
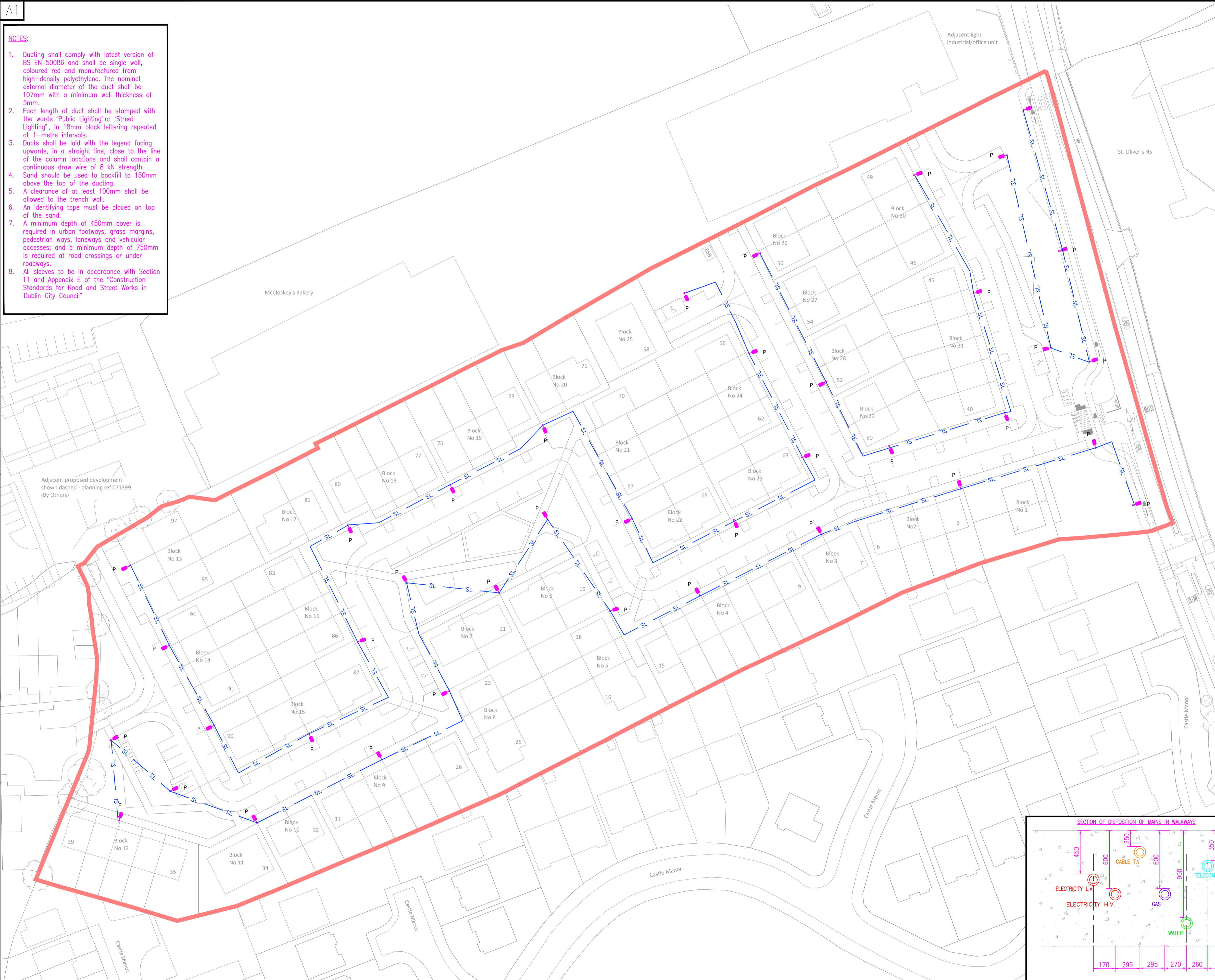
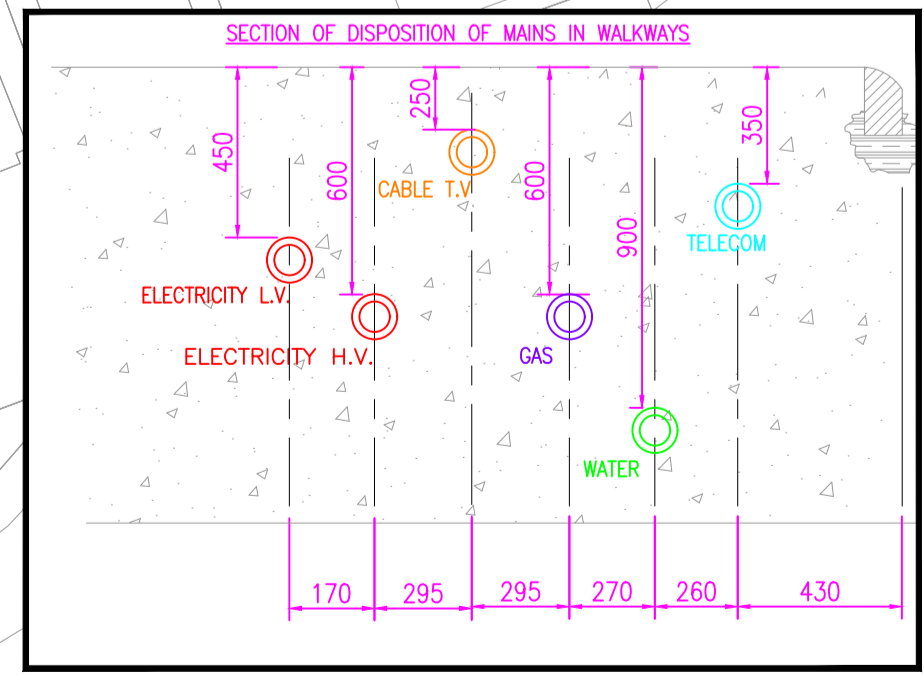
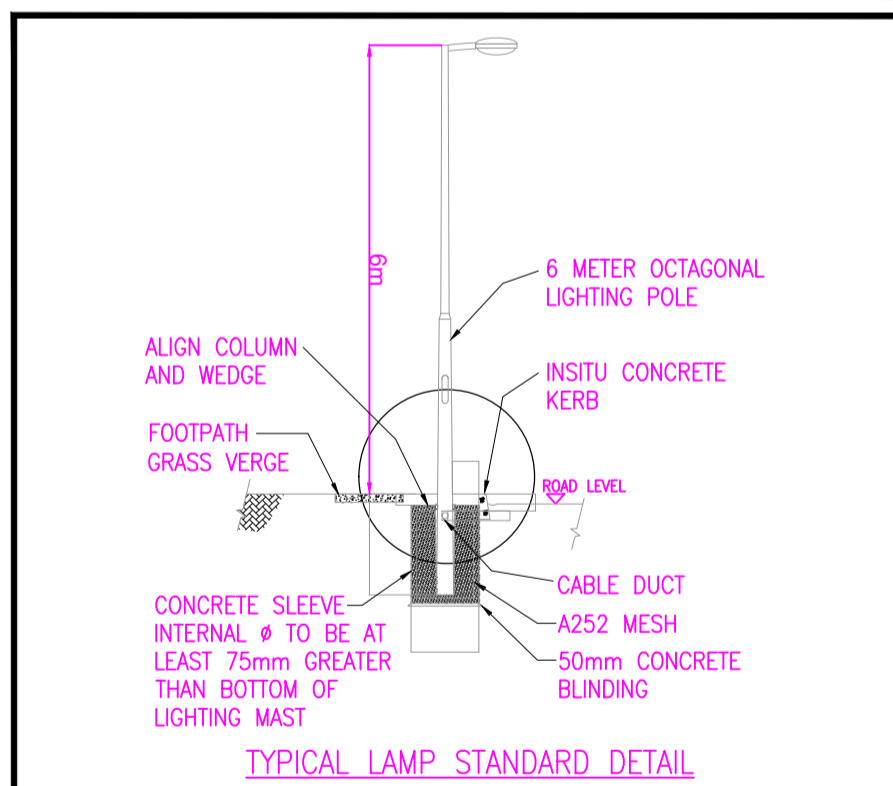
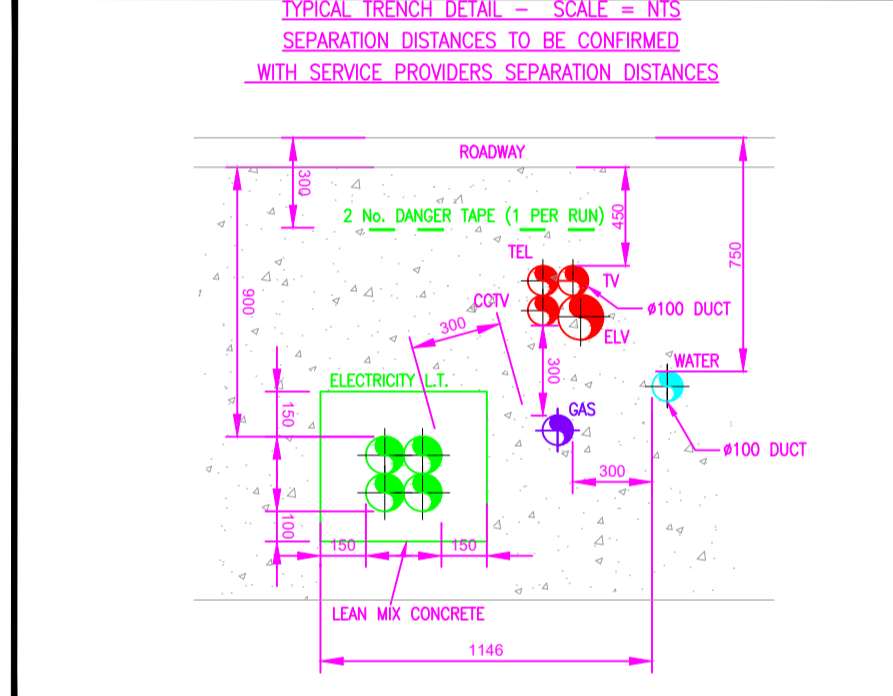
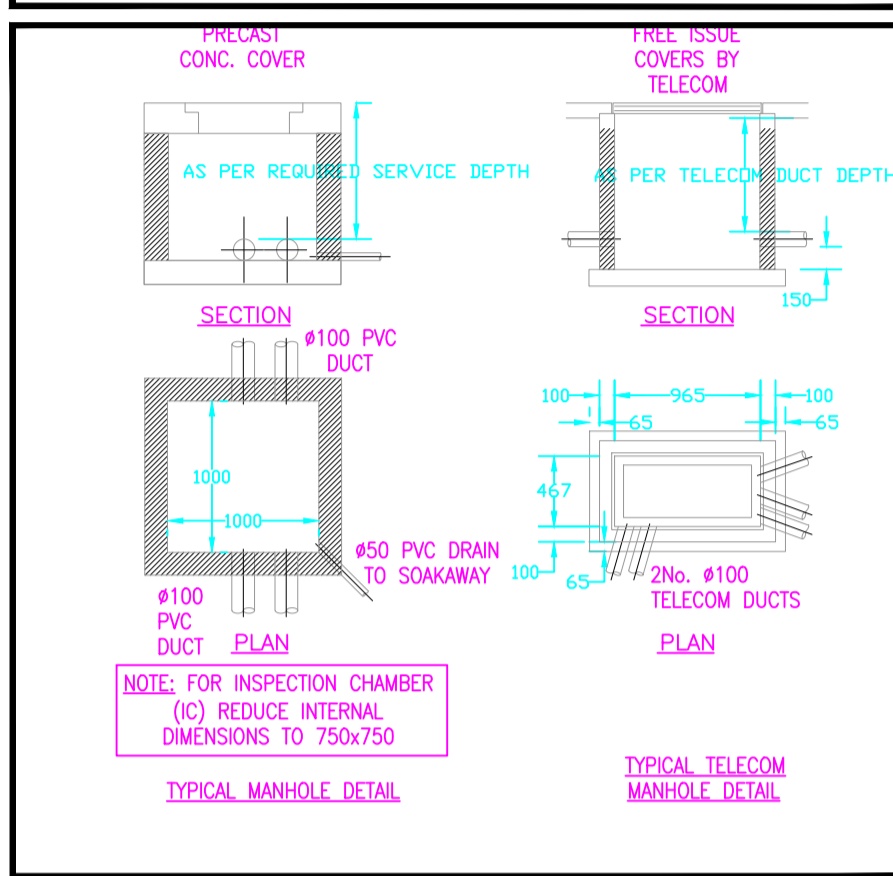


| HAYES HIGGINS PARTNERSHIP  |  |  |  |  |  | Dwg.Cat: Electrical                 |  |                      |  |
|--|--|---|--|--|--|-------------------------------------|--|----------------------|--|
| <b>Address:</b> The Arches, Gas House Lane, Kilkenny City<br><b>Tel:</b> 056-7764710<br><b>Fax:</b> 056-7723223<br><b>E-mail:</b> info@hhp.ie  |  |   |  |  |  | <b>Signed:</b>                      |  |                      |  |
| <b>DRAWING / DOCUMENT REGISTER &amp; ISSUE SHEET</b>   |  |   |  |  |  |                                     |  |                      |  |
| <b>Project:</b><br>105No. Social Housing Units at<br>Ballymakenny West, Drogheda, Co. Louth  |  |   |  | <b>Issue Date and Revision No.</b>           |  |                                     |  | <b>Sheet:</b> 1 of 1 |  |
| <b>Job No.</b> 23ME013   |  | <b>Day</b> 21<br><b>Month</b> 11<br><b>Year</b> 23                                |  | <b>05</b> 12<br><b>03</b> 03<br><b>24</b> 24 |  | <b>11</b><br><b>04</b><br><b>24</b> |  |                      |  |
| <b>Drawing/ Document No.</b>   |  | <b>Drawing / Document title</b>   |  | <b>Scale</b>                                 |  | <b>Rev</b>                          |  |                      |  |
| <b>ME-1000(C)</b>  |  | Proposed Public Lighting Layout   |  | 1:400 @ A1                                   |  | P1 P2 P3 P4                         |  |                      |  |
| <b>Specifications</b>  |  |   |  |  |  |                                     |  |                      |  |
| Site Specific Electrical Specification   |  |   |  |  |  |                                     |  |                      |  |
| General Electrical Specification   |  |   |  |  |  |                                     |  |                      |  |
| Electrical Datasheets  |  |   |  |  |  |                                     |  |                      |  |
| Electrical BCAR Requirements   |  |   |  |  |  |                                     |  |                      |  |
| <b>Copies issued to:</b>   |  |   |  | <b>Number of Copies :</b>                    |  |                                     |  |                      |  |
| <b>CLIENT</b>  |  | Louth County Council  |  | 1  |  | 1                                   |  | 1                    |  |
| <b>ARCHITECT</b>   |  |   |  |  |  |                                     |  |                      |  |
| <b>QS</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>C&amp;S</b>   |  |   |  |  |  |                                     |  |                      |  |
| <b>PSDP</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>Purpose of Issue</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>FOR INFORMATION</b>   |  | I   |  | I  |  | I                                   |  | I                    |  |
| <b>FOR APPROVAL</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>FOR TENDER</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>CONTRACT ISSUE</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>FOR CONSTRUCTION</b>  |  |   |  |  |  |                                     |  |                      |  |
| <b>ELECTRONIC</b>  |  | E   |  | E  |  | E                                   |  | E                    |  |
| <b>PAPER</b>   |  |   |  |  |  |                                     |  |                      |  |
| *** Purpose of Issue: I = Information, A = Approval, T = Tender, CI = Contract Issue, C = Construction, E = Electronic, P = Paper<br>*** P1, P1, C1 .....: Designates Drawings and/or Revisions Issued |  |   |  |  |  |                                     |  |                      |  |

- NOTES:**
- Ducting shall comply with latest version of BS EN 50086 and shall be single wall, coloured red and manufactured from high-density polyethylene. The nominal external diameter of the duct shall be 107mm with a minimum wall thickness of 5mm.
  - Each length of duct shall be stamped with the words "Public Lighting" or "Street Lighting", in 18mm black lettering repeated at 1-metre intervals.
  - Ducts shall be laid with the legend facing upwards, in a straight line, close to the line of the column locations and shall contain a continuous draw wire of 8 kN strength.
  - Sand should be used to backfill to 150mm above the top of the ducting.
  - A clearance of at least 100mm shall be allowed to the trench wall.
  - An identifying tape must be placed on top of the sand.
  - A minimum depth of 450mm cover is required in urban footways, grass margins, pedestrian ways, laneways and vehicular accesses; and a minimum depth of 750mm is required at road crossings or under roadways.
  - All sleeves to be in accordance with Section 11 and Appendix E of the "Construction Standards for Road and Street Works in Dublin City Council"



- LEGEND**
- SL — EXTERNAL LIGHTING DUCT #100mm (RED)
  - SL — EXISTING LIGHTING DUCT
  - P n' LED LANTERN, 22W, 3400lm, 4000K, DW50 DISTRIBUTION ON 6m POLE
  - E MANHOLE LUMINAIRE
  - ⊠ MANHOLE FOR DRAWING WIRES, ACCESS AND MAINTENANCE.
  - ESB MINIPILLAR "n"
  - PLA MICROPILLAR "n"



A.3.4 Status: S179A

| Dwg No. | Dwg Title |
|---------|-----------|
|         |           |
|         |           |
|         |           |
|         |           |

| Rev. | Date     | Description | Dwn. | Chkd. | Appvd. |
|------|----------|-------------|------|-------|--------|
| P1   | 21/11/23 | INFORMATION | HP   | BC    | BC     |
| P2   | 05/03/24 | INFORMATION | HP   | BC    | BC     |
| P3   | 12/03/24 | S179A       | HP   | BC    | BC     |
| P4   | 11/04/24 | S179A       | HP   | BC    | BC     |

- NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, C&S ENGINEERS DRAWINGS & SPECIFICATIONS.
  - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
  - DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.

Qualitas Veritas  
ISO 9001-2015

ENGINEERS IRELAND  
cpd ACCREDITED COMPANY

**PUBLIC LIGHTING SITE SERVICES LAYOUT**

Date: 23/11/2023    Scale: 1:500@A1 (1:1000@A3)

Drawn By: H.P.    Checked By: B.C.    Approved By: B.C.

Drawing Title: PUBLIC LIGHTING SITE SERVICES LAYOUT

Client: LOUTH COUNTY COUNCIL

Job Description: BALLYMAKENNY WEST HOUSING

Project No: 23ME012    Drawing Ref: ME-1000(C)    Rev: P4

**Hayes Higgins Partnership**

Gas House Lane, Kilkenny.

056 7764710    056 7722223    info@hayeshiggins.ie

**DATE:** 6 March 2024  
**DESIGNER:** HHP  
**PROJECT No:** 23ME013  
**PROJECT NAME:** Ballymakenny



## **Outdoor Lighting Report**

**PREPARED BY:** Hayes Higgins Partnership  
Gas House Lane  
Kilkenny  
  
email: [info@hhp.ie](mailto:info@hhp.ie)  
Tel.: 056 7764710

## Layout Report

### General Data

Dimensions in Metres Angles in Degrees  
Grid Origin 994.1m x 347.7m  
Area 303.2m x 227.7m  
Sample Spacing 1.49m x 1.50m

### Luminaires

#### Luminaire A Data

|                      |   |
|----------------------|---|
| Supplier             |   |
| Type                 | BGP615 DW50   |
| Lamp(s)              | LED-HB 4S/740   |
| Lamp Flux (klm)      | 3.40  |
| File Name            | Luma Micro_BGP615_DW50_3400_20LED_330mA_4S_CLO L90_NW.ies |
| Maintenance Factor   | 0.80  |
| Imax70,80,90(cd/klm) | 616.7, 39.5, 0.0  |
| No. in Project       | 39  |

### Layout

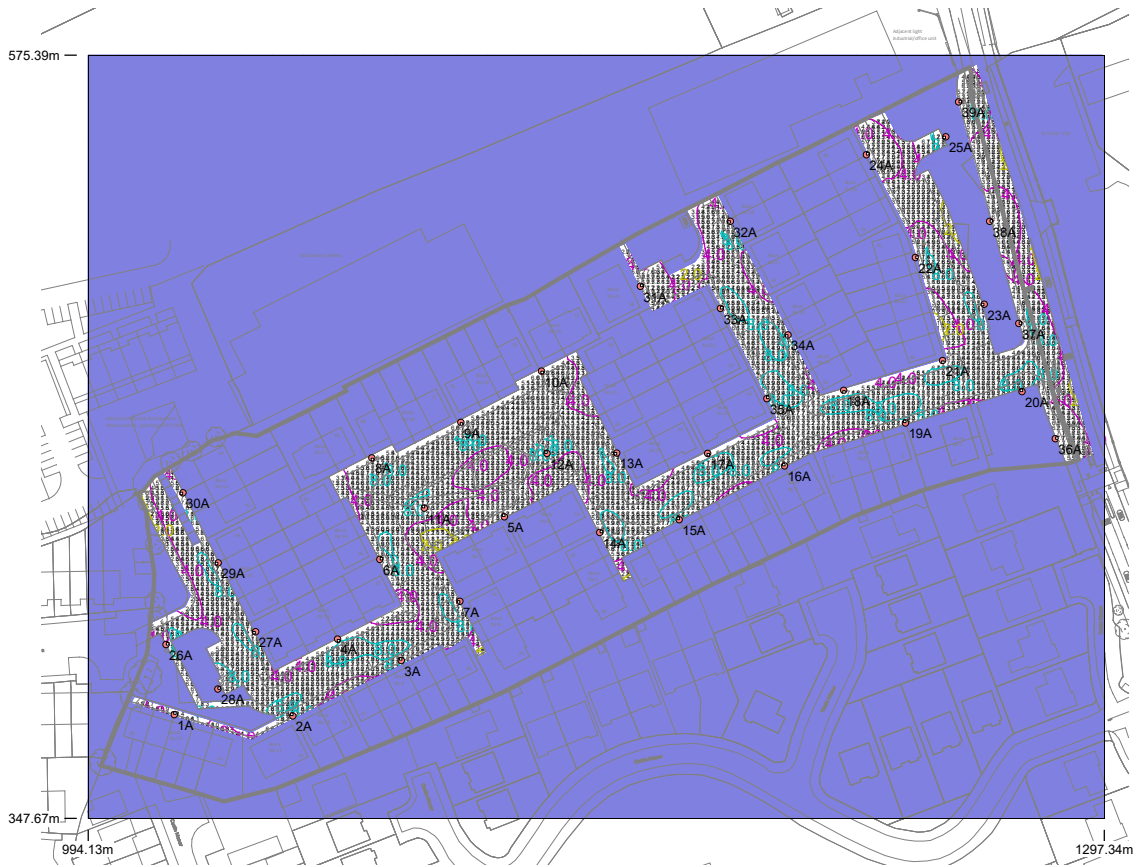
| No. | Type | X       | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|-----|------|---------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 1   | A    | 1019.85 | 378.68 | 6.00   | 72.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 2   | A    | 1055.19 | 378.32 | 6.00   | 124.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 3   | A    | 1087.52 | 394.78 | 6.00   | 111.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 4   | A    | 1068.57 | 401.17 | 6.00   | 300.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 5   | A    | 1118.24 | 437.69 | 6.00   | 111.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 6   | A    | 1081.14 | 424.95 | 6.00   | 30.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 7   | A    | 1105.01 | 412.48 | 6.00   | 210.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 8   | A    | 1078.73 | 455.22 | 6.00   | 300.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 9   | A    | 1105.27 | 465.81 | 6.00   | 300.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 10  | A    | 1129.32 | 481.14 | 6.00   | 300.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 11  | A    | 1094.36 | 440.26 | 6.00   | 120.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 12  | A    | 1130.95 | 456.57 | 6.00   | 120.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 13  | A    | 1151.82 | 456.72 | 6.00   | 210.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 14  | A    | 1146.75 | 433.04 | 6.00   | 30.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 15  | A    | 1170.41 | 436.81 | 6.00   | 120.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 16  | A    | 1201.86 | 452.83 | 6.00   | 120.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 17  | A    | 1178.89 | 456.63 | 6.00   | 300.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 18  | A    | 1219.51 | 475.38 | 6.00   | 283.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 19  | A    | 1237.94 | 465.68 | 6.00   | 108.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 20  | A    | 1272.72 | 475.01 | 6.00   | 120.00 | 0.00 | 0.00 | 0.50      |          |          |          |

**Layout Continued**

| No. | Type | X       | Y      | Height | Angle  | Tilt | Cant | Out-reach | Target X | Target Y | Target Z |
|-----|------|---------|--------|--------|--------|------|------|-----------|----------|----------|----------|
| 21  | A    | 1249.02 | 484.30 | 6.00   | 279.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 22  | A    | 1240.88 | 514.99 | 6.00   | 18.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 23  | A    | 1261.45 | 501.10 | 6.00   | 197.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 24  | A    | 1226.25 | 545.70 | 6.00   | 30.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 25  | A    | 1249.99 | 550.99 | 6.00   | 201.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 26  | A    | 1017.36 | 399.53 | 6.00   | 31.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 27  | A    | 1044.03 | 403.43 | 6.00   | 218.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 28  | A    | 1032.78 | 386.30 | 6.00   | 38.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 29  | A    | 1032.89 | 423.96 | 6.00   | 210.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 30  | A    | 1022.41 | 444.84 | 6.00   | 207.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 31  | A    | 1158.85 | 506.42 | 6.00   | 31.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 32  | A    | 1185.72 | 525.85 | 6.00   | 209.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 33  | A    | 1182.71 | 499.82 | 6.00   | 32.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 34  | A    | 1202.94 | 491.91 | 6.00   | 209.00 | 0.00 | 0.00 | 0.50      |          |          |          |
| 35  | A    | 1196.57 | 472.88 | 6.00   | 51.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 36  | A    | 1282.65 | 460.96 | 6.00   | 30.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 37  | A    | 1271.76 | 495.32 | 6.00   | 21.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 38  | A    | 1263.07 | 525.86 | 6.00   | 11.00  | 0.00 | 0.00 | 0.50      |          |          |          |
| 39  | A    | 1253.81 | 561.44 | 6.00   | 17.00  | 0.00 | 0.00 | 0.50      |          |          |          |

## Horizontal Illuminance (lux)

Grid 1



### Results

|                                    |      |
|------------------------------------|------|
| Eav                                | 5.66 |
| Emin                               | 1.31 |
| E <sub>max</sub>                   | 9.94 |
| E <sub>min</sub> /E <sub>max</sub> | 0.13 |
| E <sub>min</sub> /E <sub>av</sub>  | 0.23 |