
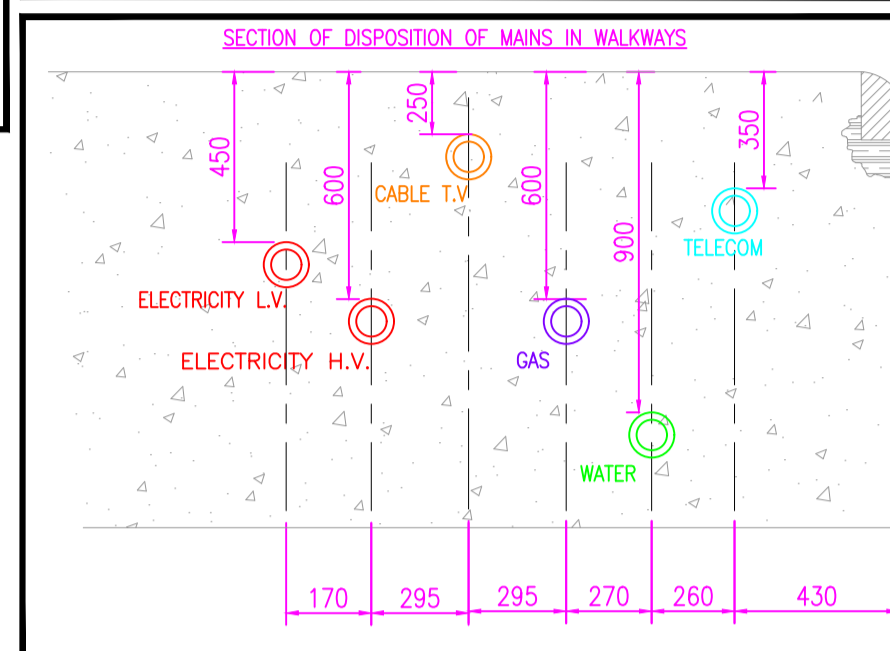
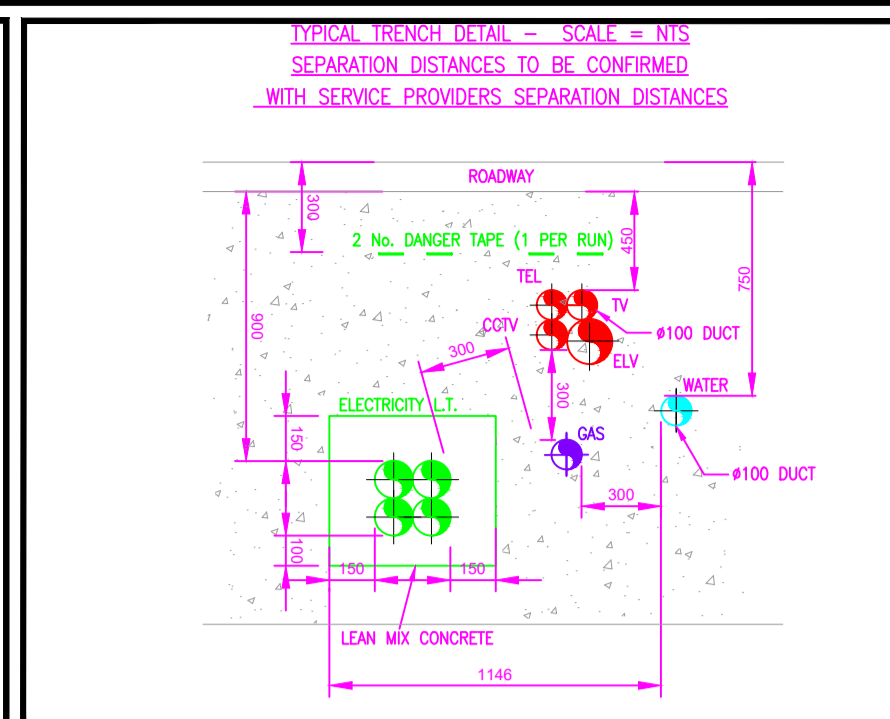
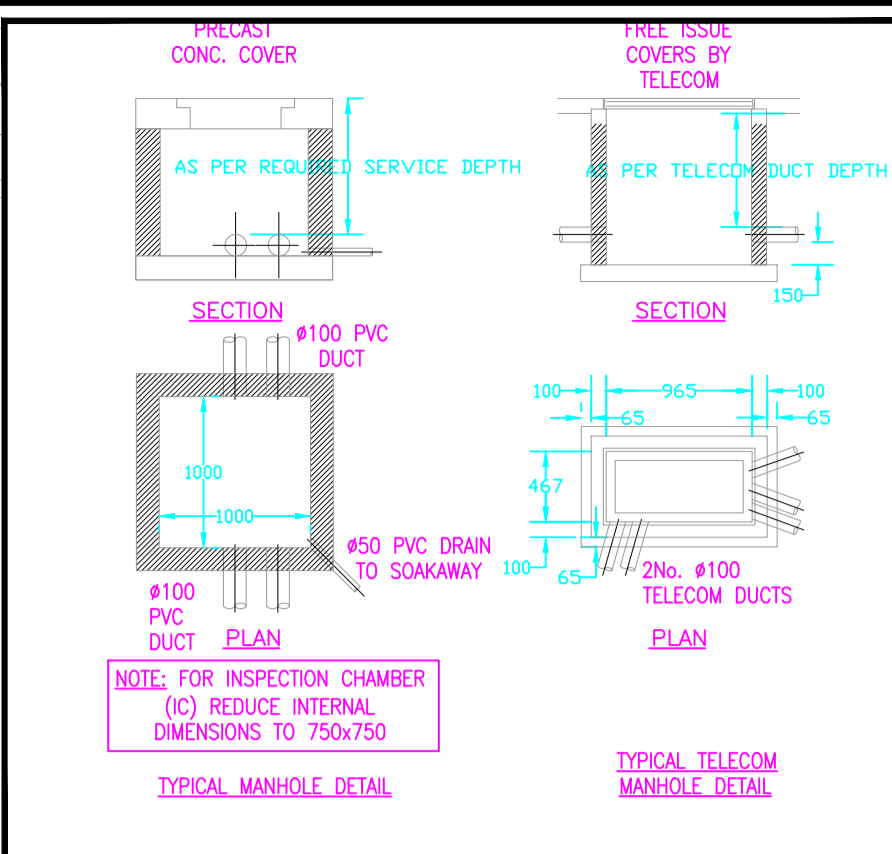
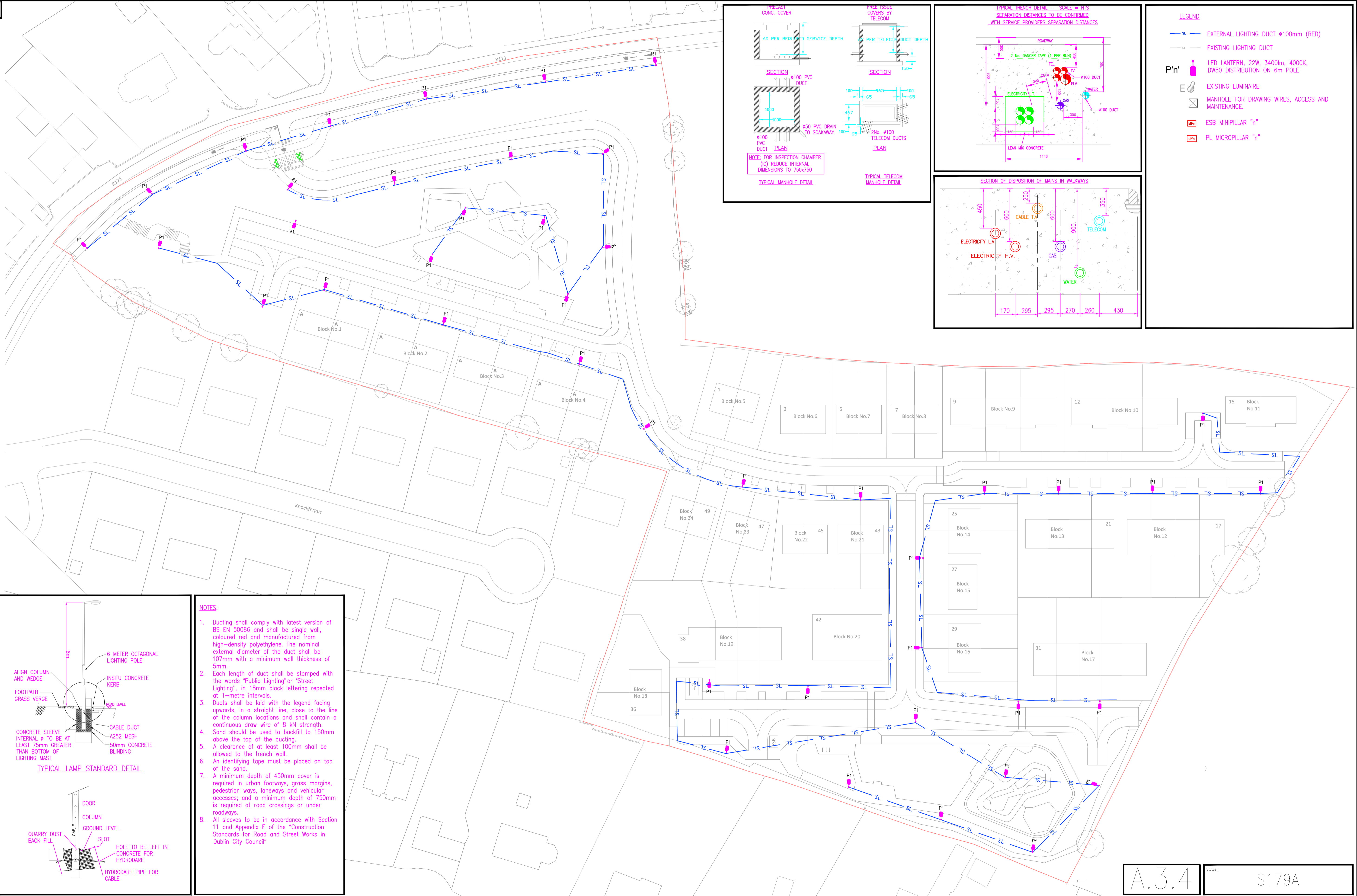
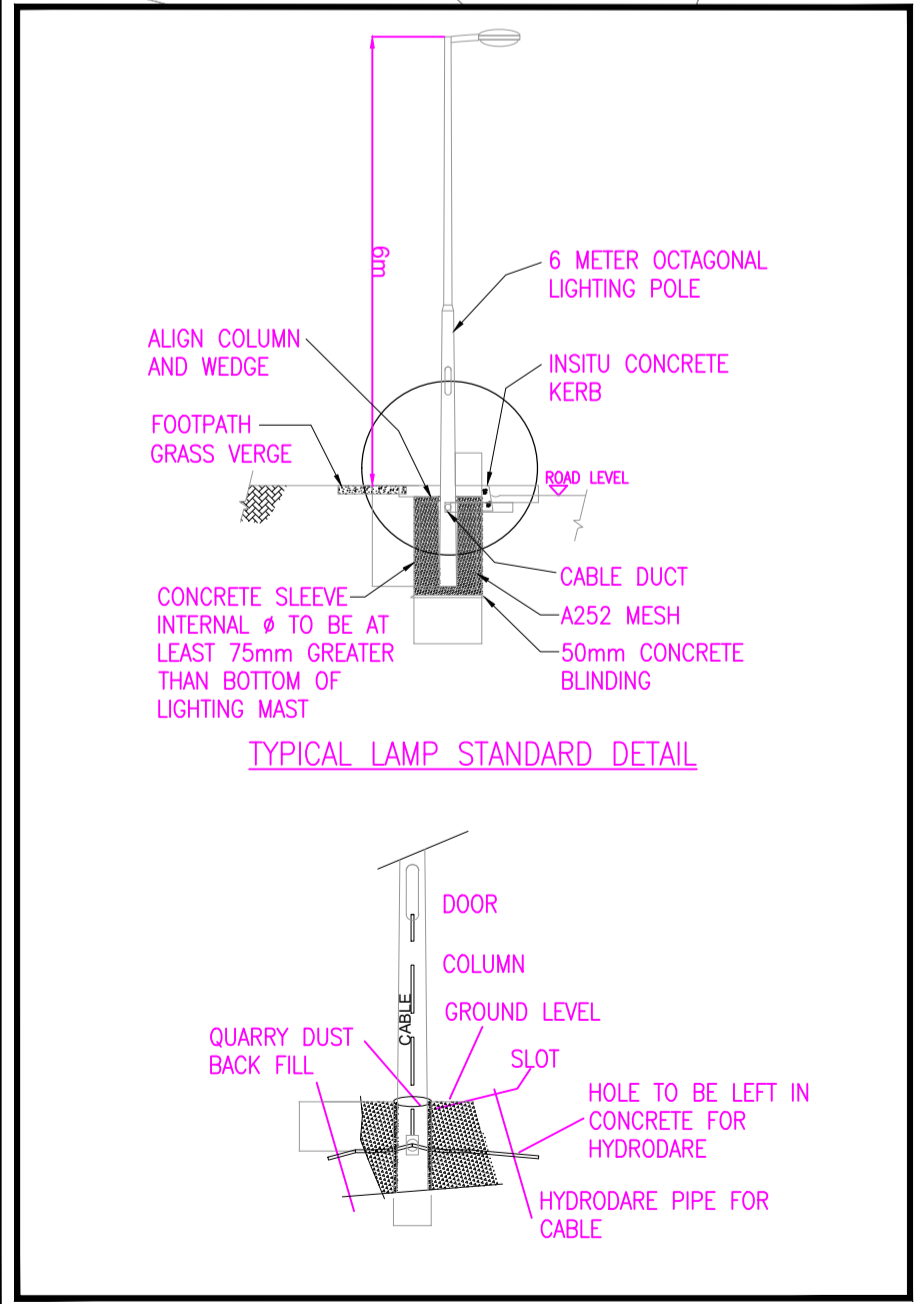


<b>HAYES HIGGINS PARTNERSHIP</b>		 <small>HAYES HIGGINS PARTNERSHIP</small>				<b>Dwg.Cat:</b> Electrical						
<b>Address:</b> The Arches, Gas House Lane, Kilkenny City <b>Tel:</b> 056-7764710 <b>Fax:</b> 056-7723223 <b>E-mail:</b> info@hhp.ie						<b>Signed:</b>						
<b>DRAWING / DOCUMENT REGISTER &amp; ISSUE SHEET</b>												
<b>Project:</b> 55No. Social Housing Units at Mullavally, Co. Louth				<b>Issue Date and Revision No.</b>				<b>Sheet:</b> 1 of 1				
<b>Job No.</b> 23ME014		<b>Day</b>		21	05	12	11					
		<b>Month</b>		11	03	03	04					
		<b>Year</b>		23	24	24	24					
<b>Drawing/ Document No.</b>		<b>Drawing / Document title</b>		<b>Scale</b>		<b>Rev</b>	<b>Rev</b>	<b>Rev</b>	<b>Rev</b>			
<b>ME-1000(C)</b>		Proposed Public Lighting Layout		1:500 @ 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	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>												
<small>*** Purpose of Issue: I = Information, A = Approval, T = Tender, CI = Contract Issue, C = Construction, E = Electronic, P = Paper</small> <small>*** P1, P1, C1 ..... : Designates Drawings and/or Revisions Issued</small>												



**LEGEND**

- SL — EXTERNAL LIGHTING DUCT #100mm (RED)
- SL — EXISTING LIGHTING DUCT
- P1 — LED LANTERN, 22W, 3400lm, 4000K, DW50 DISTRIBUTION ON 6m POLE
- E — EXISTING LUMINAIRE
- ⊠ — MANHOLE FOR DRAWING WIRES, ACCESS AND MAINTENANCE.
- HP — ESB MINIPILLAR "n"
- LP — PL MICROPILLAR "n"



- 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"

Referenced drawings

Dwg No.	Dwg Title

Issue register

Rev.	Date	Description	Dwn.	Chkd.	Appvd.
P1	21/11/23	INFORMATION	HP	BC	BC
P2	05/03/24	INFORMATION	HP	BC	BC
P3	12/3/24	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.

**IHEEM**  
Qualitas Veritas  
ISO 9001-2015

**ENGINEERS IRELAND**  
cpd ACCREDITED COMPANY

Drawing Title: **PUBLIC LIGHTING SITE SERVICES LAYOUT**

Date: 21/11/23  
Scale: 1:500@A1 (1:1000@A3)

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

Client: **LOUTH COUNTY COUNCIL**

Job Description: **MULLAVALLY HOUSING**

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

**Hayes Higgins Partnership**  
Gas House Lane, Kilkenny.

Phone: (056) 7764710  
Fax: (056) 7723223  
Email: info@hayeshiggins.com

A.3.4 Status: S179A

**DATE:** 6 March 2024  
**DESIGNER:** HHP  
**PROJECT No:** 23ME014  
**PROJECT NAME:** Mullavally



Design:  
Lighting Classes according to EN13201:2015:  
- Residential: P4 ( $5 < E_{av} < 7.5$ ;  $E_{min}=1$ ;  $MF=0.8$ )

## 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 192.8m x 344.3m  
Area 367.5m x 273.0m  
Sample Spacing 1.49m x 1.49m

### 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
Lamp S/P Ratio	1.61
No. in Project	43

### Layout

No.	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	274.46	572.30	6.00	103.00	0.00	0.00	0.50			
2	A	292.86	555.79	6.00	100.00	0.00	0.00	0.50			
3	A	326.23	562.90	6.00	103.00	0.00	0.00	0.50			
4	A	352.27	564.33	6.00	39.00	0.00	0.00	0.50			
5	A	352.67	538.36	6.00	0.00	0.00	0.00	0.50			
6	A	225.52	537.46	6.00	79.00	0.00	0.00	0.50			
7	A	254.89	520.89	6.00	74.00	0.00	0.00	0.50			
8	A	262.23	554.15	6.00	60.00	0.00	0.00	0.50			
9	A	272.65	525.67	6.00	83.00	0.00	0.00	0.50			
10	A	306.23	515.66	6.00	76.00	0.00	0.00	0.50			
11	A	345.49	504.37	6.00	80.00	0.00	0.00	0.50			
12	A	264.61	545.42	6.00	252.00	0.00	0.00	0.50			
13	A	362.98	486.69	6.00	39.00	0.00	0.00	0.50			
14	A	391.87	469.42	6.00	82.00	0.00	0.00	0.50			
15	A	425.84	465.94	6.00	97.00	0.00	0.00	0.50			
16	A	461.11	467.97	6.00	90.00	0.00	0.00	0.50			
17	A	482.11	467.51	6.00	90.00	0.00	0.00	0.50			
18	A	508.84	467.50	6.00	90.00	0.00	0.00	0.50			
19	A	539.65	467.46	6.00	90.00	0.00	0.00	0.50			
20	A	523.29	490.35	6.00	270.00	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	443.41	449.30	6.00	180.00	0.00	0.00	0.50			
22	A	443.17	423.64	6.00	180.00	0.00	0.00	0.50			
23	A	493.76	408.41	6.00	270.00	0.00	0.00	0.50			
24	A	470.45	408.25	6.00	270.00	0.00	0.00	0.50			
25	A	441.38	402.44	6.00	90.00	0.00	0.00	0.50			
26	A	410.46	412.78	6.00	270.00	0.00	0.00	0.50			
27	A	387.35	393.50	6.00	82.00	0.00	0.00	0.50			
28	A	382.43	414.28	6.00	270.00	0.00	0.00	0.50			
29	A	205.80	537.95	6.00	137.00	0.00	0.00	0.50			
30	A	224.44	552.87	6.00	137.00	0.00	0.00	0.50			
31	A	250.54	565.94	6.00	122.00	0.00	0.00	0.50			
32	A	303.59	578.87	6.00	105.00	0.00	0.00	0.50			
33	A	336.12	584.93	6.00	98.00	0.00	0.00	0.50			
34	A	366.88	589.59	6.00	105.00	0.00	0.00	0.50			
35	A	303.51	535.80	6.00	252.00	0.00	0.00	0.50			
36	A	342.09	524.39	6.00	252.00	0.00	0.00	0.50			
37	A	312.99	549.01	6.00	252.00	0.00	0.00	0.50			
38	A	335.70	546.57	6.00	252.00	0.00	0.00	0.50			
39	A	474.70	365.20	6.00	80.00	0.00	0.00	0.50			
40	A	448.55	374.61	6.00	90.00	0.00	0.00	0.50			
41	A	422.29	383.91	6.00	80.00	0.00	0.00	0.50			
42	A	466.93	386.53	6.00	80.00	0.00	0.00	0.50			
43	A	493.68	384.31	6.00	160.00	0.00	0.00	0.50			

# Horizontal Illuminance (lux)

Grid 1



## Results

Eav	5.06
Emin	1.05
Emax	9.36
Emin/Emax	0.11
Emin/Eav	0.21