

1. This drawing is based upon MET Geoenvironmental Ltd drawing 'P21-00814-MET-EXT-XX-TOP-M2-G-Rev03.dwg'.
2. All cover levels and invert levels are in metres and relate to the 'P21-00814-MET-EXT-XX-TOP-M2-G-Rev03.dwg' drawing listed above.
3. Unless otherwise stated, 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.
4. Locational accuracy is determined by referring to manufacturer's guidelines for the detectors used. In ideal conditions, the vertical accuracy of the detectors is a fillitill of 10% and mapped are $\pm 10\%$ of the depth. The horizontal accuracy is $\pm 20\text{cm}$, although the majority of traced utilities will be much more accurate than this.
5. Depths shown on the drawing are in metres below ground level and are the average of three readings. It does not necessarily indicate the depth to a duct or pipe.
6. The cables shown on this drawing may represent the path of several cables contained within a duct, or more than one duct if they are closely associated. The inspection chamber cover should be marked with the cable number.
7. The results of electro-detection techniques are not infallible although all reasonable effort is made during site detection the completeness of the underground services information cannot be guaranteed.
8. An electric current will flow along the path of least resistance, therefore if a current is induced into a feature it will 'jump' to adjacent features if they offer a better conducting pathway. It is possible that features that are not connected to the same type of cable may be detected. The fact be that type of utility. The identification of apparatus cannot be assumed to be totally accurate.
9. It should be noted that the technique is limited to detecting features that either generate an electromagnetic field, such as cables, pipes, etc. or which are susceptible to being induced, such as some water pipes and some telecommunications cables (or empty water ducts into which a conductor can be inserted), and it cannot, therefore be guaranteed to reveal the exact routes of all buried services or to detect their presence.
10. Ground Penetrating Radar (GPR) has been used to survey transects across selected areas of the site. GPR has the potential to identify services unobscured using traditional RFL techniques. It is important to note that the success of GPR is dependent upon many factors, including local ground conditions, the depth and size of the target, and amount of soil cover. The use of GPR cannot guarantee the detection of all services.
11. This drawing and the information contained therein is issued in confidence and is the copyright of METGeoenvironmental Ltd. Disclosure of this information to third parties and reproduction or copying or replication of this data without approval is forbidden.

ALWAYS EXERCISE CAUTION WHEN EXCAVATING

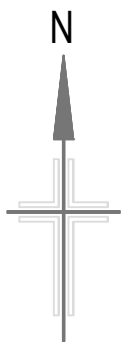
NO UTILITY MAPPING SURVEY CAN BE CONSIDERED 100% COMPLETE AS ADDITIONAL UTILITIES MAY EXIST BEYOND THOSE SHOWN ON THIS DRAWING. BE AWARE THAT SERVICES SHOWN MAY MASK OTHER UTILITIES BURIED BENEATH THEM. ALWAYS USE THIS INFORMATION ALONGSIDE UP-TO-DATE SERVICE RECORDS AND EMPLOY SAFE DIGGING PRACTICES IN ACCORDANCE WITH HSG47.

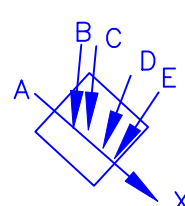
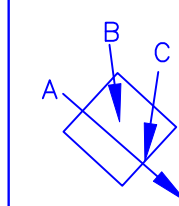
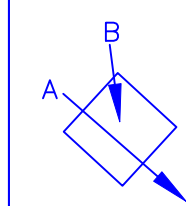
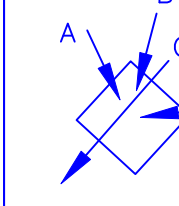
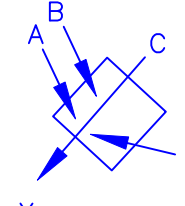
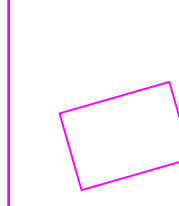
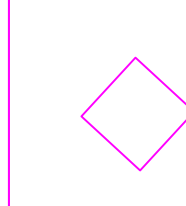
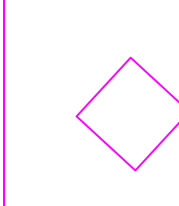
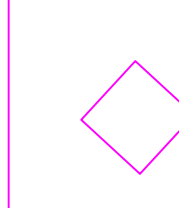
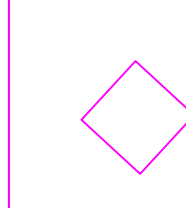
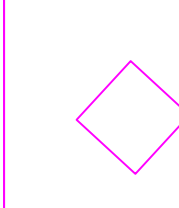
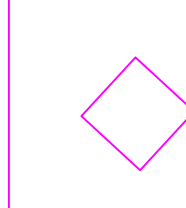
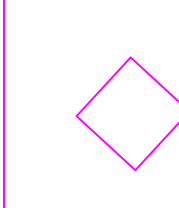
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Rev	Date	Drawn	Description	Check



Site
ST ANDREWS GRANGE
MOORLFIELD ROAD. LS12 3RU

Surveyed	JE GL		Drawn	JE RB			
Chk.	HB		Date	09/12/2021			
Scale	Job No		Sheet Size		Revision		
1:200	P21-00814		A1		01		
OWG Ref							
Year	Number	Originator	Zone	ID	Type	Role	Sheet
P21	00814	MET	EXT	UMS	M2	GU	001







<p>MH1</p>  <p>CL 99.54 PIPE X: 225ø IL 96.04 PIPES B-D: 150ø IL 96.24 PIPE E: 150ø IL 96.12</p>	<p>MH3</p>  <p>CL 100.27 PIPE X: 225ø IL 96.97 PIPE B: 100ø IL 97.47 PIPE C: 150ø IL 96.98</p>	<p>MH4</p>  <p>CL 100.54 PIPE X: 100ø IL 99.92 PIPE B: 100ø IL 99.96</p>	<p>MH8</p>  <p>CL 98.34 PIPE X: 150ø IL 96.14 PIPE A: 100ø IL 96.64 PIPE B: 100ø IL 96.59 PIPE D: 100ø IL 96.39</p>
<p>MH9</p>  <p>CL 97.89 PIPE X: 150ø IL 96.34 PIPE A: 150ø IL 96.37 PIPE B: 100ø IL 96.55 PIPE D: 150ø IL 96.48</p>	<p>IC10</p>  <p>NO COVER DEBRIS FILLED</p>	<p>IC11</p>  <p>FILLED CHAMBER NO PIPES VISIBLE</p>	<p>IC12</p>  <p>FILLED CHAMBER NO PIPES VISIBLE</p>
	<p>IC13</p>  <p>FILLED CHAMBER NO PIPES VISIBLE</p>	<p>IC14</p>  <p>FILLED CHAMBER NO PIPES VISIBLE</p>	<p>IC15</p>  <p>FILLED CHAMBER NO PIPES VISIBLE</p>
		<p>IC16</p>  <p>DEBRIS FILLED NO PIPES VISIBLE</p>	<p>IC17</p>  <p>DEBRIS FILLED NO PIPES VISIBLE</p>

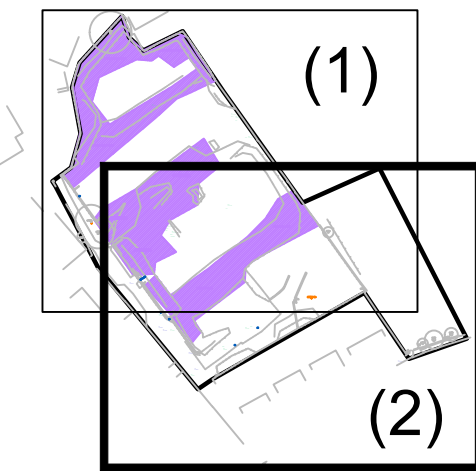


- | | |
|------------|---|
| COM - A | COMMUNICATIONS CABLE(S) |
| BT - B1 | BT CABLE(S) |
| > FD - B2 | FOUL DRAINAGE |
| > CD - B2P | COMBINED DRAINAGE |
| > SD - B2 | SURFACE DRAINAGE |
| > D - C | UNIDENTIFIED DRAINAGE |
| WAT - A | WATER SERVICES |
| GAS - B3 | GAS SERVICES |
| ELE - B1 | ELECTRICITY CABLE(S) |
| LV - A | ELECTRICITY CABLE(S) - LOW VOLTAGE |
| HV - B1 | ELECTRICITY CABLE(S) - HIGH VOLTAGE |
| CAT - B2 | CATV CABLE(S) |
| CCT - B3 | CCTV CABLE(S) |
| SL - B3 | STREET LIGHT CABLE(S) |
| TL - B3 | TRAFFIC LIGHT CABLE(S) |
| HEAT - A | HEATING/STEAM PIPE(S) |
| X - B3 | EMPTY DUCT(S) |
| UNI - B2P | UNIDENTIFIED SERVICES |
| PWR - B2 | POWER (LINEAR RESPONSE DETECTED USING "POWER" MODE OF EM LOCATOR - INDUCED 50 Hz GROUND CURRENTS) |
| RAD - B3 | RADIO (LINEAR RESPONSE DETECTED USING "RADIO" MODE OF EM LOCATOR - RF-INDICATED W/F RADIOWAVES) |
- NOTE: EXPLANATION OF ABBREVIATIONS**
CONFERENCE LEVELS

CONFIDENCE LEVELS

- (D) ROUTE FROM SERVICE RECORDS
- (E) ROUTE FROM SERVICE RECORDS TIED TO VISUAL INDICATORS
- (6A) ASSUMED ROUTE - UNDETECTED BY EML OR GPR.
- (6B) HORIZONTALLY POSITIONED DATA ONLY
- (6C) HORIZONTAL AND VERTICAL POSITION DETECTED BY A SINGLE METHOD.
- (6D) HORIZONTAL AND VERTICAL POSITION DETECTED BY A SINGLE METHOD WITH POST PROCESSING OF DATA.
- (6E) HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS.
- (6F) HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS WITH POST PROCESSING OF DATA.
- (A) HORIZONTAL AND VERTICAL POSITION VERIFIED VISUALLY.
- (6) FILE - BIP - APPROXIMATE DEPTH BELOW GROUND LEVEL OF
(6.70) APPARATUS IN METRES
- 0.70,24,100# DEPTH BELOW GROUND LEVEL (METRES), NO. OF
DUCTS/PIPES, PIPE/DUCT DIAMETER (MM)
- | | | | |
|-----|--------------------------|-----|---------------------------|
| UTR | UNABLE TO RAISE | mag | METRES BELOW GROUND LEVEL |
| UTM | UNABLE TO TRACE | cl | COVER LEVEL |
| UTN | UNABLE TO MEASURE | + | MEASUREMENT ESTIMATED |
| OS | SERVICE EXTENDS OFF SITE | SL | SOIL FLEVEL OF PIPE/DUCT |
| 6 | DIAMETER OF PIPE OR DUCT | IN | INVERT LEVEL OF PIPE/DUCT |
- | | | | |
|---|-------------------------------------|---|---------------|
|  | TRENCH SCAR / SURFACE SCAR |  | SITE BOUNDARY |
|  | AREA UNABLE TO BE SURVEYED | | |
|  | CABLE DUCT SHOWING NUMBER OF CABLES | | |

LAYOUT KEY



- NOTES
1. This drawing is based upon Met Geoenvironmental Ltd drawing 'P21-00814-MET-EXT-XX-TOP-M2-G-Rev03.dwg'.

2. All cover levels and invert levels are in metres and relate to the 'P21-00814-MET-EXT-XX-TOP-M2-G-Rev03.dwg' drawing levels.

3. Unless otherwise stated, 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.

4. Locational accuracy is determined by referring to manufacturer's guidelines for the detectors used. In ideal conditions the vertical accuracy for the underground utilities located and mapped are $\pm 10\%$ of the depth. The horizontal accuracy is $\pm 20\text{cm}$, although the majority of traced utilities will be much more accurate than this.

5. Depths shown on the drawing are in metres below ground level to the centre of the conductor and do not necessarily indicate the depth to a duct or pipe.

6. The cables shown on this drawing may represent the path of several cables contained within a duct, or more than one duct if they are closely associated. The inspection chamber schedules should be referred to for duct & cable numbers.

7. The results of electro-detection techniques are not infallible – although all reasonable effort is made during site detection the completeness of the underground services information cannot be guaranteed.

8. 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 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 cannot be assumed to be totally accurate.

9. 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 telecommunications cables (or empty pipes & ducts into which a conductor can be inserted), and it cannot therefore be guaranteed to reveal the exact routes of all buried services or to detect their presence.

10. Ground Penetrating Radar (GPR) has been used to survey transects across selected areas of the site. GPR has the potential to identify services unlocatable using traditional RFL techniques (i.e plastic pipes, fibre optics). However, the success of GPR is dependent upon many factors, including local ground conditions, the depth and size of the target, and the density of services in the vicinity. The use of GPR cannot guarantee the detection of all services.

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ALWAYS EXERCISE CAUTION WHEN EXCAVATING

NO UTILITY MAPPING SURVEY CAN BE CONSIDERED 100% COMPLETE AS ADDITIONAL UTILITIES MAY EXIST BEYOND THOSE SHOWN ON THIS DRAWING. BE AWARE THAT SERVICES SHOWN MAY MASK OTHER UTILITIES BURIED BENEATH THEM. ALWAYS USE THIS INFORMATION ALONGSIDE UP-TO-DATE SERVICE RECORDS AND EMPLOY SAFE DIGGING PRACTICES IN ACCORDANCE WITH HSG47.

Rev	Date	Drawn	Description	Check
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E: admin@metgeoenvironmental.com
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Client

CROWN CONSTRUCTION PROJECTS LTD

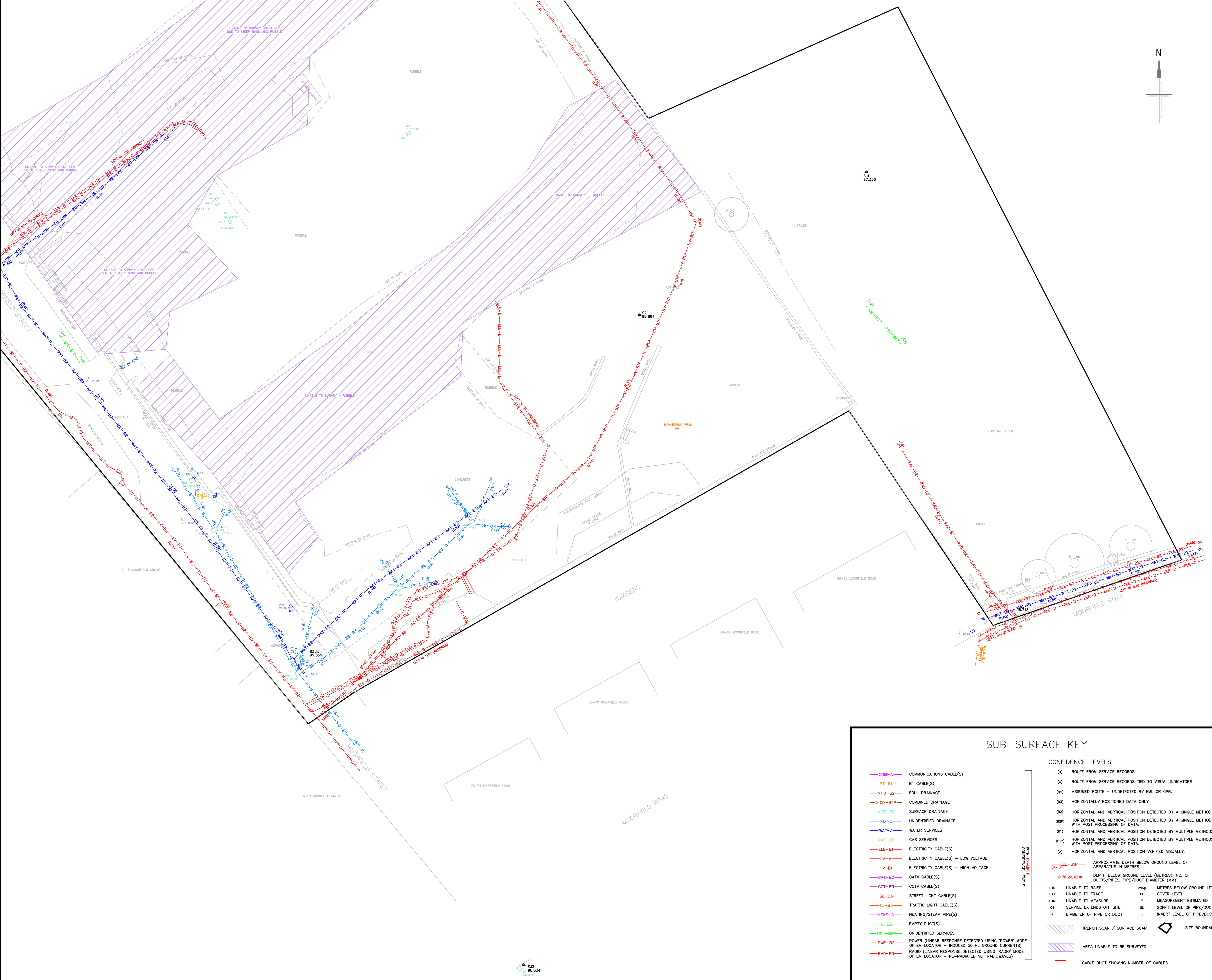
Site

ST ANDREWS GRANGE
MOORFIELD ROAD. LS12 3RU

Title

UTILITY MAPPING
SURVEY

Surveyed	JE GL	Drawn	JE RB
Chk.	HB	Date	09/12/2021
Scale	Job No	Sheet Size	Revision
1:200	P21-00814	A1	01
DWG Ref	Year	Number	Originator
	P21	00814	MET
	EXT	UMS	M2 GU
			002



SUB-SURFACE KEY

- COM-A

BT-B1

FD-B2

CD-B2P

SD-B2

D-C

WAT-A

GAS-B3

ELE-B1

LV-A

HV-B1

CAT-B2

CCT-B3

SL-B3

TL-B3

HEAT-A

X-B3

UNI-B2P

PWR-B2

RAD-B3
- COMMUNICATIONS CABLE(S)

BT CABLE(S)

FOUL DRAINAGE

COMBINED DRAINAGE

SURFACE DRAINAGE

UNIDENTIFIED DRAINAGE

WATER SERVICES

GAS SERVICES

ELECTRICITY CABLE(S)

ELECTRICITY CABLE(S) – LOW VOLTAGE

ELECTRICITY CABLE(S) – HIGH VOLTAGE

CATV CABLE(S)

CCTV CABLE(S)

STREET LIGHT CABLE(S)

TRAFFIC LIGHT CABLE(S)

HEATING/STEAM PIPE(S)

EMPTY DUCT(S)

UNIDENTIFIED SERVICES

POWER (LINEAR RESPONSE DETECTED USING 'POWER' MODE OF EM LOCATOR – INDUCED 50 Hz GROUND CURRENTS)

RADIO (LINEAR RESPONSE DETECTED USING 'RADIO' MODE OF EM LOCATOR – RE-RADIATED VLF RADIOWAVES)

CONFIDENCE LEVELS

- (D)

(C)

(B4)

(B3)

(B2)

(B2P)

(B1)

(B1P)

(A)
- ROUTE FROM SERVICE RECORDS

ROUTE FROM SERVICE RECORDS TIED TO VISUAL INDICATORS

ASSUMED ROUTE – UNDETECTED BY EML OR GPR.

HORIZONTALLY POSITIONED DATA ONLY

HORIZONTAL AND VERTICAL POSITION DETECTED BY A SINGLE METHOD.

HORIZONTAL AND VERTICAL POSITION DETECTED BY A SINGLE METHOD WITH POST PROCESSING OF DATA.

HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS.

HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS WITH POST PROCESSING OF DATA.

HORIZONTAL AND VERTICAL POSITION VERIFIED VISUALLY.
- ELE-B1P

0.70,24,1006

UTR

UT

UTM

OS

*
- APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES

DEPTH BELOW GROUND LEVEL (METRES), NO. OF DUCTS/PIPES, PIPE/DUCT DIAMETER (MM)

UNABLE TO RAISE

UNABLE TO TRACE

UNABLE TO MEASURE

SERVICE EXTENDS OFF SITE

DIAMETER OF PIPE OR DUCT

APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES

COVER LEVEL

MEASUREMENT ESTIMATED

SOFFIT LEVEL OF PIPE/DUCT

INVERT LEVEL OF PIPE/DUCT
- TRENCH SCAR / SURFACE SCAR

AREA UNABLE TO BE SURVEYED

CABLE DUCT SHOWING NUMBER OF CABLES

SITE BOUNDARY