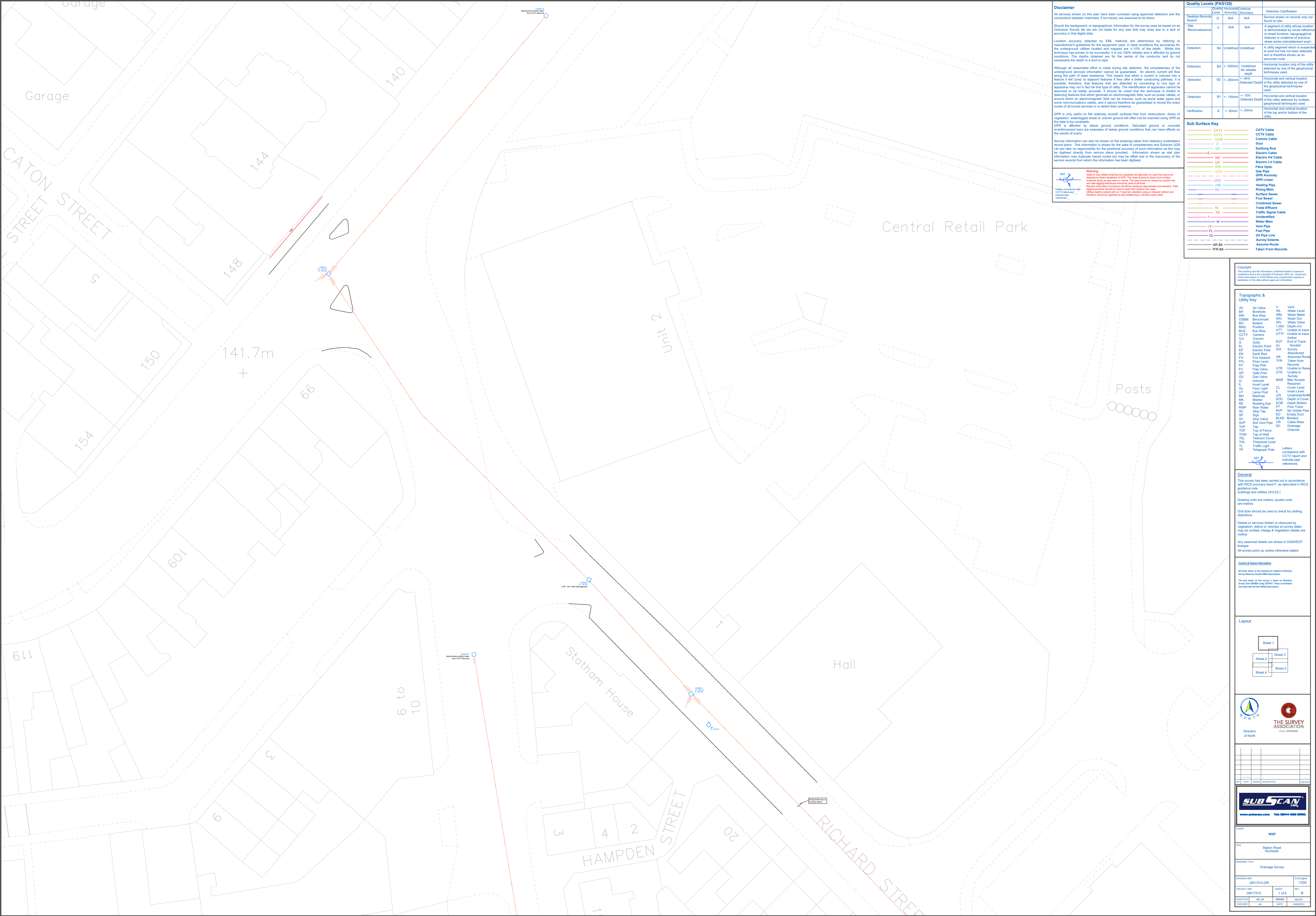




Disclaimer

All services shown on this plan have been surveyed using approved detectors and the connections between manholes, if not traced, are assumed to be direct.

Should the background, or topographical, information for the survey area be based on an Ordnance Survey file we are not liable for any loss that may arise due to a lack of accuracy in that digital data.

Location accuracy detected by EMI methods are determined by referring to manufacturer's guidelines for the equipment used. In ideal conditions the accuracy for the underground utilities located and mapped are $\pm 10\%$ of the depth. Whilst this technique has proven to be successful, it is not 100% reliable and is affected by ground conditions. The depths obtained are for the centre of the conductor and do not necessarily the depth to a duct or pipe.

Although all reasonable effort is made during site detection, the completeness of the underground services information cannot be guaranteed. An electric current will flow along the path of least resistance. This means that when a current is induced into a feature it will 'jump' to adjacent features if they offer a better conducting pathway. It is possible, therefore, that features that are detected by connecting to one type of apparatus may not in fact be that type of utility. The identification of apparatus carried or assumed to be totally accurate. It should be noted that the technique is limited to detecting features that either generate an electromagnetic field, such as power cables, or around which an electromagnetic field can be induced, such as some water pipes and some communications cables, and it cannot therefore be guaranteed to reveal the exact routes of all buried services or to detect their presence.

GPR is only useful on flat relatively smooth surfaces free from obstructions. Areas of vegetation, waterlogged areas or uneven ground will often not be scanned using GPR as the data is too unreliable.

GPR is affected by below ground conditions. Saturated ground or concrete re-enforcement bars are examples of below ground conditions that can have effects on the results of scans.

Service information can also be shown on the drawings taken from statutory undertakers record plans. This information is shown for the sake of completeness and Station UGS Ltd can take no responsibility for the positional accuracy of such information as this may be digitised directly from service plans provided. Information shown as old plan information may duplicate traced routes but may be offset due to the inaccuracy of the service records from which the information has been digitised.

Warning

Notes & cautions relating to GPR are generally of a note that cannot be removed by Station UGS Ltd. The notes of these are shown first on each sheet of the drawing. Notes should be read in conjunction with the notes on the site and safe digging techniques should be used at all times.

Results of GPR scans should be used as a guide only and not as a basis for any excavation or construction work.

Utility depths marked with an 'X' have been detected using an indirect method and therefore should be regarded as best evidence from a direct method.

Quality Levels (PAS128)			Detection Clarification
Quality Level	Accuracy	Vertical Accuracy	
Desktop Records Search	D	N/A	N/A
Site Reconnaissance	C	N/A	N/A
Detection	B4	Undefined	Undefined
Detection	B3	$\pm 500mm$	Undefined
Detection	B2	$\pm 250mm$	Detected Depth
Detection	B1	$\pm 150mm$	$\pm 15\%$
Verification	A	$\pm 50mm$	$\pm 25mm$

Sub Surface Key

CATV	CATV Cable
CCTV	CCTV Cable
COM	Comms Cable
Duct	Duct
ER	Earthing Rod
E	Electric Rod
FIO	Electric HV Cable
HV	Electric LV Cable
LV	Electric LV Cable
FL	Fibre Optic
GAS	Gas Pipe
GP	Gas Pipe
GR	GPR Anomaly
GR	GPR Linear
HM	Heating Pipe
RM	Rising Main
SS	Surface Sewer
TE	Trade Effluent
TS	Trade Effluent
W	Water Main
VP	Vent Pipe
FL	Flag Pole
OL	Oil Pipe Line
AR B4	Assume Route
TFR B4	Taken From Records

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Topographic & Utility Key

AV	Air Valve	V	Vent
BH	Borehole	WL	Water Level
BM	Bus Stop	WM	Water Meter
OSM	Ordnance Survey	WO	Water Out
BO	Bollard	WW	Water Valve
MBL	Manhole	1.000	Depth (m)
BUS	Bus Stop	UTT	Unable to trace
CCTV	Camera	UTR	Unable to trace
Col	Column	UTR	Unable to trace
Q	Quarry	End of Trace	
EP	Electric Pole	End of Trace	
ER	Earth Road	End of Trace	
FH	Flag Hydrant	End of Trace	
FFL	Flag Pole	End of Trace	
FV	Flag Valve	End of Trace	
GP	Gas Pipe	End of Trace	
GV	Gas Valve	End of Trace	
IL	Isolated Level	End of Trace	
GL	Floor Light	End of Trace	
LP	Lamp Post	End of Trace	
MC	Marker	End of Trace	
RE	Road Eye	End of Trace	
RWP	Road Water	End of Trace	
SC	Stop Tap	End of Trace	
SV	Stop Valve	End of Trace	
TAP	Tap	End of Trace	
TOW	Top of Wall	End of Trace	
TEL	Telecom Cover	End of Trace	
THL	Threshold Level	End of Trace	
TL	Traffic Light	End of Trace	
TP	Telegraph Pole	End of Trace	

General

This survey has been carried out in accordance with RICS accuracy band F, as described in RICS guidance note 'Building and Utilities (3rd Ed.)'.

Drawing units are meters, quoted units are metres.

Grid lines should be used to check for plotting distortions.

Details or services hidden or obscured by vegetation, debris or vehicles at survey dates may be omitted. Hedges & Vegetation details are outline.

Any assumed details are shown in DASHDOT line type.

All arrows point up unless otherwise stated.

Control & Datum Information

All work shown on this drawing is related to Ordnance Survey Datum to which all GPR coordinates are related.

The grid shown on this survey is based on Ordnance Survey Grid OSGB36 using OSGB36. These co-ordinates have been derived from GPR coordinates.

Layout

Sheet 1	Sheet 2	Sheet 3	Sheet 4	Sheet 5
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THE SURVEY ASSOCIATION

Direction of North

Full Member

REV	DATE	BY	DESCRIPTION	REASON
1	14/05/2021	AS	DATE	DATE

SUBSCAN

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WSP

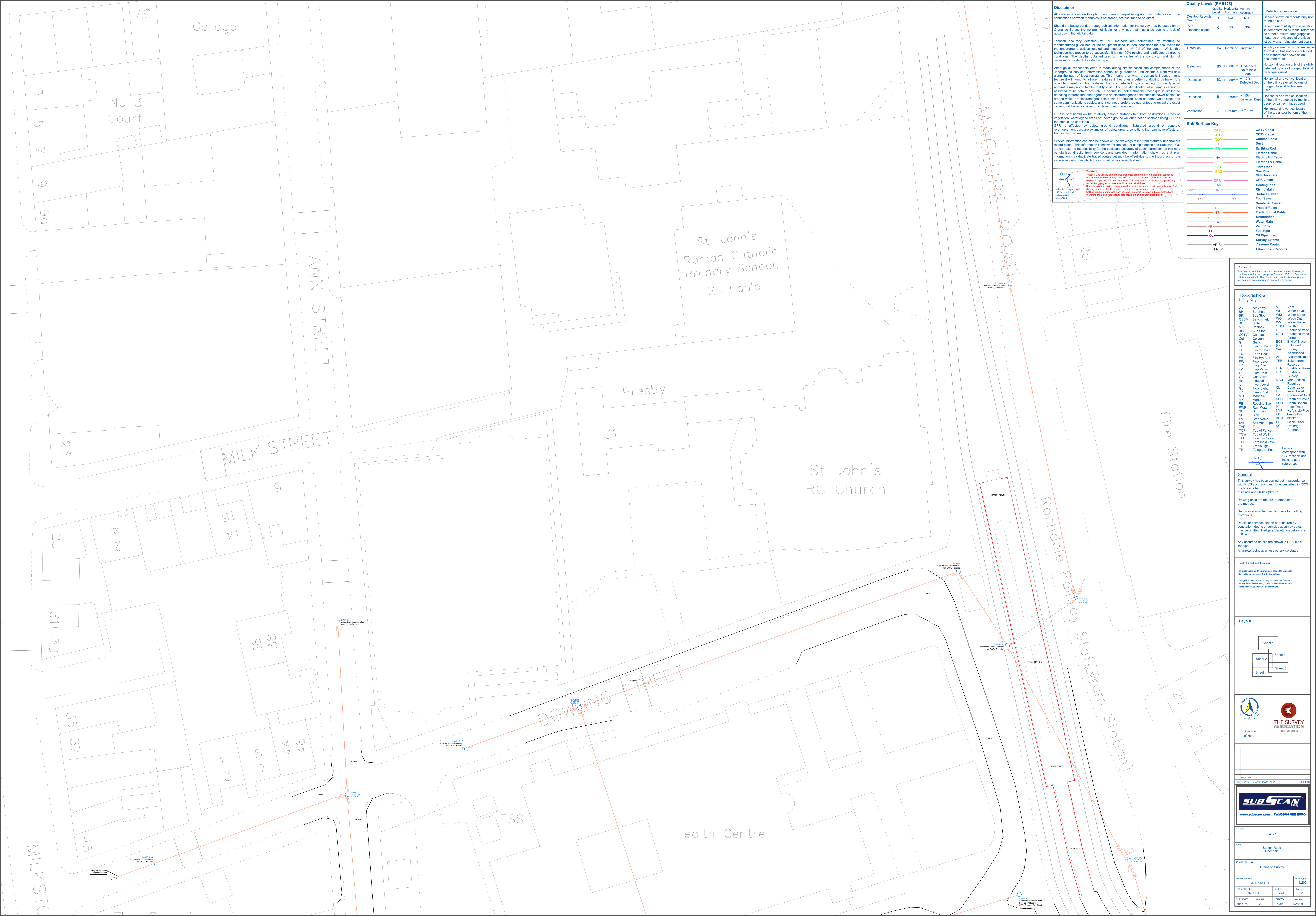
Station Road
Rochdale

Drainage Survey

DRAWING REF: GR17515-DR
PROJECT: GR17515
SHEET: 1 of 5
REV: 0

SURVEYED: WJL/M
DRAWN: WJL/M
CHECKED: AS
DATE: 14/05/2021

SCALE: 1/200



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Warning

Heat & cold cables warning are completed generally if a heat cable cannot be detected by Radio detection or GPR. The scale of these is shown first on plan and then on a separate sheet. This data must be used as a guide only and not as a basis for any decision. It is not a guarantee and should be used as a guide only.

Radio detection is not a guarantee and should be used as a guide only. It is not a guarantee and should be used as a guide only.

Utility depths marked with a 'Y' have not been detected using an induced method and therefore should be regarded as less reliable than a direct method.

Quality Levels (PAS128)		
Level	Accuracy	Accuracy
Desktop Records Search	D	N/A
Site Reconnaissance	C	N/A
Detection	B4	Undefined
Detection	B3	$\pm 500mm$
Detection	B2	$\pm 250mm$
Detection	B1	$\pm 150mm$
Verification	A	$\pm 50mm$

Sub Surface Key

CATV	CATV Cable
CCTV	CCTV Cable
COM	Comms Cable
Duct	Duct
ER	Earthing Rod
E	Electric Rod
FIO	Electric FIO Cable
HV	Electric HV Cable
LV	Electric LV Cable
FL	Flue Gas
GAS	Gas Pipe
GPR	GPR Anomaly
HW	Heating Pipe
RM	Rising Main
TE	Trade Effluent
TS	Trade Effluent
W	Water Main
VP	Vent Pipe
FL	Flue Pipe
OL	Oil Pipe Line
AR B4	Assume Route
TFR B4	Taken From Records

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Topographic & Utility Key

AV	Air Valve	V	Vent
BH	Borehole	WL	Water Level
BN	Bus Stop	WM	Water Meter
OSM	Ordnance Survey	WO	Water Out
BO	Bollard	WV	Water Valve
MAL	Manhole	1.000	Depth (m)
BUS	Bus Stop	UTT	Unable to trace
CCTV	Camera	UTR	Unable to Raise
Col	Column	UTS	Unable to Survey
EL	Electric Pole	MAR	Man Access
EP	Electric Pole	Required	Required
ER	Earth Road	IL	Invert Level
FH	Flue Hydrant	US	Underneath/Soft
FFL	Flag Pole	DOF	Depth of Cover
FP	Flag Pole	DOB	Depth Bottom
GP	Gas Valve	PT	Poor Trace
GV	Gas Valve	NVP	No Visible Pipe
IL	Invert Level	ED	Empty Duct
LP	Lamp Post	BLKD	Blocked
MH	Manhole	CR	Cable Rise
MC	Marker	DC	Drainage
RE	Rising Eye		
RWP	Rain Water		
SC	Stop Tap		
SV	Stop Valve		
TAP	Tap		
TOW	Top of Wall		
TEL	Telecom Cover		
THL	Threshold Level		
TL	Traffic Light		
TP	Telegraph Pole		

Letters correspond with CCTV report and indicate pipe references.

General

This survey has been carried out in accordance with RICS accuracy band F, as described in RICS guidance note buildings and utilities (3rd Ed.)

Drawing units are metres, quoted units are metres.

Grid ticks should be used to check for plotting distortions.

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Any assumed details are shown in DASHDOT line type.

All arrows point up unless otherwise stated.

Control & Datum Information

All work shown on this drawing is related to Ordnance Survey Datum to which all measurements are taken.

The grid shown on this survey is based on Ordnance Survey Grid OSGB36 using datum 1936. These co-ordinates have been derived from GPS observations.

Layout

Sheet 1	Sheet 3
Sheet 2	Sheet 4
Sheet 5	

THE SURVEY ASSOCIATION

Direction of North

Full Member

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WSP

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DRAINAGE SURVEY

DRAINAGE SURVEY

PROJECT	GR17515-DR	SHEET	2 of 5	REV	0
SURVEYED	WJL/M	DRAWN	WJL/M	CHECKED	AS
DATE	14/05/2021				

