION	ACC.	Q-LEVEL	DESCRIPTION
QL-D	Service positions taken from records.	Undefined	QL-B2	Horizontal & vertical location using only one geophysical technique.
QL-C	Visual evidence of service existence but undetectable by geophysical technology.	Undefined	QL-B1	Horizontal & vertical location using multiple geophysical techniques.
QL-B4	Undetectable service present shown as an assumed route. (AR)	H: +/- 500mm V: N/A	QL-A	Horizontal & vertical position verification by open excavation, manholes and/or inspection chambers.
QL-B3	Horizontal location by one geophysical technique but with none or poor depth information.			

DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/types and service data recorded from ground level. All connections from DPs, Gullies, Drains, VP's, RE's and lampholes have been proven wherever possible using audible connections (AC) and/or sonde instrumentation where applicable. Where these methods have proved unsuccessful then assumed (AR) straight line connections will be shown.

CCTV DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/type and service data recorded from ground level. Pipework has been traced, accessed and collected for post processing. Drainage layout, including manhole covers not located by topographical survey, may be taken from CCTV chainage and will be shown as indicative only.

Electricity

Elec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

British Telecoms

BT cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Due to current laws and legislation protecting all BT apparatus, cabling can only be located remotely. We therefore compare all our telecom findings against record information to produce the final service layout. In some instances, where high amount of cable ducts are present, we may only be able to identify a linear centre peak signal rather than identifying all the individual duct positions. For further information regarding Telecoms apparatus, please contact Openreach directly.

Cable TV & Communications

CTV and/or Com cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Fibre Optic

FO cables will have been predominantly located using GPR methodology. This is due to the materials used within fibre optic cabling. In some rare instances, tracer cabling or conductible non fibre optic cabling will be present within some or all ducting. When this is the case, both EML and GPR methodology will be combined to identify service network and achieve greater quality levels.

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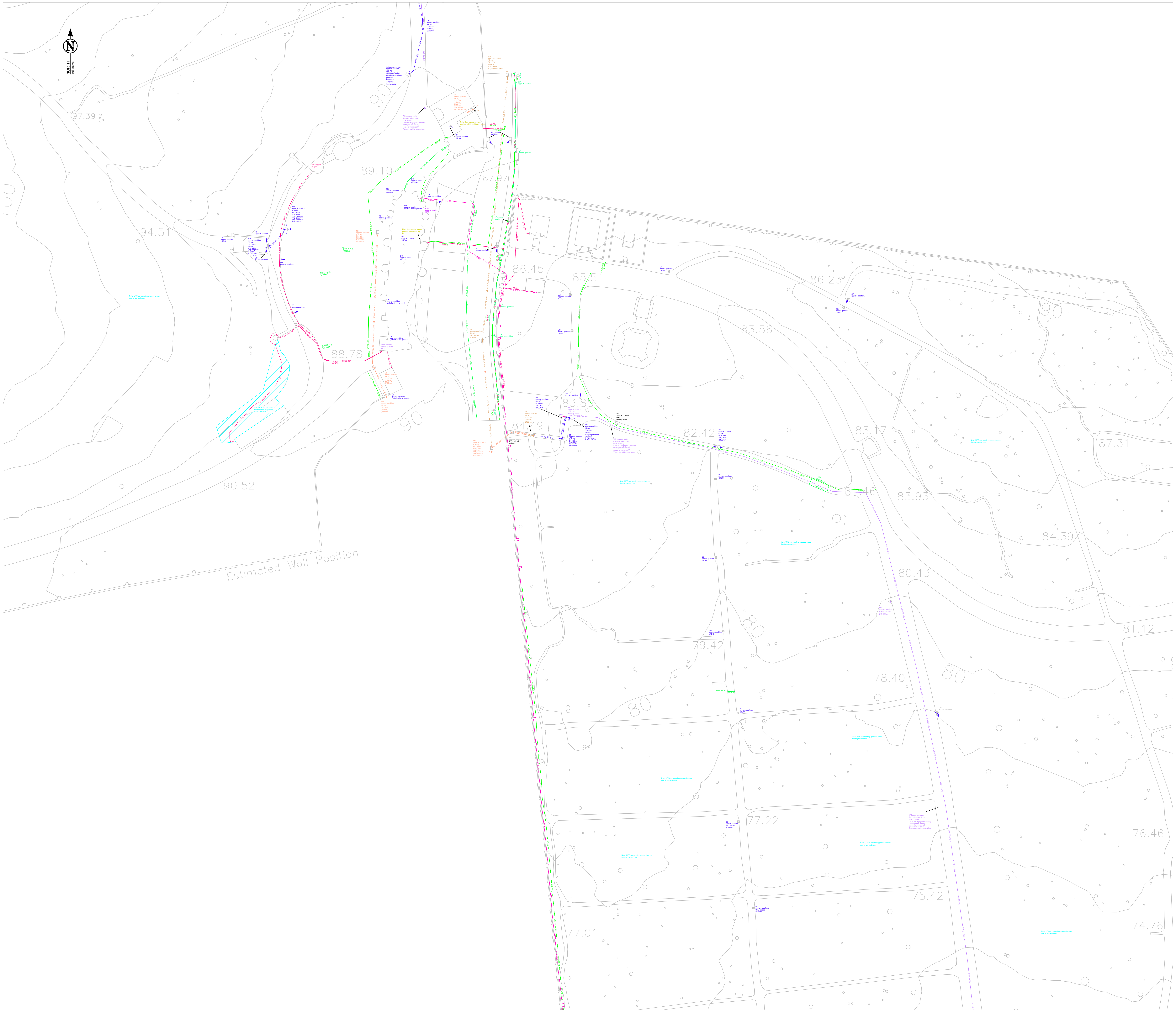

UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

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GM	GAS MAIN
GS	GAS SERVICE
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SCAR	VISIBLE SCARRING
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UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
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EW	EFFLUENT WATER
	FOUL SEWER
FW RM	FOUL WATER RISING MAIN
RM	RISING MAIN
	SURFACE WATER SEWER
SW RM	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

NORTH
Indicative

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
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??-OH	SERVICE OVERHEAD

DRAWING NOTES

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DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY
SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH
NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 4 OF 9

CLIENT STEENSEN VARMING				SCALE 1:250
SURVEYOR LJT	SURVEY DATE 20/10/2021	CHECKED BY JAB	APPROVED BY GSB	DWG STATUS FINAL
DRAWING NUMBER 32482BWUG-04			REVISION	ISSUE DATE 28/10/2021

RICS chartered ices THE SURVEY ASSOCIATION QMS ISO 9001 REGISTERED FIRM QMS ISO 14001 : 2015 REGISTERED

Original Sheet Size A0H

GENERAL SYNOPSIS

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NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
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DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

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	INVESTIGATION EXTENTS

NORTH Indicative

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??-OH	SERVICE OVERHEAD

DRAWING NOTES

All below ground details shown have been identified from above ground without excavation. Survey Solution use electro-magnetic and/or ground penetrating radar (GPR) methods to investigate for underground utilities, services and features. Results using these methods are not infallible and we recommend trial excavations are carried out for verification of positions, depths and identification.

Any areas on the drawing where services or features have not been shown are not necessarily clear of services or features but are an indication that no items have been identified during our investigations. All reasonable care and normal good practice should still be employed during design and construction processes.

Certain types of services such as plastic or concrete pipes, some conduit and ducting where direct access can not be achieved for tracing may not be shown and alternative locating methods should be used.

Survey Solutions has used all reasonable care to research available service records but the completeness or use of the service records supplied to or by Survey Solutions cannot be guaranteed. Therefore Survey Solutions cannot be held responsible for any features annotated as 'taken from records' (TFR).

Depths obtained using electro-magnetic or GPR are effected by ground conditions and should be treated as indicative only. Electro-magnetic depths to utilities and services are generally taken to the centre of a feature, GPR depths to the top of a feature and drainage depth shown to inverts, unless otherwise indicated.

Drainage pipe sizes will be obtained without entering the chamber and therefore should be treated as approximate. Pipe dimensions which have not been obtained visually will be taken from records when available.

All services, drainage and utilities routes are assumed straight between access points, unless otherwise stated. The numbers of cables in runs will not be shown unless specifically requested. All services are below ground unless indicated.

Services, utilities and features may not have been surveyed if obstructed or not reasonably visible or accessible at the time of survey.

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The contractor must check and verify all site and building dimensions, levels, utilities and drainage details and connections prior to commencing work.

Do not scale from this drawing.

DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 5 OF 8

CLIENT STEENSEN VARMING				SCALE 1:250
SURVEYOR LJT	SURVEY DATE 20/10/2021	CHECKED BY JAB	APPROVED BY GSB	DWG STATUS FINAL
DRAWING NUMBER 32482BWUG-05			REVISION	ISSUE DATE 28/10/2021

RICS chartered ices THE SURVEY ASSOCIATION QMS ISO 9001 REGISTERED FIRM QMS ISO 14001 : 2015 REGISTERED

Original Sheet Size A0H

GENERAL SYNOPSIS

This survey has been carried out in accordance with PAS 128: 2014 & our version of the Royal Institution of Chartered Surveyors (RICS) specification for Measured Surveys of Land, Buildings and Utilities. Our survey extents have been agreed and confirmed with formal acceptance of 32482BWUG-01 from STEENSEN VARMING. If you have any queries regarding the final services layout, please may we ask you to carefully read all the information within this title block in its entirety before continuing to do so.

TOPOGRAPHICAL/.DWG DRAWING INFORMATION

TOPOGRAPHICAL SURVEY DATE 04/2018

SURVEY TYPE	DESCRIPTION	EFFECT ON SURVEY RESULTS
TOPO	ATLANTIC GEOMATICS	ALL COVERS AND STREET FURNITURE ADDED
OUTDATED		BY SURVEY SOLUTIONS AS APPROXIMATE
OS		POSITION.
NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
GRAVESTONES AND UNEVEN GROUND.	SURVEYED WHERE POSSIBLE IN PATHS

SURVEY RECOMMENDATIONS

LIST RECOMMENDATIONS TO IMPROVE SURVEY DATA

Due to the geophysical nature of subsurface technology, we always recommend excavation works to be carried out for verification, especially within critical areas.

We would suggest an up to date, more detailed and comprehensive topographical survey.

PAS 128: 2014 QUALITY LEVEL GUIDE

Q-LEVEL	DESCRIPTION	ACC.	Q-LEVEL	DESCRIPTION
QL-D	Service positions taken from records.	Undefined	QL-B2	Horizontal & vertical location using only one geophysical technique.
QL-C	Visual evidence of service existence but undetectable by geophysical technology.	Undefined	QL-B1	Horizontal & vertical location using multiple geophysical techniques.
QL-B4	Undetectable service present shown as an assumed route. (AR)	H: +/- 500mm V: N/A	QL-A	Horizontal & vertical position verification by open excavation, manholes and/or inspection chambers.
QL-B3	Horizontal location by one geophysical technique but with none or poor depth information.			

DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/types and service data recorded from ground level. All connections from DPs, Gullies, Drains, VP's, RE's and lampholes have been proven wherever possible using audible connections (AC) and/or sonde instrumentation where applicable. Where these methods have proved unsuccessful then assumed (AR) straight line connections will be shown.

CCTV DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/type and service data recorded from ground level. Pipework has been traced, accessed and collected for post processing. Drainage layout, including manhole covers not located by topographical survey, may be taken from CCTV chainage and will be shown as indicative only.

Electricity

Elec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

British Telecoms

BT cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Due to current laws and legislation protecting all BT apparatus, cabling can only be located remotely. We therefore compare all our telecom findings against record information to produce the final service layout. In some instances, where high amount of cable ducts are present, we may only be able to identify a linear centre peak signal rather than identifying all the individual duct positions. For further information regarding Telecoms apparatus, please contact Openreach directly.

Cable TV & Communications

CTV and/or Com cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Fibre Optic

FO cables will have been predominantly located using GPR methodology. This is due to the materials used within fibre optic cabling. In some rare instances, tracer cabling or conductible non fibre optic cabling will be present within some or all ducting. When this is the case, both EML and GPR methodology will be combined to identify service network and achieve greater quality levels.

Lighting, Traffic Signal & Security Cables

LC, TS and/or Sec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Gas & Water Inc. Fuel Pipes and Hot Water Pipes

GM/GS and/or WM/WS pipe work will have been attempted and located using both EML & GPR methodology with electronically derived depths shown for the former and depths to crown levels shown for the latter.
When the Gas/Water pipe work is constructed using conductible materials, then we are able to to employ multiple geophysical techniques to identify service network and achieve greater quality levels. When a non conductible material is used, GPR methodology will be employed to locate and plot the final service layout.

Ground Penetrating Radar

GPR methodology is used to identify and locate all non metallic, non conductible piping and cabling. We also employ GPR to obtain a greater accuracy levels on EML located services. The GPR has a greater success rate on pipe or service diameter upward of Ø63mm,C63mm, as size increments increase, so does the chance of detection. The GPR can produces varying results and as such, wouldn't be used as an independent utility surveying instrument.

Unidentified Traces

All UITs will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Every effort has been made to identify the service but in this instance, is not achievable. We recommend excavation work to determine identity and depth where applicable.

Scarring (QL-C)

Scarring has been identified on site with a potential of an undetectable service present.

Assumed Routes & Taken from Records (QL-B4/D)

Assumed routes (AR) are shown if there is evidence that a service exists but we are unable to trace it whilst on site. The surveyor will attempt to locate various risers/ics/valves/meters (service evidence) etc. around site area to successfully determine an assumed route between these points. If there is little evidence on site but they believe a service is still present, then a common sense approach to an assumed route shall be employed.

Taken from records (TFR) are service routes that are taken from STAT record plans or previous survey information and overlaid onto our drawings.

UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

1D 5C	1 Duct 5 Cables	DCr	Depth To Crown	RBC	Rectangular Brick Chamber
Ø	Diameter	DI	Depth To Invert	RCC	Rectangular Conc Chamber
AC	Audible Connection	DS	Depth To Silt	RE	Rodding Eye
AG	Above Ground	DTB	Depth To Base	SA	Survey Abandoned
AR	Assumed Route	DTW	Depth To Water	SL	Silt Level
BL	Base Level	DTS	Depth To Surcharge	SuL	Surcharge Level
CB	Concrete Benching	EBD	External Backdrop	TFR	Taken From Records
CBC	Circular Brick Chamber	EOT	End Of Trace ⟶	UTC	Unable To CCTV
CCC	Circular Conc Chamber	IBD	Internal Backdrop	UTDO	Unable To Determine Outfall
CL	Cover Level	IL	Invert Level	UTL	Unable To Lift
CPC	Circ Plastic Chamber	OH	Overhead	UTS	Unable To Survey
CrL	Crown Level	PDR	Poor Depth Response	UTT	Unable To Trace
CU	Camera Under Water ⟶	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
COM	COMMUNICATIONS CABLE(S)
CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
O/E	OVERHEAD ELECTRIC CABLE(S)
FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW	COMBINED SEWER
CW RM	COMBINED WATER RISING MAIN
EW	EFFLUENT WATER
	FOUL SEWER
FW RM	FOUL WATER RISING MAIN
RM	RISING MAIN
	SURFACE WATER SEWER
SW RM	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

NORTH
Indicative

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

DRAWING NOTES

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PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

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WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
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CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH
NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 6 OF 8

CLIENT				SCALE
STEENSEN VARMING				1:250
SURVEYOR	SURVEY DATE	CHECKED BY	APPROVED BY	DWG STATUS
LJT	20/10/2021	JAB	GSB	FINAL
DRAWING NUMBER			REVISION	ISSUE DATE
32482BWUG-06				28/10/2021

GENERAL SYNOPSIS

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OUTDATED		BY SURVEY SOLUTIONS AS APPROXIMATE
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NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
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DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

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Assumed Routes & Taken from Records (QL-B4/D)

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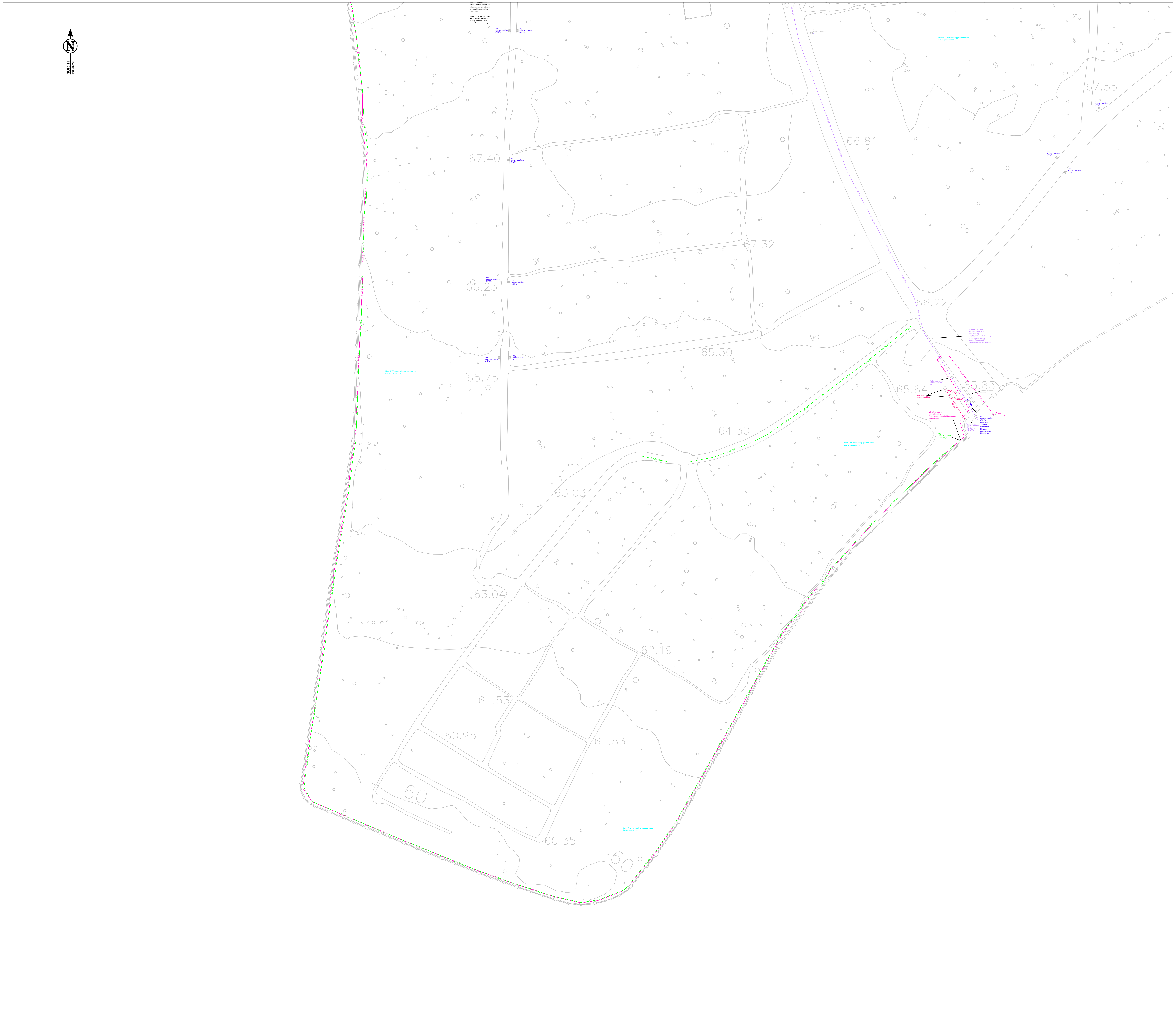

UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

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CrL	Crown Level	PDR	Poor Depth Response	UTT	Unable To Trace
CU	Camera Under Water ⟶	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
COM	COMMUNICATIONS CABLE(S)
CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
O/E	OVERHEAD ELECTRIC CABLE(S)
FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW	COMBINED SEWER
CW RM	COMBINED WATER RISING MAIN
EW	EFFLUENT WATER
	FOUL SEWER
FW RM	FOUL WATER RISING MAIN
RM	RISING MAIN
	SURFACE WATER SEWER
SW RM	SURFACE WATER RISING MAIN
	INVESTIGATION EXTENTS

N
NORTH
Indicative

Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

DRAWING NOTES

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PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
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GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY SOLUTIONS

LAND SURVEYING
BUILDING SURVEYING
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
survey-solutions.co.uk

IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH NOTTINGHAM YEOVIL

PROJECT TITLE HIGHGATE CEMETERY, SWAINS LANE, LONDON, N6 6PJ.				
DRAWING DETAIL UTILITIES AND DRAINAGE SURVEY. SHEET 7 OF 8				
CLIENT STEENSEN VARMING				SCALE 1:250
SURVEYOR LJT	SURVEY DATE 20/10/2021	CHECKED BY JAB	APPROVED BY GSB	DWG STATUS FINAL
DRAWING NUMBER 32482BWUG-07			REVISION	ISSUE DATE 28/10/2021

Original Sheet Size A0H

GENERAL SYNOPSIS

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TOPOGRAPHICAL SURVEY DATE 04/2018

SURVEY TYPE	DESCRIPTION	EFFECT ON SURVEY RESULTS
TOPO	ATLANTIC GEOMATICS	ALL COVERS AND STREET FURNITURE ADDED
OUTDATED		BY SURVEY SOLUTIONS AS APPROXIMATE
OS		POSITION.
NTS		

GENERAL SITE CONDITIONS

BELOW AVERAGE

ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS
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LIST RECOMMENDATIONS TO IMPROVE SURVEY DATA

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QL-C	Visual evidence of service existence but undetectable by geophysical technology.	Undefined	QL-B1	Horizontal & vertical location using multiple geophysical techniques.
QL-B4	Undetectable service present shown as an assumed route. (AR)	H: +/- 500mm V: N/A	QL-A	Horizontal & vertical position verification by open excavation, manholes and/or inspection chambers.
QL-B3	Horizontal location by one geophysical technique but with none or poor depth information.			

DETECTION METHOD

IN ACCORDANCE WITH PAS 128: 2014 SURVEY TYPE B

DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/types and service data recorded from ground level. All connections from DPs, Gullies, Drains, VP's, RE's and lampholes have been proven wherever possible using audible connections (AC) and/or sonde instrumentation where applicable. Where these methods have proved unsuccessful then assumed (AR) straight line connections will be shown.

CCTV DRAINAGE SURVEY

All accessible Manholes and Inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber sizes/type and service data recorded from ground level. Pipework has been traced, accessed and collected for post processing. Drainage layout, including manhole covers not located by topographical survey, may be taken from CCTV chainage and will be shown as indicative only.

Electricity

Elec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

British Telecoms

BT cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Due to current laws and legislation protecting all BT apparatus, cabling can only be located remotely. We therefore compare all our telecom findings against record information to produce the final service layout. In some instances, where high amount of cable ducts are present, we may only be able to identify a linear centre peak signal rather than identifying all the individual duct positions. For further information regarding Telecoms apparatus, please contact Openreach directly.

Cable TV & Communications

CTV and/or Com cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Fibre Optic

FO cables will have been predominantly located using GPR methodology. This is due to the materials used within fibre optic cabling. In some rare instances, tracer cabling or conductible non fibre optic cabling will be present within some or all ducting. When this is the case, both EML and GPR methodology will be combined to identify service network and achieve greater quality levels.

Lighting, Traffic Signal & Security Cables

LC, TS and/or Sec cables will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required.

Gas & Water Inc. Fuel Pipes and Hot Water Pipes

GM/GS and/or WM/WS pipe work will have been attempted and located using both EML & GPR methodology with electronically derived depths shown for the former and depths to crown levels shown for the latter.
When the Gas/Water pipe work is constructed using conductible materials, then we are able to to employ multiple geophysical techniques to identify service network and achieve greater quality levels. When a non conductible material is used, GPR methodology will be employed to locate and plot the final service layout.

Ground Penetrating Radar

GPR methodology is used to identify and locate all non metallic, non conductible piping and cabling. We also employ GPR to obtain a greater accuracy levels on EML located services. The GPR has a greater success rate on pipe or service diameter upward of Ø63mm,C63mm, as size increments increase, so does the chance of detection. The GPR can produces varying results and as such, wouldn't be used as an independent utility surveying instrument.

Unidentified Traces

All UITs will have been predominantly located using EML methodology with electronically derived depths shown. GPR techniques will be employed to achieve greater quality levels as required. Every effort has been made to identify the service but in this instance, is not achievable. We recommend excavation work to determine identity and depth where applicable.

Scarring (QL-C)

Scarring has been identified on site with a potential of an undetectable service present.

Assumed Routes & Taken from Records (QL-B4/D)

Assumed routes (AR) are shown if there is evidence that a service exists but we are unable to trace it whilst on site. The surveyor will attempt to locate various risers/ics/valves/meters (service evidence) etc. around site area to successfully determine an assumed route between these points. If there is little evidence on site but they believe a service is still present, then a common sense approach to an assumed route shall be employed.

Taken from records (TFR) are service routes that are taken from STAT record plans or previous survey information and overlaid onto our drawings.

Original Sheet Size A0H

UTILITIES & UNDERGROUND INVESTIGATIONS

ABBREVIATIONS & SYMBOLS

1D 5C	1 Duct 5 Cables	DCr	Depth To Crown	RBC	Rectangular Brick Chamber
Ø	Diameter	DI	Depth To Invert	RCC	Rectangular Conc Chamber
AC	Audible Connection	DS	Depth To Silt	RE	Rodding Eye
AG	Above Ground	DTB	Depth To Base	SA	Survey Abandoned
AR	Assumed Route	DTW	Depth To Water	SL	Silt Level
BL	Base Level	DTS	Depth To Surcharge	SuL	Surcharge Level
CB	Concrete Benching	EBD	External Backdrop	TFR	Taken From Records
CBC	Circular Brick Chamber	EOT	End Of Trace ⟶	UTC	Unable To CCTV
CCC	Circular Conc Chamber	IBD	Internal Backdrop	UTDO	Unable To Determine Outfall
CL	Cover Level	IL	Invert Level	UTL	Unable To Lift
CPC	Circ Plastic Chamber	OH	Overhead	UTS	Unable To Survey
CrL	Crown Level	PDR	Poor Depth Response	UTT	Unable To Trace
CU	Camera Under Water ⟶	RB ●	Rest Bend	WL	Water Level

BT	BT CABLE(S)
O/BT	OVERHEAD BT CABLE(S)
COM	COMMUNICATIONS CABLE(S)
CTV	CABLE TV CABLE(S)
DUCT	EMPTY DUCT
E	ELECTRIC CABLE(S)
O/E	OVERHEAD ELECTRIC CABLE(S)
FO	FIBREOPTIC CABLE(S)
FUEL	FUEL PIPE(S)
GM	GAS MAIN
GS	GAS SERVICE
GPR	GROUND PENETRATING RADAR (GPR) TRACE
HW	HOT WATER PIPE
LC	LIGHTING CIRCUIT
OIL	OIL PIPE(S)
SCAR	VISIBLE SCARRING
SEC	SECURITY CABLING
TC	TELECOM CABLE(S)
TS	TRAFFIC SIGNAL
UIS	UNIDENTIFIED SERVICE
UIT	UNIDENTIFIED TRACE
WM	WATER MAIN
WS	WATER SERVICE
CW ▶	COMBINED SEWER
CW RM ▶	COMBINED WATER RISING MAIN
EW ▶	EFFLUENT WATER
▶	FOUL SEWER
FW RM ▶	FOUL WATER RISING MAIN
RM	RISING MAIN
▶	SURFACE WATER SEWER
SW RM ▶	SURFACE WATER RISING MAIN
▬	INVESTIGATION EXTENTS
Note:	UTILITIES COMMENT BOX (GENERAL NOTES)
d0.37m	DEPTH TO SERVICE
??-AC	AUDIBLE CONNECTION
??-AG	SERVICE ABOVE GROUND
??-CU	CAMERA UNDER WATER
??-OH	SERVICE OVERHEAD

NORTH
Indicative

DRAWING NOTES

All below ground details shown have been identified from above ground without excavation. Survey Solution use electro-magnetic and/or ground penetrating radar (GPR) methods to investigate for underground utilities, services and features. Results using these methods are not infallible and we recommend trial excavations are carried out for verification of positions, depths and identification.

Any areas on the drawing where services or features have not been shown are not necessarily clear of services or features but are an indication that no items have been identified during our investigations. All reasonable care and normal good practice should still be employed during design and construction processes.

Certain types of services such as plastic or concrete pipes, some conduit and ducting where direct access can not be achieved for tracing may not be shown and alternative locating methods should be used.

Survey Solutions has used all reasonable care to research available service records but the completeness or use of the service records supplied to or by Survey Solutions cannot be guaranteed. Therefore Survey Solutions cannot be held responsible for any features annotated as 'taken from records' (TFR).

Depths obtained using electro-magnetic or GPR are effected by ground conditions and should be treated as indicative only. Electro-magnetic depths to utilities and services are generally taken to the centre of a feature, GPR depths to the top of a feature and drainage depth shown to inverts, unless otherwise indicated.

Drainage pipe sizes will be obtained without entering the chamber and therefore should be treated as approximate. Pipe dimensions which have not been obtained visually will be taken from records when available.

All services, drainage and utilities routes are assumed straight between access points, unless otherwise stated. The numbers of cables in runs will not be shown unless specifically requested. All services are below ground unless indicated.

Services, utilities and features may not have been surveyed if obstructed or not reasonably visible or accessible at the time of survey.

Survey Solutions accept no responsibility for the completeness or accuracy of either the topographical survey or base mapping on this project.

All critical dimensions and measurements should be checked and verified with any errors or discrepancies notified to Survey Solutions immediately. The accuracy of the digital data is the same as the plotting scale implies. All dimensions are in metres unless otherwise stated.

The contractor must check and verify all site and building dimensions, levels, utilities and drainage details and connections prior to commencing work.

Do not scale from this drawing.

DESKTOP UTILITY RECORDS (PAS 128: 2014 SURVEY TYPE D)
PREREQUISITE FOR PAS 128: 2014 SURVEY TYPE B
COMMISSIONED: NO

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	NO	N/A
TELECOM	PUBLIC	BRITISH TELECOMS
CABLE TV	NO	N/A
ELECTRICITY	NO	N/A
OIL PIPES	NO	N/A
OTHER	NO	N/A

REV	DESCRIPTION	DRAWN	APPR	DATE

SURVEY
SOLUTIONS

LAND SURVEYING
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IPSWICH BEDFORD COVENTRY GLASGOW LONDON MANCHESTER NORWICH
NOTTINGHAM YEOVIL

PROJECT TITLE
HIGHGATE CEMETERY, SWAINS LANE,
LONDON, N6 6PJ.

DRAWING DETAIL
UTILITIES AND DRAINAGE SURVEY.
SHEET 8 OF 8

CLIENT STEENSEN VARMING				SCALE 1:250
SURVEYOR LJT	SURVEY DATE 20/10/2021	CHECKED BY JAB	APPROVED BY GSB	DWG STATUS FINAL
DRAWING NUMBER 32482BWUG-08			REVISION	ISSUE DATE 28/10/2021

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