



**PUBLIC LIGHTING REPORT
RESIDENTIAL DEVELOPMENT
APARTMENTS AT
GOWAN MOTORS COMPOUND
169-177 MERRION ROAD, DUBLIN 4.**

**Residential Development
169-177 Merrion Road,
Dublin 4.**

**Project: 2251
Issue: Planning
Rev: C**

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Project Details

Project: Residential Development at
Gowan Motors Compound,
169-177 Merrion Road, Dublin 4.

Client: Lioncor,
1st Floor, Block E,
Iveagh Court,
Harcourt Road,
Dublin 2.
D02YT22.

Architect: McCauley Daye O-Connel Architects Ltd
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M&E Consultant: Fallon Design Ltd.
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Document Details:

Version	Issue Date	Title	Author
Rev A	30.05.2024	Public Lighting Report	Fallon Design Ltd
Rev B	19.08.2024	Public Lighting Report	Fallon Design Ltd
Rev C	05.09.2024	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 169-177 Merrion Road, Dublin 4.

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

Planning permission is sought for a Large Scale Residential Development delivering 200 no. student residential units within two blocks. The blocks range in height up to 6 storeys with a basement below. All associated internal and external amenity space, car and cycle parking, landscaping, bin stores, service provision and vehicular and pedestrian accesses are also proposed.

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 proposes to use 6 No. Luminaires with 2 No. types mounted at 5m height and varying beam widths across the development. This complies with class P3 of IS EN 13201-2:2015 / BS 5489-1:2020 for residential roads & paths (7.5 lux average, 1.5 lux minimum).

Proposed luminaire design layout as per drawings:

GMC-FDE-60-SW-DR-EE-1000

Lighting Calculations:

Results

Eav	8.57
Emin	1.69
E _{max}	29.40
Emin/E _{max}	0.06
Emin/Eav	0.20

5. Luminaires:



Luminaire A Data

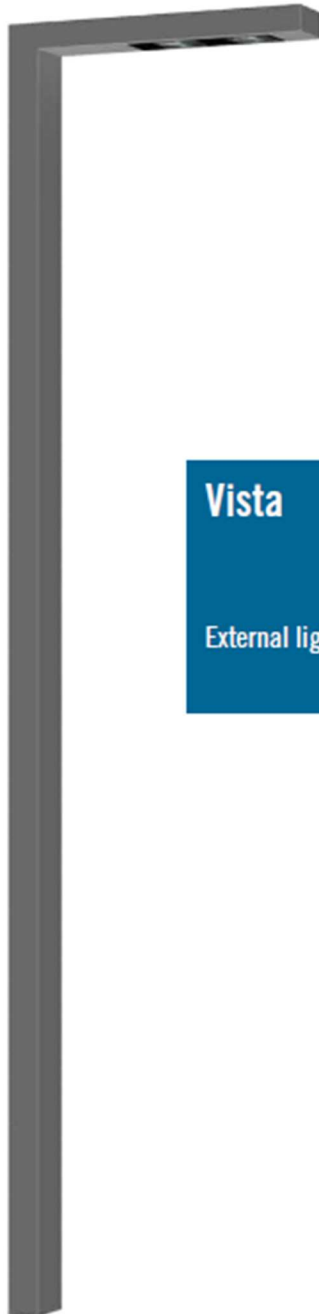
Supplier	
Type	Veelite Vista 27w LED Sreet Optic A10
Lamp(s)	12LED 3000K 700mA
Lamp Flux (klm)	3.11
File Name	5VSTX1030-A10-3K.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	754.6, 119.2, 0.0
No. in Project	4



Luminaire B Data

Supplier	
Type	Veelite Vista 27w LED Forward Throw A14 Optic
Lamp(s)	12LED 3000K 700mA
Lamp Flux (klm)	3.11
File Name	5VSTX1030-A14-3K.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	520.3, 206.1, 0.0
No. in Project	2

5.1 Vista-Streetlight



Vista

External lighting



Designer range Luminaire with LED optics and integrated pole, for road or pathway applications. Single or Twin Head.

Construction: Die Cast and Extruded Aluminium, aluminium Reflector, tempered glass. IP66 optics, IP55 Housing. IK08. Galvanized steel Pole. Tilt on Luminaires - 0°, 10°, 20° or 30° options. Other Tilts on Request.

Finish: Black as Standard. Other RALs on request. Wooden Effect on request.

LED: Max 138W (or 2 x 138W on Twin version). CRI 70 on 4000K as standard. 3000K, 2700K or other CCT on request. Asymmetric Street Optic A10 as standard, other optics on request.

Driver: 220-240V AC 50/60Hz.

Options: Tilt, heights, Different Wattages/ Luminaires at different heights, Wall Mounting.

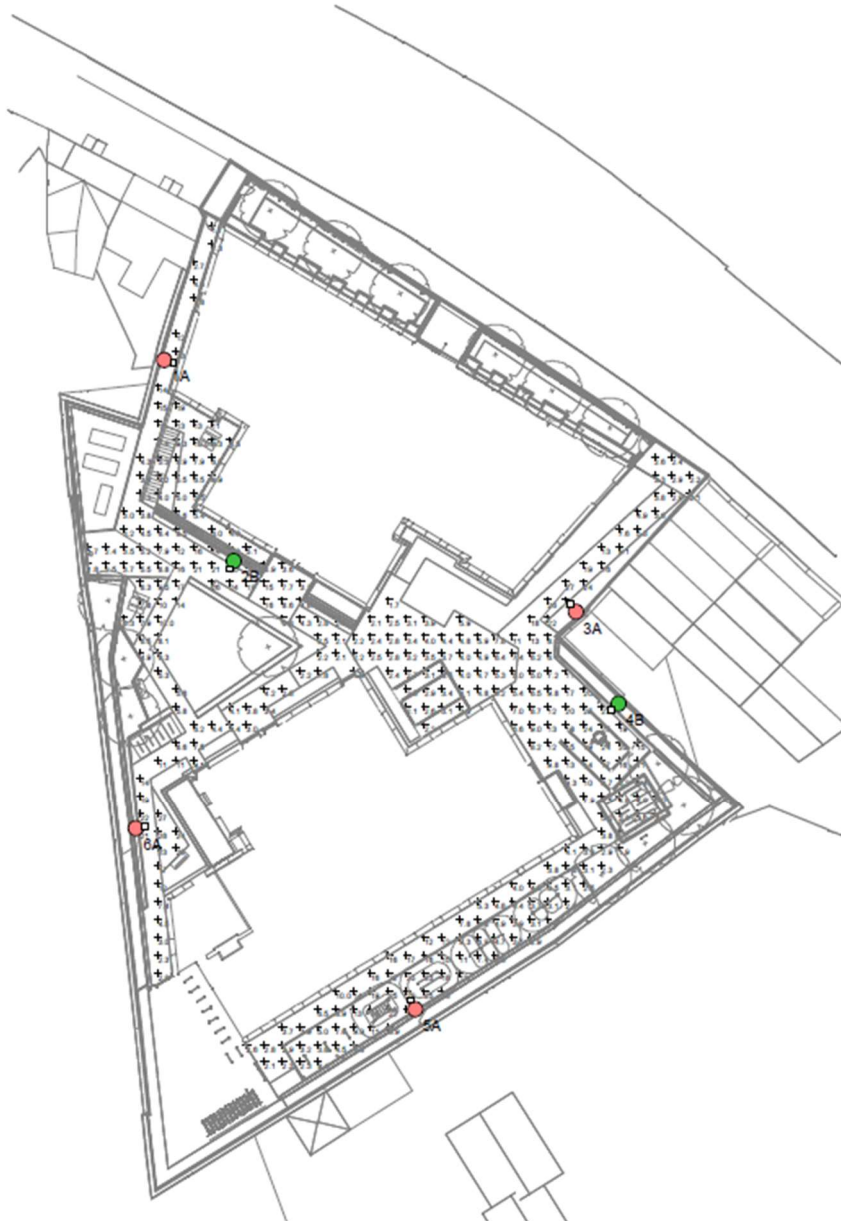
Manufactured: EU.

Product Compliance: EN60598, CE.

VeeLite

6. Grid Results

6.1 Lighting Calculation Results – Horizontal Illuminance (Lux) Road & Path



Results

Eav	8.57
Emin	1.69
E _{max}	29.40
Emin/E _{max}	0.06
Emin/Eav	0.20

6.2 Lighting Calculation Results – Horizontal Illuminance (Lux) Road & Path



Results

Eav	8.57
Emin	1.69
Emax	29.40
Emin/Emax	0.06
Emin/Eav	0.20

6.3 Lux Point Levels

Reference drawing GMC-FDE-60-SW-DR-EE-1000 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 darkness along the public lighting spaces.