



<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>The topographical survey was produced by Technicsgroup Limited, drawing number SP12345.</li> <li>The Ground Penetrating Radar was deployed using PAS 128 method MA.</li> <li>The Electromagnetic Locator survey was deployed using PAS 128 method MA.</li> <li>A number of technologies were used to obtain the information shown on this drawing. Varying ground conditions can affect the performance of these systems, therefore 100% detection is not guaranteed. Always Exercise Caution When Excavating. See PAS-47.</li> <li>Line types with the suffix B4 represent assumed utility positions. The information and positions are indicative only and are in an approximate position.</li> <li>Where electric EMI &amp; GPR services are illustrated on this drawing as a single utility line, these may represent multiple pipes/cables.</li> <li>Unlocated electric cables or perfectly balanced electric cables may not be detectable using Electromagnetic Radio Frequency locators.</li> <li>GPR targets with a suffix of B3P or B3 show the position of suspected underground linear features, these features have produced an inconsistent response to the radar.</li> <li>It is not always possible to differentiate between construction features and pipes, it is therefore possible that some of the features shown are not pipes or cables.</li> <li>The correct identification of the utility types can not be 100% guaranteed, therefore these should be independently verified prior to use in any design/building works.</li> <li>Where possible, the ownership of inspection covers has been derived from information on the covers or from cable tags. This does not necessarily mean that they use or are sole users of the apparatus.</li> <li>All pipe diameters and levels are assumed to be correct, however due to non entry to inspection chambers, these should be verified before any works commence.</li> <li>All utility depths are in meters.</li> <li>All pipe duct sizes are in millimetres.</li> <li>Copyright of all data produced by Technicsgroup shall remain with Technicsgroup unless otherwise agreed.</li> <li>Information provided should not be altered or modified in any way. It should not be used for any purpose other than for which it was intended and should not be issued to other parties without prior agreement of Technicsgroup.</li> <li>Technicsgroup cannot accept any responsibility for any damage to computer systems which may result from viruses which may be contained in the data provided.</li> <li>If the AutoCAD drawing is being read by any system other than AutoCAD it should be checked against a hard copy.</li> <li>Technicsgroup cannot accept liability for omissions.</li> <li>Dimensions should not be scaled. All dimensions should be checked on site before any fabrication / construction / excavation.</li> <li>The Utility Survey has been surveyed to an accuracy commensurate with 1:200 scale and plotted at 1:50 scale for clarity of information.</li> <li>CCTV Drainage Pipe positions are indicative only and are in an approximate position.</li> <li>Line types with the suffix of D or C represent Records submitted in accordance with PAS128, must be used to verify the information and establish their actual position.</li> <li>Drawing to be read in conjunction with provided PAS 128-quality levels &amp; detection methods table information.</li> </ol>	<p><b>KEY</b></p> <p><b>STREET FURNITURE</b>      BE Barbed Beacon      BD Back Stop Depth      ED Electric Capstand      EEP Electric Meter Pole      EMK Electric Meter Post      EP Electric Pole      FMK Fix Meter Marker      FL Flood Light      JO Junction Box      GMK Gas Meter Post      GSK Gas Meter      LM Lamp Post      MK Manhole      PM Parking Meter      SI Sign      STN Street Station      TLL Traffic Light      TLLC Traffic Light Control Box      TRP Telegraph Pole</p> <p><b>LEVELS &amp; DEPTHS</b>      A Approximate      BS Back Stop Depth      CD Chamber Depth      EMK Electric Meter Post      EP Electric Pole      ID Invert Depth      IS Invert Level      LD Lamp Post      MD Manhole      SP Surface Level      SL Sill Level      SWL Water Level</p> <p><b>INSPECTION CHAMBERS</b>      AC Access Cover      BC Back Stop      CC Chamber      CCOC Chamber with Unknown Extents      EC Electric Capstand      EEP Electric Meter Pole      EP Electric Pole      FMK Fix Meter Marker      FL Flood Light      JO Junction Box      GMK Gas Meter Post      GSK Gas Meter      LM Lamp Post      MK Manhole      PM Parking Meter      SI Sign      STN Street Station      TLL Traffic Light      TLLC Traffic Light Control Box      TRP Telegraph Pole</p> <p><b>LEVELS &amp; DEPTHS</b>      A Approximate      BS Back Stop Depth      CD Chamber Depth      EMK Electric Meter Post      EP Electric Pole      ID Invert Depth      IS Invert Level      LD Lamp Post      MD Manhole      SP Surface Level      SL Sill Level      SWL Water Level</p>	<p><b>DUCT FORMATION EXAMPLES</b></p> <p>1W: 1WAY SINGLE DUCT      2W: 2WAY FLAT      4W: 2/2 ZWAY      6W: 3/3 ZWAY</p> <p><b>HATCH PATTERNS</b></p> <ul style="list-style-type: none"> <li>CHAMBER</li> <li>CHAMBER WITH UNKNOWN EXTENTS</li> <li>UNABLE TO SURVEY AREA</li> <li>RADAR DETECTED REINFORCING MESH</li> <li>RADAR DETECTED ANOMALY PRODUCED</li> </ul> <p>AN ANOMALOUS FEATURE REPRESENTS AN AREA WITHIN THE RADAR DATA THAT ILLUSTRATES A SUBSTANTIAL DIFFERENCE FROM THE UNIFORM DATA OF THE SURROUNDING AREA. SUCH FEATURES COULD BE AN EFFECT FROM VOIDS, HEAVILY SATURATED GROUND, &amp; SUBSURFACE CONSTRUCTION FEATURES.</p>	<p><b>UTILITY LINE TYPES</b></p> <p><b>CONTROL CABLE</b>      TELEPHONE      COAXIAL      OPTICAL FIBRE      DATA      CCTV</p> <p><b>DUCT</b>      COMBINED DRAIN FLOW DIRECTION      DRAIN FLOW DIRECTION      STORM DRAIN FLOW DIRECTION      FRESH WATER      HOT WATER      ELECTRIC      ELECTRIC LOW VOLTAGE      STREET LIGHTING      GAS      WATER      UNKNOWN</p> <p><b>PIPELINE</b>      RAIL      HIGH PRESSURE      HIGH PRESSURE      LOW PRESSURE      UNKNOWN PRESSURE      UNKNOWN      HOT WATER      UNKNOWN PIPE      BIRDSH TELECOM      TELEPHONE      COAXIAL      OPTICAL FIBRE      DATA      CCTV</p> <p><b>WATER</b>      WATER MAIN      WATER POTABLE      WATER UNKNOWN      UNKNOWN      UNKNOWN</p>	<p><b>PAS128 QUALITY LEVELS</b></p> <p>-B1 ROUTE DERIVED FROM RECORDS INFORMATION, POSITION AND UPTHS INDICATIVE ONLY.</p> <p>-C ROUTE DERIVED FROM RECORDS INFORMATION AND TIED TO VISUAL INDICATORS SUCH AS - STREET FURNITURE, TOPOGRAPHICAL FEATURES OR EVIDENCE OF PREVIOUS STREET WORKS (RESTATEMENT SCAR). POSITION AND DEPTHS INDICATIVE ONLY.</p> <p>-B4 ASSUMED ROUTE A UTILITY WHICH IS SUSPECTED TO EXIST BUT HAS NOT BEEN DETECTED AND IS THEREFORE SHOWN AS AN ASSUMED ROUTE. POSITION INDICATIVE ONLY.</p> <p>-B3 HORIZONTAL LOCATION ONLY OF THE UTILITY DETECTED BY ONE OF THE GEOPHYSICAL TECHNIQUES USED.</p> <p>-B2 HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE OF THE GEOPHYSICAL TECHNIQUES USED, NOT INCLUDING UPTHS DETECTED SOLELY BY RADIO FREQUENCY LOCATORS.</p> <p>-B1 HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED WITH POST PROCESSING OF DATA.</p> <p>-B0 HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY ONE OF THE GEOPHYSICAL TECHNIQUES USED WITH POST PROCESSING OF DATA.</p> <p>-A HORIZONTAL AND VERTICAL LOCATION OF THE UTILITY DETECTED BY MULTIPLE GEOPHYSICAL TECHNIQUES USED WITH POST PROCESSING OF DATA.</p>	<p><b>SURVEY AREA LINE TYPES</b></p> <p>EM. SURVEY AREA      GPR SURVEY AREA      CHANGE OF SURFACE      TRENCH OF SURFACE      BUILDING FACE      WALL      FENCE      KERB/DROP KERB      TREE CANOPY      BUSHES/FOLIAGE</p> <p><b>TOPOGRAPHICAL LINE TYPES</b></p> <p>1:50x1:50      0:50x0:50</p> <p><b>SYMBOLLOGY</b></p> <p>Single Gate      DOUBLE GATE      BANKING      STEP UP      DIMETER: SHOW IN MM      SURVEY STATION</p>	<p><b>EXAMPLE ANNOTATIONS AND LINE TYPES</b></p> <p><b>1:50x1:50</b>      0:50x0:50      1:50x1:50      1:200x1:200      0:225</p> <p><b>EXAMPLE ANNOTATIONS AND LINE TYPES</b>      Detailed description of various line types and annotations used in the survey, including symbols for gates, banks, and step ups.</p>	<p><b>SHEET LAYOUT</b></p> <p><b>CLIENT</b>      A Client</p> <p><b>SITE</b>      SITE1      SITE2      SITE3</p> <p><b>DRAWING TITLE</b>      Example PAS128 Utility Survey</p> <p><b>PROJECT NUMBER</b>      PROJECT NO</p> <p><b>SURVEYED BY</b>      DRAWN BY</p> <p><b>SCALE</b>      1:50</p> <p><b>DATE</b>      DATE</p> <p><b>CHECKED BY</b>      CHECKED BY</p> <p><b>SHEET SIZE</b>      A0-L</p> <p><b>SHIRT NO</b>      SHEET 1 OF 1</p> <p><b>Notes</b></p> <table border="1"> <tr><th>Rev</th><th>Date</th><th>Notes</th><th>By</th></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	Rev	Date	Notes	By													<p><b>Technics</b>      Geospatial Consultant Surveyors</p> <p>TECHNICS GROUP      TECHNICS HOUSE      MERROW BUSINESS PARK      GUILDFORD      SURREY, GU14 7WA</p> <p>T: 01483 230 080      E: mail@technicsgroup.com      W: technicsgroup.com</p> <p><b>Regulated by</b>      NICEIC, ICS, BSRIA, GPR, SRA, GPR</p>
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