KEY

TOPOGRAPHICAL KEY

SURVEY STATION
BANKING
HEDGE SPREADS
WOODLAND CANOPY
ARROW ON STEPS / RAMPS INDICATES DIRECTION UPWARDS
TREES
GATE
KERB CHANNEL
ROAD UNKERBED
FENCE
WALL
BUILDING
OPEN SIDED BUILDING
OVERHANG / CANOPY
GLASSHOUSE
CONTOUR
SPOT LEVEL
SONAR LEVEL
BORE HOLE
TRIAL HOLE
FOOTPATH
CHANGE IN SURFACE

GENERAL

Av	AVERAGE
COW	CABLE ON WALL
CW	COMBINED WATER
DIS	DISUSED
DR	DRAIN/ERS
EML	ELECTROMAGNETIC LOCATOR
EOT	END OF TRACE
FO	FIBRE OPTIC
FP	FOOTPATH
FW	FOUL WATER
GP	GATE POST
GPR	GROUND PENETRATING RADAR
HB	HARD BED
HIP	HIGH PRESSURE
HV	HIGH VOLTAGE
KV	KILO VOLT
IP	INTERMEDIATE PRESSURE
LP	LOW PRESSURE
MH	MANHOLE
MIP	MEDIUM PRESSURE
NDI	NO DEPTH INFORMATION
NFI	NO FURTHER INFORMATION
NDV	NO DUCTS VISIBLE
NPV	NO PIPES VISIBLE
OSBM	ORDNANCE SURVEY BENCHMARK
POW	PIPE ON WALL
P.BOX	POST BOX
PRS	PRESSURE SERVICE
RW	RETAINING WALL
SB	SOFT BED
SNP	STREET NAME PLATE
SW	SURFACE WATER
TAC	TACTILE PAVING
TOW	TOP OF WALL
UIW	UNABLE TO INVERT WATER
UTL	UNABLE TO LOCATE
UTR	UNABLE TO RAISE
UTS	UNABLE TO SURVEY

APPARATUS

ACU	AIR CONDITIONING UNIT
AV	AIR VENT
BB	BELISHA BEACON
BO	BOLLARD
BOL	BOLLARD LIGHT
BS	BUS STOP
CATV	CABLE TELEVISION
CB	CONTROL BOX
CCB	CROSSING CONTROL BUTTON
CP	CATCH PIT
CR	CABLE RISER
DCH	DRAINAGE CHANNEL
EB	ELECTRIC CONTROL BOX
EP	ELECTRIC POLE
ER	EARTH ROD
FD	FILTER DRAIN
FFP	FUEL TANK FILL POINT
GM	GAS METER
GR	GAS RISER
GV	GAS VALVE
GY	GULLY
IC	INSPECTION COVER
INT	INTERCEPTOR
IT	INLET
LO	LOOP OUTLET
LD	LOOP DETECTOR
LH	LAMP HOLE
LP	LAMP POST
MH	MANHOLE
MK	MARKER POST / PLATE
MT	METER
MW	MONITORING WELL
OL	OUTLET
OP	OPTICAL EYE
PO	POST
PTG	PIPE TO GROUND
PTS	PIPE TO SURFACE
PU	PUMP
RE	ROAD SIGN EYE
RI	ROAD IRON
RWM	RISING MAIN
RWP	RAIN WATER PIPE
SC	STOP COCK
SO	SOAKAWAY
SP	SOIL PIPE
ST	STAY CABLE
SV	STOP / ISOLATE VALVE
TBP	TEST BOX POST
TCB	TELEPHONE CALL BOX
TEL	TELECOM INSPECTION COVER
TL	TRAFFIC LIGHT
TLC	TRAFFIC LIGHT COVER
TM	TICKET MACHINE
TP	TELECOM POLE
VM	VENT MARKER
WM	WATER METER
WO	WASH OUT
WR	WATER RISER
WT	WATER TAP
WW	WET WELL

DEPTHS

#	ELECTRONICALLY DERIVED
Pd	PASSIVELY DERIVED
Bd	BASE DEPTH
Cd	DEPTH TO CROWN
Id	DEPTH TO INVERT
Sd	DEPTH TO SOFFIT
STd	DEPTH TO SILT

PIPE MATERIALS

AC	ASBESTOS CEMENT
ALK	ALKATHENE
BK	BRICK
CI	CAST IRON
CON	CONCRETE
DI	DUCTILE IRON
HDPE	HIGH DENSITY PE
MDPE	MEDIUM DENSITY PE
PE	POLYETHYLENE
PF	PITCH FIBRE
PP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
PVC-U	ULTRA PVC (PVC)
SI	SPUN IRON
ST	STEEL
VC	VITRIFIED CLAY

FENCES

B/W	BARBED WIRE FENCE
C/B	CLOSED BOARDED FENCE
CPL	CONCRETE PANEL FENCE
CI	CORRUGATED IRON FENCE
CNP	CHESTNUT PALING
C/L	CHAIN LINK FENCE
I/R	IRON RAILINGS
L/L	LARCH LAP FENCE
P/R	POST AND RAIL FENCE
P/W	POST AND WIRE FENCE
W/M	WIRE MESH FENCE

LEVELS

BD	BACKDROP LEVEL
BL	BASE LEVEL
CL	COVER LEVEL
DL	DEPOT LEVEL
DPC	DAMP PROOF COURSE
FL	FLOOR LEVEL
IL	INVERT LEVEL
PT	P TRAP LEVEL
RL	ROOF LEVEL
SL	SILT LEVEL
TL	TOP LEVEL
THL	THRESHOLD LEVEL
WL	WATER LEVEL

LINESTYLE

INTERNAL METER	(MT)
POT ENDED SERVICE	
SEWER CAPPED RUN	
SURVEY ABANDONED	
INTERNAL VALVE	
UNKNOWN UNDERGROUND ANOMALY	
UNDERGROUND CHAMBERS	
VERIFICATION TRIAL HOLE/EXCAVATION	
ABOVE GROUND	(AG)
ASSUMED ROUTE	QB4(T,R1)
EMPTY DUCTS	(E)
OVERHEAD	(OH)
BACK DROP	
P TRAP	
UTILITY CROSSOVER	
SURVEY BOUNDARY	
VERBAL INFORMATION	QB4(V)
RECORD INFORMATION	QB4(R)
REDUNDANT SERVICE	
RISING MAIN	

CCTV SECTION 4 AND 5 FAULTS ARE SHOWN IN RED

SERVICE TYPE

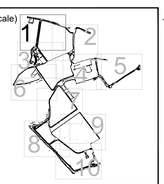
DATA / CATV	
ELECTRICITY (HV)	
ELECTRICITY (LV)	
FUEL	
GAS	
HEATING	
OVERHEAD ELECTRIC	
OVERHEAD TELECOM	
COMBINED SEWER	
FOUL SEWER	
SURFACE SEWER	
TRADE EFFLUENT	
UNIDENTIFIED SEWER	
TELECOM	
UNKNOWN SERVICE	
WATER	
SERVICES SURVEY WARNING	

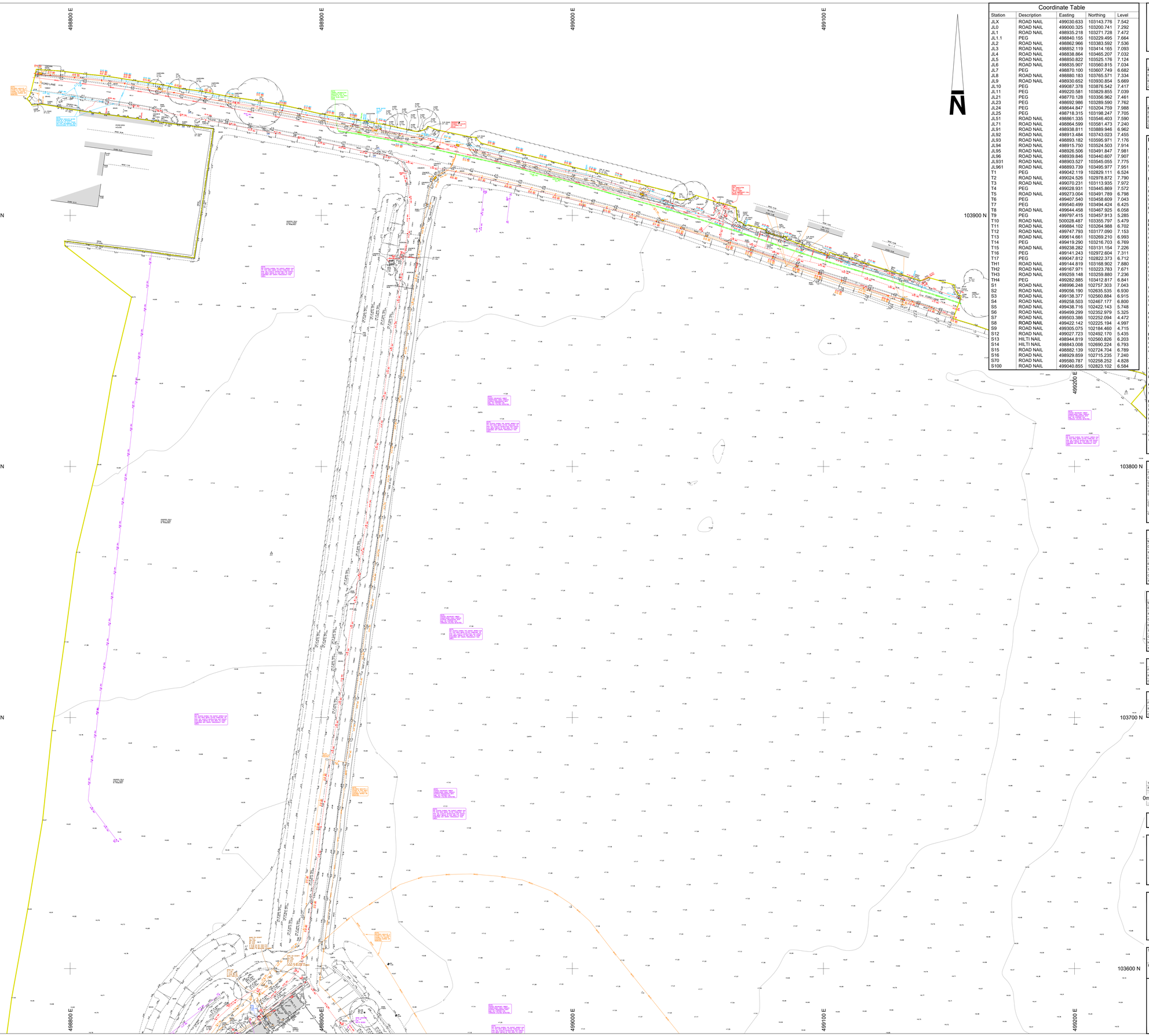
CAUTIONARY NOTES

1. EML techniques have been used in the detection of underground utilities as outlined in Table 2 of PAS 128:2022, the results are not infallible and trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
2. GPR techniques have been used in the detection of non-metallic utilities as outlined in Table 2 of PAS 128:2022. The interpretation of these results is not infallible and success will depend on a number of factors including soil type, ground water levels and surface conditions, hence trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
3. Depths derived via EML are taken to the centre of the conductor (cable, metallic pipe) and those derived via GPR are usually to the crown of the utility unless otherwise indicated.
4. Where cables cannot be detected individually an average depth has been obtained and trial excavations are recommended to confirm number and depths of cables bundled together.
5. 'Pick-ended' cables are often difficult to detect and although we have made all reasonable efforts to locate or transpose this information from records, we cannot guarantee that all 'pick-ended' cables have been located.
6. Fibre optic cables are often difficult to detect, and commonly access chambers can be locked and thereby made inaccessible by the utility provider. All reasonable efforts have been made to locate these ducts using GPR. Cables not located have been transposed from records.
7. Within close proximity of electric substations and similar structures results using EML may become distorted. All reasonable efforts have been made to verify our results using GPR wherever conditions permitted.
8. Underneath overhead power lines results using EML may become distorted. All reasonable efforts have been made to verify our results using GPR wherever conditions permitted.
9. Drainage information has been obtained without man entry into the chamber.
10. Wherever possible we have attempted to locate the route of the sewer, issues such as blockages, surcharging, collapsed pipes, excessive debris/silt/water, inaccessible manhole/chamber, obstructions or heavy traffic flow may have affected our ability to obtain meaningful results. In these cases recommendations have been made for further survey or maintenance work.
11. Pipe / duct sizes have been recorded from surface inspection or taken from record information. Pipe sizes have been recorded in millimetres and depths in metres, except in instances where sizes are indicated in imperial units on the record information.
12. Water and Gas utilities to individual properties are often of a size that cannot be detected using EML or GPR. Investigation, wherever possible the route has been added from surface evidence (pipe risers, valves, etc), but this should be viewed as a guide only.
13. All utilities detected by MK Surveys should be considered live unless confirmed otherwise by client or service provider.
14. MK Surveys cannot confirm when utilities are redundant unless there is visual or record evidence to indicate this. In addition MK Surveys cannot guarantee being able to detect all redundant utilities.
15. Wherever available the results of our investigations have been cross referenced with record information. If a utility shown on the records cannot be detected on site, the information has been added to the drawing and indicated as QB4 (R). However it should be noted that the completeness and accuracy of the records cannot be guaranteed.
16. The utility information has been obtained from non-intrusive survey techniques; it always remains possible that there are additional utilities within the survey boundary that we have not been able to detect. We recommend that care is taken on site and that all utility records are used in conjunction with this survey.
17. The responsibility for avoiding damage to assets and utilities on site shall be that of the persons proposing to excavate within the surveyed area, who shall be liable to the asset owner and any third party who may be affected in any way for any loss or damage.

ALWAYS EXERCISE CAUTION WHEN EXCAVATING.

Sheet Layout: (Not to Scale)





Coordinate Table

Station	Description	Easting	Northing	Level
JL0	ROAD NAIL	499030.633	103143.776	7.542
JL0	ROAD NAIL	499000.325	103200.741	7.292
JL1	ROAD NAIL	498935.218	103271.728	7.472
JL1.1	PEG	498840.155	103229.495	7.664
JL2	ROAD NAIL	498862.966	103383.592	7.536
JL3	ROAD NAIL	498852.119	103414.165	7.093
JL4	ROAD NAIL	498838.864	103465.207	7.032
JL5	ROAD NAIL	498850.822	103525.176	7.124
JL6	ROAD NAIL	498835.907	103560.815	7.034
JL7	PEG	498870.100	103607.749	6.682
JL8	ROAD NAIL	498880.183	103765.571	7.334
JL9	ROAD NAIL	498930.652	103930.854	5.669
JL10	PEG	499087.378	103876.542	7.417
JL11	PEG	499220.581	103829.855	7.039
JL21	PEG	498770.128	103356.962	7.461
JL23	PEG	498692.986	103289.590	7.762
JL24	PEG	498644.847	103204.759	7.988
JL25	PEG	498718.315	103198.247	7.705
JL51	ROAD NAIL	498861.335	103546.403	7.590
JL71	ROAD NAIL	498864.599	103581.473	7.240
JL91	ROAD NAIL	498938.811	103889.946	6.962
JL92	ROAD NAIL	498913.484	103743.023	7.455
JL93	ROAD NAIL	498893.182	103595.971	7.176
JL94	ROAD NAIL	498915.750	103524.503	7.914
JL95	ROAD NAIL	498926.506	103491.847	7.981
JL96	ROAD NAIL	498939.846	103440.607	7.907
JL931	ROAD NAIL	498903.527	103545.055	7.775
JL961	ROAD NAIL	498893.739	103496.977	7.951
T1	PEG	499042.119	102829.111	6.524
T2	ROAD NAIL	499024.526	102978.872	7.790
T3	ROAD NAIL	499070.231	103113.935	7.972
T4	PEG	499028.931	103445.869	7.572
T5	ROAD NAIL	499273.004	103491.789	6.798
T6	PEG	499407.540	103458.609	7.043
T7	PEG	499540.499	103494.424	6.425
T8	ROAD NAIL	499644.458	103467.925	6.058
T9	PEG	499797.415	103457.913	5.285
T10	ROAD NAIL	500028.487	103355.797	5.479
T11	ROAD NAIL	499884.102	103264.988	6.702
T12	ROAD NAIL	499747.793	103177.090	7.153
T13	ROAD NAIL	499614.661	103269.210	6.993
T14	PEG	499419.290	103216.703	6.769
T15	ROAD NAIL	499238.282	103131.154	7.226
T16	PEG	499141.243	102972.604	7.311
T17	PEG	499047.812	102822.373	6.712
TH1	ROAD NAIL	499144.819	103168.902	7.880
TH2	ROAD NAIL	499167.971	103223.783	7.671
TH3	ROAD NAIL	499259.148	103259.880	7.236
TH4	PEG	499282.885	103412.817	6.841
S1	ROAD NAIL	498996.248	102757.303	7.043
S2	ROAD NAIL	499056.190	102635.535	6.930
S3	ROAD NAIL	499138.377	102560.884	6.915
S4	ROAD NAIL	499258.503	102467.177	6.800
S5	ROAD NAIL	499438.716	102422.143	5.748
S6	ROAD NAIL	499499.299	102352.979	5.325
S7	ROAD NAIL	499503.386	102252.094	4.472
S8	ROAD NAIL	499422.142	102225.194	4.997
S9	ROAD NAIL	499305.075	102184.460	4.715
S12	ROAD NAIL	499027.723	102492.170	5.435
S13	HILTI NAIL	498944.819	102560.826	6.203
S14	HILTI NAIL	498843.008	102690.224	6.793
S15	ROAD NAIL	498882.139	102724.704	6.789
S16	ROAD NAIL	498929.859	102715.235	7.240
S70	ROAD NAIL	499580.787	102258.252	4.828
S100	ROAD NAIL	499040.855	102823.102	6.584

Notes :

1. GRID AND LEVELS BASED ON ORDNANCE DATUM, DERIVED FROM THE NATIONAL GNSS NETWORK. LOCAL SCALE FACTOR OF 0.99972 APPLIED.
2. TREE AND HEDGE SPECIES HAVE BEEN IDENTIFIED AS ACCURATELY AS POSSIBLE BUT SHOULD BE CROSS CHECKED IN CRITICAL AREAS.
3. THIS SURVEY (REVISION 1) SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT. THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

Equipment Information

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8200	10/TX-108-10896	RD6	14/03/2023
EML Rx Receiver	SPX Radiodetection	RD8200	10/83-GB-44	RD6	14/03/2023
GPR	IDS Georadar	Opera	010-16-000396	GPR7	Day of survey

Equipment Information R1

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8100	10/TX-108-7795	RD12	06/07/2023
EML Rx Receiver	SPX Radiodetection	RD8100	10/81PDL-472	RD12	06/07/2023
GPR	IDS Georadar	OPERA DUO	SN:010-17-000374	GPR15	24/10/2023
GPS	Leica Geosystems	CS20/GS014	2420301	GNSS 26	N/A

DETECTION SURVEY REPORT

GENERAL

This survey was carried out in accordance with PAS 128:2022 (Publicly Available Specification from BSI). After a pre-survey consultation with the client it was agreed to carry out the detection survey using methodology M1 as per Table 2 of the PAS 128:2022. The survey boundary has been shown on the drawing; please see linestyle section of the key for reference.

DESKTOP UTILITY REPORT

The client has provided MK Surveys with historical record information for the original survey works. There is no guarantee of the completeness and accuracy of this information.
Prior to the revision to our original survey commencing record information was gathered and compiled in a separate desktop utility report. This report should be read in conjunction with the information contained in this utility detection survey. Record information was at the time of the survey the most recent available in accordance with the requirements of the PAS 128:2022. For a full list of the providers searched, records received and the dates the information was obtained, please refer to the attachments page of the desktop utility report.

DETECTION SURVEY

DRAINAGE

Drainage was lifted with pipe sizes and invert levels recorded. Wherever possible the chamber sizes have been recorded and positioned on the drawing. All connections from gullies, external rainwater pipes and external soil stacks have been proven wherever possible into manholes and sewer runs by radio sonde location and/or GPR. Where a saddle connection is present the position is assumed only until proven to QB2 or above. In instances where other detection methods were unsuccessful connections between manholes have been assumed to be straight and labelled as QB4. All drainage should be cross checked in critical areas by CCTV survey or verification survey type A. Due to areas of dense vegetation, access has been limited and there are possible drainage apparatus present in these areas. Unable to detect rising main matching the positions indicated in the supplied utility records. However, a consistent unknown target has been detected close to marker posts (related to the rising main) to the North of the airfield. Recommend a trial excavation to confirm the utility that is located in this region. If this is the rising main from the records, the position differ significantly.

WATER

Water utilities have been successfully detected using EML and GPR techniques with depths recorded electronically and to the crown of the pipe. Undetected utilities have been drawn up from supplied utility record drawings. Recommend trial excavations to verify position and depths in critical areas.

GAS

Gas utilities have been detected through GPR techniques with depths recorded to the crown of the pipe. Undetected utilities have been added from supplied record drawings. Recommend trial excavations to verify depth and positions in critical areas.

ELECTRICITY

Electricity utilities have been successfully detected through EML and GPR methods with depths recorded electronically and to the crown of the duct. Undetected utilities have been drawn in from supplied records. Recommend trial excavations to verify depth and positions in critical areas.

TELECOM

Telecom ducts have been traced with depths recorded. Due to laws protecting British Telecom apparatus all ducts have been located using remote detection techniques only and compared with record information. Chamber sizes have been recorded using GPR techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

CATV

There were no additional CATV utilities detected on site. This matches the supplied records that do not show any affected utilities.

UNKNOWNS

Some unknown targets identified on the drawing using GPR are classified as "non-linear targets". These are not consistent with what we expect to see when identifying a buried utility, and appear on the drawing as single targets with depths (i.e. not linking two or more depth readings). This does not mean they are not utilities, we are just unable to positively identify them as a utility. We would strongly recommend that further verification surveys (PAS 128:2022 survey type A) are carried out to identify these targets in critical areas. Unknown anomalies located using EML or GPR techniques with electronically derived depths recorded where possible. Recommend trial excavations to confirm identity position and depths in critical areas.

SEE CAUTIONARY NOTES WITHIN THE UTILITY KEY

PAS 128:2022 Quality Level Guide

Quality Level	Description	Accuracy
QB4 (QL-B4)	A utility is expected to exist but cannot be detected - (AR), (R), (V).	Undefined
QB3 (QL-B3) QB3P (QL-B3P)	Horizontal location only using one geophysical technique. No depth information - NDI.	+/- 500mm Horizontal Undefined Vertical
QB2 (QL-B2) QB2P (QL-B2P)	Horizontal and vertical location only using one geophysical technique.	+/- 250mm or +/- 40% of depth whichever is greater
QB1 (QL-B1) QB1P (QB-1P)	Horizontal and vertical location only using two geophysical techniques.	+/- 150mm or +/- 15% of depth whichever is greater
QA (QL-A)	Service verified in an open excavation, inside an inspection chamber / draw pit, or at the point the service enters / exits the ground.	+/- 50mm Horizontal +/- 50mm Vertical

Desktop Utility Records

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/07/2023
Water	Portsmouth Water	06/07/2023
Gas	SGN	06/07/2023
Electricity	Scottish and Southern Electricity Networks	06/07/2023
Telecom	Openreach	06/07/2023
CATV	Not Affected	Not Applicable
Tunnels & Pipelines	UnreasonableRouteUtdg	06/07/2023

Desktop Utility Records R1

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/09/2023
Water	Portsmouth Water	07/09/2023
Gas	SGN	06/09/2023
Electricity	Scottish and Southern Electricity Networks	06/09/2023
Telecom	Openreach	27/09/2023
CATV	Virgin Media	06/09/2023
New Installations	GTC	28/09/2023
Tunnels & Pipelines	UnreasonableRouteUtdg	06/09/2023

Survey Information R1

Fieldwork dates	23/10	24/10	25/10	26/10	27/10	31/10	01/11	06/11	07/11	08/11
Weather conditions	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Rain
Ground conditions	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet

Survey Information R1

Fieldwork dates	14/11	15/11	20/11	22/11						
Weather conditions	Showers	Cloudy	Cloudy	Cloudy						
Ground conditions	Wet	Wet	Wet	Wet						

Revision	Description	Surv. by	Check. by	Appr. by	Date
1	Northern parcel surveyed.	JL/TH/MK	KS/AC	CP/NF	October 2023

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

Topographical and PAS 128:2022 Utility Survey

Vistry Group

Ford Airfield
Arundel
West Sussex

Scale:	Sheet Size:	Sheet Number:	Date:
1:500	A0	1	August 2023

Project Number:	Rev:	Surveyed by:	Checked by:	Approved by:
32809	1	JM / TC / LW	AS / AC	CP / NF

mksurveys

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TOPOGRAPHICAL KEY

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CONTOUR — 39.80
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BORE HOLE — BH
TRIAL HOLE — TH
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St	DEPTH TO SILT

PIPE MATERIALS

AC	ASBESTOS CEMENT
ALK	ALKATHENE
BK	BRICK
CI	CAST IRON
CON	CONCRETE
DI	DUCTILE IRON
HDPE	HIGH DENSITY PE
MDPE	MEDIUM DENSITY PE
PE	POLYETHYLENE
PF	PITCH FIBRE
PP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
PVC-U	ULTRA RIB (PVC)
SI	SPUN IRON
ST	STEEL
VC	VITRIFIED CLAY

FENCES

B/W	BARBED WIRE FENCE
C/B	CLOSED BOARDED FENCE
CPL	CONCRETE PANEL FENCE
C/I	CORRUGATED IRON FENCE
CNP	CHESTNUT PALING
C/L	CHAIN LINK FENCE
I/R	IRON RAILINGS
L/L	LARCH LAP FENCE
P/R	POST AND RAIL FENCE
P/W	POST AND WIRE FENCE
W/M	WIRE MESH FENCE

LEVELS

BD	BACKDROP LEVEL
BL	BASE LEVEL
CL	COVER LEVEL
DL	DRAIN LEVEL
DPC	DAMP PROOF COURSE
FL	FLOOR LEVEL
IL	INVERT LEVEL
PT	P TRAP LEVEL
RL	ROOF LEVEL
SL	SILT LEVEL
TL	TOP LEVEL
THL	THRESHOLD LEVEL
WL	WATER LEVEL

LINESTYLE

INTERNAL METER — (MT)
POT ENDED SERVICE
SEWER CAPPED RUN
SURVEY ABANDONED
INTERNAL VALVE
UNKNOWN UNDERGROUND ANOMALY
UNDERGROUND CHAMBERS
VERIFICATION TRIAL HOLE/EXCAVATION
ABOVE GROUND — (AG)
ASSUMED ROUTE — (QB4(AR))
EMPTY DUCTS — (E)
OVERHEAD — (OH)
BACK DROP
P TRAP
UTILITY CROSSOVER
SURVEY BOUNDARY
VERBAL INFORMATION — (QB4(VI))
RECORD INFORMATION — (QB4(R))
REDUNDANT SERVICE
RISING MAIN
CCTV SECTION 4 AND 5 FAULTS ARE SHOWN IN RED

SERVICE TYPE

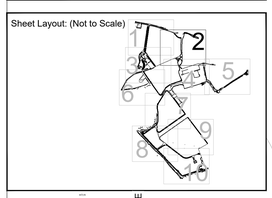
DATA / CATV
ELECTRICITY (HV)
ELECTRICITY (LV)
FUEL
GAS
HEATING
OVERHEAD ELECTRIC
OVERHEAD TELECOM
COMBINED SEWER
FOUL SEWER
SURFACE SEWER
TRADE EFFLUENT
UNIDENTIFIED SEWER
TELECOM
UNKNOWN SERVICE
WATER
SERVICES SURVEY WARNING

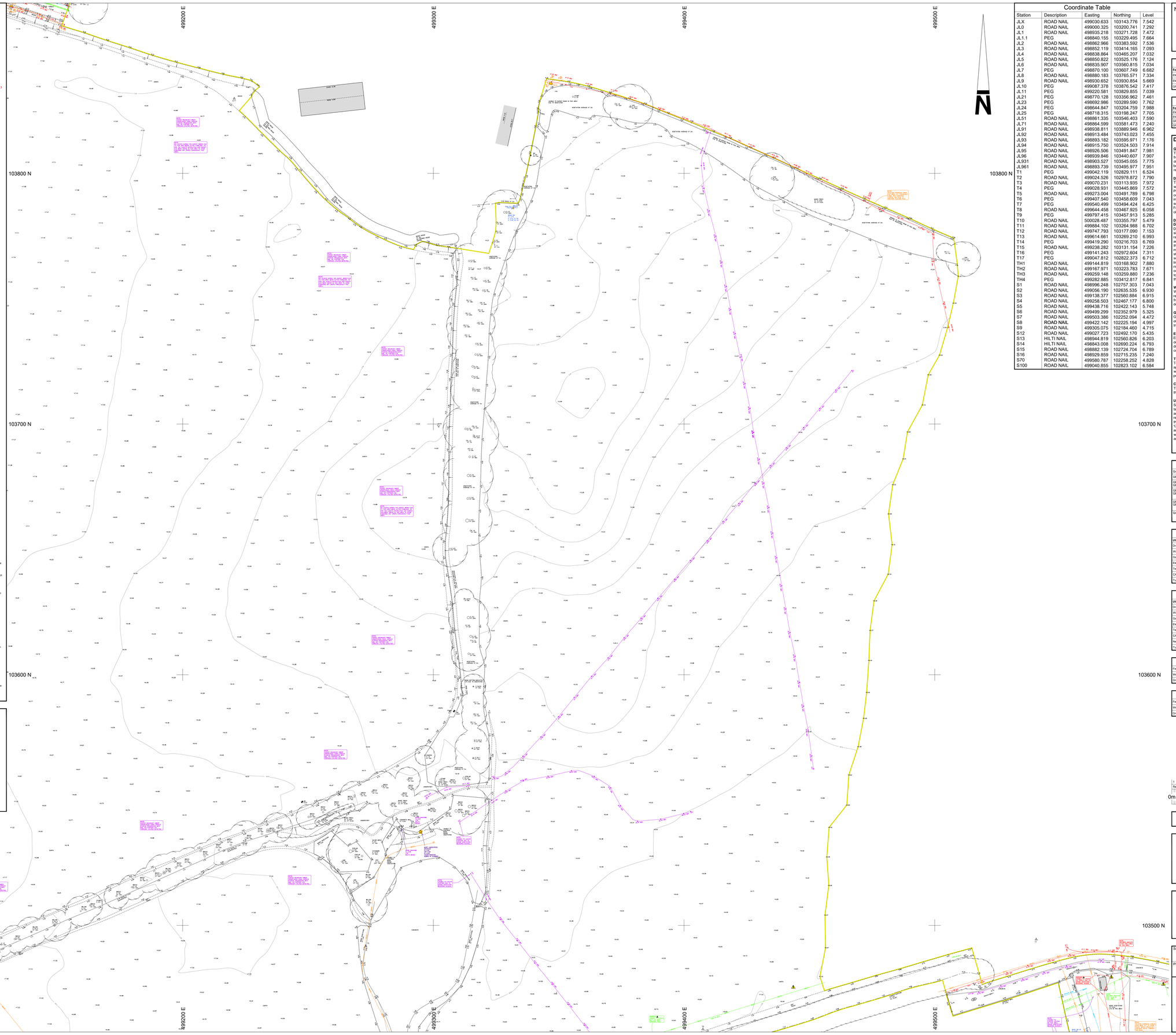
CAUTIONARY NOTES

1. EML techniques have been used in the detection of underground utilities as outlined in Table 2 of PAS 128:2022, the results are not infallible and trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
2. GPR techniques has been used in the detection of non-metallic utilities as outlined in Table 2 of PAS 128:2022. The interpretation of these results is not infallible and success will depend on a number of factors including soil type, ground water levels and surface conditions, hence trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
3. Depths derived via EML are taken to the centre of the conductor (cable, metallic pipe) and those derived via GPR are usually to the crown of the utility unless otherwise indicated.
4. Where cables cannot be detected individually an average depth has been obtained and trial excavations are recommended to confirm number and depths of cables bended together.
5. 'Pot-ended' cables are often difficult to detect and although we have made all reasonable efforts to locate or transpose this information from records, we cannot guarantee that all 'pot-ended' cables have been located.
6. Fibre optic cables are often difficult to detect, and commonly access chambers can be locked and thereby made inaccessible by the utility provider. All reasonable efforts have been made to locate these ducts using GPR. Cables not located have been transposed from records.
7. Within close proximity of electric substations and similar structures results using EML may become distorted. All reasonable efforts have been made to verify our results using GPR wherever conditions permitted.
8. Underneath overhead power lines results using EML may become distorted. All reasonable efforts have been made to verify our results using GPR wherever conditions permitted.
9. Drainage information has been obtained without man entry into the chamber.
10. Wherever possible we have attempted to locate the route of the sewer. Issues such as blockages, surcharging, flooding, sedimentation, sewer collapse, root ingress, excessive depth, obstructions or heavy traffic flow may have affected our ability to obtain meaningful results. In these cases recommendations have been made for further survey or maintenance work.
11. Pipe / duct sizes have been recorded from surface inspection or taken from record information. Pipe sizes have been recorded in millimetres and depths in metres, except in instances where sizes are indicated in imperial units on the record information.
12. Water and Gas utilities to individual properties are often of a size that cannot be detected using EML or GPR. Investigation, wherever possible the route has been added from surface evidence (pipe risers, valves, etc), but this should be viewed as a guide only.
13. All utilities detected by MK Surveys should be considered live unless confirmed otherwise by client or service provider.
14. MK Surveys cannot confirm when utilities are redundant unless there is visual or record evidence to indicate this. In addition MK Surveys cannot guarantee being able to detect all redundant utilities.
15. Wherever available the results of our investigations have been cross referenced with record information. If a utility shown on the records cannot be detected on site, the information has been added to the drawing and indicated as QB4 (R). However it should be noted that the completeness and accuracy of the records cannot be guaranteed.
16. The utility information has been obtained from non-intrusive survey techniques; it always remains possible that there are additional utilities within the survey boundary that we have not been able to detect. We recommend that care is taken on site and that all utility records are used in conjunction with this survey.
17. The responsibility for avoiding damage to assets and utilities on site shall be that of the persons proposing to excavate within the surveyed area, who shall be liable to the asset owner and any third party who may be affected in any way for any loss or damage.

ALWAYS EXERCISE CAUTION WHEN EXCAVATING.

Sheet Layout: (Not to Scale)





Coordinate Table

Station	Description	Easting	Northing	Level
JL0	ROAD NAIL	499030.633	103143.776	7.542
JL0	ROAD NAIL	499000.325	103200.741	7.292
JL1	ROAD NAIL	498935.218	103271.728	7.472
JL1.1	PEG	498840.155	103229.495	7.664
JL2	ROAD NAIL	498862.966	103383.592	7.536
JL3	ROAD NAIL	498852.119	103414.165	7.093
JL4	ROAD NAIL	498838.864	103465.207	7.032
JL5	ROAD NAIL	498850.822	103525.176	7.124
JL6	ROAD NAIL	498835.907	103560.815	7.034
JL7	PEG	498870.100	103607.749	6.682
JL8	ROAD NAIL	498880.183	103765.571	7.334
JL9	ROAD NAIL	498930.652	103930.854	5.669
JL10	PEG	499087.378	103876.542	7.417
JL11	PEG	499220.581	103829.855	7.039
JL21	PEG	498770.128	103356.962	7.461
JL23	PEG	498692.986	103289.590	7.762
JL24	PEG	498644.847	103204.759	7.988
JL25	PEG	498718.315	103198.247	7.705
JL51	ROAD NAIL	498861.335	103546.403	7.590
JL71	ROAD NAIL	498864.599	103581.473	7.240
JL91	ROAD NAIL	498938.811	103889.946	6.962
JL92	ROAD NAIL	498913.484	103743.023	7.455
JL93	ROAD NAIL	498893.182	103595.971	7.176
JL94	ROAD NAIL	498915.750	103524.503	7.914
JL95	ROAD NAIL	498926.506	103491.847	7.981
JL96	ROAD NAIL	498939.846	103440.607	7.907
JL931	ROAD NAIL	498903.527	103545.055	7.775
JL961	ROAD NAIL	498893.739	103495.977	7.951
T1	PEG	499042.119	102829.111	6.524
T2	ROAD NAIL	499024.526	102978.872	7.790
T3	ROAD NAIL	499070.231	103113.935	7.972
T4	PEG	499028.931	103445.869	7.572
T5	ROAD NAIL	499273.004	103491.789	6.798
T6	PEG	499407.540	103458.609	7.043
T7	PEG	499540.499	103494.424	6.425
T8	ROAD NAIL	499644.458	103467.925	6.058
T9	PEG	499797.415	103457.913	5.285
T10	ROAD NAIL	500028.487	103355.797	5.479
T11	ROAD NAIL	499884.102	103264.988	6.702
T12	ROAD NAIL	499747.793	103177.090	7.153
T13	ROAD NAIL	499614.661	103269.210	6.993
T14	PEG	499419.290	103216.703	6.769
T15	ROAD NAIL	499238.282	103131.154	7.226
T16	PEG	499141.243	102972.604	7.311
T17	PEG	499047.812	102822.373	6.712
TH1	ROAD NAIL	499144.819	103168.902	7.880
TH2	ROAD NAIL	499167.971	103223.783	7.671
TH3	ROAD NAIL	499259.148	103259.880	7.236
TH4	PEG	499282.885	103412.817	6.841
S1	ROAD NAIL	498996.248	102757.303	7.043
S2	ROAD NAIL	499056.190	102635.535	6.930
S3	ROAD NAIL	499138.377	102560.884	6.915
S4	ROAD NAIL	499258.503	102467.177	6.800
S5	ROAD NAIL	499438.716	102422.143	5.748
S6	ROAD NAIL	499499.299	102352.979	5.325
S7	ROAD NAIL	499503.386	102252.094	4.472
S8	ROAD NAIL	499422.142	102225.194	4.997
S9	ROAD NAIL	499305.075	102184.460	4.715
S12	ROAD NAIL	499027.723	102492.170	5.435
S13	HILTI NAIL	498944.819	102560.826	6.203
S14	HILTI NAIL	498843.008	102690.224	6.793
S15	ROAD NAIL	498882.139	102724.704	6.789
S16	ROAD NAIL	498929.859	102715.235	7.240
S70	ROAD NAIL	499580.787	102258.252	4.828
S100	ROAD NAIL	499040.855	102823.102	6.584

Notes :

1. GRID AND LEVELS BASED ON ORDNANCE DATUM, DERIVED FROM THE NATIONAL ONES NETWORK. LOCAL SCALE FACTOR OF 0.99972 APPLIES.
2. TREE AND HEDGE SPECIES HAVE BEEN IDENTIFIED AS ACCURATELY AS POSSIBLE BUT SHOULD BE CROSS CHECKED IN CRITICAL AREAS.
3. THIS SURVEY (REVISION 1) SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT. THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

Equipment Information

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8200	10TX-10B-10896	RD6	14/03/2023
EML Rx Receiver	SPX Radiodetection	RD8200	10B3-QB-64	RD6	14/03/2023
GPR	IDS Georadar	Opera	010-16-000396	GPR7	Day of survey

Equipment Information R1

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8100	10TX-10B-7795	RD12	06/07/2023
EML Rx Receiver	SPX Radiodetection	RD8100	10B1PDL-472	RD12	06/07/2023
GPR	IDS Georadar	DPERA DUO	SN:010-17-000374	GPR15	24/10/2023
GPS	Leica Geosystems	CS20/GS014	2420301	GNSS 26	N/A

DETECTION SURVEY REPORT

GENERAL

This survey was carried out in accordance with PAS 128:2022 (Publicly Available Specification from BSI). After a pre-survey consultation with the client it was agreed to carry out the detection survey using methodology M1 as per Table 2 of the PAS 128:2022. The survey boundary has been shown on the drawing; please see linestyle section of the key for reference.

DESKTOP UTILITY REPORT

The client has provided MK Surveys with historical record information for the original survey works. There is no guarantee of the completeness and accuracy of this information.
Prior to the revision to our original survey commencing record information was gathered and compiled in a separate desktop utility report. This report should be read in conjunction with the information contained in this utility detection survey. Record information was at the time of the survey the most recent available in accordance with the requirements of the PAS 128:2022. For a full list of the providers searched, records received and the dates the information was obtained, please refer to the attachments page of the desktop utility report.

DETECTION SURVEY

DRAINAGE

Drainage was lifted with pipe sizes and invert levels recorded. Wherever possible the chamber sizes have been recorded and positioned on the drawing. All connections from gullies, external rainwater pipes and external soil stacks have been proven wherever possible into manholes and sewer runs by radio sonde location and/or GPR. Where a saddle connection is present the position is assumed only until proven to QB2 or above. In instances where other detection methods were unsuccessful connections between manholes have been assumed to be straight and labelled as QB4. All drainage should be cross checked in critical areas by CCTV survey or verification survey type A. Due to areas of dense vegetation, access has been limited and there are possible drainage apparatus present in these areas. Unable to detect rising main matching the positions indicated in the supplied utility records. However, a consistent unknown target has been detected close to marker posts (related to the rising main) to the North of the airfield. Recommend a trial excavation to confirm the utility that is located in this region. If this is the rising main from the records, the position differ significantly.

WATER

Water utilities have been successfully detected using EML and GPR techniques with depths recorded electronically and to the crown of the pipe. Undetected utilities have been drawn up from supplied utility record drawings. Recommend trial excavations to verify position and depths in critical areas.

GAS

Gas utilities have been detected through GPR techniques with depths recorded to the crown of the pipe. Undetected utilities have been added from supplied record drawings. Recommend trial excavations to verify depth and positions in critical areas.

ELECTRICITY

Electricity utilities have been successfully detected through EML and GPR methods with depths recorded electronically and to the crown of the duct. Undetected utilities have been drawn in from supplied records. Recommend trial excavations to verify depth and positions in critical areas.

TELECOM

Telecom ducts have been traced with depths recorded. Due to laws protecting British Telecom apparatus all ducts have been located using remote detection techniques only and compared with record information. Chamber sizes have been recorded using GPR techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

CATV

There were no additional CATV utilities detected on site. This matches the supplied records that do not show any affected utilities.

UNKNOWNS

Some unknown targets identified on the drawing using GPR are classified as "non-linear targets". These are not consistent with what we expect to see when identifying a buried utility, and appear on the drawing as single targets with depths (i.e. not linking two or more depth readings). This does not mean they are not utilities, we are just unable to positively identify them as a utility. We would strongly recommend that further verification surveys (PAS 128:2022 survey type A) are carried out to identify these targets in critical areas. Unknown anomalies located using EML or GPR techniques with electronically derived depths recorded where possible. Recommend trial excavations to confirm identity position and depths in critical areas.

SEE CAUTIONARY NOTES WITHIN THE UTILITY KEY

PAS 128:2022 Quality Level Guide

Quality Level	Description	Accuracy
QB4 (QL-B4)	A utility is expected to exist but cannot be detected - (AR), (R), (VI)	Undefined
QB3 (QL-B3) QB3P (QL-B3P)	Horizontal location only using one geophysical technique. No depth information - NDI.	+/- 500mm Horizontal Undefined Vertical
QB2 (QL-B2) QB2P (QL-B2P)	Horizontal and vertical location only using one geophysical technique.	+/- 250mm or +/- 40% of depth whichever is greater
QB1 (QL-B1) QB1P (QB-1P)	Horizontal and vertical location only using two geophysical techniques.	+/- 150mm or +/- 15% of depth whichever is greater
QA (QL-A)	Service verified in an open excavation, inside an inspection chamber / draw pit, or at the point the service enters / exits the ground.	+/- 50mm Horizontal +/- 50mm Vertical

Desktop Utility Records

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/07/2023
Water	Portsmouth Water	06/07/2023
Gas	SGN	06/07/2023
Electricity	Scottish and Southern Electricity Networks	06/07/2023
Telecom	Openreach	06/07/2023
CATV	Not Affected	Not Applicable
Tunnels & Pipelines	LinesearchbeforeUdig	06/07/2023

Desktop Utility Records R1

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/09/2023
Water	Portsmouth Water	07/09/2023
Gas	SGN	06/09/2023
Electricity	Scottish and Southern Electricity Networks	06/09/2023
Telecom	Openreach	27/09/2023
CATV	Virgin Media	06/09/2023
New Installations	GTC	28/09/2023
Tunnels & Pipelines	Linesearchbeforeudig	06/09/2023

Survey Information R1

Fieldwork dates	23/10	24/10	25/10	26/10	27/10	31/10	01/11	06/11	07/11	08/11
Weather conditions	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Rain
Ground conditions	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet

Survey Information R1

Fieldwork dates	14/11	15/11	20/11	22/11						
Weather conditions	Showers	Cloudy	Cloudy	Cloudy						
Ground conditions	Wet	Wet	Wet	Wet						

Revision	Description	Sur. by	Check. by	Appr. by	Date
1	Northern parcel surveyed.	JL/TH/MK	AS/AC	CP/NF	October 2023

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

Topographical and PAS 128:2022 Utility Survey

Vistry Group

Ford Airfield
Arundel
West Sussex

Scale:	Sheet Size:	Sheet Number:	Date:
1:500	A0	2	August 2023

Project Number:	Rev:	Surveyed by:	Checked by:	Approved by:
32809	1	JM / TC / LW	AS / AC	CP / NF

mksurveys

www.mksurveys.com www.surveys4bim.co.uk
Head Office: Milton Keynes t: 01908 565561 e: mail@mksurveys.co.uk

KEY

TOPOGRAPHICAL KEY

SURVEY STATION — 5
BANKING — TOP / BOTTOM
HEDGE SPREADS
WOODLAND CANOPY
ARROW ON STEPS / RAMPS INDICATES DIRECTION UP/WARDS
TREES — SPREAD & GIRTH SHOWN TO SCALE
GATE
KERB CHANNEL
ROAD UNKERBED

FENCE
WALL
BUILDING
OPEN SIDED BUILDING
OVERHANG / CANOPY
GLASSHOUSE
CONTOUR — 39.50
SPOT LEVEL + 127.13 — SONAR LEVEL ○ 127.13
BORE HOLE — BH
TRIAL HOLE — TH
FOOTPATH
CHANGE IN SURFACE

GENERAL

Av	AVERAGE
COW	CABLE ON WALL
CW	COMBINED WATER
DIS	DISUSED
DR	DRAIN BARS
EML	ELECTROMAGNETIC LOCATOR
EOT	END OF TRACE
FO	FIBRE OPTIC
FP	FOOTPATH
FW	FOUL WATER
GP	GATE POST
GPR	GROUND PENETRATING RADAR
HB	HARD BED
HP	HIGH PRESSURE
HV	HIGH VOLTAGE
KV	KILO VOLT
IP	INTERMEDIATE PRESSURE
LP	LOW PRESSURE
MH	MANHOLE
MP	MEDIUM PRESSURE
NDI	NO DEPTH INFORMATION
NFI	NO FURTHER INFORMATION
NDV	NO DUCTS VISIBLE
NPV	NO PIPES VISIBLE
OSBM	ORDNANCE SURVEY BENCHMARK
POW	PIPE ON WALL
P.BOX	POST BOX
RED	REDUNDANT SERVICE
RW	RETAINING WALL
SB	SOFT BED
SNP	STREET NAME PLATE
SW	SURFACE WATER
TAC	TACTILE PAVING
TOW	TOP OF WALL
UCW	UNCLASSIFIED WATER
UTL	UNABLE TO LOCATE
UTR	UNABLE TO RAISE
UTS	UNABLE TO SURVEY

APPARATUS

ACU	AIR CONDITIONING UNIT
BH	BORE HOLE
BM	BELISHA BEACON
BO	BOLLARD
BOL	BOLLARD LIGHT
BS	BUS STOP
CATV	CABLE TELEVISION
CB	CONTROL BOX
CCB	CROSSING CONTROL BUTTON
CP	CATCH PIT
CR	CABLE RISER
DCH	DRAINAGE CHANNEL
EB	ELECTRIC CONTROL BOX
EP	ELECTRIC POLE
ER	EARTH ROD
FD	FILTER DRAIN
FFP	FUEL TANK FILL POINT
GM	GAS METER
GR	GAS RISER
GV	GAS VALVE
GY	GULLY
IC	INSPECTION COVER
INT	INTERCEPTOR
IT	INLET
LO	LOOP OUTLET
LD	LOOP DETECTOR
LH	LAMP HOLE
LP	LAMP POST
MH	MANHOLE
MK	MARKER POST / PLATE
MT	METER
MW	MONITORING WELL
OL	OUTLET
OP	OUTSTAND
PO	POST
PTG	PIPE TO GROUND
PTS	PIPE TO SURFACE
PU	PUMP
RE	ROAD SIGN EYE
RI	RISER IRON
RMG	RISING MAIN
RWP	RAIN WATER PIPE
SC	STOP COCK
SO	SOAKAWAY
SP	SOIL PIPE
ST	STAY CABLE
SV	STOP / ISOLATE VALVE
TBP	TELEGRAPH POLE
TCB	TELEPHONE CALL BOX
TEL	TELECOM INSPECTION COVER
TL	TRAFFIC LIGHT
TLC	TRAFFIC LIGHT COVER
TM	TICKET MACHINE
TP	TELECOM POLE
VP	VENT PIPE
WM	WATER METER
WO	WASH OUT
WR	WATER RISER
WT	WATER TAP
WW	WET WELL

DEPTHS

#	ELECTRONICALLY DERIVED
Pd	PASSIVELY DERIVED
Bd	BASE DEPTH
Cd	DEPTH TO CROWN
Id	DEPTH TO INVERT
Sd	DEPTH TO SOFFIT
STd	DEPTH TO SILT

PIPE MATERIALS

AC	ASBESTOS CEMENT
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ABOVE GROUND — (AG)
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RECORD INFORMATION — QB4(R)
REDUNDANT SERVICE — (R)
RISING MAIN

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DATA CABLE
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ELECTRICITY (LV)
FUEL
GAS
HEATING
OVERHEAD ELECTRIC
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FOUL SEWER
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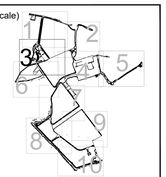
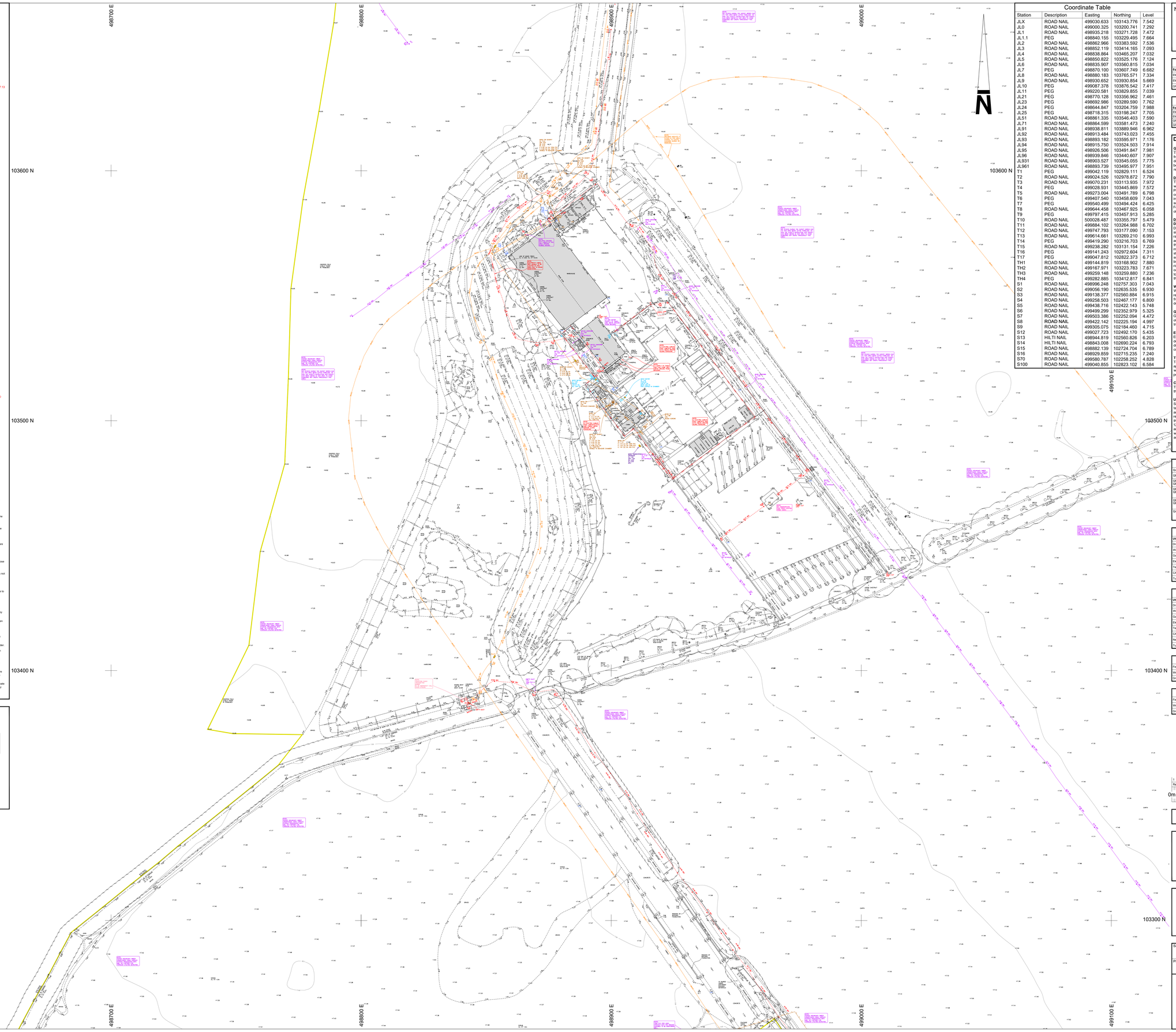
9. Drainage information has been obtained without man entry into the chamber.
10. Wherever possible we have attempted to locate the route of the sewer. Issues such as blockages, surcharging, flooding, sedimentation, sewer collapse, root ingress, excessive depth, obstructions or heavy traffic flow may have affected our ability to obtain meaningful results. In these cases recommendations have been made for further survey or maintenance work.
11. Pipe / duct sizes have been recorded from surface inspection or taken from record information. Pipe sizes have been recorded in millimetres and depths in metres, except in instances where sizes are indicated in imperial units on the record information.
12. Water and Gas utilities to individual properties are often of a size that cannot be detected using EML or GPR investigation, wherever possible the route has been added from surface evidence (pipe risers, valves, etc), but this should be viewed as a guide only.
13. All utilities detected by MK Surveys should be considered live unless confirmed otherwise by client or service provider.
14. MK Surveys cannot confirm when utilities are redundant unless there is visual or record evidence to indicate this. In addition MK Surveys cannot guarantee being able to detect all redundant utilities.
15. Wherever available the results of our investigations have been cross referenced with record information. If a utility shown on the records cannot be detected on site, the information has been added to the drawing and indicated as QB4 (R). However it should be noted that the completeness and accuracy of the records cannot be guaranteed.
16. The utility information has been obtained from non-intrusive survey techniques. It always remains possible that there are additional utilities within the survey boundary that we have not been able to detect. We recommend that care is taken on site and that all utility records are used in conjunction with this survey.
17. The responsibility for avoiding damage to assets and utilities on site shall be that of the persons proposing to excavate within the surveyed area, who shall be liable to the asset owner and any third party who may be affected in any way for any loss or damage.

ALWAYS EXERCISE CAUTION WHEN EXCAVATING.

Sheet Layout: (Not to Scale)





Coordinate Table

Station	Description	Easting	Northing	Level
JL0	ROAD NAIL	499030.633	103143.776	7.542
JL0	ROAD NAIL	499000.325	103200.741	7.292
JL1	ROAD NAIL	498935.218	103271.728	7.472
JL1.1	PEG	498840.155	103229.495	7.664
JL2	ROAD NAIL	498862.966	103383.592	7.536
JL3	ROAD NAIL	498852.119	103414.165	7.093
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JL25	PEG	498718.315	103198.247	7.705
JL51	ROAD NAIL	498861.335	103546.403	7.590
JL71	ROAD NAIL	498864.599	103581.473	7.240
JL91	ROAD NAIL	498938.811	103889.946	6.962
JL92	ROAD NAIL	498913.484	103743.023	7.455
JL93	ROAD NAIL	498893.182	103595.971	7.176
JL94	ROAD NAIL	498915.750	103524.503	7.914
JL95	ROAD NAIL	498926.506	103491.847	7.981
JL96	ROAD NAIL	498939.846	103440.607	7.907
JL931	ROAD NAIL	498903.527	103545.055	7.775
JL961	ROAD NAIL	498883.739	103495.977	7.951
T1	PEG	499042.119	102829.111	6.524
T2	ROAD NAIL	499024.526	102978.872	7.790
T3	ROAD NAIL	499070.231	103113.935	7.972
T4	PEG	499028.931	103445.869	7.572
T5	ROAD NAIL	499273.004	103491.789	6.798
T6	PEG	499407.540	103458.609	7.043
T7	PEG	499540.499	103494.424	6.425
T8	ROAD NAIL	499644.458	103467.925	6.058
T9	PEG	499797.415	103457.913	5.285
T10	ROAD NAIL	500028.487	103355.797	5.479
T11	ROAD NAIL	499884.102	103264.988	6.702
T12	ROAD NAIL	499747.793	103177.090	7.153
T13	ROAD NAIL	499614.661	103269.210	6.993
T14	PEG	499419.290	103216.703	6.769
T15	ROAD NAIL	499238.282	103131.154	7.226
T16	PEG	499141.243	102972.604	7.311
T17	PEG	499047.812	102822.373	6.712
TH1	ROAD NAIL	499144.819	103168.902	7.880
TH2	ROAD NAIL	499167.971	103223.783	7.671
TH3	ROAD NAIL	499259.148	103259.880	7.236
TH4	PEG	499282.885	103412.817	6.841
S1	ROAD NAIL	498996.248	102757.303	7.043
S2	ROAD NAIL	499056.190	102635.535	6.930
S3	ROAD NAIL	499138.377	102560.884	6.915
S4	ROAD NAIL	499258.503	102467.177	6.800
S5	ROAD NAIL	499438.716	102422.143	5.748
S6	ROAD NAIL	499499.299	102352.979	5.325
S7	ROAD NAIL	499503.386	102252.094	4.472
S8	ROAD NAIL	499422.142	102225.194	4.997
S9	ROAD NAIL	499305.075	102184.460	4.715
S12	ROAD NAIL	499027.723	102492.170	5.435
S13	HILTI NAIL	498944.819	102560.826	6.203
S14	HILTI NAIL	498843.008	102690.224	6.793
S15	ROAD NAIL	498882.139	102724.704	6.789
S16	ROAD NAIL	498929.859	102715.235	7.240
S70	ROAD NAIL	499580.787	102258.252	4.828
S100	ROAD NAIL	499040.855	102823.102	6.584

Notes :

1. GRID AND LEVELS BASED ON ORDNANCE DATUM, DERIVED FROM THE NATIONAL GNSS NETWORK. LOCAL SCALE FACTOR OF 0.99972 APPLIED.
2. TREE AND HEDGE SPECIES HAVE BEEN IDENTIFIED AS ACCURATELY AS POSSIBLE BUT SHOULD BE CROSS CHECKED IN CRITICAL AREAS.
3. THIS SURVEY (REVISION 1) SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT, THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

Equipment Information

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8200	10/TX-108-10896	RD6	14/03/2023
EML Rx Receiver	SPX Radiodetection	RD8200	10/83-GB-84	RD6	14/03/2023
GPR	IDS Georadar	Opera	010-16-000396	GPR7	Day of survey

Equipment Information R1

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8100	10/TX-108-7795	RD12	06/07/2023
EML Rx Receiver	SPX Radiodetection	RD8100	10/81PDL-472	RD12	06/07/2023
GPR	IDS Georadar	OPERA DUO	SN.010-17-000374	GPR15	24/10/2023
CPS	Leica Geosystems	CS20/GS014	2420301	GNSS 26	N/A

DETECTION SURVEY REPORT

GENERAL

This survey was carried out in accordance with PAS 128:2022 (Publicly Available Specification from BSI). After a pre-survey consultation with the client it was agreed to carry out the detection survey using methodology M1 as per Table 2 of the PAS 128:2022. The survey boundary has been shown on the drawing; please see linestyle section of the key for reference.

DESKTOP UTILITY REPORT

The client has provided MK Surveys with historical record information for the original survey works. There is no guarantee of the completeness and accuracy of this information.

Prior to the revision to our original survey commencing record information was gathered and compiled in a separate desktop utility report. This report should be read in conjunction with the information contained in this utility detection survey. Record information was at the time of the survey the most recent available in accordance with the requirements of the PAS 128:2022. For a full list of the providers searched, records received and the dates the information was obtained, please refer to the attachments page of the desktop utility report.

DETECTION SURVEY

DRAINAGE

Drainage was lifted with pipe sizes and invert levels recorded. Wherever possible the chamber sizes have been recorded and positioned on the drawing. All connections from gullies, external rainwater pipes and external soil stacks have been proven wherever possible into manholes and sewer runs by radio sonde location and/or GPR. Where a saddle connection is present the position is assumed only until proven to QB2 or above. In instances where other detection methods were unsuccessful connections between manholes have been assumed to be straight and labelled as QB4. All drainage should be cross checked in critical areas by CCTV survey or verification survey type A. Due to areas of dense vegetation, access has been limited and there are possible drainage apparatus present in these areas. Unable to detect rising main matching the positions indicated in the supplied utility records. However, a consistent unknown target has been detected close to marker posts (related to the rising main) to the North of the airfield. Recommend a trial excavation to confirm the utility that is located in this region. If this is the rising main from the records, the position differ significantly.

WATER

Water utilities have been successfully detected using EML and GPR techniques with depths recorded electronically and to the crown of the pipe. Undetected utilities have been drawn up from supplied utility record drawings. Recommend trial excavations to verify position and depths in critical areas.

GAS

Gas utilities have been detected through GPR techniques with depths recorded to the crown of the pipe. Undetected utilities have been added from supplied record drawings. Recommend trial excavations to verify depth and positions in critical areas.

ELECTRICITY

Electricity utilities have been successfully detected through EML and GPR methods with depths recorded electronically and to the crown of the duct. Undetected utilities have been drawn in from supplied records. Recommend trial excavations to verify depth and positions in critical areas.

TELECOM

Telecom ducts have been traced with depths recorded. Due to laws protecting British Telecom apparatus all ducts have been located using remote detection techniques only and compared with record information. Chamber sizes have been recorded using GPR techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

CATV

There were no additional CATV utilities detected on site. This matches the supplied records that do not show any affected utilities.

UNKNOWNS

Some unknown targets identified on the drawing using GPR are classified as "non-linear targets". These are not consistent with what we expect to see when identifying a buried utility, and appear on the drawing as single targets with depths (i.e. not linking two or more depth readings). This does not mean they are not utilities, we are just unable to positively identify them as a utility. We would strongly recommend that further verification surveys (PAS 128:2022 survey type A) are carried out to identify these targets in critical areas. Unknown anomalies located using EML or GPR techniques with electronically derived depths recorded where possible. Recommend trial excavations to confirm identity position and depths in critical areas.

SEE CAUTIONARY NOTES WITHIN THE UTILITY KEY

PAS 128:2022 Quality Level Guide

Quality Level	Description	Accuracy
QB4 (QL-B4)	A utility is expected to exist but cannot be detected - (AR), (R), (V)	Undefined
QB3 (QL-B3) QB3P (QL-B3P)	Horizontal location only using one geophysical technique. No depth information - NDI.	+/- 500mm Horizontal Undefined Vertical
QB2 (QL-B2) QB2P (QL-B2P)	Horizontal and vertical location only using one geophysical technique.	+/- 250mm or +/- 40% of depth whichever is greater
QB1 (QL-B1) QB1P (QB-1P)	Horizontal and vertical location only using two geophysical techniques.	+/- 150mm or +/- 15% of depth whichever is greater
QA (QL-A)	Service verified in an open excavation, inside an inspection chamber / draw pit, or at the point the service enters / exits the ground	+/- 50mm Horizontal +/- 50mm Vertical

Desktop Utility Records

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/07/2023
Water	Portsmouth Water	06/07/2023
Gas	SGN	06/07/2023
Electricity	Scottish and Southern Electricity Networks	06/07/2023
Telecom	Openreach	06/07/2023
CATV	Not Affected	Not Applicable
Tunnels & Pipelines	Linesearchbeforeu3dg	06/07/2023

Desktop Utility Records R1

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/09/2023
Water	Portsmouth Water	07/09/2023
Gas	SGN	06/09/2023
Electricity	Scottish and Southern Electricity Networks	06/09/2023
Telecom	Openreach	27/09/2023
CATV	Virgin Media	06/09/2023
New Installations	GTC	28/09/2023
Tunnels & Pipelines	Linesearchbeforeu3dg	06/09/2023

Survey Information R1

Fieldwork dates	23/10	24/10	25/10	26/10	27/10	31/10	01/11	06/11	07/11	08/11
Weather conditions	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Rain
Ground conditions	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet

Survey Information R1

Fieldwork dates	14/11	15/11	20/11	22/11						
Weather conditions	Showers	Cloudy	Cloudy	Cloudy						
Ground conditions	Wet	Wet	Wet	Wet						

Revision	Description	Drn	Chk'd	App'd	Date
1	Northern parcel surveyed.	JL/TH/MK	AS/AC	CP/NF	October 2023

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

Topographical and PAS 128:2022 Utility Survey

Vistry Group

Ford Airfield
Arundel
West Sussex

Scale:	Sheet Size:	Sheet Number:	Date:
1:500	A0	3	August 2023

Project Number:	Rev:	Surveyed by:	Checked by:	Approved by:
32809	1	JM / TC / LW	AS / AC	CP / NF

mksurveys

www.mksurveys.com www.surveys4bim.co.uk
Head Office: Milton Keynes t: 01908 565561 e: mail@mksurveys.co.uk

KEY

TOPOGRAPHICAL KEY

SURVEY STATION — 5
BANKING — TOP / BOTTOM
HEDGE SPREADS
WOODLAND CANOPY
ARROW ON STEPS / RAMPS INDICATES DIRECTION UP/WARDS
TREES — SPREAD & GIRTH SHOWN TO SCALE
GATE
KERB CHANNEL
ROAD UNKERBED

FENCE
WALL
BUILDING
OPEN SIDED BUILDING
OVERHANG / CANOPY
GLASSHOUSE
CONTOUR — 39.80
SPOT LEVEL + 127.13 — SONAR LEVEL ○ 127.13
BORE HOLE — BH
TRIAL HOLE — TH
FOOTPATH
CHANGE IN SURFACE

GENERAL

Av	AVERAGE
COW	CABLE ON WALL
CW	COMBINED WATER
DIS	DISUSED
ELE	ELECTRICS
EML	ELECTROMAGNETIC LOCATOR
EOT	END OF TRACE
FO	FIBRE OPTIC
FP	FOOTPATH
FW	FOUL WATER
GP	GATE POST
GPR	GROUND PENETRATING RADAR
HB	HARD BED
HIP	HIGH PRESSURE
HV	HIGH VOLTAGE
KV	KILO VOLT
IP	INTERMEDIATE PRESSURE
LP	LOW PRESSURE
MB	MASTIC BED
MIP	MEDIUM PRESSURE
NDI	NO DEPTH INFORMATION
NFI	NO FURTHER INFORMATION
NDV	NO DUCTS VISIBLE
NPV	NO PIPES VISIBLE
OSBM	ORDNANCE SURVEY BENCHMARK
POW	PIPE ON WALL
P.BOX	POST BOX
RDS	REDUNDANT SERVICE
RW	RETAINING WALL
SB	SOFT BED
SNP	STREET NAME PLATE
SW	SURFACE WATER
TAC	TACTILE PAVING
TOW	TOP OF WALL
UCW	UNCLASSIFIED WATER
UTL	UNABLE TO LOCATE
UTR	UNABLE TO RAISE
UTS	UNABLE TO SURVEY

APPARATUS

ACU	AIR CONDITIONING UNIT
AP	ACCESS POINT
BM	BELISHA BEACON
BO	BOLLARD
BOL	BOLLARD LIGHT
BS	BUS STOP
CATV	CABLE TELEVISION
CB	CONTROL BOX
CCB	CROSSING CONTROL BUTTON
CP	CAT PAW
CR	CABLE RISER
DCH	DRAINAGE CHANNEL
EB	ELECTRIC CONTROL BOX
EP	ELECTRIC POLE
ER	EARTH ROD
FD	FILTER DRAIN
FFP	FUEL TANK FILL POINT
GA	GAS ANTENNA
GR	GAS RISER
GV	GAS VALVE
GY	GULLY
IC	INSPECTION COVER
INT	INTERCEPTOR
IT	INLET
LO	LAMP OUTLET
LD	LOOP DETECTOR
LH	LAMP HOLE
LP	LAMP POST
MH	MANHOLE
MK	MARKER POST / PLATE
MT	METER
MW	MONITORING WELL
OL	OUTLET
OP	OUTSTATION
PO	POST
PTG	PIPE TO GROUND
PTS	PIPE TO SURFACE
PU	PUMP
RE	ROAD SIGN EYE
RI	RISER IRON
RMP	RAMING MAIN
RWP	RAIN WATER PIPE
SC	STOP COCK
SO	SOAKAWAY
SP	SOIL PIPE
ST	STAY CABLE
SV	STOP / ISOLATE VALVE
TBP	TELEGRAPH POLE
TCB	TELEPHONE CALL BOX
TEL	TELECOM INSPECTION COVER
TL	TRAFFIC LIGHT
TLC	TRAFFIC LIGHT COVER
TM	TICKET MACHINE
TP	TELECOM POLE
VM	VENT MARKER
WM	WATER METER
WO	WASH OUT
WR	WATER RISER
WT	WATER TAP
WW	WET WELL

DEPTHS

d	ELECTRONICALLY DERIVED
Pd	PASSIVELY DERIVED
Bd	BASE DEPTH
Cd	DEPTH TO CROWN
Id	DEPTH TO INVERT
Sd	DEPTH TO SOFFIT
STd	DEPTH TO SILT

PIPE MATERIALS

AC	ASBESTOS CEMENT
ALK	ALKATHENE
BK	BRICK
CI	CAST IRON
CON	CONCRETE
DI	DUCTILE IRON
HDPE	HIGH DENSITY PE
MDPE	MEDIUM DENSITY PE
PE	POLYETHYLENE
PF	PITCH FIBRE
PP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
PVC-U	ULTRA RIB (PVC)
SI	SPUN IRON
ST	STEEL
VC	VITRIFIED CLAY

FENCES

B/W	BARBED WIRE FENCE
C/B	CLOSED BOARDED FENCE
CPL	CONCRETE PANEL FENCE
C/I	CORRUGATED IRON FENCE
CNP	CHESTNUT PALING
C/L	CHAIN LINK FENCE
I/R	IRON RAILINGS
L/L	LARCH LAP FENCE
P/R	POST AND RAIL FENCE
P/W	POST AND WIRE FENCE
W/M	WIRE MESH FENCE

LEVELS

BD	BACKDROP LEVEL
BL	BASE LEVEL
CL	COVER LEVEL
DL	DRAIN LEVEL
DPC	DAMP PROOF COURSE
FL	FLOOR LEVEL
IL	INVERT LEVEL
PT	P TRAP LEVEL
RL	ROOF LEVEL
SL	SILT LEVEL
TL	TOP LINK LEVEL
THL	THRESHOLD LEVEL
WL	WATER LEVEL

INTERNAL METER	MT
POT ENDED SERVICE	
SEWER CAPPED RUN	
SURVEY ABANDONED	
INTERNAL VALVE	
UNKNOWN UNDERGROUND ANOMALY	
UNDERGROUND CHAMBERS	
VERIFICATION TRIAL HOLE/EXCAVATION	
ABOVE GROUND	(AG)
ASSUMED ROUTE	(Q84[AR])
EMPTY DUCTS	(E)
OVERHEAD	(OH)
BACK DROP	
P TRAP	
UTILITY CROSSOVER	
SURVEY BOUNDARY	
VERBAL INFORMATION	(Q84[V])
RECORD INFORMATION	(Q84[R])
REDUNDANT SERVICE	
RISING MAIN	
CCTV SECTION 4 AND 5 FAULTS ARE SHOWN IN RED	

SERVICE TYPE

DATA / CATV	
ELECTRICITY (HV)	
ELECTRICITY (LV)	
FUEL	
GAS	
HEATING	
OVERHEAD ELECTRIC	
OVERHEAD TELECOM	
COMBINED SEWER	
FOUL SEWER	
SURFACE SEWER	
TRADE EFFLUENT	
UNIDENTIFIED SEWER	
TELECOM	
UNKNOWN SERVICE	
WATER	
SERVICES SURVEY WARNING	

CAUTIONARY NOTES

1. EML techniques have been used in the detection of underground utilities as outlined in Table 2 of PAS 128:2022, the interpretation of these results is not infallible and trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
2. GPR techniques have been used in the detection of non-metallic utilities as outlined in Table 2 of PAS 128:2022. The interpretation of these results is not infallible and success will depend on a number of factors including soil type, ground water levels and surface conditions, hence trial excavations must be carried out in order to confirm identification, position and in particular depth of the utility.
3. Depths derived via EML are taken to the centre of the conductor (cable, metallic pipe) and those derived via GPR are usually to the crown of the utility unless otherwise indicated.
4. Where cables cannot be detected individually an average depth has been obtained and trial excavations are recommended to confirm number and depths of cables bundled together.
5. 'Pot-ended' cables are often difficult to detect and although we have made all reasonable efforts to locate or transpose this information from records, we cannot guarantee that all 'pot-ended' cables have been located.
6. Fibre optic cables are often difficult to detect, and commonly access chambers can be locked and thereby made inaccessible by the utility provider. All reasonable efforts have been made to locate these ducts using GPR. Cables not located have been transposed from records.
7. Within close proximity of electric substations and similar structures results using EML may become distorted. All reasonable efforts have been made to verify our results using GPR wherever conditions permitted.
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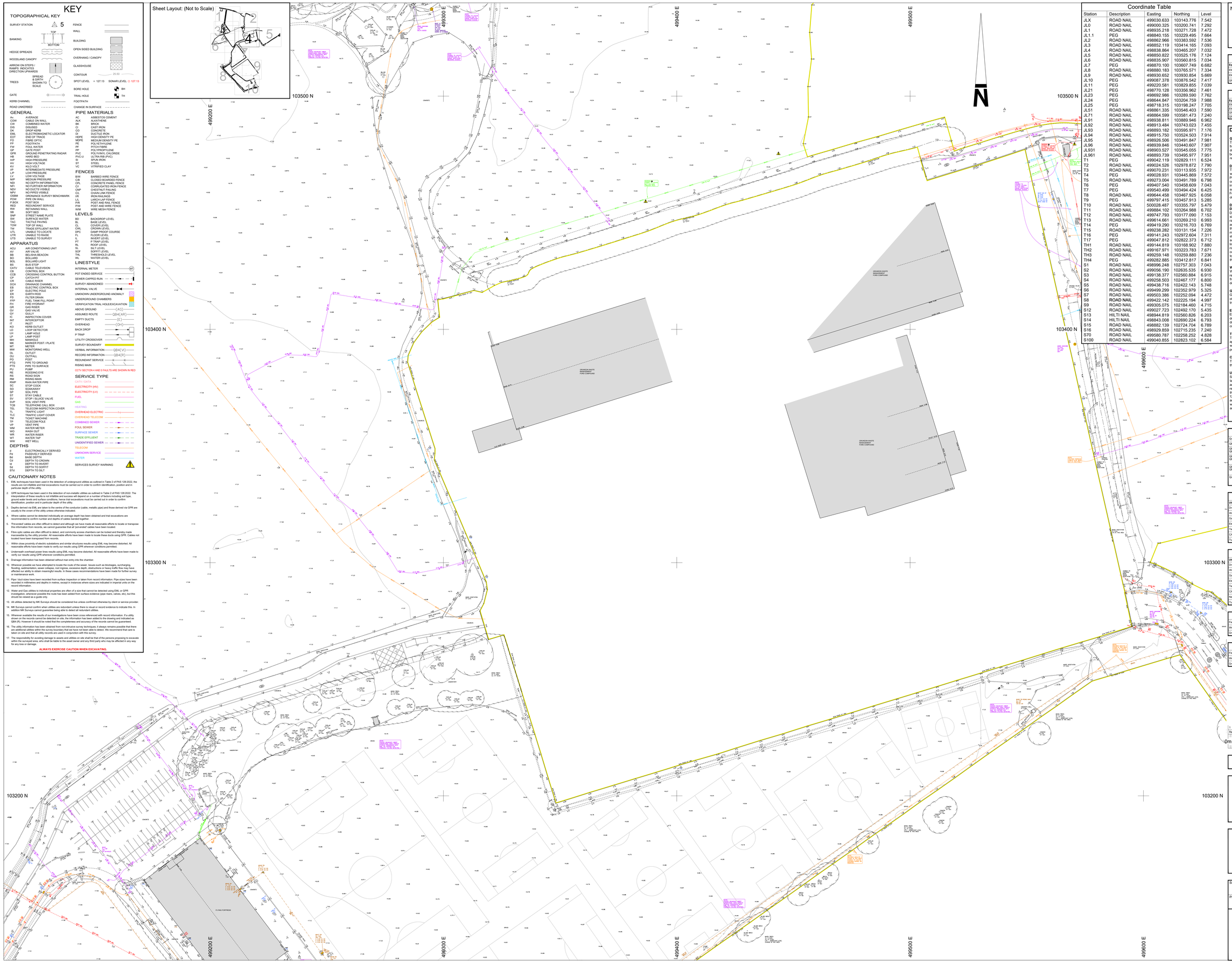

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JL24	PEG	498644.847	103204.759	7.988
JL25	PEG	498718.315	103198.247	7.705
JL51	ROAD NAIL	498861.335	103546.403	7.590
JL71	ROAD NAIL	498864.599	103581.473	7.240
JL91	ROAD NAIL	498938.811	103889.946	6.962
JL92	ROAD NAIL	498913.484	103743.023	7.455
JL93	ROAD NAIL	498893.182	103595.971	7.176
JL94	ROAD NAIL	498915.750	103524.503	7.914
JL95	ROAD NAIL	498926.506	103491.847	7.981
JL96	ROAD NAIL	498939.846	103440.607	7.907
JL931	ROAD NAIL	498903.527	103545.055	7.775
JL961	ROAD NAIL	498893.739	103496.977	7.951
T1	PEG	499042.119	102829.111	6.524
T2	ROAD NAIL	499024.526	102978.872	7.790
T3	ROAD NAIL	499070.231	103113.935	7.972
T4	PEG	499028.931	103445.869	7.572
T5	ROAD NAIL	499273.004	103491.789	6.798
T6	PEG	499407.540	103458.609	7.043
T7	PEG	499540.499	103494.424	6.425
T8	ROAD NAIL	499644.458	103467.925	6.058
T9	PEG	499797.415	103457.913	5.285
T10	ROAD NAIL	500028.487	103355.797	5.479
T11	ROAD NAIL	499884.102	103264.988	6.702
T12	ROAD NAIL	499747.793	103177.090	7.153
T13	ROAD NAIL	499614.661	103269.210	6.993
T14	PEG	499419.290	103216.703	6.769
T15	ROAD NAIL	499238.282	103131.154	7.226
T16	PEG	499141.243	102972.604	7.311
T17	PEG	499047.812	102822.373	6.712
TH1	ROAD NAIL	499144.819	103168.902	7.880
TH2	ROAD NAIL	499167.971	103223.783	7.671
TH3	ROAD NAIL	499259.148	103259.880	7.236
TH4	PEG	499282.885	103412.817	6.841
S1	ROAD NAIL	498996.248	102757.303	7.043
S2	ROAD NAIL	499056.190	102635.535	6.930
S3	ROAD NAIL	499138.377	102560.884	6.915
S4	ROAD NAIL	499258.503	102467.177	6.800
S5	ROAD NAIL	499438.716	102422.143	5.748
S6	ROAD NAIL	499499.299	102352.979	5.325
S7	ROAD NAIL	499503.386	102252.094	4.472
S8	ROAD NAIL	499422.142	102225.194	4.997
S9	ROAD NAIL	499305.075	102184.460	4.715
S12	ROAD NAIL	499027.723	102492.170	5.435
S13	HILTI NAIL	498944.819	102560.826	6.203
S14	HILTI NAIL	498843.008	102690.224	6.793
S15	ROAD NAIL	498882.139	102724.704	6.789
S16	ROAD NAIL	498929.859	102715.235	7.240
S70	ROAD NAIL	499580.787	102258.252	4.828
S100	ROAD NAIL	499040.855	102823.102	6.584

Notes :

1. GRID AND LEVELS BASED ON ORDNANCE DATUM, DERIVED FROM THE NATIONAL GNSS NETWORK. LOCAL SCALE FACTOR OF 0.99972 APPLIED.
2. TREE AND HEDGE SPECIES HAVE BEEN IDENTIFIED AS ACCURATELY AS POSSIBLE BUT SHOULD BE CROSS CHECKED IN CRITICAL AREAS.
3. THIS SURVEY (REVISION 1) SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT. THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

Equipment Information

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8200	10TX-108-10896	RD6	14/03/2023
EML Rx Receiver	SPX Radiodetection	RD8200	10R3-QB-64	RD6	14/03/2023
GPR	IDS Georadar	Opera	010-18-000396	GPR7	Day of survey

Equipment Information R1

Equipment	Manufacturer	Model	Serial Number	MKS REF	Date of Calibration
EML Tx Transmitter	SPX Radiodetection	RD8100	10TX-108-7795	RD12	06/07/2023
EML Rx Receiver	SPX Radiodetection	RD8100	10R1PDL-472	RD12	06/07/2023
GPR	IDS Georadar	DEPERA DUO	SN:010-17-000374	GPR15	24/10/2023
CPS	Leica Geosystems	CS20/GS014	2420301	GNSS 26	N/A

DETECTION SURVEY REPORT

GENERAL

This survey was carried out in accordance with PAS 128:2022 (Publicly Available Specification from BSI). After a pre-survey consultation with the client it was agreed to carry out the detection survey using methodology M1 as per Table 2 of the PAS 128:2022. The survey boundary has been shown on the drawing; please see linestyle section of the key for reference.

DESKTOP UTILITY REPORT

The client has provided MK Surveys with historical record information for the original survey works. There is no guarantee of the completeness and accuracy of this information.
Prior to the revision to our original survey commencing record information was gathered and compiled in a separate desktop utility report. This report should be read in conjunction with the information contained in this utility detection survey. Record information was at the time of the survey the most recent available in accordance with the requirements of the PAS 128:2022. For a full list of the providers searched, records received and the dates the information was obtained, please refer to the attachments page of the desktop utility report.

DETECTION SURVEY

DRAINAGE

Drainage was lifted with pipe sizes and invert levels recorded. Wherever possible the chamber sizes have been recorded and positioned on the drawing. All connections from gullies, external rainwater pipes and external soil stacks have been proven wherever possible into manholes and sewer runs by radio sonde location and/or GPR. Where a saddle connection is present the position is assumed only until proven to QB2 or above. In instances where other detection methods were unsuccessful connections between manholes have been assumed to be straight and labelled as Q84. All drainage should be cross checked in critical areas by CCTV survey or verification survey type A. Due to areas of dense vegetation, access has been limited and there are possible drainage apparatus present in these areas. Unable to detect rising main matching the positions indicated in the supplied utility records. However, a consistent unknown target has been detected close to marker posts (related to the rising main) to the North of the airfield. Recommend a trial excavation to confirm the utility that is located in this region. If this is the rising main from the records, the position differ significantly.

WATER

Water utilities have been successfully detected using EML and GPR techniques with depths recorded electronically and to the crown of the pipe. Undetected utilities have been drawn up from supplied utility record drawings. Recommend trial excavations to verify position and depths in critical areas.

GAS

Gas utilities have been detected through GPR techniques with depths recorded to the crown of the pipe. Undetected utilities have been added from supplied record drawings. Recommend trial excavations to verify depth and positions in critical areas.

ELECTRICITY

Electricity utilities have been successfully detected through EML and GPR methods with depths recorded electronically and to the crown of the duct. Undetected utilities have been drawn in from supplied records. Recommend trial excavations to verify depth and positions in critical areas.

TELECOM

Telecom ducts have been traced with depths recorded. Due to laws protecting British Telecom apparatus all ducts have been located using remote detection techniques only and compared with record information. Chamber sizes have been recorded using GPR techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

CATV

There were no additional CATV utilities detected on site. This matches the supplied records that do not show any affected utilities.

UNKNOWNS

Some unknown targets identified on the drawing using GPR are classified as "non-linear targets". These are not consistent with what we expect to see when identifying a buried utility, and appear on the drawing as single targets with depths (i.e. not linking two or more depth readings). This does not mean they are not utilities, we are just unable to positively identify them as a utility. We would strongly recommend that further verification surveys (PAS 128:2022 survey type A) are carried out to identify these targets in critical areas. Unknown anomalies located using EML or GPR techniques with electronically derived depths recorded where possible. Recommend trial excavations to confirm identity position and depths in critical areas.

SEE CAUTIONARY NOTES WITHIN THE UTILITY KEY

PAS 128:2022 Quality Level Guide

Quality Level	Description	Accuracy
QB4 (QL-B4)	A utility is expected to exist but cannot be detected - (AR), (R), (V1)	Undefined
QB3 (QL-B3) QB3P (QL-B3P)	Horizontal location only using one geophysical technique. No depth information - NDI.	+/- 500mm Horizontal Undefined Vertical
QB2 (QL-B2) QB2P (QL-B2P)	Horizontal and vertical location only using one geophysical technique.	+/- 250mm or +/- 40% of depth whichever is greater
QB1 (QL-B1) QB1P (QB-1P)	Horizontal and vertical location only using two geophysical techniques.	+/- 150mm or +/- 15% of depth whichever is greater
QA (QL-A)	Service verified in an open excavation, inside an inspection chamber / draw pit, or at the point the service enters / exits the ground	+/- 50mm Horizontal +/- 50mm Vertical

Desktop Utility Records

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/07/2023
Water	Portsmouth Water	06/07/2023
Gas	SGN	06/07/2023
Electricity	Scottish and Southern Electricity Networks	06/07/2023
Telecom	Openreach	06/07/2023
CATV	Not Affected	Not Applicable
Tunnels & Pipelines	LinesearchbeforeUdig	06/07/2023

Desktop Utility Records R1

Utility Type	Provider Details	Date Acquired
Drainage	Southern Water	06/09/2023
Water	Portsmouth Water	07/09/2023
Gas	SGN	06/09/2023
Electricity	Scottish and Southern Electricity Networks	06/09/2023
Telecom	Openreach	27/09/2023
CATV	Virgin Media	06/09/2023
New Installations	GTC	28/09/2023
Tunnels & Pipelines	Linesearchbeforeudig	06/09/2023

Survey Information R1

Fieldwork dates	23/10	24/10	25/10	26/10	27/10	31/10	01/11	06/11	07/11	08/11
Weather conditions	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Showers	Rain
Ground conditions	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet

Survey Information R1

Fieldwork dates	14/11	15/11	20/11	22/11						
Weather conditions	Showers	Cloudy	Cloudy	Cloudy						
Ground conditions	Wet	Wet	Wet	Wet						

Revision	Description	Surv. by	Check. by	Appr. by	Date
1	Northern parcel surveyed.	JL/TH/MK	AS/AC	CP/NF	October 2023

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

Topographical and PAS 128:2022 Utility Survey

Vistry Group

Ford Airfield
Arundel
West Sussex

Scale:	Sheet Size:	Sheet Number:	Date:
1:500	A0	4	August 2023

Project Number:	Rev:	Surveyed by:	Checked by:	Approved by:
32809	1	JM / TC / LW	AS / AC	CP / NF

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