



**Notes**

1. Topographical information has been taken from drawing 23-02-1006 2d Topographical Survey at Hollyville, Knocknoheeny, some information may have been removed for clarity. Please refer to original drawing for full details.
2. This drawing should be read in conjunction with the utility survey report.
3. All depths are taken to top of service, unless "L.L." is indicated, in this instance the depth is to the invert of the pipe. This is for drainage pipes at manholes only.
4. As this is a non-intrusive survey only, all utilities should be visually verified by safe digging practices to confirm depths and alignments of survey.
5. Non-intrusive surveys cannot guarantee every possible service under the ground is located. Care must be taken when site works begin, as services that are not locatable through non-intrusive methods may exist on site.

**DISCLAIMER**

This drawing and information contained within is issued in confidence and is the copyright of Precision Utility Mapping. If the topographical information or base mapping has been supplied by a Third Party, Precision Utility Mapping is not liable for any inaccuracies contained therein. It is recommended to supplement mapping from third parties and Precision Utility Mapping has not been commissioned to verify these inaccuracies. Please refer to the accompanying report. Disclosure of the information in this Plan and any unauthorised copying or replication of the data without approval is forbidden.

The data presented in this drawing have been collected using a combination of the following: consultation of utility asset information, visual survey & inspection of manholes and inspection chambers, electromagnetic location techniques, ground penetrating radar, and, where applicable, trial hole excavations. These techniques have been employed in accordance with the BS/PAS 238 Specification for Underground Utility Detection, Verification and Location using the search methodologies indicated below and described in the accompanying report. This drawing should be used in conjunction with the accompanying report which details the limitations of these techniques and any remedial factors encountered during this survey.

Unless otherwise stated, all utilities shown on this plan have been surveyed using approved detectors and the connections between inspection chambers, if unable to be detected, are generally assumed to be direct unless there are any indications to the contrary. The detection confidence for each utility segment is depicted in line with the PAS 238 scheme outlined below. Information depicted as CL-C or CL-D cannot be guaranteed as it is based on historic utility records which can be inaccurate and incomplete.

The utility routes depicted may reflect the routes of multiple cables or pipes. It is not always possible to differentiate between buried construction features, utilities and other subsurface linear features therefore it is possible that some features shown are not utility related, and due to the limitations of electromagnetic techniques all utility identifications should be treated with caution and verified prior to any utility digging/building works.

If the location or depth of utilities and features of particular importance to a project then it is recommended that excavations are held with Precision Utility Mapping regarding any possible limitations or anomalies.

Please note that not all buried pipes, cables and ducts can be detected and mapped in consideration of their depth, location, material type, geometry and proximity to other utilities. Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate. Where an area of utility is likely to affect client project requirements, it is strongly recommended that a PAS 238 Quality Level A verification survey is carried out.

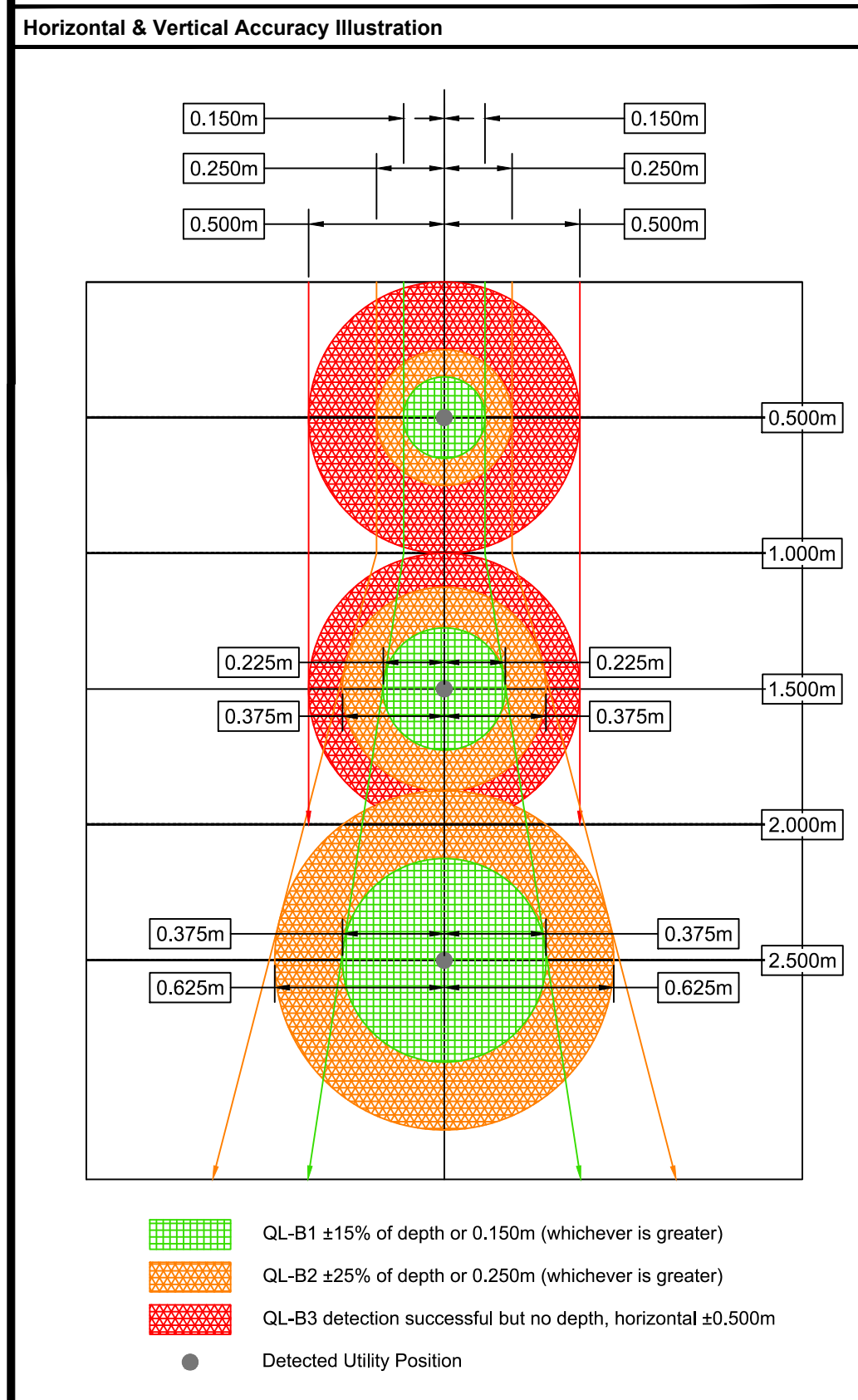
No utility mapping survey can be considered a 100% accurate depiction of the subsurface environment, and the use of these drawings does not remove the requirement for the use of safe digging techniques at all times, in line with the requirements of HSE/GAT and current CDm regulations.

**SUB-SURFACE KEY**

COMBINED HEATING AND POWER	Blue line
DISTRICT HEATING	Blue line with dots
DRAINAGE COMBINED	Orange line
DRAINAGE COAT	Orange line with dots
DRAINAGE SURFACE	Orange line with dashes
DRAINAGE UNIDENTIFIED	Orange line with diagonal lines
FLOW DIRECTION INDICATED BY ARROW (D) OR (I) IF KNOWN	Orange line with arrow
ELECTRIC	Red line
ELECTRIC LV	Red line with dots
ELECTRIC HV	Red line with diagonal lines
ELECTRIC STREET LIGHTING	Red line with cross-hatch
GAZ	Yellow line
OPTICAL FIBRELINE	Green line
STREET FURNITURE CABLES	Green line with dots
TELECOMS	Purple line
TELECOMS - FIBRE OPTIC	Purple line with dots
TELECOMS - BT	Purple line with diagonal lines
TELECOMS - VOIP MEDIA	Purple line with cross-hatch
TRONICAM	Purple line with diagonal lines
TRAFFIC CONTROL	Blue line with diagonal lines
WATER	Blue line
UNIDENTIFIED UTILITY	Blue line with diagonal lines
UNIDENTIFIED CABLES	Blue line with dots
UNIDENTIFIED EMPTY DUCT	Blue line with diagonal lines
GPR LINEAR FEATURE	Blue line with diagonal lines
GPR LINEAR FEATURE	Blue line with diagonal lines
GPR AREA ANOMALY	Blue line with diagonal lines
GPR AREA ANOMALY - REBAR	Blue line with diagonal lines
CHAMBER EXTENTS	Blue line with diagonal lines
MEASURED DEPTH (M) TO PIPE/CABLE/DUCT	0.05m
INVERT LEVEL OF PIPE/CABLE/DUCT (TO OS DATUM)	0.10m
DEPTH LEVEL (TO OS DATUM)	0.15m
COVER LEVEL OF INSPECTION CHAMBER (TO OS DATUM)	0.20m
DIAMETER OF PIPE/DUCT IN MILLIMETERS	1500
AREA UNABLE TO BE SURVEYED DUE TO SURFACE OBSTRUCTION, RESTRICTION OF ACCESS	Blue hatched area
TRENCH SCAR / SURFACE SCAR	Blue hatched area
EXTENT OF SURVEY - BOUNDARY	Blue line with diagonal lines

**UTILITY CONFIDENCE LEVELS (Listed from High to Low)**

(A)	HORIZONTAL AND VERTICAL POSITION VERIFIED VISUALLY (Accuracy: Horizontal ±25mm Vertical ±50mm)
(B1P)	HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS WITH POST PROCESSING OF GPR DATA (Estimated Accuracy: ±150mm OR ±10% of detected depth)
(B1)	HORIZONTAL AND VERTICAL POSITION DETECTED BY MULTIPLE METHODS (Estimated Accuracy: ±150mm OR ±10% of detected depth)
(B2P)	HORIZONTAL AND VERTICAL POSITION DETECTED VIA POST-PROCESSED GPR (Estimated Accuracy: ±250mm OR ±40% of detected depth)
(B2)	HORIZONTAL AND VERTICAL POSITION DETECTED BY A SINGLE METHOD (Estimated Accuracy: ±250mm OR ±40% of detected depth)
(B3P)	HORIZONTAL POSITION DETECTED VIA POST-PROCESSED GPR (Estimated Accuracy: ±500mm in the Horizontal - Depth is undefined)
(B3)	HORIZONTAL POSITION DETECTED BY A SINGLE METHOD (Estimated Accuracy: ±500mm in the Horizontal - Depth is undefined)
(B4)	A utility segment which is suspected to exist (either on CL-D or CL-C records) but has not been detected and is therefore shown as an assumed route.



1

MIP - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 0.5m INTERVALS - GPR SURVEY GRID AT 5m INTERVALS OR HIGH DENSITY ARRAY - POST PROCESSING OF GPR DATA	M1 - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 0.5m INTERVALS - GPR SURVEY GRID AT 5m INTERVALS - GPR MARKUP ON SITE
MIP - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 1m INTERVALS - GPR SURVEY GRID AT 10m INTERVALS OR HIGH DENSITY ARRAY - POST PROCESSING OF GPR DATA	M2 - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 1m INTERVALS - GPR SURVEY GRID AT 10m INTERVALS - GPR MARKUP ON SITE
MIP - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 2m INTERVALS - GPR SURVEY GRID AT 2m INTERVALS OR HIGH DENSITY ARRAY - POST PROCESSING OF GPR DATA	M3 - EM SEARCH TRACED AT 2m INTERVALS - TRACED AT 2m INTERVALS - GPR SURVEY GRID AT 2m INTERVALS - GPR MARKUP ON SITE
MIP - EM SEARCH TRACED AT 10m INTERVALS - TRACED AT 5m INTERVALS - GPR SURVEY AS APPROPRIATE - POST PROCESSING OF GPR DATA	M4 - EM SEARCH TRACED AT 10m INTERVALS - TRACED AT 5m INTERVALS - GPR SURVEY AS APPROPRIATE - GPR MARKUP ON SITE

01	25/04/2023	L.M.	Survey Completed	K.S.	J.M.
Rev	Date	Drawn	Description	Chkd	Appd

Client: KH Architects  
Title: Hollyville Utility Survey Sheet 1 of 1

Surveyor	C. CLAVIN	C.C.	Eng check	K. SHEEHAN	K.S.
Drawn	L. MOREIRA	L.M.	Coordination	K. SHEEHAN	K.S.
Dwg check	K. SHEEHAN	K.S.	Approved	J. MARKHAM	J.M.
Scale at A0	1:200	Status	COMPLETED	Rev	01
Drawing Number	PUM-11266-U-DR-0001-01				