

## **GENERAL**

This survey was carried out in accordance with PAS 128:2014 (Publicly Available Specification for BS 6841 - A pre-survey consultation with the client) it was agreed to carry out the detection survey using methodology M1 per table 2 of the PAS 128:2014. The survey location has been shown on the drawing; please see line/drawings section of the key for reference.

## **DESKTOP UTILITY REPORT**

The desktop utility report information was gathered and compiled in a separate document which can be found here: [redacted] This should be read in conjunction with the information contained in this utility detection survey. Record information was at the time of the survey less than 50 days old. The desktop utility report was generated by [redacted] for a full list of the providers searched, records received and the dates the information was obtained, please refer to the desktop utility report.

## **DETECTION SURVEY**

### **DRAWING**

The drawings were filled with pipe assets and inert level records. Wherever possible the chamber survey was recorded and positioned on the drawing. All connections between MH43 and MH62 through internal recording, not surveyed. All Assemblies from gullies, external manholes, surface drains, etc. were surveyed. All underground services were detected and new runs buried to radio locate location and/or GPS. Where a saddle connection is present the location of the saddle connection will be noted on the drawing. The following methods were unsuccessful for some locations where manholes have been assumed to be located as they are inaccessible or the signal could not be picked up. These locations are marked on the drawing. The desktop utility report should be cross checked in critical areas by CCTV survey or verification survey type A.

### **WATER**

Water was located utilizing EML and Gpr methods to quality level GA supply to the site and water mains. Barriers Road, record information has been transcribed to the drawing to quality level B.

### **GAS**

Gas was located using EML methods to quality level GB. Two gas supplies to the site were located. Where congested services made that we could no longer induce a signal into the system. Barriers Road, record information has been transcribed to the drawing to quality level GB.

### **ELECTRICITY**

Electricity cables located utilizing EML and GPR methods to quality level GBP. Where effort was made to detect all underground cables it is not always possible, not ended cables being detected. Barriers Road, record information has been recorded using GPS techniques wherever the LV loop supplying the lamp posts in the rear car park is assumed route and labelled accordingly.

### **TELECOM**

Telecom ducts have been traced with depths recorded. Due to laws protecting British Telecom's assets all ducts have been traced using remote detection techniques only and compared against BT records. Barriers Road, record information has been recorded using GPS techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

## **CATV**

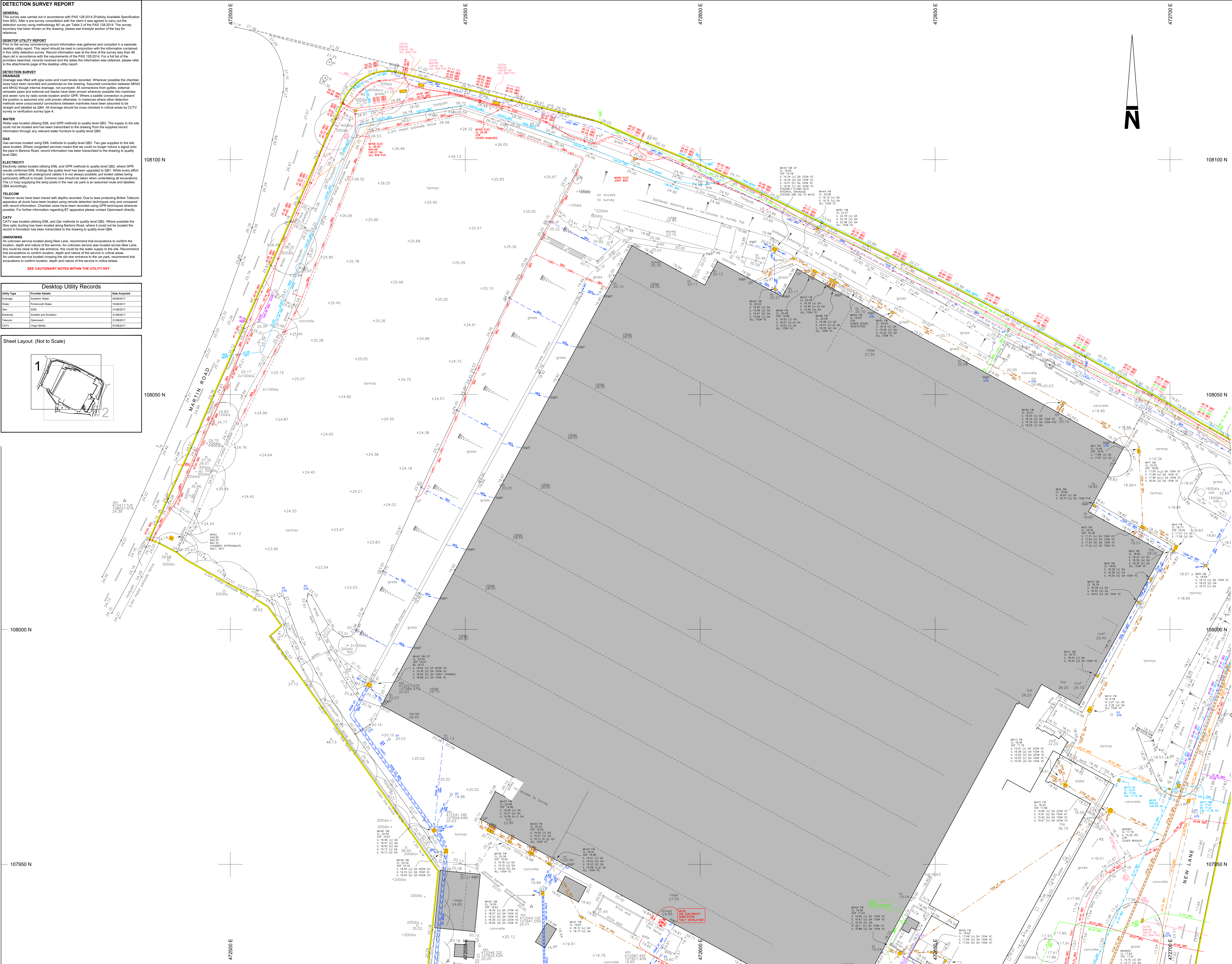
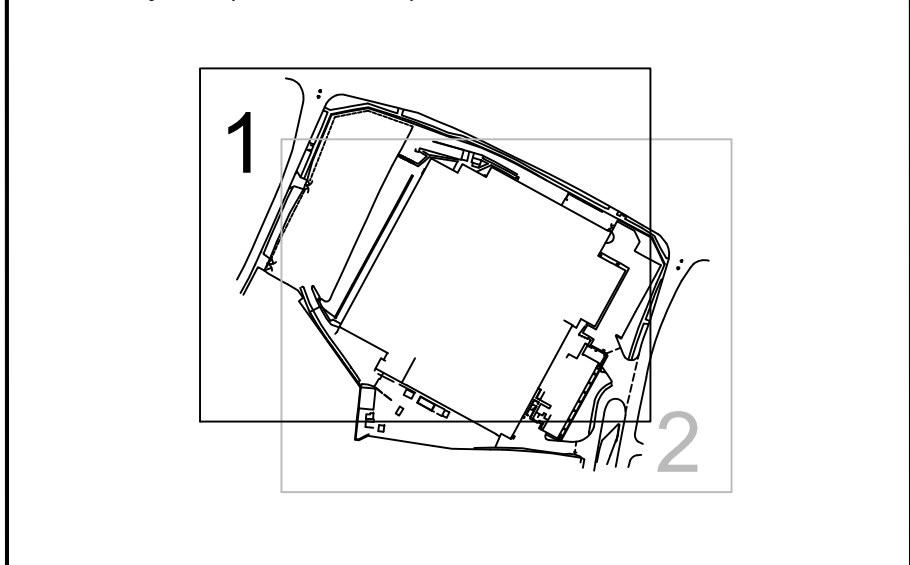
Cable TV was located utilizing EML and Gpr methods to quality level GB. Where possible the fibre optic cabling has been located along Barriers Road, where it could not be located the record information has been transcribed to the drawing to quality level GB.

## **UNKNOWN**

An unknown service located along New Lane, recommended trial excavations to confirm the location, depth and nature of the service. An unknown service was located across New Lane, recommended trial excavations to confirm the location, depth and nature of the service in critical areas. An unknown service located along the driveway, recommended trial excavations to confirm the location, depth and nature of the service in critical areas.

| Desktop Utility Records |                       |               |
|-------------------------|-----------------------|---------------|
| Utility Type            | Provider Details      | Date Acquired |
| Drainage                | Southern Water        | 06/06/2017    |
| Water                   | Portsmouth Water      | 15/03/2017    |
| Gas                     | SGN                   | 31/06/2017    |
| Electricity             | Scottish and Southern | 31/06/2017    |
| Telecom                 | Openreach             | 31/06/2017    |
| CATV                    | Virgin Media          | 07/06/2017    |

Sheet Layout: (Not to Scale)



- Notes :**
1. UTILITY AND SERVICE INFORMATION ADDED TO TOPOGRAPHICAL SURVEY PRODUCED BY P STUBBINGTON LAND SURVEYS LTD. JOB No. 4816/01. DATE DECEMBER 2014. NO SITE VERIFICATION CARRIED OUT BY MK SURVEYS
  2. THIS SURVEY SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT, THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

[illegible]

## CAUTIONARY NOTES

- [illegible]

## PAS 128:2014 Quality Level Guide

| Quality Level | Description                                                                                                                             | Accuracy                                          |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Q1M           | A utility is expected to exist but cannot be detected - (AR), (R), (V)                                                                  | Unfused                                           |
| Q2B1          | Horizontal location only using one geophysical technique.                                                                               | ± 500mm Horizontal                                |
| Q2B2          | No depth information - NDI                                                                                                              | Unfused Vertical                                  |
| Q2B3          | Horizontal and vertical location only using one geophysical technique                                                                   | ± 200mm or ±1 - 40% of depth whichever is greater |
| Q2B4          | Horizontal and vertical location only using two geophysical techniques                                                                  | ± 150mm or ±1 - 15% of depth whichever is greater |
| QA            | Service verified in an open excavation, inside an inspection chamber / draw pit, or at the point the service enters / exits the ground. | ± 50mm Horizontal<br>± 25mm Vertical              |



# mk surveys

Tel 01908 565051  
Tel 01805 594979  
Tel 0116 2649127  
Tel 01386 454203  
Tel 01403 243162

Milton Keynes  
Oxford  
East Midlands  
West Midlands  
Hornham

[enquiries@mk-surveys.co.uk](mailto:enquiries@mk-surveys.co.uk)  
[oxford@mk-surveys.co.uk](mailto:oxford@mk-surveys.co.uk)  
[eastmidlands@mk-surveys.co.uk](mailto:eastmidlands@mk-surveys.co.uk)  
[westmidlands@mk-surveys.co.uk](mailto:westmidlands@mk-surveys.co.uk)  
[hornham@mk-surveys.co.uk](mailto:hornham@mk-surveys.co.uk)

[www.mk-surveys.com](http://www.mk-surveys.com) [www.surveys4bim.co.uk](http://www.surveys4bim.co.uk)



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## Utility Survey

|                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Scale<br>1:250                                                                        | Sheet Size:<br>A0                                                                     | Sheet Number:<br>1                                                                    | Date:<br>September 2017                                                               |
| Project Number:<br>24301                                                              | Rev.<br>-                                                                             | Surveyed By:<br>AH                                                                    | Approved By:<br>DF                                                                    |
|  |  |  |  |

**GENERAL**

This survey was carried out in accordance with PASD 12-014 (Publicly Available Specification Form 12-014) after consultation with the client it was agreed to carry out the detection survey using methodology M1 as per Table 2 of the PASD 12-014. The survey information has been shown on the drawing; please see line/drawn circle of the key for reference.

**DISKTOP UTILITY REPORT**

A disktop utility survey commencing recording information was gathered and compiled in a separate file which can be viewed and read online at the following URL: [http://www.cablevision.co.uk/information-in-the-city/utility-detection-survey](#). Record information was at the time of the survey less than 6 months old. This information meets the requirements of the PASD 12-014:2014. For full list of the providers searched, records received and the dates the information was obtained, please refer to the attached file titled "disktop utility report".

**DETECTION SURVEY**

**DRAWING**

Drainage was traced by pipe sizes and invert levels recorded. Wherever possible the chamber location was determined and positioned on the drawing. Assured connection between MH45 and MH62 through internal drainage, not surveyed. All connections from gullies, external drains, manholes, etc., were traced and located. All connections to the sewer system and service runs up to meter service location and/or GPR. Where a saddle connection is present the position is noted. Where no connection is detected or where the depth of the connection methods were unsuccessful connections between manholes have been assumed to be present. Please note that the location of the connection may be checked directly by CCTV survey or verification survey type A.

**WATER**

Water was located utilizing EML and GPR methods to quality level Q4. The survey to the left of the Bortons Road, record information has been transferred to the drawing to supply record information through any relevant water feature to quality level Q4B.

**GAS**

The gas services located using EML methods to quality level Q2. Two gas supplies to the site were located. Where congested services means that too much longer inside a signal into the Bortons Road, record information has been transferred to the drawing to quality level Q4B.

**ELECTRICITY**

Electricity cables located utilizing EML and GPR methods to quality level Q4B, where GPR method was used. Findings the quality level has been upgraded to Q5B1. Where every effort is made to detect all underground cables it is not always possible, pot holes cannot be dug to find them, care must therefore take caution when taking over the cable crossings. The LV loop supplying the lamp posts in the rear car park is assumed routine and labelled accordingly.

**TELECOM**

Telecom ducts have been traced with depths recorded. Due to the latest British Telecom equipment all ducts have been traced using remote detection techniques only and compared against other known locations. No further records are required using GPR techniques wherever possible. For further information regarding BT apparatus please contact Openreach directly.

**CATV**

Cable TV was located utilizing EML and Gpr methods to quality level Q2. Where possible the fibre optic cabling has been located along Bortons Road, where it could not be located the record information has been transferred to the drawing to quality level Q4B.

**UNKNOWN**

An unknown service located along New Lane, recommended trial excavations to confirm the location and nature of the service. An unknown service was located across New Lane, recommended trial excavations to confirm the location and nature of the service in critical areas.

**RECOMMENDATIONS**

Recommendation for the future work is to conduct trial excavations to confirm the location, depth and nature of the service in critical areas.

| SEE CAUTIONARY NOTES WITHIN THE UTILITY KEY |                       |               |
|---------------------------------------------|-----------------------|---------------|
| Desktop Utility Records                     |                       |               |
| Utility Type                                | Provider Details      | Date Acquired |
| Drainage                                    | Southern Water        | 09/05/2017    |
| Water                                       | Portsmouth Water      | 15/08/2017    |
| Gas                                         | SGN                   | 31/05/2017    |
| Electricity                                 | Scottish and Southern | 31/05/2017    |
| Telecom                                     | Openreach             | 31/05/2017    |
| CATV                                        | Virgin Media          | 07/05/2017    |

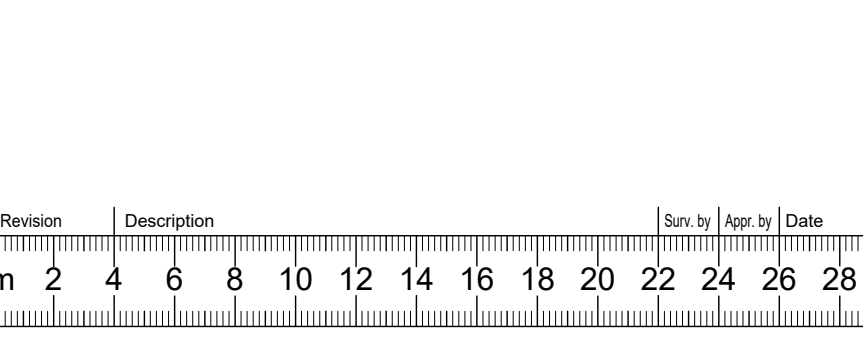


Notes :

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2. THIS SURVEY SHOULD ALWAYS BE READ IN CONJUNCTION WITH THE DESKTOP UTILITY REPORT, THAT WAS CARRIED OUT AS A PREREQUISITE TO THE DETECTION SURVEY.

[illegible]

| PAS 128:2014 Quality Level Guide |                                                                                                                                         |                                                |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Quality Level                    | Description                                                                                                                             | Accuracy                                       |
| QB4                              | A vehicle is expected to exist but cannot be detected - (ARL, RV, IV)                                                                   | Undefined                                      |
| QB3                              | Horizontal location only using one geophysical technique                                                                                | ± 500mm Horizontal<br>Undefined Vertical       |
| QB2                              | Horizontal and vertical location only using one geophysical technique                                                                   | ± 250mm or < 40% of depth whichever is greater |
| QB1                              | Horizontal and vertical location only using two geophysical techniques                                                                  | ± 100mm or < 15% of depth whichever is greater |
| QA                               | Service verified in an open excavation, inside an inspection chamber / drain pit, or at the point the service enters / exits the ground | ± 20mm Horizontal<br>± 20mm Vertical           |



**mk**surveys

Tel 01908 565561  
Tel 01905 594979  
Tel 0116 2949127  
Tel 01384 404203  
Tel 01403 243162

Mike Keynes  
Oxford  
East Midlands  
West Midlands  
Northern

[enquiries@mk-surveys.co.uk](mailto:enquiries@mk-surveys.co.uk)  
[oxford@mk-surveys.co.uk](mailto:oxford@mk-surveys.co.uk)  
[eastmidlands@mk-surveys.co.uk](mailto:eastmidlands@mk-surveys.co.uk)  
[westmidlands@mk-surveys.co.uk](mailto:westmidlands@mk-surveys.co.uk)  
[northern@mk-surveys.co.uk](mailto:northern@mk-surveys.co.uk)

[www.mk-surveys.com](http://www.mk-surveys.com) [www.surveys4bm.co.uk](http://www.surveys4bm.co.uk)



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|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Utility Survey                                                                        |                                                                                       |                                                                                       |                                                                                       |
| Scale:<br>1:250                                                                       | Sheet Size:<br>A0                                                                     | Sheet Number:<br>2                                                                    | Date:<br>September 20                                                                 |
| Project Number:<br>24301                                                              | Rev:<br>-                                                                             | Surveyed By:<br>AH                                                                    | Approved By:<br>DF                                                                    |
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