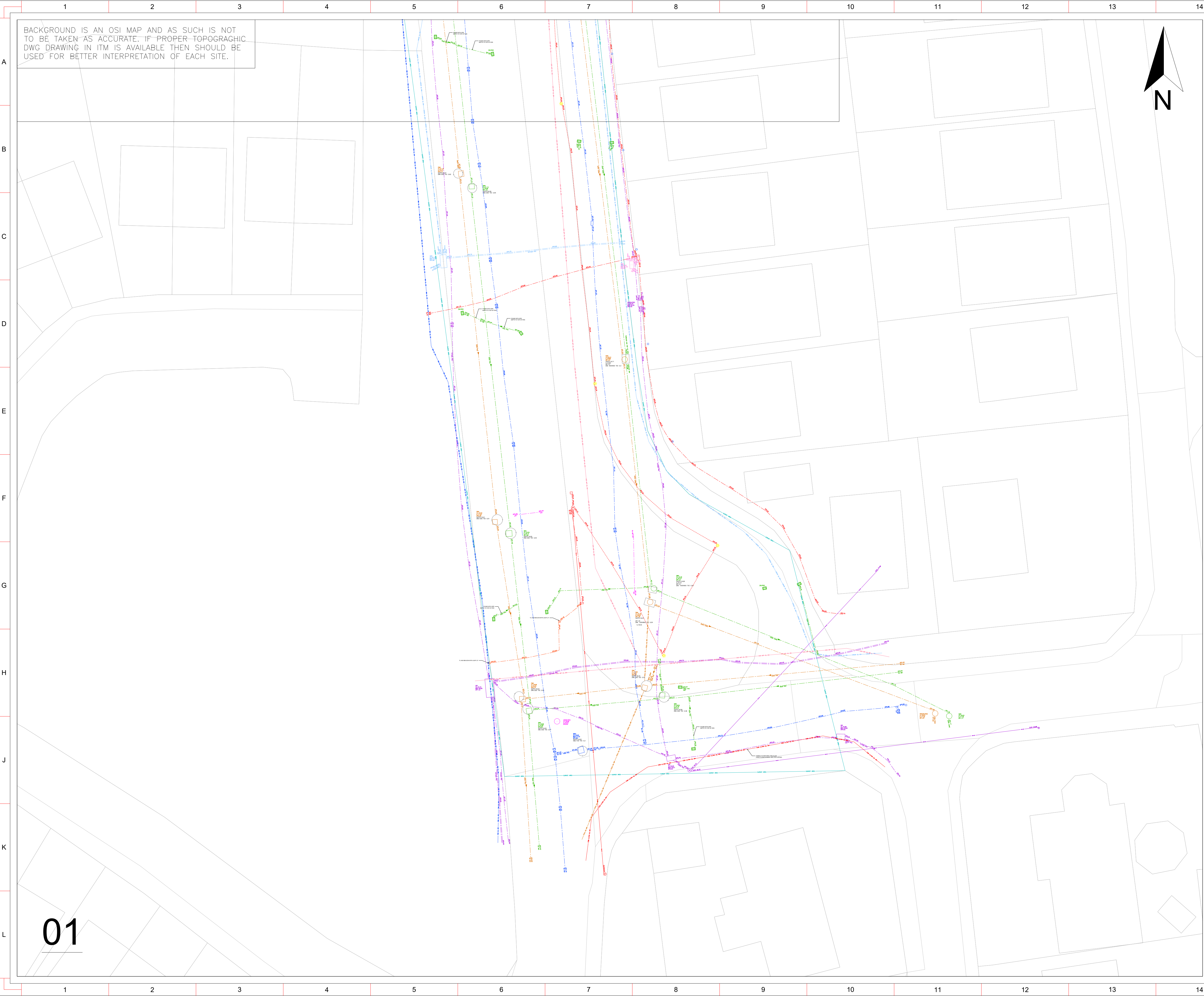
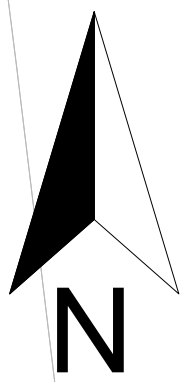




BACKGROUND IS AN OSI MAP AND AS SUCH IS NOT TO BE TAKEN AS ACCURATE. IF PROPER TOPOGRAPHIC DWG DRAWING IN ITM IS AVAILABLE THEN SHOULD BE USED FOR BETTER INTERPRETATION OF EACH SITE.



### SERVICES LEGEND

|         |                                  |     |                                              |               |
|---------|----------------------------------|-----|----------------------------------------------|---------------|
| EML     | UNDERGROUND ELECTRICITY LINE     | FOL | FOUL DRAINAGE                                |               |
| EML     | ELECTRICAL M/HOLE                | FOL | FOUL MANHOLE                                 |               |
| OP      | OVERHEAD LINE WITH POLE          | SDM | STORM DRAINAGE                               |               |
| OE      | OVERHEAD ELECTRIC                | SDM | STORM DRAINAGE MANHOLE                       |               |
| EML     | UNDERGROUND HV ELECTRICITY LINE  | CDM | COMBINED DRAINAGE                            |               |
| EL      | PUBLIC LIGHTING ELECTRICITY LINE | CDM | COMBINED DRAINAGE MANHOLE                    |               |
| SLP     | 6m HIGH STREET LIGHT             | PRD | PRODUCT DRAINAGE                             |               |
| MHPV    | MN PILLAR                        | PRD | PRODUCT DRAINAGE MANHOLE                     |               |
| TMH     | U/G ELECTRIC TRAFFIC CONTROL     | CHE | CHEMICAL LINE                                |               |
| TMH     | TRAFFIC CONTROL M/HOLE           | CHE | CHEMICAL MANHOLE                             |               |
| ER      | ER                               | RDM | ROAD GULLY                                   |               |
| ER      | ER CHAMBER                       | GTR | GULLY TRAP                                   |               |
| OP      | OVERHEAD LINE WITH POLE          | WM  | WATER MAIN                                   |               |
| ENET    | ENET                             | SV  | SLUICE VALVE                                 |               |
| ENET    | ENET CHAMBER                     | FHO | FIRE HYDRANT                                 |               |
| COMMS   | COMMS                            | WM  | WATER METER                                  |               |
| COMMS   | COMMS CHAMBER                    | SCV | SCOUR VALVE                                  |               |
| VIRGN   | VIRGN                            | PRV | PRESSURE RELEASE VALVE                       |               |
| VIRGN   | VIRGN CHAMBER                    | AV  | AIR VALVE                                    |               |
| FIBRE   | FIBRE                            | NRV | NON-RETURN VALVE                             |               |
| FIBRE   | FIBRE CHAMBER                    | FL  | FUEL LINE/TANK                               |               |
| AURORA  | AURORA TELECOM                   | GSV | GAS SV                                       |               |
| AURORA  | AURORA TELECOM CHAMBER           | GL  | GAS LINE                                     |               |
| CATV    | CATV                             | GL  | GAS HIGH PRESSURE LINE                       |               |
| CATV    | CATV CHAMBER                     | GL  | 00.00 GROUND LEVEL (metres - os datum)       |               |
| BT/ESAT | BT/ESAT                          | GL  | 10.00 COVER LEVEL (metres - os datum)        |               |
| BT/ESAT | BT/ESAT CHAMBER                  | GL  | 10.00 INVERT LEVEL (metres - os datum)       |               |
| SRO     | SRO                              | GL  | DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |               |
| SRO     | SRO CHAMBER                      | GL  | DP ON MANHOLES = INVERT LEVEL OF CHAMBER     |               |
| UNID    | UNIDENTIFIED SERVICE             | GL  | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |               |
| UNID    | UNIDENTIFIED CHAMBER             | GL  | UTO UNABLE TO OPEN                           |               |
| EARTH   | EARTH LINE AND RODS              | GL  | OSA OUTSIDE SURVEY AREA                      |               |
| SENSOR  | TRAFFIC SENSORS                  | GL  | UTT UNABLE TO TRACE                          |               |
| GPR     | GPR ANOMALY                      | GL  | (E) EMPTY DUCT                               |               |
| CCTV    | CCTV POLE                        | GL  | (CD) CLOSED DUCT                             |               |
| UTIL    | UTILITIES CABINET                | GL  | SUA                                          | SURVEYED AREA |

### SHEET LEGEND

Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locator signal. Plot ground conditions and or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating.

Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 30 days from date stated below.

Drawing is intended solely for use of the contractor named below.

**Accuracy Levels**

In ideal conditions the accuracy levels of the EML is +/-0.5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depth of services, congestion of services (may cause signal to bleed on to other services).

Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole.

All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.

**Survey Limitations**

Non-conductible services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel.

PE gas mains can also prove difficult to identify.

If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QL-B4'.

If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open).

Excluded from the survey unless otherwise stated:

Domestic services, Services above ground, Disconnected services where no signal can be obtained

### Notes

1. GPR equipment :  
Detector Duo, DS2000,  
Stream C, Mala EL Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.

2. Radio detection equipment:  
Vivax Metrotech VLoc Pro3 / RD7000

3. GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing

4. All depths stated are an indication of depth  
caution required when excavating.

5. All Utilities are classified QL- B2  
unless noted otherwise.

### PAS 128

| Survey Type                     | Quality Level | Location Accuracy                      |                                      | Supporting Data                                                                                                                                           |
|---------------------------------|---------------|----------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |               | Horizontal                             | Vertical                             |                                                                                                                                                           |
| D Desktop utility record search | QL-D          | Undefined                              | Undefined                            | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works. |
| C Site Reconnaissance           | QL-C          | Undefined                              | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed reality.                                     |
| B Detection                     | QL-B4         | Undefined                              | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed reality.                                     |
|                                 | QL-B3         | plus/minus 100mm                       | Undefined (no reliable depth)        | Horizontal location only of the utility detected by one of the geophysical techniques used                                                                |
|                                 | QL-B2         | plus/minus 200mm of the detected depth | plus/minus 40% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used                                                        |
|                                 | QL-B1         | plus/minus 100mm of the detected depth | plus/minus 15% of the detected depth | Horizontal and vertical location of the utility detected by multiple geophysical techniques used                                                          |
| A Verification                  | QL-A          | plus/minus 50mm                        | plus/minus 15mm                      | Horizontal and vertical location of the top and/or bottom of the utility through trial hole or direct trench method                                       |

## METROSCAN

### UTILITY LOCATING LTD.

**Address:** Carrick Road Carrick,Edenderry,Co Kildare R45WD32  
**Email:** Info@metroscan.ie  
**Website:** www.metroscan.ie

**Client:** Cork County Council

**Site Address:** Broomfield West,  
Midleton, County Cork

**Drawing Title:**  
MUL2493\_Broomfield Site A Midleton\_Rev0

**Drwg No:**  
1

**Site Completion Date:**  
02/06/2026

**Scale:**  
1:200 @ A1

**Coordinates:**  
ITM

**Drawn**  
Rev

**Date**  
Rev

**Comments**  
Rev

**Checked**  
Rev

**DA**  
Rev

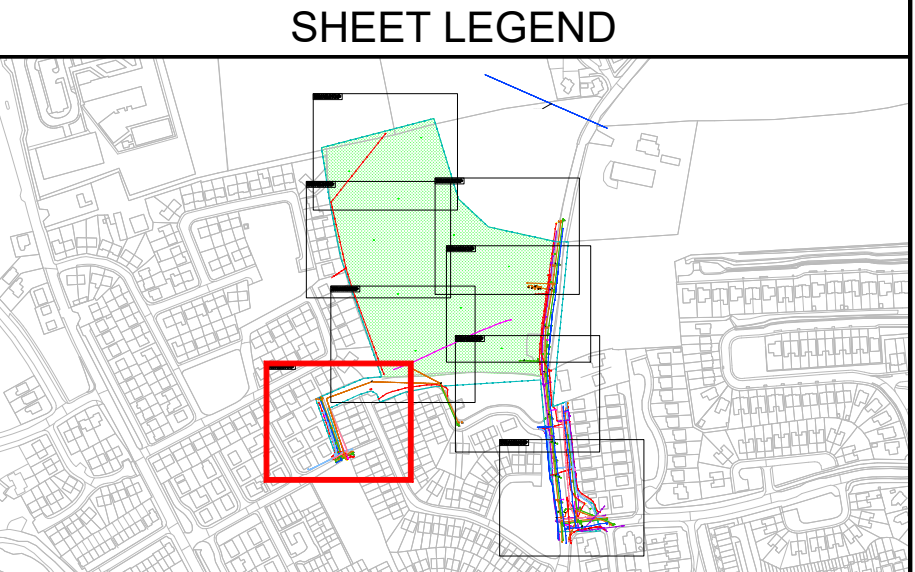
**Sheet No:**  
01

**Rev No:**  
0

# 01

# SERVICES LEGEND

|  |                                  |  |                                              |
|--|----------------------------------|--|----------------------------------------------|
|  | UNDERGROUND ELECTRICITY LINE     |  | FOUL DRAINAGE                                |
|  | ELECTRICAL M/HOLE                |  | FOUL MANHOLE                                 |
|  | OVERHEAD LINE WITH POLE          |  | STORM DRAINAGE                               |
|  | UNDERGROUND ELECTRIC             |  | STORM DRAINAGE MANHOLE                       |
|  | OVERHEAD HV ELECTRICITY LINE     |  | COMBINED DRAINAGE                            |
|  | PUBLIC LIGHTING ELECTRICITY LINE |  | COMBINED DRAINAGE MANHOLE                    |
|  | 6m HIGH STREET LIGHT             |  | PRODUCT DRAINAGE                             |
|  | MINI PILLAR                      |  | PRODUCT DRAINAGE MANHOLE                     |
|  | 1/2" WATER TRAFFIC CONTROL       |  | CHEMICAL LINE                                |
|  | TRAFFIC CONTROL M/HOLE           |  | CHEMICAL MANHOLE                             |
|  | ER                               |  | ROAD GULLY                                   |
|  | ER CHAMBER                       |  | GULLY TRAP                                   |
|  | OVERHEAD LINE WITH POLE          |  | WATER MAIN                                   |
|  | ENET                             |  | SERVICE VALVE                                |
|  | ENET CHAMBER                     |  | FIRE HYDRANT                                 |
|  | COMMS                            |  | WATER METER                                  |
|  | COMMS CHAMBER                    |  | SEWER VALVE                                  |
|  | VIRGN                            |  | PRESSURE RELEASE VALVE                       |
|  | VIRGN CHAMBER                    |  | AIR VALVE                                    |
|  | FIBRE                            |  | NDV                                          |
|  | FIBRE CHAMBER                    |  | FUEL LINE/TANK                               |
|  | AURORA TELECOM                   |  | GAS SV                                       |
|  | AURORA TELECOM CHAMBER           |  | GAS - SV                                     |
|  | CATV                             |  | GAS HP - SV                                  |
|  | CATV CHAMBER                     |  | GL 00.00 GROUND LEVEL (metres - as datum)    |
|  | BT/ESAT                          |  | GL 10.00 COVER LEVEL (metres - as datum)     |
|  | BT/ESAT CHAMBER                  |  | IL 10.00 INVERT LEVEL (metres - as datum)    |
|  | SIBO FIBRE                       |  | DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |
|  | SIBO CHAMBER                     |  | DP ON MANHOLES = INVERT LEVEL OF MANHOLE     |
|  | UNIDENTIFIED SERVICE             |  | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |
|  | UNIDENTIFIED CHAMBER             |  | UTD UNABLE TO OPEN                           |
|  | EARTH LINE AND RODS              |  | OSA OUTSIDE SURVEY AREA                      |
|  | TRAFFIC SENSORS                  |  | UTT UNABLE TO TRACE                          |
|  | GPR ANOMALY                      |  | () EMPTY DUCT                                |
|  | OCV POLICY                       |  | (CD) CLOSED DUCT                             |
|  | UTILITIES CABINET                |  | Survived Area                                |



Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locater signal. Poor ground conditions and/or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metrotrans by the contractor, Metrotrans cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating.

Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 60 days from date stated below.

Drawing is intended solely for use of the contractor named below.

### Accuracy Levels

In ideal conditions the accuracy levels of the EML is +/-5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to be lost on to other services).

Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole.

All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied

**Survey Limitations**  
Non-conductable services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel.  
PE gas mains can also prove difficult to identify.

If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QJ-B4'.  
If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open).  
Deduced from the survey unless otherwise stated:

**Exempted services:** Services above ground. **Disconnected services:** where no signal can be obtained.

## Notes

1. GPR equipment :  
Detector Duo, DS2000,  
Stream C, Mala El. Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.
2. Radio detection equipment:  
Vivax Metrotech VLoc Pro3 / RD7000
3. GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing
4. All depths stated are an indication  
of depth  
caution required when excavating.
5. All Utilities are classified QL- B2  
unless noted otherwise.

## PAS 128

| Survey type | Quality level                 | Location Accuracy                  |                                                              | Supporting Data                                                                                                                                               |
|-------------|-------------------------------|------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                               | horizontal                         | vertical                                                     |                                                                                                                                                               |
| D           | Desktop utility record search | Q2.0                               | Undefined                                                    |                                                                                                                                                               |
| C           | Site Reconnaissance           | QC.2                               | Undefined                                                    | A placement of utility whose location is demonstrated by visual inspection to street features, topographical features, or evidence of previous work.          |
|             |                               | QB.4                               | Undefined                                                    | A utility assignment which is supported at least but has not been demonstrated by visual inspection.                                                          |
|             |                               | QB.3<br>QB.3.1<br>QB.3.2<br>QB.3.3 | Undefined<br>Undefined<br>poor/limited<br>poor/limited       | A utility assignment which is supported by a map and/or aerial photograph. Horizontal location only or of the utility determined by one of the other methods. |
| B           | Detection                     | QB.2<br>QB.2.1<br>QB.2.2<br>QB.2.3 | poor/limited<br>poor/limited<br>poor/limited<br>poor/limited | Horizontal and vertical location of the utility determined by one of the other methods.                                                                       |
|             |                               | QB.1<br>QB.1.1<br>QB.1.2           | poor/limited<br>poor/limited<br>poor/limited                 | Horizontal and vertical location of the utility determined by multiple geophysical techniques used.                                                           |
| A           | Verification                  | QA.4<br>QA.4.1<br>QA.4.2           | poor/limited<br>poor/limited<br>poor/limited                 | Horizontal and vertical location of the utility top and/or bottom of the trench is confirmed by high-precision surveying techniques.                          |

**METROSCAN**   
UTILITY LOCATING LTD.  
**Address:** Carrick Road, Carrick, Edenderry, Co Kildare R45WD32  
**Email:** [Info@metroscan.ie](mailto:Info@metroscan.ie)  
**Website:** [www.metroscan.ie](http://www.metroscan.ie)

|                      |                                           |
|----------------------|-------------------------------------------|
| <b>Client:</b>       | Cork County Council                       |
| <b>Site Address:</b> | Broomfield West,<br>Midleton, County Cork |

|                |          |
|----------------|----------|
| Drawing Title: | Drwg No: |
|                | 1        |

MUL2493\_Broomfield Site A Midleton\_Rev0

|                       |        |              |    |
|-----------------------|--------|--------------|----|
| Site Completion Date: | Scale: | Coordinates: | 02 |
|-----------------------|--------|--------------|----|

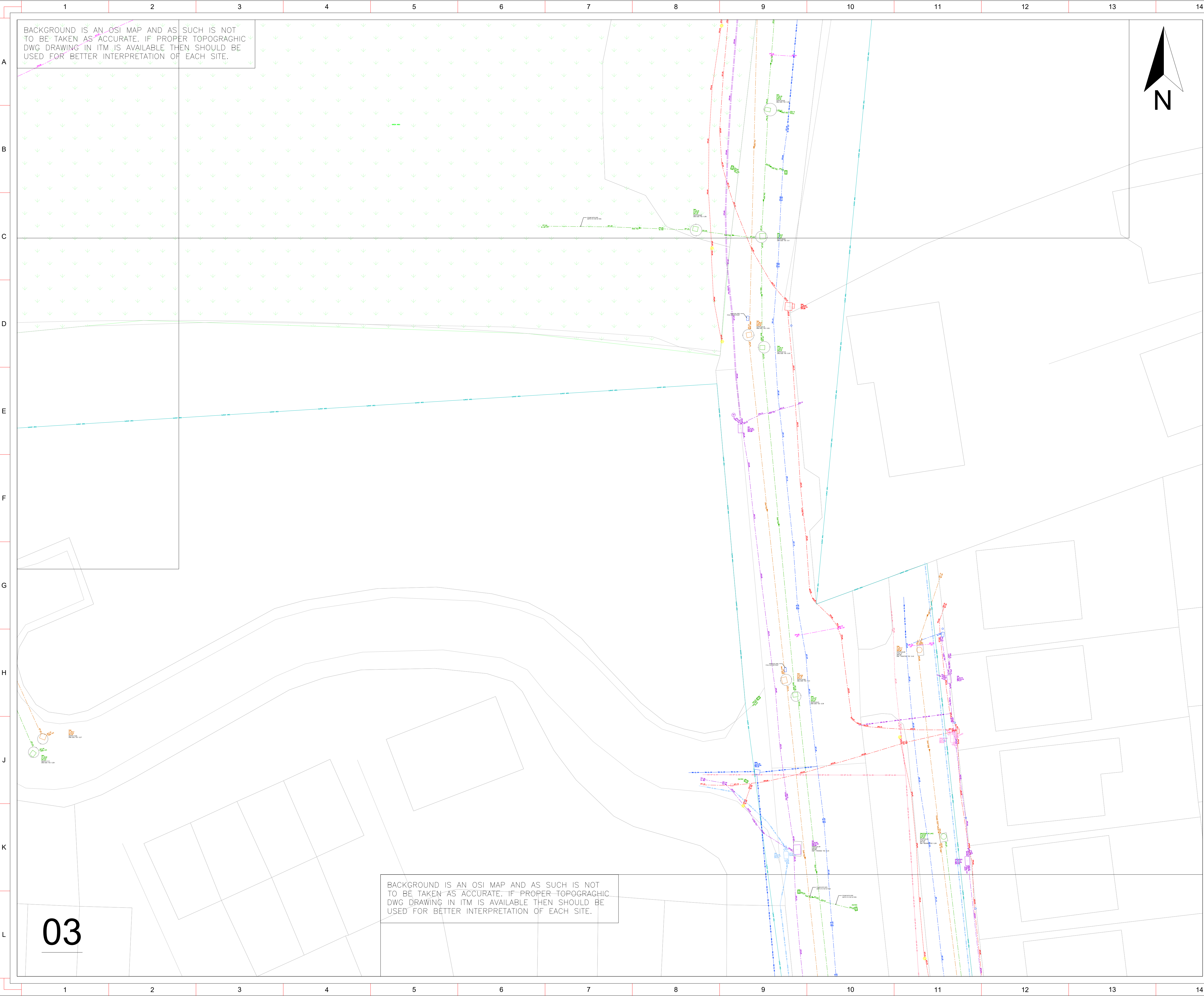
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| Site Completion Date: | Scale:     | Coordinates: | Rev No: |
| 02/06/2026            | 1:200 @ A1 | ITM          | 2       |

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|--------------|-----------|-----------------|----------------|--|-----------|----------|
| <b>Drawn</b> |           | <b>DON</b>      | <b>Checked</b> |  | <b>DA</b> | <b>0</b> |
| <b>Date</b>  | <b>By</b> | <b>Comments</b> |                |  |           |          |

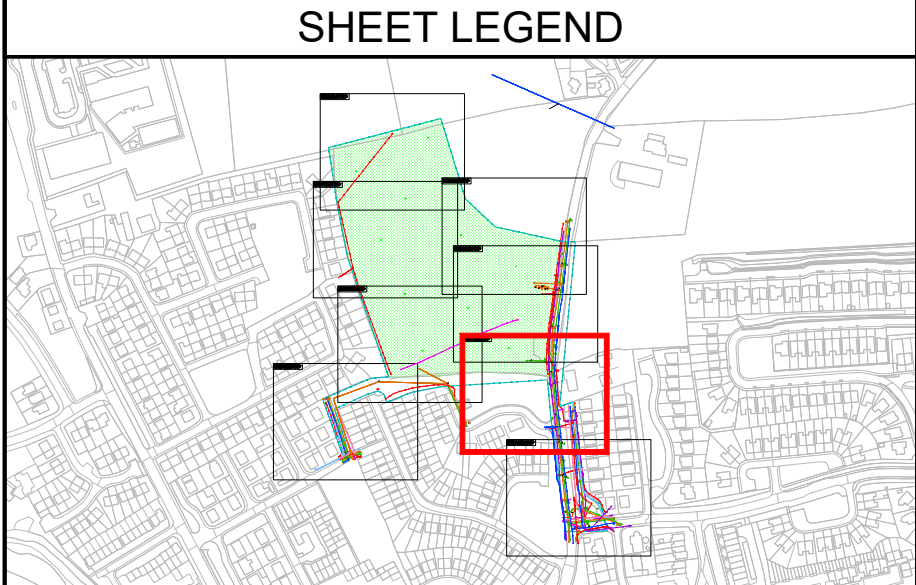
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|  | 15 | 16 |  |
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| SERVICES LEGEND |                                              |
|-----------------|----------------------------------------------|
| EML             | UNDERGROUND ELECTRICITY LINE                 |
| EML             | UNDERGROUND M/HOLE                           |
| EML             | OVERHEAD LINE WITH POLE                      |
| EML             | OVERHEAD ELECTRIC                            |
| EML             | UNDERGROUND HV ELECTRICITY LINE              |
| EML             | PUBLIC LIGHTING ELECTRICITY LINE             |
| EML             | 6m HIGH STREET LIGHT                         |
| EML             | U/G ELECTRIC TRAFFIC CONTROL                 |
| EML             | TRAFFIC CONTROL M/HOLE                       |
| EML             | ER                                           |
| EML             | ER CHAMBER                                   |
| EML             | ENET                                         |
| EML             | ENET CHAMBER                                 |
| EML             | COMMS                                        |
| EML             | COMMS CHAMBER                                |
| EML             | VIRGIN                                       |
| EML             | VIRGIN CHAMBER                               |
| EML             | FIBRE                                        |
| EML             | FIBRE CHAMBER                                |
| EML             | AURORA TELECOM                               |
| EML             | AURORA TELECOM CHAMBER                       |
| EML             | CATV                                         |
| EML             | CATV CHAMBER                                 |
| EML             | BT/ESAT                                      |
| EML             | BT/ESAT CHAMBER                              |
| EML             | SIRO                                         |
| EML             | SIRO CHAMBER                                 |
| EML             | UNIDENTIFIED SERVICE                         |
| EML             | UNIDENTIFIED CHAMBER                         |
| EML             | EARTH LINE AND RODS                          |
| EML             | SENSOR                                       |
| EML             | GPR ANOMALY                                  |
| EML             | CCTV POLE                                    |
| EML             | UTILITIES CABINET                            |
| EML             | FOUL DRAINAGE                                |
| EML             | FOUL MANHOLE                                 |
| EML             | STORM DRAINAGE                               |
| EML             | STORM DRAINAGE MANHOLE                       |
| EML             | COMBINED DRAINAGE                            |
| EML             | COMBINED DRAINAGE MANHOLE                    |
| EML             | PRODUCT DRAINAGE                             |
| EML             | PRODUCT DRAINAGE MANHOLE                     |
| EML             | CHEMICAL LINE                                |
| EML             | CHEMICAL MANHOLE                             |
| EML             | ROAD GULLY                                   |
| EML             | GULLY TRAP                                   |
| EML             | WATER MAIN                                   |
| EML             | SLUICE VALVE                                 |
| EML             | FIRE HYDRANT                                 |
| EML             | WATER METER                                  |
| EML             | SCOUR VALVE                                  |
| EML             | PRESSURE RELEASE VALVE                       |
| EML             | AIR VALVE                                    |
| EML             | NON-RETURN VALVE                             |
| EML             | FUEL LINE/TANK                               |
| EML             | GAS SV                                       |
| EML             | GAS LINE                                     |
| EML             | GAS HIGH PRESSURE LINE                       |
| EML             | QL 00.00 GROUND LEVEL (metres - as datum)    |
| EML             | QL 10.00 COVER LEVEL (metres - as datum)     |
| EML             | IL 10.00 INVERT LEVEL (metres - as datum)    |
| EML             | DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |
| EML             | DP ON MANHOLES = INVERT LEVEL OF CHAMBER     |
| EML             | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |
| EML             | UTO UNABLE TO OPEN                           |
| EML             | OSA OUTSIDE SURVEY AREA                      |
| EML             | UTT UNABLE TO TRACE                          |
| EML             | (E) EMPTY DUCT                               |
| EML             | (CD) CLOSED DUCT                             |
| EML             | SURVEYED AREA                                |



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**Accuracy Levels**  
In ideal conditions the accuracy levels of the EML is +/-5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to bleed on to other services). Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole. All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.

**Survey Limitations**  
Non-conductible services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel. PE gas mains can also prove difficult to identify.  
If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QL-B4'.  
If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open).  
Excluded from the survey unless otherwise stated:  
Domestic services, Services above ground, Disconnected services where no signal can be obtained.

- Notes**  
1. GPR equipment :  
Detector Duo, DS2000,  
Stream C, Mala EL Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.  
2. Radio detection equipment:  
Vivax Metrotech VLoc Pro3 / RD7000  
3. GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing
4. All depths stated are an indication of depth caution required when excavating.  
5. All Utilities are classified QL- B2 unless noted otherwise.

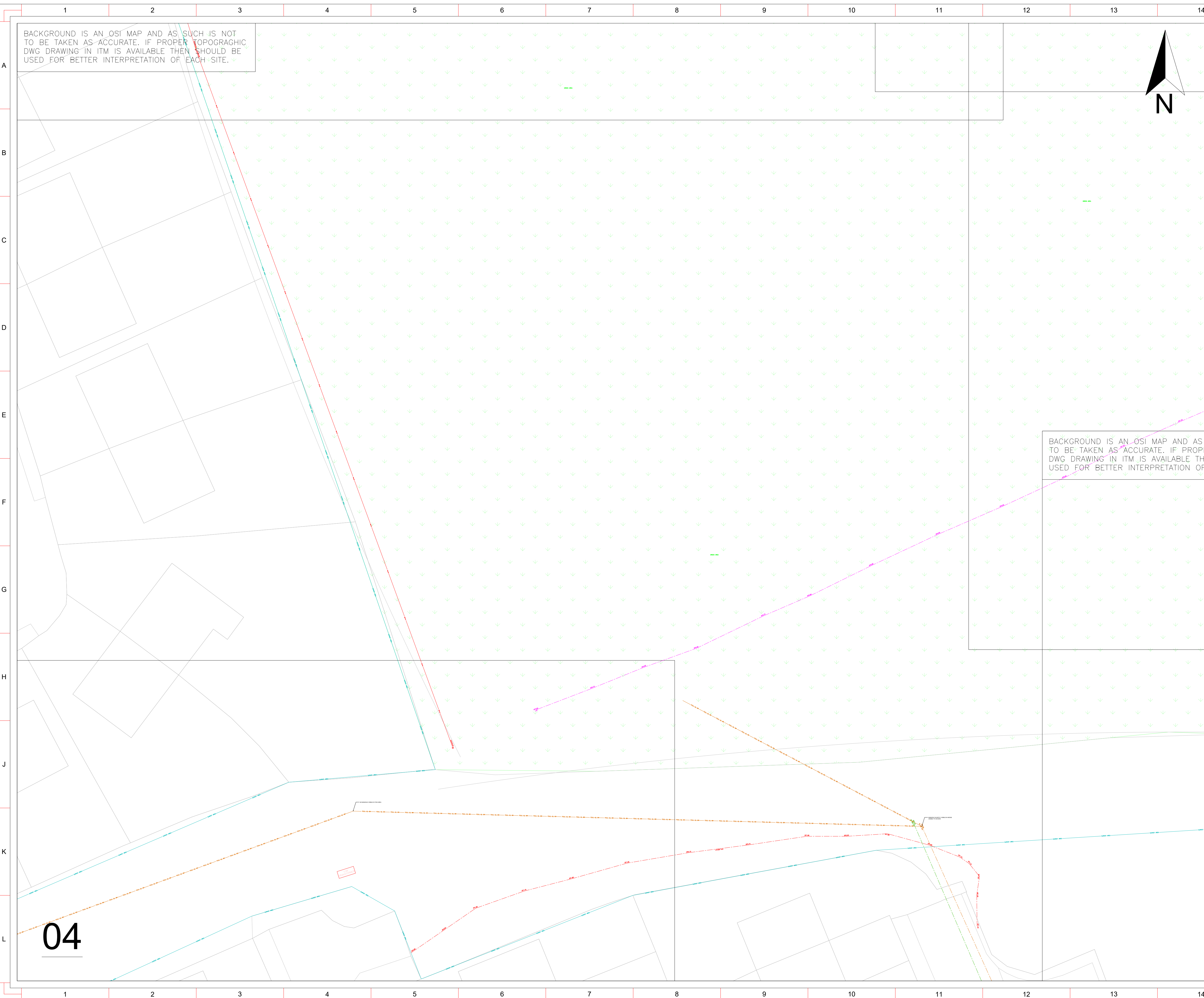
| PAS 128                         |               |                                        |                                      |                                                                                                                                                                                                                    |
|---------------------------------|---------------|----------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Survey Type                     | Quality Level | Location Accuracy                      |                                      | Supporting Data                                                                                                                                                                                                    |
|                                 |               | Horizontal                             | Vertical                             |                                                                                                                                                                                                                    |
| D Desktop utility record search | QL-D          | Undefined                              | Undefined                            | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works.                                                          |
| C Site Reconnaissance           | QL-C          | Undefined                              | Undefined                            |                                                                                                                                                                                                                    |
| B Detection                     | QL-B4         | Undefined                              | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed location. Horizontal location only of the utility detected by one of the geophysical techniques used. |
|                                 | QL-B3         | plus/minus 100mm                       | Undefined (no reliable depth)        |                                                                                                                                                                                                                    |
|                                 | QL-B2         | plus/minus 250mm of the detected depth | plus/minus 40% of the detected depth |                                                                                                                                                                                                                    |
|                                 | QL-B1         | plus/minus 150mm of the detected depth | plus/minus 15% of the detected depth |                                                                                                                                                                                                                    |
| A Verification                  | QL-A          | plus/minus 50mm                        | plus/minus 15mm                      | Horizontal and vertical location of the utility detected by multiple geophysical techniques used                                                                                                                   |

**METROSCAN**  
UTILITY LOCATING LTD.  
Address: Carrick Road Carrick,Edenderry,Co Kildare R45WD32  
Email: info@metroscan.ie  
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Client: Cork County Council

Site Address: Broomfield West, Midleton, County Cork

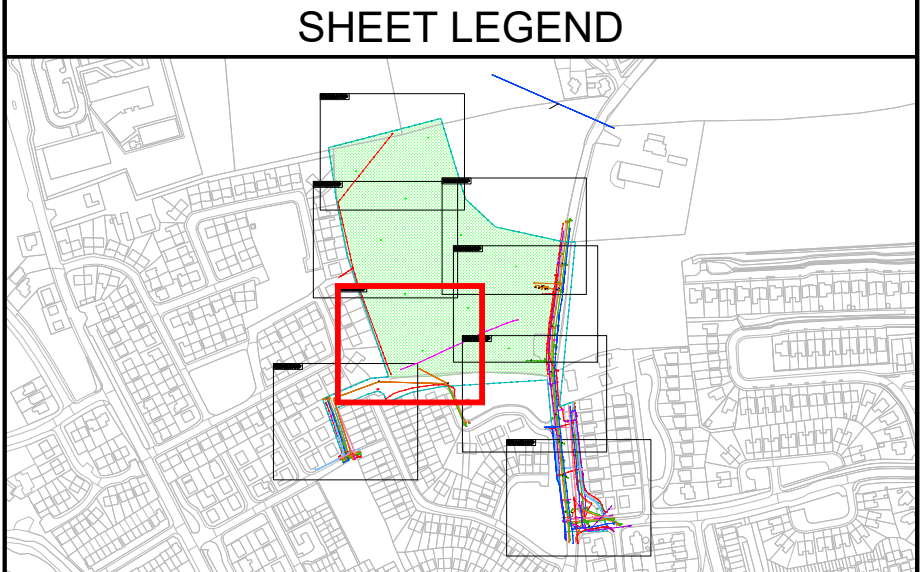
|                                                                  |             |                        |
|------------------------------------------------------------------|-------------|------------------------|
| <b>Drawing Title:</b><br>MUL2493_Broomfield Site A Midleton_Rev0 |             | <b>Drwg No:</b><br>1   |
| <b>Site Completion Date:</b><br>02/06/2026                       |             | <b>Sheet No:</b><br>03 |
| <b>Drawn:</b> DON                                                |             | <b>Rev No:</b><br>0    |
| <b>Rev</b>                                                       | <b>Date</b> | <b>Comments</b>        |
| <b>Rev</b>                                                       |             |                        |



# SERVICES LEGEND

|                                                                                     |                                      |                                                                                     |                                              |
|-------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------|
|  | UNDERGROUND ELECTRICITY LINE         |  | FOUL DRAINAGE                                |
|  | ELECTRICAL M/HOLE                    |  | FOUL MANHOLE                                 |
|  | OVERHEAD LINE WITH POLE              |  | STORM DRAINAGE                               |
|  | OVERHEAD ELECTRIC                    |  | STORM DRAINAGE MANHOLE                       |
|  | UNDERGROUND H/W ELECTRICITY LINE     |  | COMBINED DRAINAGE                            |
|  | PUBLIC LIGHTING ELECTRIFICATION LINE |  | COMBINED DRAINAGE MANHOLE                    |
|  | 6m HIGH STREET LIGHT                 |  | PRODUCT DRAINAGE                             |
|  | MAN PILLAR                           |  | PRODUCT DRAINAGE MANHOLE                     |
|  | U/S ELECTRIC TRAFFIC CONTROL         |  | CHEMICAL LINE                                |
|  | TRAFFIC CONTROL M/HOLE               |  | CHEMICAL MANHOLE                             |
|  | ER                                   |  | ROAD GULLY                                   |
|  | ER CHAMBER                           |  | GULLY TRAP                                   |
|  | OVERHEAD LINE WITH POLE              |  | WATER MAIN                                   |
|  | ENET                                 |  | SLUICE VALVE                                 |
|  | ENET CHAMBER                         |  | FIRE HYDRANT                                 |
|  | COMMS                                |  | WATER METER                                  |
|  | COMMS CHAMBER                        |  | SCOUR VALVE                                  |
|  | VIRCON                               |  | PRESSURE RELEASE VALVE                       |
|  | VIRCON CHAMBER                       |  | AIR VALVE                                    |
|  | FIBRE                                |  | NON-RETURN VALVE                             |
|  | FIBRE CHAMBER                        |  | FUEL LINE/TANK                               |
|  | AURORA TELECOM                       |  | GAS SV                                       |
|  | AURORA TELECOM CHAMBER               |  | GAS LINE                                     |
|  | CATV                                 |  | GAS HP HPI                                   |
|  | CATV CHAMBER                         |  | GL 00.00 GROUND LEVEL (metres - as datum)    |
|  | BT/ESAT                              |  | CL 10.00 COVER LEVEL (metres - as datum)     |
|  | BT/ESAT                              |  | IL 10.00 INVERT LEVEL (metres - as datum)    |
|  | SIRO FIBRE                           |  | DP1-50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |
|  | SIRO CHAMBER                         |  | DP ON MANHOLES = INVERT LEVEL OF CHAMBER     |
|  | UNEL UNIDENTIFIED SERVICE            |  | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |
|  | UNEL UNIDENTIFIED CHAMBER            |  | UGA UNABLE TO OPEN                           |
|  | EARTH LINE AND ROSS                  |  | OSA OUTSIDE SURVEY AREA                      |
|  | SENSOR TRAFFIC SENSORS               |  | UTT UNABLE TO TRACE                          |
|  | GRP ANCHOR                           |  | E EMPTY DUCT                                 |
|  | CCTV                                 |  | C0 CLOSED DUCT                               |
|  | UTILITES CABINET                     |                                                                                     |                                              |

..... SURVEY AREA



Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locative signal. Poor ground conditions and or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor, Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been located and must exercise a duty of care when excavating. Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 60 days from date stated below. Drawing is intended solely for use of the contractor named below.

Accuracy Levels

In ideal conditions the accuracy levels of the EML is +/-5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to be lost or to other services).

Depths noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depths are required.

Diagram of services will be given where direct access is available through visual inspection, eg manhole.

All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied

Non-conductive services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel. PE gas mains can also prove difficult to identify.

If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is "Taken from records or 454".

If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open). Excluded from the survey unless otherwise stated:

Domestic services, Services above ground, Disconnected services where no signal can be obtained.

## Notes

1. GPR equipment :  
Detector Duo, DS2000,  
Stream C, Mala EL Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.
2. Radio detect equipment:  
Vivax Metrotech VLoc Pro3 / RD7000
3. GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing
4. All depths stated are an indication  
of depth  
caution required when excavating.
5. All Utilities are classified QL- B2  
unless noted otherwise.

## PAS 128

| Case | Survey type                   | Quality level | Location Accuracy                   |                                     | Supporting Data                                                                                                                               |
|------|-------------------------------|---------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|      |                               |               | Horizontal                          | vertical                            |                                                                                                                                               |
| C    | Desktop utility record search | Q-0           | Undefined                           | Undefined                           |                                                                                                                                               |
| D    | Site Reconnaissance           | Q-0           | Undefined                           | Undefined                           | A segment of utility location is determined by visual reference to street furniture, topographical features, or evidence of utility location. |
| B    | Detection                     | Q-0.84        | Undefined                           | Undefined                           | A utility segment which is suspected to exist but has not been detected by any of the methods described in this standard.                     |
|      |                               | Q-0.91        | Undefined                           | Undefined                           | A utility segment which is suspected to exist but has not been detected by any of the methods described in this standard.                     |
|      |                               | Q-0.93        | Planned 500mm                       | Planned 500mm                       | Horizontal and vertical location of the utility determined by one of the geophysical techniques used.                                         |
|      |                               | Q-0.92        | Planned 250mm of the detected depth | Planned 250mm of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                           |
|      |                               | Q-0.94        | Planned 80% of the detected depth   | Planned 80% of the detected depth   | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                           |
|      |                               | Q-0.91        | Planned 500mm of the detected depth | Planned 500mm of the detected depth | Horizontal and vertical location of the utility detected by multiple geophysical techniques used.                                             |
| A    | Verification                  | Q-0.91        | Planned 500mm                       | Planned 500mm                       | Horizontal and vertical location of the top and bottom of the utility determined by multiple geophysical techniques used.                     |

**METROSCAN**   
UTILITY LOCATING LTD.

**Address:** Carrick Road, Carrick, Edenderry, Co Kildare R45WD32  
**Email:** [Info@metroscan.ie](mailto:Info@metroscan.ie)  
**Website:** [www.metroscan.ie](http://www.metroscan.ie)

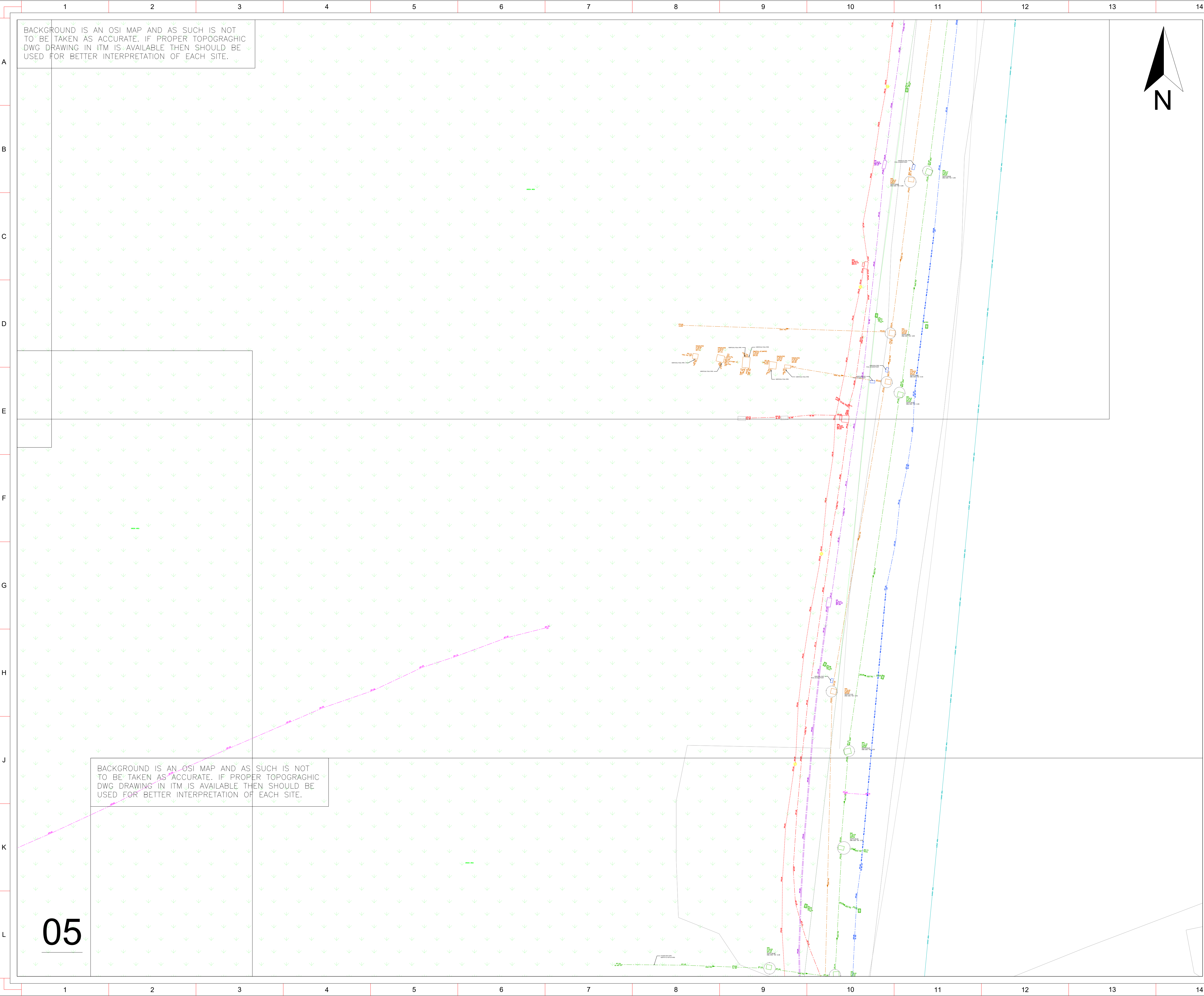
|                      |                                           |
|----------------------|-------------------------------------------|
| <b>Client:</b>       | Cork County Council                       |
| <b>Site Address:</b> | Broomfield West,<br>Midleton, County Cork |

|                |          |
|----------------|----------|
| Drawing Title: | Drwg No: |
|                | 1        |

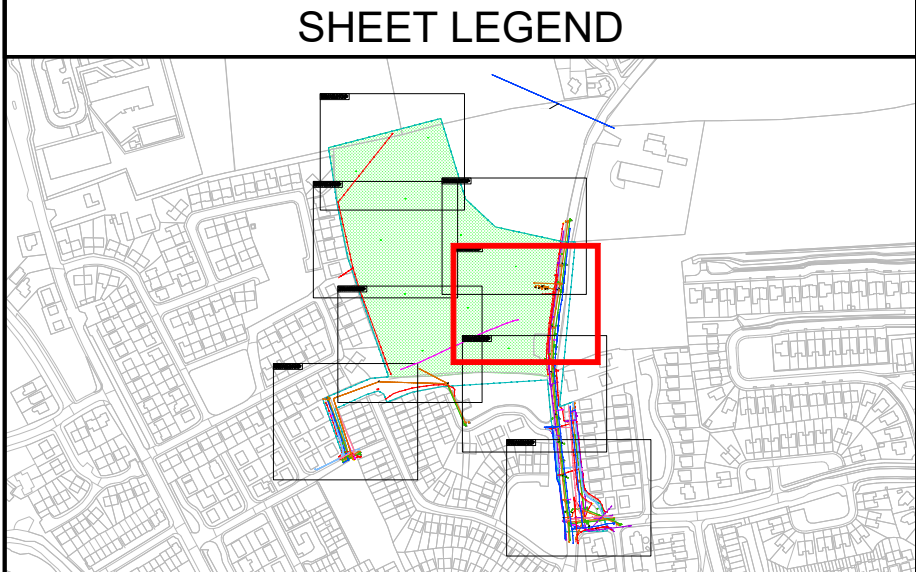
MUL2493\_Broomfield Site A Midleton\_Rev0

|                                            |                             |                            |              |
|--------------------------------------------|-----------------------------|----------------------------|--------------|
| <b>Site Completion Date:</b><br>02/06/2026 | <b>Scale:</b><br>1:200 @ A1 | <b>Coordinates:</b><br>ITM | 04           |
| <b>Drawn</b> DON                           | <b>Checked</b>              | DA                         | Rev No:<br>0 |

|     |      |          |
|-----|------|----------|
| Rev | Date | Comments |
| Rev |      |          |
| Rev |      |          |



| SERVICES LEGEND |                                              |
|-----------------|----------------------------------------------|
|                 | UNDERGROUND ELECTRICITY LINE                 |
|                 | ELECTRICAL M/HOLE                            |
|                 | OVERHEAD LINE WITH POLE                      |
|                 | OVERHEAD ELECTRIC                            |
|                 | UNDERGROUND HV ELECTRICITY LINE              |
|                 | PUBLIC LIGHTING ELECTRICITY LINE             |
|                 | 6m HIGH STREET LIGHT                         |
|                 | U/G ELECTRIC TRAFFIC CONTROL                 |
|                 | TRAFFIC CONTROL M/HOLE                       |
|                 | ER CHAMBER                                   |
|                 | ENET CHAMBER                                 |
|                 | COMMS CHAMBER                                |
|                 | VIRGIN CHAMBER                               |
|                 | FIBRE CHAMBER                                |
|                 | AURORA TELECOM CHAMBER                       |
|                 | CATV CHAMBER                                 |
|                 | BT/EAST CHAMBER                              |
|                 | SRO FIBRE                                    |
|                 | SRO CHAMBER                                  |
|                 | UNIDENTIFIED SERVICE                         |
|                 | UNIDENTIFIED CHAMBER                         |
|                 | EARTH LINE AND RODS                          |
|                 | GPR SENSORS                                  |
|                 | GPR ANOMALY                                  |
|                 | CCTV POLE                                    |
|                 | UTILITIES CABINET                            |
|                 | FOUL DRAINAGE                                |
|                 | FOUL MANHOLE                                 |
|                 | STORM DRAINAGE                               |
|                 | STORM DRAINAGE MANHOLE                       |
|                 | COMBINED DRAINAGE                            |
|                 | COMBINED DRAINAGE MANHOLE                    |
|                 | PRODUCT DRAINAGE                             |
|                 | PRODUCT DRAINAGE MANHOLE                     |
|                 | CHEMICAL LINE                                |
|                 | CHEMICAL MANHOLE                             |
|                 | ROAD GULLY                                   |
|                 | GULLY TRAP                                   |
|                 | WATER MAIN                                   |
|                 | SLUICE VALVE                                 |
|                 | FIRE HYDRANT                                 |
|                 | WATER METER                                  |
|                 | SCOUR VALVE                                  |
|                 | PRESSURE RELEASE VALVE                       |
|                 | AIR VALVE                                    |
|                 | NON-RETURN VALVE                             |
|                 | FUEL LINE/TANK                               |
|                 | GAS LINE                                     |
|                 | GAS SV                                       |
|                 | GAS HIGH PRESSURE LINE                       |
|                 | QL 00.00 GROUND LEVEL (metres - as datum)    |
|                 | QL 10.00 COVER LEVEL (metres - as datum)     |
|                 | IL 10.00 INVERT LEVEL (metres - as datum)    |
|                 | DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |
|                 | DP ON MANHOLES = INVERT LEVEL OF CHAMBER     |
|                 | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |
|                 | UTO UNABLE TO OPEN                           |
|                 | OSA OUTSIDE SURVEY AREA                      |
|                 | UTT UNABLE TO TRACE                          |
|                 | (E) EMPTY DUCT                               |
|                 | (CD) CLOSED DUCT                             |
|                 | SURVEYED AREA                                |



Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locator signal. Poor ground conditions and/or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor, Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating. Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 30 days from date added below. Drawing is intended solely for use of the contractor named below.

**Accuracy Levels**  
In ideal conditions the accuracy levels of the EML is +/-5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depth of services, congestion of services (may cause signal to bleed on to other services). Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole. All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.  
**Survey Limitations**  
Non-conductible services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel. PE gas mains can also prove difficult to identify.  
If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QL-B4'.  
If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open).  
Excluded from the survey unless otherwise stated:  
Domestic services, Services above ground, Disconnected services where no signal can be obtained

- |                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Notes</b>                                                                                                                                                 |
| 1. GPR equipment:<br>Detector Duo, DS2000,<br>Stream C, Mala EL Core<br>scanning frequency 250 and 700 mhz<br>Depth of investigation 2.5m, self calibrating. |
| 2. Radio detection equipment:<br>Vivax Metrotech VLoc Pro3 / RD7000                                                                                          |
| 3. GPR scanning limited to smooth surfaces only no obstruction.<br>Survey area marked on drawing                                                             |
| 4. All depths stated are an indication of depth<br>caution required when excavating.                                                                         |
| 5. All Utilities are classified QL- B2<br>unless noted otherwise.                                                                                            |

| PAS 128                         |                                                 |                                      |                                                                                                    |                                                                                                                                                                                                                       |
|---------------------------------|-------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Survey Type                     | Quality Level                                   | Location Accuracy                    |                                                                                                    | Supporting Data                                                                                                                                                                                                       |
|                                 |                                                 | Horizontal                           | vertical                                                                                           |                                                                                                                                                                                                                       |
| D Desktop utility record search | QL-D                                            | Undefined                            | Undefined                                                                                          | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works.                                                             |
| C Site Reconnaissance           | QL-C                                            | Undefined                            | Undefined                                                                                          |                                                                                                                                                                                                                       |
| B Detection                     | QL-B4                                           | Undefined                            | Undefined                                                                                          | A utility segment which is suspected to exist but has not been identified and is therefore shown as an assumed quality.<br>Horizontal location only of the utility detected by one of the geophysical techniques used |
|                                 | QL-B1<br>plus/minus 500mm                       | Undefined (no reliable depth)        | Undefined                                                                                          |                                                                                                                                                                                                                       |
|                                 | QL-B2<br>plus/minus 250mm                       | plus/minus 40% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used |                                                                                                                                                                                                                       |
|                                 | QL-B3<br>plus/minus 150mm of the detected depth | plus/minus 15% of the detected depth |                                                                                                    |                                                                                                                                                                                                                       |
| A Verification                  | QL-A                                            | plus/minus 50mm                      | plus/minus 15mm                                                                                    | Horizontal and vertical location of the top and/or bottom of the utility through test hole/s trench method                                                                                                            |

**UTILITY LOCATING LTD.**  
Address: Carrick Road Carrick,Edenderry,Co Kildare R45WD32  
Email: Info@metroscan.ie  
Website: www.metroscan.ie

**Client:** Cork County Council

**Site Address:** Broomfield West, Midleton, County Cork

**Drawing Title:** MUL2493\_Broomfield Site A Midleton\_Rev0

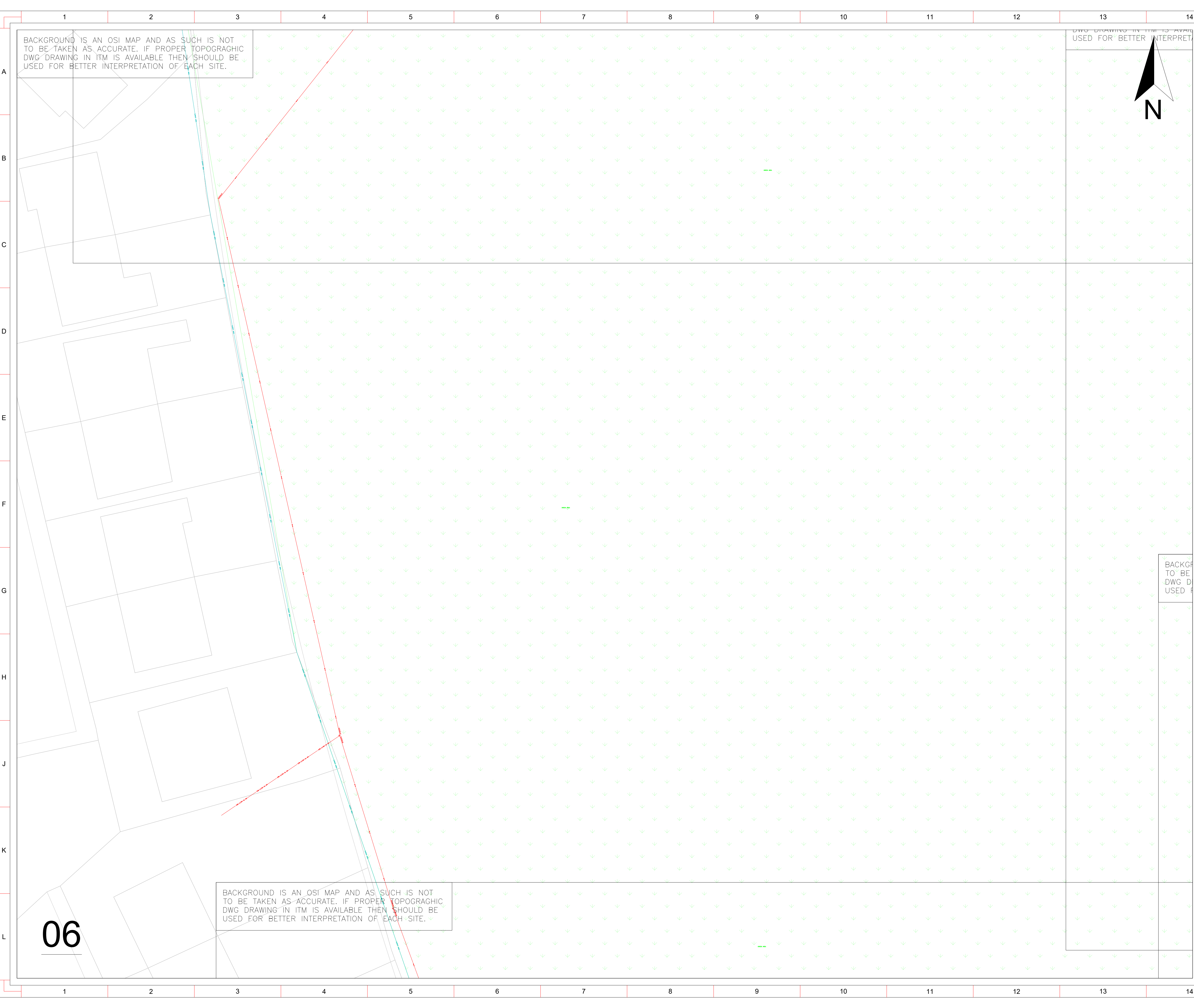
**Site Completion Date:** 02/06/2026

**Scale:** 1:200 @ A1

**Coordinates:** ITM DA

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| Rev | Date | Comments |
| Rev |      |          |

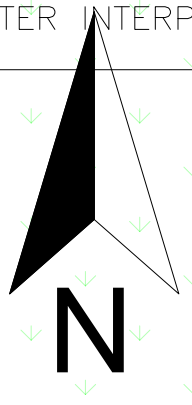
|           |    |
|-----------|----|
| Drwg No:  | 1  |
| Sheet No: | 05 |
| Rev No:   | 0  |



BACKGROUND IS AN OSI MAP AND AS SUCH IS NOT TO BE TAKEN AS ACCURATE. IF PROPER TOPOGRAPHIC DWG DRAWING IN ITM IS AVAILABLE THEN SHOULD BE USED FOR BETTER INTERPRETATION OF EACH SITE.

BACKGROUND IS AN OSI MAP AND AS SUCH IS NOT TO BE TAKEN AS ACCURATE. IF PROPER TOPOGRAPHIC DWG DRAWING IN ITM IS AVAILABLE THEN SHOULD BE USED FOR BETTER INTERPRETATION OF EACH SITE.

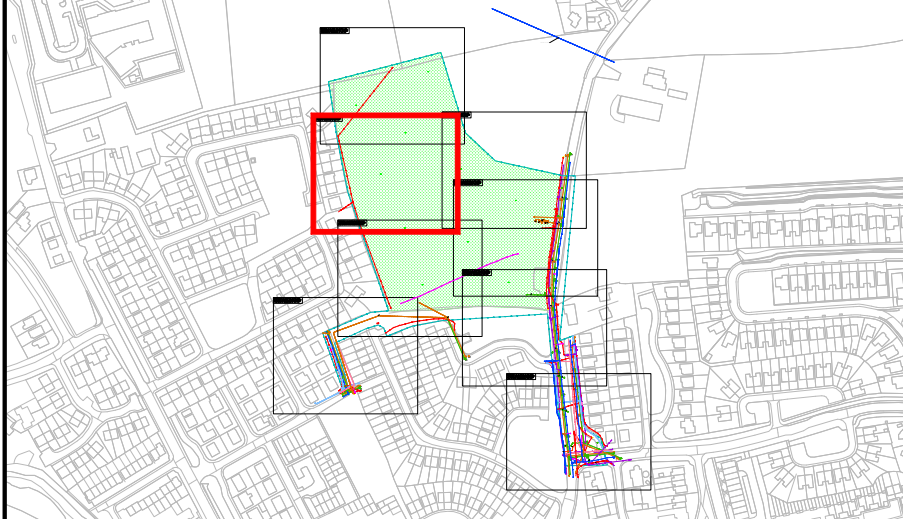
DWG DRAWING IN ITM IS AVAILABLE FOR BETTER INTERPRETATION



## SERVICES LEGEND

- |         |                                  |      |                                              |
|---------|----------------------------------|------|----------------------------------------------|
| EML     | UNDERGROUND ELECTRICITY LINE     | FOL  | FOUL DRAINAGE                                |
| EML     | ELECTRICAL M/HOLE                | FOL  | FOUL MANHOLE                                 |
| EP      | OVERHEAD LINE WITH POLE          | SDM  | STORM DRAINAGE                               |
| EP      | OVERHEAD ELECTRIC                | SDM  | STORM DRAINAGE MANHOLE                       |
| ESB     | UNDERGROUND HV ELECTRICITY LINE  | COMB | COMBINED DRAINAGE                            |
| PLS     | PUBLIC LIGHTING ELECTRICITY LINE | COMB | COMBINED DRAINAGE MANHOLE                    |
| HSL     | 6m HIGH STREET LIGHT             | PRD  | PRODUCT DRAINAGE                             |
| MPP     | MN PILLAR                        | PRD  | PRODUCT DRAINAGE MANHOLE                     |
| TWH     | U/G ELECTRIC TRAFFIC CONTROL     | CHEM | CHEMICAL LINE                                |
| TWH     | TRAFFIC CONTROL M/HOLE           | CHEM | CHEMICAL MANHOLE                             |
| ER      | ER                               | RDG  | ROAD GULLY                                   |
| ER      | ER CHAMBER                       | GUL  | GULLY TRAP                                   |
| ENET    | ENET                             | WTR  | WATER MAIN                                   |
| ENET    | ENET CHAMBER                     | SV   | SLUICE VALVE                                 |
| COMS    | COMS                             | FHO  | FIRE HYDRANT                                 |
| COMS    | COMS CHAMBER                     | WTR  | WATER METER                                  |
| VIRGN   | VIRGN                            | SCV  | SCOUR VALVE                                  |
| VIRGN   | VIRGN CHAMBER                    | PRV  | PRESSURE RELEASE VALVE                       |
| FIB     | FIBRE                            | AIR  | AIR VALVE                                    |
| FIB     | FIBRE CHAMBER                    | NRV  | NON-RETURN VALVE                             |
| AURORA  | AURORA TELECOM                   | FUEL | FUEL LINE/TANK                               |
| AURORA  | AURORA TELECOM CHAMBER           | GAS  | GAS SV                                       |
| CATV    | CATV                             | GAS  | GAS LINE                                     |
| BT/ESAT | BT/ESAT                          | GAS  | GAS HIGH PRESSURE LINE                       |
| BT/ESAT | BT/ESAT CHAMBER                  | QL   | QL 00.00 GROUND LEVEL (metres - as datum)    |
| SRO     | SRO                              | QL   | QL 10.00 COVER LEVEL (metres - as datum)     |
| SRO     | SRO CHAMBER                      | QL   | QL 10.00 INVERT LEVEL (metres - as datum)    |
| UNID    | UNIDENTIFIED SERVICE             | DP1  | DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE |
| UNID    | UNIDENTIFIED CHAMBER             | DP1  | DP ON MANHOLES = INVERT LEVEL OF CHAMBER     |
| EARTH   | EARTH LINE AND RODS              | DP1  | DP ON DRAINAGE = INVERT LEVEL OF PIPE        |
| SENSOR  | TRAFFIC SENSORS                  | UTO  | UTO UNABLE TO OPEN                           |
| GPR     | GPR ANOMALY                      | OSA  | OSA OUTSIDE SURVEY AREA                      |
| CCTV    | CCTV POLE                        | UNTR | UNTR UNABLE TO TRACE                         |
| UTIL    | UTILITIES CABINET                | E    | E EMPTY DUCT                                 |
|         |                                  | CD   | CD CLOSED DUCT                               |
|         |                                  | SURV | SURV SURVEYED AREA                           |

## SHEET LEGEND



Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locator signal. Poor ground conditions and/or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor, Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating. Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 30 days from date issued below. Drawing is intended solely for use of the contractor named below.

**Accuracy Levels**  
In ideal conditions the accuracy levels of the EML is +/-0.5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to bleed on to other services). Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole. All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.  
**Survey Limitations**  
Non-conductible services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel. PE gas mains can also prove difficult to identify.  
If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QL-B4'.  
If manholes cannot be opened on site, they will be marked on the drawing as 'UTD (unable to open)'.  
Excluded from the survey unless otherwise stated:  
Domestic services, Services above ground, Disconnected services where no signal can be obtained

## Notes

- GPR equipment:  
Detector Duo, DS2000,  
Stream C, Mala EL Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.
- Radio detection equipment:  
Vivax Metrotech VLoc Pro3 / RD7000
- GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing
- All depths stated are an indication of depth  
caution required when excavating.
- All Utilities are classified QL- B2 unless noted otherwise.

## PAS 128

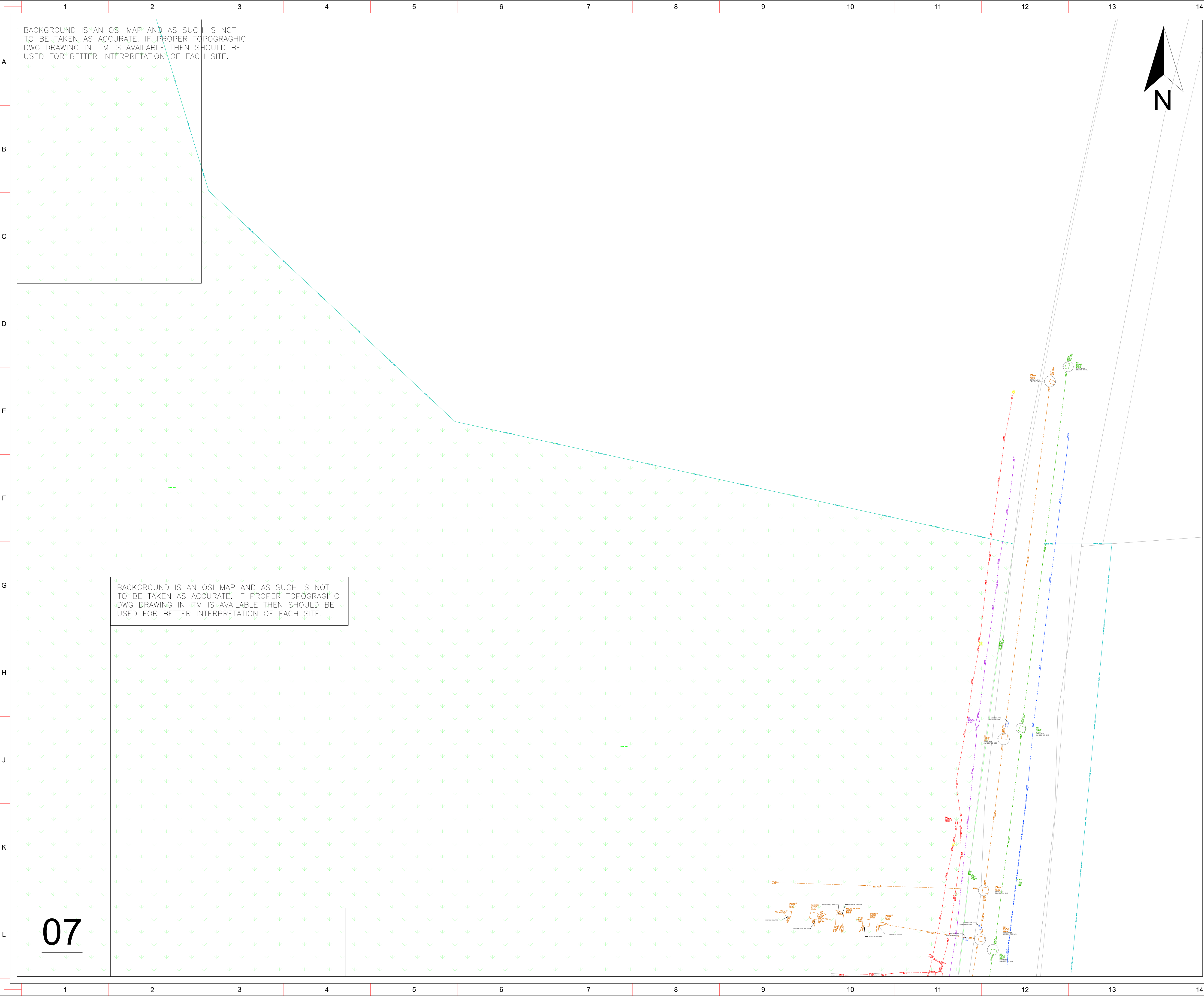
| Survey Type                     | Quality Level | Location Accuracy |                                      | Supporting Data                                                                                                                                                                                                   |
|---------------------------------|---------------|-------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |               | Horizontal        | Vertical                             |                                                                                                                                                                                                                   |
| D Desktop utility record search | QL-D          | Undefined         | Undefined                            | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works.                                                         |
| C Site Reconnaissance           | QL-C          | Undefined         | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed quality. Horizontal location only of the utility detected by one of the geophysical techniques used. |
| B Detection                     | QL-B4         | Undefined         | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed quality. Horizontal location only of the utility detected by one of the geophysical techniques used. |
|                                 | QL-B3         | plus/minus 100mm  | plus/minus 40% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                                                                                               |
|                                 | QL-B2         | plus/minus 250mm  | plus/minus 15% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                                                                                               |
|                                 | QL-B1         | plus/minus 150mm  | plus/minus 10% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                                                                                               |
| A Verification                  | QL-A          | plus/minus 50mm   | plus/minus 15mm                      | Horizontal and vertical location of the top and/or bottom of the utility through trial holes (as trench method).                                                                                                  |

**METROSCAN**  
UTILITY LOCATING LTD.

**Address:** Carrick Road Carrick, Edenderry, Co Kildare R45WD32  
**Email:** info@metroscan.ie  
**Website:** www.metroscan.ie

**Client:** Cork County Council  
**Site Address:** Broomfield West, Middleton, County Cork

|                                                                   |  |                             |
|-------------------------------------------------------------------|--|-----------------------------|
| <b>Drawing Title:</b><br>MUL2493_Broomfield Site A Middleton_Rev0 |  | <b>Drwg No:</b><br>1        |
| <b>Site Completion Date:</b><br>02/06/2026                        |  | <b>Scale:</b><br>1:200 @ A1 |
| <b>Drawn</b><br>DON                                               |  | <b>Coordinates:</b><br>ITM  |
| <b>Rev</b><br>Date                                                |  | <b>Checked</b><br>DA        |
| <b>Rev</b><br>Comments                                            |  | <b>Rev No:</b><br>0         |



SERVICES LEGEND

EMH

EMH

UNDERGROUND ELECTRICITY LINE

EMH

EMH

ELECTRICAL M/HOLE

OP

OP

OVERHEAD LINE WITH POLE

OP

OP

OVERHEAD ELECTRIC

ESB HV

ESB HV

UNDERGROUND HV ELECTRICITY LINE

EP

EP

PUBLIC LIGHTING ELECTRICITY LINE

EP

EP

6m HIGH STREET LIGHT

MP/PL

MP/PL

MN PILLAR

TMH

TMH

U/G ELECTRIC TRAFFIC CONTROL

TP

TP

TRAFFIC CONTROL M/HOLE

ER

ER

ER

ER

ER

ER CHAMBER

ENET

ENET

OVERHEAD LINE WITH POLE

ENET

ENET

ENET

ENET

ENET

ENET CHAMBER

COMMS

COMMS

COMMS

COMMS

COMMS

COMMS CHAMBER

COMMS

COMMS

COMMS CHAMBER

VIRGIN

VIRGIN

VIRGIN

VIRGIN

VIRGIN

VIRGIN CHAMBER

VIRGIN

VIRGIN

VIRGIN CHAMBER

FIBRE

FIBRE

FIBRE

FIBRE

FIBRE

FIBRE CHAMBER

AURORA

AURORA

AURORA TELECOM

AURORA

AURORA

AURORA TELECOM CHAMBER

CATV

CATV

CATV

CATV

CATV

CATV CHAMBER

BT/ESAT

BT/ESAT

BT/ESAT

BT/ESAT

BT/ESAT

BT/ESAT CHAMBER

BT/ESAT

BT/ESAT

BT/ESAT CHAMBER

SIRO

SIRO

SIRO FIBRE

SIRO

SIRO

SIRO CHAMBER

UNID

UNID

UNIDENTIFIED SERVICE

UNID

UNID

UNIDENTIFIED CHAMBER

UNID

UNID

UNIDENTIFIED CHAMBER

SENSOR

SENSOR

SENSOR

SENSOR

SENSOR

SENSOR

CCTV

CCTV

CCTV POLE

UTIL

UTIL

UTILITIES CABINET

FOUL

FOUL

FOUL DRAINAGE

FOUL

FOUL

FOUL MANHOLE

STORM

STORM

STORM DRAINAGE

STORM

STORM

STORM DRAINAGE MANHOLE

COMB

COMB

COMBINED DRAINAGE

COMB

COMB

COMBINED DRAINAGE MANHOLE

PROD

PROD

PRODUCT DRAINAGE

PROD

PROD

PRODUCT DRAINAGE MANHOLE

CHEM

CHEM

CHEMICAL LINE

CHEM

CHEM

CHEMICAL MANHOLE

ROAD

ROAD

ROAD GULLY

GULLY

GULLY

GULLY TRAP

WATER

WATER

WATER MAIN

SV

SV

SLUICE VALVE

FHYD

FHYD

FIRE HYDRANT

WTR

WTR

WATER METER

SCVR

SCVR

SCOUR VALVE

PRV

PRV

PRESSURE RELEASE VALVE

AIR

AIR

AIR VALVE

NRV

NRV

NON-RETURN VALVE

FUEL

FUEL

FUEL LINE/TANK

GAS

GAS

GAS SV

GAS

GAS

GAS LINE

GAS

GAS

GAS HIGH PRESSURE LINE

QL

QL

QL 00.00 GROUND LEVEL (metres - as datum)

QL

QL

QL 10.00 COVER LEVEL (metres - as datum)

IL

IL

IL 10.00 INVERT LEVEL (metres - as datum)

DP

DP

DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE

DP

DP

DP ON MANHOLES = INVERT LEVEL OF CHAMBER

DP

DP

DP ON DRAINAGE = INVERT LEVEL OF PIPE

UTO

UTO

UNABLE TO OPEN

OSA

OSA

OUTSIDE SURVEY AREA

UTT

UTT

UNABLE TO TRACE

(E)

(E)

EMPTY DUCT

(CD)

(CD)

CLOSED DUCT

SURV

SURV

SURVEYED AREA

SHEET LEGEND

Please note that the absence of services on this drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locator signal. Poor ground conditions and/or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor, Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating. Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 30 days from date issued below. Drawing is intended solely for use of the contractor named below.

**Accuracy Levels**

In ideal conditions the accuracy levels of the EML is +/-0.5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to bleed on to other services). Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole. All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.

**Survey Limitations**

Non-conductible services pose a difficult task to identify. Direct buried fibre optic cables are difficult to identify with GPR. They can easily be traced when placed in a conduit by the means of a sonde or cobra reel. PE gas mains can also prove difficult to identify.

If Metroscan cannot get an accurate signal from a service, it will be noted on the drawing that the service is 'Taken from records QL-B4'.

If manholes cannot be opened on site, they will be marked on the drawing as UTO (unable to open).

Excluded from the survey unless otherwise stated:

Domestic services, Services above ground, Disconnected services where no signal can be obtained

Notes

1. GPR equipment :  
Detector Duo, DS2000,  
Stream C, Mala EL Core  
scanning frequency 250 and 700 mhz  
Depth of investigation 2.5m, self calibrating.

2. Radio detection equipment:  
Vivax Metrotech VLoc Pro3 / RD7000

3. GPR scanning limited to smooth surfaces only no obstruction.  
Survey area marked on drawing

4. All depths stated are an indication of depth  
caution required when excavating.

5. All Utilities are classified QL- B2  
unless noted otherwise.

PAS 128

| Survey Type                     | Quality Level | Location Accuracy |                  | Supporting Data                                                                                                                                           |
|---------------------------------|---------------|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |               | Horizontal        | Vertical         |                                                                                                                                                           |
| D Desktop utility record search | QL-D          | Undefined         | Undefined        | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works. |
| C Site Reconnaissance           | QL-C          | Undefined         | Undefined        | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed quality.                                     |
| B Detection                     | QL-B4         | Undefined         | Undefined        | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed quality.                                     |
|                                 | QL-B3         | plus/minus 100mm  | plus/minus 200mm | Horizontal location only of the utility detected by one of the geophysical techniques used                                                                |
|                                 | QL-B2         | plus/minus 50mm   | plus/minus 100mm | Horizontal and vertical location of the utility detected by one of the geophysical techniques used                                                        |
|                                 | QL-B1         | plus/minus 25mm   | plus/minus 50mm  | Horizontal and vertical location of the utility detected by multiple geophysical techniques used                                                          |
| A Verification                  | QL-A          | plus/minus 10mm   | plus/minus 20mm  | Horizontal and vertical location of the top and/or bottom of the utility through test hole/sidewalk trench method                                         |

METROSCAN

UTILITY LOCATING LTD.

Address: Carrick Road Carrick,Edenderry,Co Kildare R45WD32

Email: info@metroscan.ie

Website: www.metroscan.ie

Client: Cork County Council

Site Address: Broomfield West, Middleton, County Cork

Drawing Title: MUL2493\_Broomfield Site A Middleton\_Rev0

Site Completion Date: 02/06/2026

Drawn: DON

Rev: Rev

Scale: 1:200 @ A1

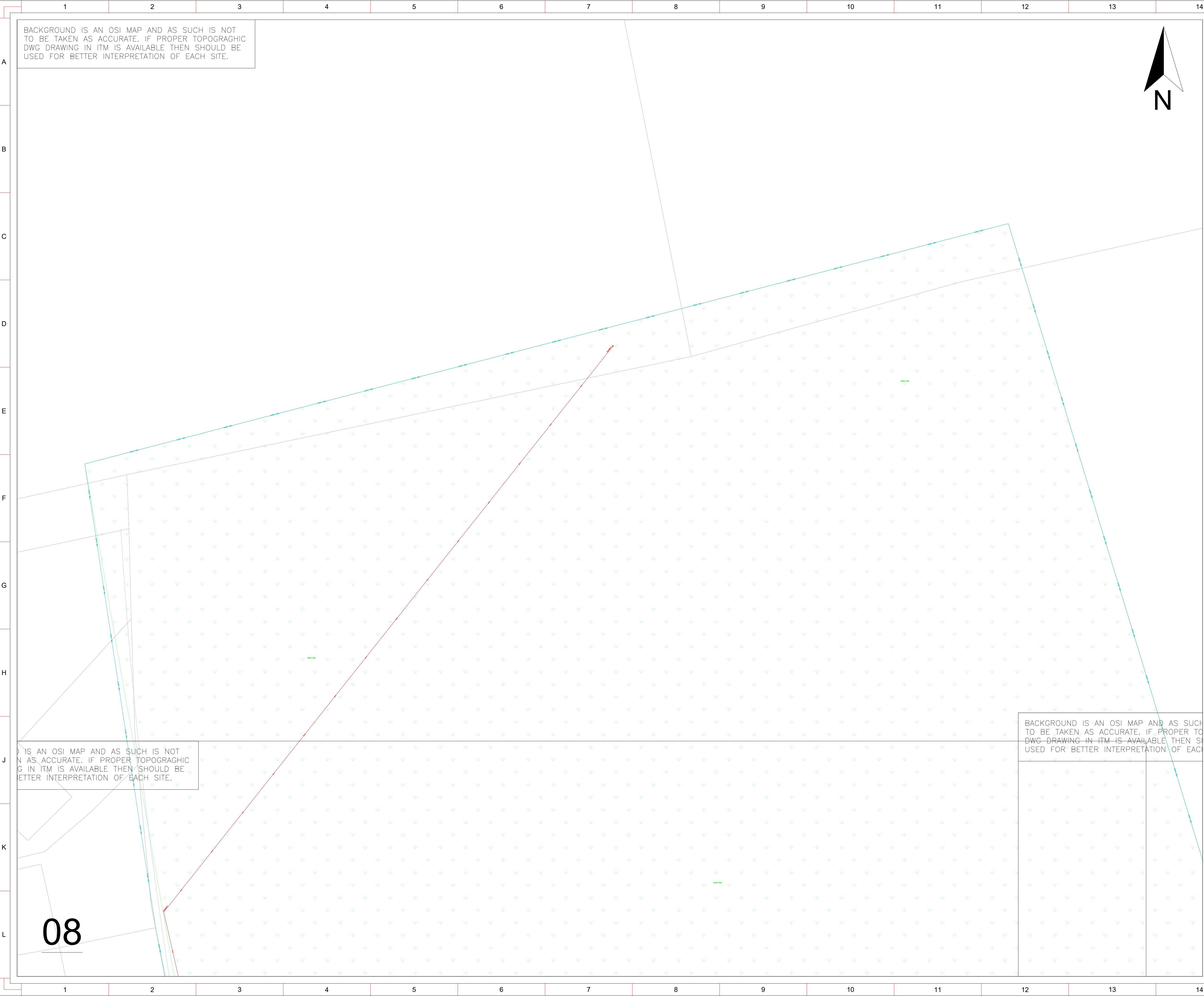
Checked: DA

Coordinates: ITM

Rev No: 0

Drwg No: 1

Sheet No: 07



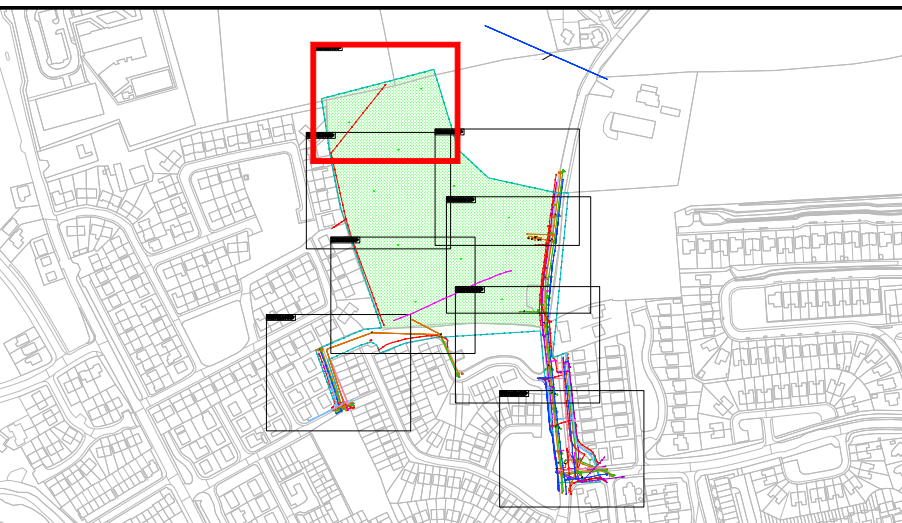
BACKGROUND IS AN OSI MAP AND AS SUCH IS NOT TO BE TAKEN AS ACCURATE. IF PROPER TOPOGRAPHIC DWG DRAWING IN ITM IS AVAILABLE THEN SHOULD BE USED FOR BETTER INTERPRETATION OF EACH SITE.

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SERVICES LEGEND

- UNDERGROUND ELECTRICITY LINE
- ELECTRICAL M/HOLE
- OVERHEAD LINE WITH POLE
- OVERHEAD ELECTRIC
- UNDERGROUND HV ELECTRICITY LINE
- PUBLIC LIGHTING ELECTRICITY LINE
- 6m HIGH STREET LIGHT
- MN PILLAR
- U/G ELECTRIC TRAFFIC CONTROL
- TRAFFIC CONTROL M/HOLE
- ER
- ER CHAMBER
- OVERHEAD LINE WITH POLE
- ENET
- ENET CHAMBER
- COMMS
- COMMS CHAMBER
- VIRGIN
- VIRGIN CHAMBER
- FIBRE
- FIBRE CHAMBER
- AURORA TELECOM
- AURORA TELECOM CHAMBER
- CATV
- CATV CHAMBER
- BT/ESAT
- BT/ESAT CHAMBER
- SIRO
- SIRO CHAMBER
- UNIDENTIFIED SERVICE
- UNIDENTIFIED CHAMBER
- EARTH LINE AND RODS
- TRAFFIC SENSORS
- GPR ANOMALY
- CCTV
- CCTV POLE
- UTILITIES CABINET
- FOUL DRAINAGE
- FOUL MANHOLE
- STORM DRAINAGE
- STORM DRAINAGE MANHOLE
- COMBINED DRAINAGE
- COMBINED DRAINAGE MANHOLE
- PRODUCT DRAINAGE
- PRODUCT DRAINAGE MANHOLE
- CHEMICAL LINE
- CHEMICAL MANHOLE
- ROAD GULLY
- GULLY TRAP
- WATER MAIN
- SLUICE VALVE
- FIRE HYDRANT
- WATER METER
- SCOUR VALVE
- PRESSURE RELEASE VALVE
- AIR VALVE
- NON-RETURN VALVE
- FUEL LINE/TANK
- GAS SV
- GAS LINE
- GAS HIGH PRESSURE LINE
- QL 00.00 GROUND LEVEL (metres - as datum)
- CL 10.00 COVER LEVEL (metres - as datum)
- IL 10.00 INVERT LEVEL (metres - as datum)
- DP1.50 DEPTH TO TOP OF SERVICE DUCT OR CABLE
- DP ON MANHOLES = INVERT LEVEL OF CHAMBER
- DP ON DRAINAGE = INVERT LEVEL OF PIPE
- UTO UNABLE TO OPEN
- OSA OUTSIDE SURVEY AREA
- UTT UNABLE TO TRACE
- (E) EMPTY DUCT
- (CD) CLOSED DUCT
- SURVEYED AREA

SHEET LEGEND



Please note that the absence of services on the drawing is not solid proof that these services are not present in the ground. While every method of underground utility locating has been adhered to in this survey, some services may lie outside the range of the GPR and electro-magnetic locator signal. Poor ground conditions and/or services situated underneath other services can also prove impossible to locate. Due to the fact that not all Utility Service Plans were provided to Metroscan by the contractor, Metroscan cannot be held responsible for any services that have not been identified. The contractor should not assume that all services have been identified and must exercise a duty of care when excavating. Hand / vacuum excavation is advised to determine exact depth and position of service prior to excavation commencing. Please note that the drawing provided is valid for 90 days from date issued below. Drawing is intended solely for use of the contractor named below.

**Accuracy Levels**  
In ideal conditions the accuracy levels of the EML is +/-5% whilst the GPR outputs accuracy levels of 10% up to 2.5m depth. These accuracy levels can vary depending on ground conditions, depths of services, congestion of services (may cause signal to bleed on to other services). Depth noted on drawings should be taken as indicative and hand / vacuum excavation is advised where exact depth are required. Diameter of services will be given where direct access is available through visual inspection, eg manhole. All Cover level elevations for Manholes / Inspection Chambers will be taken from topographical survey if supplied.

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Notes

- GPR equipment: Detector Duo, DS2000, Stream C, Mala EL Core scanning frequency 250 and 700 mhz Depth of investigation 2.5m, self calibrating.
- Radio detection equipment: Vivax Metrotech VLoc Pro3 / RD7000
- GPR scanning limited to smooth surfaces only no obstruction. Survey area marked on drawing
- All depths stated are an indication of depth caution required when excavating.
- All Utilities are classified QL- B2 unless noted otherwise.

PAS 128

| Survey Type                     | Quality Level    | Location Accuracy |                                      | Supporting Data                                                                                                                                                                                                    |
|---------------------------------|------------------|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                  | Horizontal        | Vertical                             |                                                                                                                                                                                                                    |
| D Desktop utility record search | QL-C             | Undefined         | Undefined                            | A segment of utility whose location is demonstrated by visual reference to street furniture, topographical features or evidence of previous street works.                                                          |
| C Site Reconnaissance           | QL-C             | Undefined         | Undefined                            | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed location. Horizontal location only of the utility detected by one of the geophysical techniques used. |
| B Detection                     | QL-B4            | Undefined         | Undefined (no reliable depth)        | A utility segment which is suspected to exist but has not been detected and is therefore shown as an assumed location. Horizontal location only of the utility detected by one of the geophysical techniques used. |
|                                 | plus/minus 100mm | plus/minus 250mm  | plus/minus 40% of the detected depth | Horizontal and vertical location of the utility detected by one of the geophysical techniques used.                                                                                                                |
|                                 | QL-B3            | plus/minus 150mm  | plus/minus 15% of the detected depth | Horizontal and vertical location of the utility detected by multiple geophysical techniques used.                                                                                                                  |
|                                 | QL-B2            | plus/minus 100mm  | plus/minus 10% of the detected depth | Horizontal and vertical location of the top and/or bottom of the utility through trial hole/sidewalk trench method.                                                                                                |
| A Verification                  | QL-A             | plus/minus 50mm   | plus/minus 15mm                      | Horizontal and vertical location of the top and/or bottom of the utility through trial hole/sidewalk trench method.                                                                                                |

**METROSCAN**  
UTILITY LOCATING LTD.

**Address:** Carrick Road Carrick, Edenderry, Co Kildare R45WD32  
**Email:** info@metroscan.ie  
**Website:** www.metroscan.ie

**Client:** Cork County Council  
**Site Address:** Broomfield West, Middleton, County Cork

|                                                                   |  |                             |
|-------------------------------------------------------------------|--|-----------------------------|
| <b>Drawing Title:</b><br>MUL2493_Broomfield Site A Middleton_Rev0 |  | <b>Drwg No:</b><br>1        |
| <b>Site Completion Date:</b><br>02/06/2026                        |  | <b>Scale:</b><br>1:200 @ A1 |
| <b>Drawn</b><br>DON                                               |  | <b>Coordinates:</b><br>ITM  |
| <b>Rev</b>                                                        |  | <b>Checked</b><br>DA        |
| <b>Rev</b>                                                        |  | <b>Rev No:</b><br>0         |