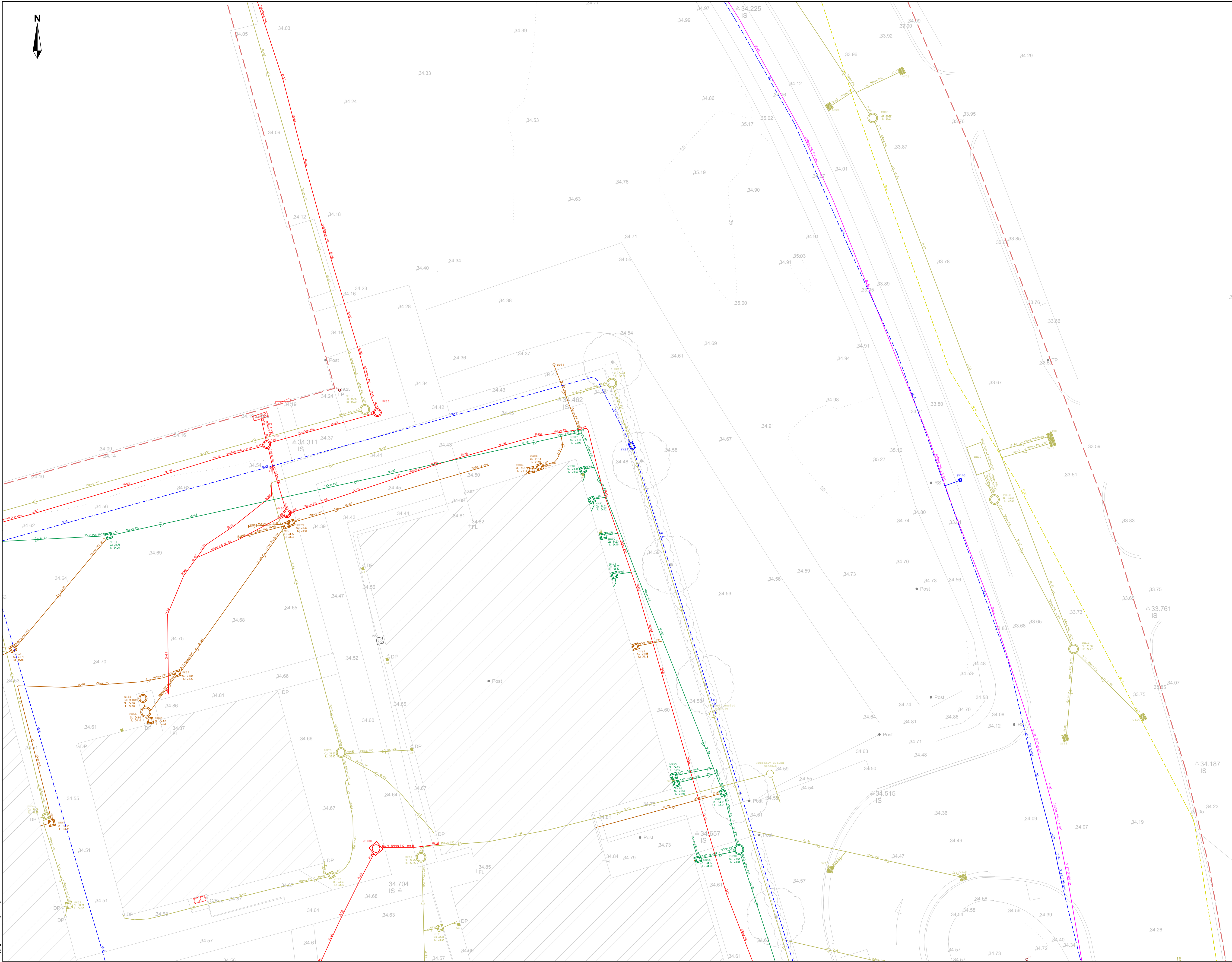
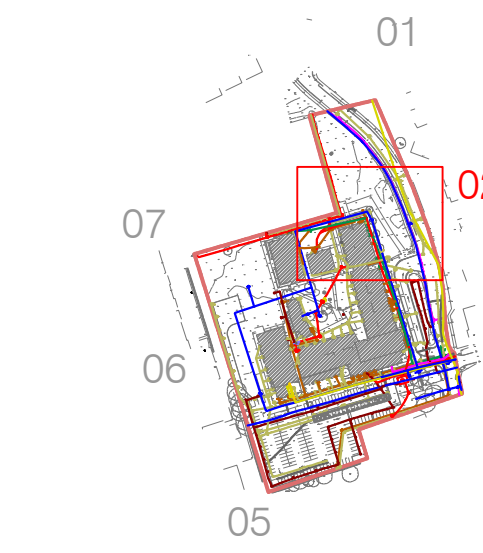




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KEYMAP



LEGEND

Description	Color / type
Cartographical background	Black
Survey area	Dark pink
CCTV	Green
Drainage Surface	Sienna
Drainage Foul	Burnt Sienna
Drainage Combined	Dark Green
Elcom	Magenta
Traffic	Red orange
Water	Blue
Electricity	Red
Gas	Dark yellow
Telecommunications	Light green
Aurora Telecom	Cyan
Public Lighting	Dark red
Virgin Media	Purple
Unknown	Grey
Subsurface Anomaly Area	Yellow
Area not Suitable for GPR Survey	Grey
Reinforced concrete layer	Grey
No. of ducts of the same service	By layer
Depth to the top of the pipe	By layer
Flow direction	By layer
Unknown connection/direction	By layer
Unable to lift - Cover or lid	By layer
Quality Level - A (Verification)	±2.5 cm (H) and 2.5 cm (V)
Quality Level - B1P (Detection)	±15 cm (H) and 15% (V)
Quality Level - B2P (Detection)	±25 cm (H) and 40% (V)
Quality Level - B3P (Detection)	±50 cm (H) and Undefined (V)
Quality Level - B3 (Detection)	±50 cm (H) and Undefined (V)
Quality Level - B4 (Detection)	Undefined (H), Undefined (V)
Quality Level - C (Site Evidence)	Undefined (H), Undefined (V)
Quality Level - D (Record drawings)	Undefined (H), Undefined (V)

Hatched areas on a Utility specific layer represent:
1) Several cables not better identified
2) Reinforced layer on top of buried utilities.



TST Engineering Ltd Disclaimer

TST Engineering surveyed the required area in order to provide information about the existing utility services located within the area and its immediate parts. While the best precision and accuracy were performed during site activities, TST extremely recommends attention prior to excavation, as there is still uncertainty related with no dig surveys. There is no guarantee that all buried services were identified with the survey shown in the layout. The quality of the acquired data depends by the soil water percentage and the ground conditions; TST Engineering bore any possible effort in order to provide the most reliable results.

Technical Specification:
GPR scans starting from physical elements (e.g. walls, kerbs) can bear an offset of approx 0.45m due to the GPR trolley's configuration; this is a small section of the area that remains not covered by the GPR scans and consequently does not show GPR information. The greatest survey depth achievable with GPR is about 3 - 2.5 meters from the ground surface and it can vary according to the penetrating parameters of the soil. Deeper pipes were located, where possible, with electronic detection devices and through the inspection of chambers and manholes. Accuracy margins, depending upon problems encountered while surveying or systematic device errors, will be within 10% of actual depths. Infrastructures' position on layouts can vary from actual surface by 0.10 meters, oval distances. Buried utilities are shown through polylines and tags identifying, where possible, the typology, characteristics, state of use and any other useful information. A single polyline may represent a pipeline, a duct, a cable, a group of cables or ducts; the relative tags describes the elements represented. Manholes, chambers, boxes, valves and any other surface element related with the buried utilities were surveyed and represented in the layout with their real dimensions (2D or 3D). Information such as operating pressure and relining (for gas pipes), voltage (for electric cables) is obtained from records of the assets owners and is not verified by TST Engineering Ltd.

This drawing represents a 3D drawing of the result of the surveys. The drawing is represented in absolute coordinate.

Reference system: Irish Transverse Mercator



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Tel: (+353) 1 5373905 www.tstengineering.com

Client: Drogheda Institute of
Further Education

Project: New Sports Building -
Changing Rooms

Description: Utilities Mapping Survey

Drawing No.: 1352D-23-003 **Sheet 2/7**

Scale: 1:150 (on A1)

Enclosed with:

Surveyed by: SD, DL, RL

Drawn by: CD

GPR elaboration by: SD

Approved by: SD **Date:** 10-11-2023

REVISIONS

No.	Date	Description
0	05-10-2023	Draft - Drainage
1	12-10-2023	Rev-01
2	16-10-2023	Rev-02
3	10-11-2023	Rev-03