PUBLIC LIGHTING REPORT

RESIDENTIAL DEVELOPMENT AT

BOHERBOY, SAGGART,

COUNY DUBLIN.

Residential Development

Boherboy, Saggart,

County Dublin.

Project: 2578
Issue: Information
Rev: 1
Date: 08.12.25

ADDRESS Avocet House, Riverwalk, Arklow, Co. Wicklow. Y14 XD68 CONTACT +353 (402) 20612 WEBSITE www.fallondesign.ie
DIRECTOR **MARK FALLON** CEng BEng MIEI MCIBSE EMAIL info@fallondesign.ie
VAT No. IE 3452860GH

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Project Details

Project: Residential Development at:
Boherboy, Saggart,
County Dublin.

Client: Evara Developments Ltd.
Fitzwilliam Court,
Lesson Cl,
Dublin 2,
D02 TC95.

Architect: MCORM.
1 Grantham St,
Saint Kevin's,
Dublin 8,
D08 A49Y.

M&E Consultant: Fallon Design Ltd.
Avocet House,
Riverwalk,
Arklow,
Co. Wicklow.
Y14 XD68

Document Details:

Version	Issue Date	Title	Author
Rev 0	02.12.25	Public Lighting Report	Fallon Design Ltd
Rev 1	08.12.25	Public Lighting Report	Fallon Design Ltd

1. Introduction

This report will outline the design intent for the public lighting design for the proposed development at Boherboy, Saggart, Co. Dublin.

This report outlines the lighting design as developed by Fallon Design to provide adequate illuminance to meet all regulations and requirements as follows:

- To provide adequate illumination to contribute toward the safe use of the access roads and pathways for vehicular and pedestrians.
- Minimise lighting pollution on surrounding areas and neighbours
- Reduce glare on pedestrians and other users of the access areas
- Use of highly efficient artificial lighting to reduce energy consumption

The complete installation will be required to meet the following regulatory standards and policies:

- S.I. No. 291 of 2013: Safety, Health and Welfare at work (Construction Reg. 2013)
- ETCI National Rules for electrical Installation ET101-2008
- BS 5489-1:2013 Code of Practice for the design of road lighting
- IS EN 13201-1 & 2 -2015
- IS EN 13201-5-2015 S2 & ME4A
- CIBSE Lighting Guide 7
- Housing Scheme: Guidebook ESB Networks Standards for Electrical Services
- Guidance Note 08/18:Bats and artificial lighting in the UK (Bat Conservation Trust, 2018)
- Bats & Lighting Guidance notes for: Planners, engineers, architects and developers (12/2010)
- Local County Council Street Lighting Technical Specification

2. Development Description

Kelland Homes Ltd. and Evara Developments Ltd. wish to apply for permission for a Large-scale Residential Development (LRD) on a site located at Boherboy, Saggart, County Dublin. To the immediate north of the site is the Carrigmore residential estate, to the west are agricultural lands and a single dwelling, to the east is the Corbally residential estate and Carrigmore Park, while to the south is the Boherboy Road.
The proposed development consists of 611 no. dwellings, comprised of 306 no. 2, 3, 4 & 4-5 bed, 2 & 3 storey, detached, semi-detached & terraced houses, 133 no. 1, 2 & 3 bed duplex units in 12 no. 2-3 storey blocks, and 172 no. 1, 2 & 3 bed apartments in 5 no. buildings ranging in height from 4-5 & 5 storeys. The proposed development also includes a 2-storey crèche (c.630m²).
Access to the development will by via one no. new vehicular access point from the Boherboy Road, along with new vehicular connections to adjoining developments at Corbally Heath to the east and Carrigmore Green to the north. Ten no. houses in the south-east part of the site will be accessed from Corbally Glade to the east. The proposed development includes for pedestrian and cyclist connections throughout the proposed development and accesses into adjoining lands at Carrigmore Park, Corbally Heath and Corbally Glade to the east and Carrigmore Green to the north.
Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartments and duplex units. The proposed development provides for a total of c. 2.3Ha of public open space, and c. 4,750sq.m of communal open space associated with proposed development.
The proposed development provides for (i) all associated site development works above and below ground, including surface water attenuation & an underground foul sewerage pumping station at the northern end of the site, (ii) public open spaces (c. 2.3Ha), (iii) communal open spaces (c. 4,750sq.m), (iv) hard & soft landscaping and boundary treatments, (v) surface car parking (861 no. car parking spaces), (vi) bicycle parking (711 no. bicycle parking spaces), (vii) bin & bicycle storage, (viii) diversion of all existing overhead ESB lines underground, (ix) public lighting, and (x), plant / PV panels (M&E), utility services & 8 no. ESB sub-stations, all on an overall application site area of c.18.7Hha. In accordance with the South Dublin County Development Plan (2022-2028), an area of c.1.03Ha within the site is reserved as a future school site.

3. Design Concept

The public lighting design for residential development is to provide adequate illuminance for vehicular and pedestrian access for the residents and general public.

The design of the public lighting includes low energy LED lighting throughout. Energy efficient light fittings are a key element in reducing the developments energy consumption.

4. Detailed Design

The design uses 249 x Metro Streetlight 19w LED 3000K mounted on 247 x 6m columns with no tilt with the following optics and mounting arrangements:
28 x Forward Throw A Optic (All Single)
172 x Street Optic R03 (2 x Twin and 168 x Single)
49 x Street Optic R01 (All Single)

Light levels are as follows:
Road & Paths 1 : 5.6 lux average, 1.1 lux minimum (0.20 uniformity).
Road & Paths 2 : 5.3 lux average, 1.0 lux minimum (0.20 uniformity).
Road & Paths 3 : 5.4 lux average, 1.0 lux minimum (0.20 uniformity).
These levels comply with IS EN13201-2:2015 / BS 5489-1:2020 for roads & paths - class P4 (5.0 lux average, 1.0 lux minimum).

Proposed luminaire design layout as per drawings:

BHB-XX-60-SW-XXX-DR-FDE-EE-1000

BHB-XX-60-SW-XXX-DR-FDE-EE-1001

Lighting Calculations:

Results

Eav	5.69
Emin	1.11
Emax	18.85
Emin/Emax	0.06
Emin/Eav	0.20

5. Luminaires:

Luminaire A Data

Supplier	
Type	Veelite Metro Streetlight 19w LED Forward Throw A Optic
Lamp(s)	8 LED 3000K G4
Lamp Flux (klm)	2.26
File Name	5MTA08LGA-FTA-3K.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	401.3, 47.0, 0.5
No. in Project	28

Luminaire B Data

Supplier	
Type	Veelite Metro Streetlight 19w LED Street Optic R03
Lamp(s)	8 LED 3000K G4
Lamp Flux (klm)	2.27
File Name	5MTA08LGA-R03-3K.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	537.8, 56.5, 0.3
No. in Project	172

Luminaire C Data

Supplier	
Type	Veelite Metro Streetlight 19w LED Street Optic R01
Lamp(s)	8 LED 3000K G4
Lamp Flux (klm)	2.15
File Name	5MTA08LGA-R01-3K.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	680.3, 387.6, 0.6
No. in Project	49

5.1 Metro Series

Metro Series

External Lighting

Modern functional LED streetlight, available in 3 sizes. Ideal for roadway, path or carpark applications.

Construction: Die-cast aluminium. IP66. IK09 as standard. Driver and LED Modules are accessible for maintenance or replacement.

Lens: Tempered glass as standard.

Installation: Luminaire supplied with 76mm mastfitter for post-top mounting or 60mm for side entry installation. Tiltable: 0°, 5° or 10°

Finish: Grey RAL 9006 as standard. Other RAL colours on request.

LED: Available in 10w to 134w LED (see ordering codes). CRI 70 4000K (standard). 3000K or other on request. Asymmetric street optic as standard. See ordering codes for more details.

Life: L90 B10 >100,000 hours. (at 25°C).

Driver: 220-240V AC 50/60 Hz. 700mA as Standard. 350mA, 500mA, 1050mA or custom setting on request. Lifetime (<10% failures): 100,000 hrs.

Mains Surge Protection: 10kV device included as standard.

Temperature: -30°C +50°C (-20°C +40°C with Emergency Kit)

Options: Dimming, DALI, Photocell, various optics available. Emergency available in some versions, please check with Veelite to clarify which.

Manufactured: Ireland

Product Compliance: EN 60598; CE.

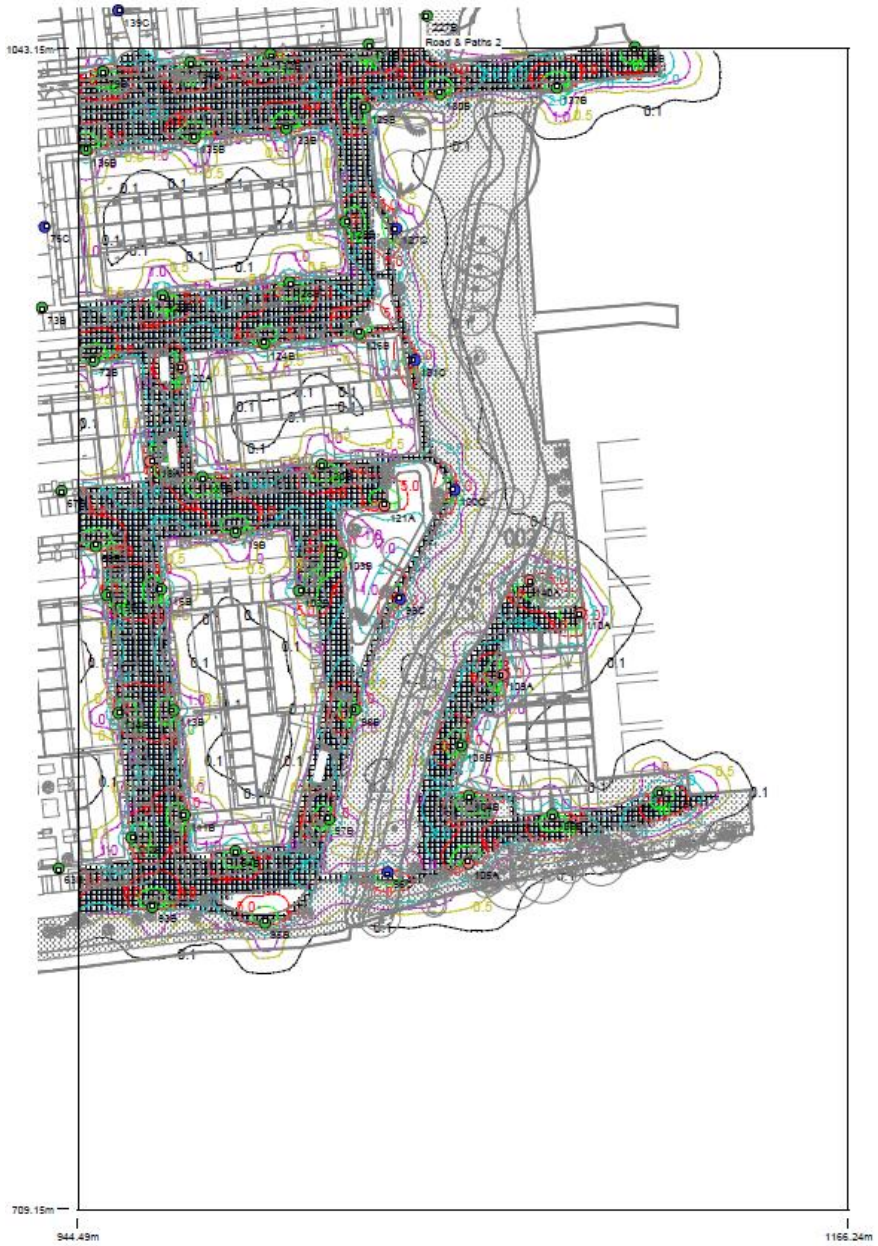
6. Grid Results

6.1 Horizontal Illuminance (lux) - Road & Paths 1

Results

Eav	5.69
Emin	1.11
Emax	18.85
Emin/Emax	0.06
Emin/Eav	0.20

6.2 Horizontal Illuminance (lux) - Road & Paths 2



Results

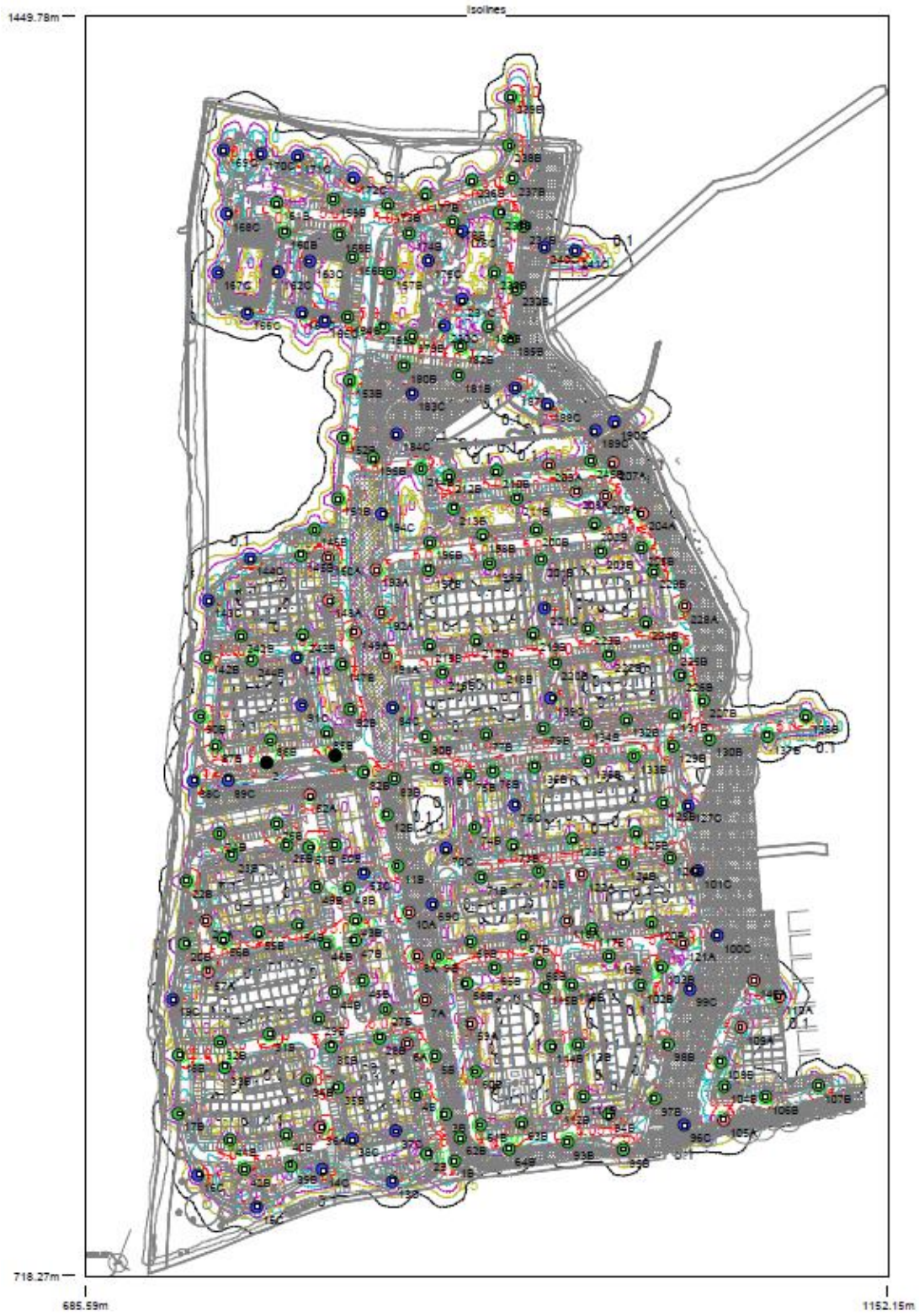
Eav	5.31
Emin	1.04
Emax	16.63
Emin/Emax	0.06
Emin/Eav	0.20

6.3 Horizontal Illuminance (lux) - Road & Paths 3

Results

Eav	5.47
Emin	1.07
Emax	19.49
Emin/Emax	0.06
Emin/Eav	0.20

6.4 Horizontal Illuminance (lux) - Isolines



ISO 003

6.5 Lux Point Levels

Reference drawing BHB-XX-60-SW-XXX-DR-FDE-EE-1000, BHB-XX-60-SW-XXX-DR-FDE-EE-1001 for a full lux plot across the development.

7. Energy Efficiency

The design of Public Lighting with regard to the energy consumption has been carefully considered for the lifetime of the development.

- Low energy LED light fittings with high quality efficient lamps will provide considerable operational saving for the development.

- Greater energy savings will also result using the inbuilt multi-step dimming program during late hours of darkens along the public lighting spaces.