Utility Survey Disclaimer:
We have endeavored to locate as many buried services as possible using the Best Available Technology (BAT) and applying the Best available Techniques as defined under guidance from the The Survey Association (TSA) and the British Standard PAS128 for Utility Surveys.

However, the user of this drawing should be aware that the results found using Best Available Technology are subject to errors and tolerances resulting from geophysical properties of the subsurface (which can be a significant limitation/inhibter to the survey) , out of the control of the operator, being surveyed/scanned. In addition survey findings are interpreted on site in real-time and thus are subject to interpretative and subjective variations. This information is given without warranty, the accuracy thereof cannot be guaranteed.

The accuracy of the findings indicated within this drawing, cannot be guaranteed or indemnified, and should only be used as a guide as defined by the Health & Safety Executives (HSE) guideline - HSG47.

Lines on this drawing indicating the presence of buried services may actually be indicating the presence of closely bundled cables or pipelines, therefore the user of this drawing should not assume that a single line is indicative of the number of services within the area. In addition services below detected utilities may be masked from detection by the shadow cast from shallower depth services.

Metal pipes, communication cables and earth bonds can 'present' electromagnetic fields similar to that of high voltage and low voltage cables under load, if alternating electromagnetic fields are in close proximity from other power cables or sub-stations etc.

The designation of the services (i.e. is the detected service a water pipe or as pipe?) is open to interpretation and is based upon a number of references such as visible surface features (water stop valves, or gas meter) and utility provider records (indicating whether high voltage or low voltage). The best technology deployed is limited in its ability to define the exact type of service. The user of this drawing should prove, by means of safe-excavation, the type of service if critical to the design.

Equipment Deployed:
IDS Dual Frequency Ground Penetrating Radar (GPR) with on-site operator interpretation.

Radiodetection RD8000 & T10 Electromagnetic Generator and Precision Cable Locator.

Quality Level of Utility Survey Outputs:

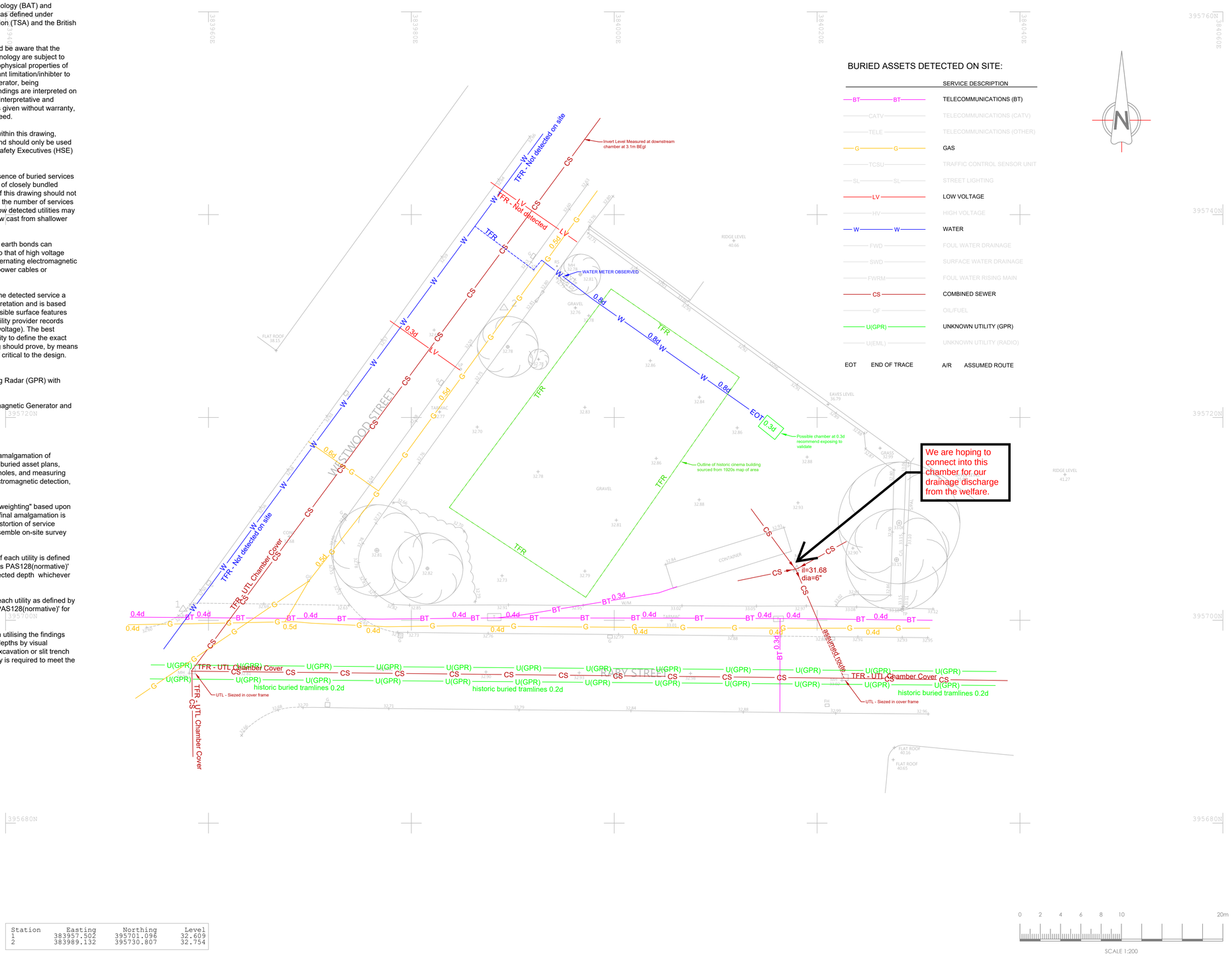
The drawing has been derived from the amalgamation of several data sets: utility service provider buried asset plans, visual confirmation by way of lifting manholes, and measuring depth, type and location of services, electromagnetic detection, and GPR scans.

All the data sets have been allocated a "weighting" based upon the likely accuracy and confidence. The final amalgamation is performed by polynomial rubber sheet distortion of service provider assets plans for a 'best fit' to resemble on-site survey data findings as close as possible

The accuracy of the horizontal location of each utility is defined by Table 1 'Quality level of survey outputs PAS128(normative)' for QL-B2P = +/-0.25m or +/-40% of detected depth whichever is greater.

The accuracy of the verticall location of each utility as defined by Table 1 'Quality level of survey outputs PAS128(normative)' for QL-B2P = +/-40% of detected depth.

Care should be taken by designers when utilising the findings within this drawing, and should confirm depths by visual confirmation/verification using vacuum excavation or slit trench technology if a higher degree of accuracy is required to meet the design brief specification.




| Station | Easting | Northing | Level |
|---|---|---|---|
| 1 | 383957.502 | 395701.096 | 32.609 |
| 2 | 383989.132 | 395730.807 | 32.754 |

Abbreviations/Symbols (Measured Building Surveys):

| | |
|---|---|
| C: | Window Cill Height |
| H: | Window Head Height |
| BH: | Beam Height |
| DH: | Door Height |
| COL: | Column |
| SVP: | Soil Vent Pipe |
| FL: | Floor Level |
| TH: | Threshold Level |
| 2.5m | Floor to Ceiling Height |
| | Vaulted Ceiling |

Line types

| | |
|---|---|
| | Hedge Lines |
| | Drainage Runs |
| | Overhead Electricity Cables |
| | Overhead Telephone Cables |

Symbols

| | | | |
|---|---|---|---|
| | Tree/Bush | | Glass House |
| | Control Station | | Osbm |
| | Borehole | | |
| | Trial Hole | | |

Abbreviations (Topographic Survey):

| | |
|---|---|
| AH: | Arch Height |
| AV: | Air Valve |
| BB: | Belisha Beacon |
| BOX: | Electricity Box, Cables Box, Etc. |
| BOL: | Bollard |
| BT/IC: | British Telecom Inspection Chamber |
| BS: | Bus Stop |
| BS/LP: | Bus Stop / Lamp Post |
| CATV: | CATV Inspection Chamber |
| CCTV: | Closed Circuit Television |
| CL: | Cellar Light |
| C.PIT: | Catch Pit |
| ER: | Earth Rod |
| EC: | Electricity Inspection Chamber |
| EP: | Electricity Pole |
| FH: | Fire Hydrant |
| FP: | Flag Pole |
| GV: | Gas Valve |
| GI: | Gully |
| IC: | Inspection Chamber |
| KO: | Kerb Outlet |
| LP: | Lamp Post |
| LB: | Letter Box |
| LC: | Lighting Column |
| MKR: | Marker |
| MH: | Manhole |
| MP: | Mooring Point |
| MS: | Mile Stone |
| NYNEX: | Nynex Inspection Chamber |
| O/H: | Over Hang |
| P: | Post |
| PO/IC: | Post Office Inspection Chamber |
| R/S: | Road Sign |
| RE: | Rodding Eye |
| RTW: | Retaining Wall |
| S/P: | Sign Post |
| SNP: | Street Name Plate |
| ST: | Stop Tap |
| SV: | Stop Valve |
| T: | Telecom Inspection Chamber |
| TCB: | Telephone Call Box |
| TH: | Threshold Level |
| TL: | Traffic Light |
| TP: | Telegraph Pole |
| TROUGH: | Trough |
| WO: | Water Outlet |
| WM: | Water Meter |

Fence Descriptions:

| | |
|---|---|
| B/W: | Barbed Wire |
| C/B: | Close Boarded |
| C/BARRIER: | Crash Barrier |
| C/L: | Chain Link |
| C/P: | Chestnut Paling |
| C/I: | Corrugated Iron |
| I/R: | Iron Railing |
| MISC: | Miscellaneous |
| P/R: | Post & Rail |
| P/W: | Post & Wire |
| P/C: | Post & Chain |
| S/PAL: | Steel Palisade |
| W/M: | Wire Mesh |

Survey Notes:
Coordinates and Levels related to Ordnance Survey Datum - GPS OSGB36

| Revision | Date | Description |
|---|---|---|
| | | |


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Client
MSV Housing Group

Project
Westwood St/Raby St, Manchester (Site 3)
Utility GPR Survey

| | | |
|---|---|---|
| Scale 1:200 | Surveyed By CW | Date 09.05.23 |
| Drawing No. 090523CW-01 | Checked By VW | Date 14.05.23 |
| | Drawn By CW | Date 14.05.23 |