PUBLIC LIGHTING REPORT

RESIDENTIAL DEVELOPMENT
ON LANDS AT NOS. 23-28 PRUSSIA STREET,
DUBLIN 7.

Prepared for:

Randalswood Construction Limited

PSA-XX-60-XX-XXX-RP-FDE-EE-9000

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

PROJECT DETAILS

Project Number	Project Name
1981	Residential Development at Prussia Street

DOCUMENT DETAILS

Version No.	Description	Prepared By	Issued By	Checked By	Date
P1-P13	New Description	FD	FD	MF	06.08.2026
P1-P12	New Description	FD	FD	MF	13.03.2026
P1-P11	New Description	FD	FD	MF	03.02.2026
P1-P10	New Description	FD	FD	MF	03.07.2025
P1-P09	New Description	FD	FD	MF	26.09.2024
P1-P08	New Description	FD	FD	MF	20.09.2024
P1-P07	New Description	FD	FD	MF	05.09.2024
P1-P06	New Description	FD	FD	MF	22.08.2024
P1-P05	New Description	FD	FD	MF	13.03.2024
P1-P04	New Description	FD	FD	MF	15.12.2021
P1-P03	New Description	FD	FD	MF	15.11.2021
P1-P02	New Description	FD	FD	MF	12.05.2021
P1-P01	Information	FD	FD	MF	26.07.2020

TABLE OF CONTENTS

1 INTRODUCTION 4
2 DEVELOPMENT DESCRIPTION 4
3 DESIGN CONCEPT 5
4 DETAILED DESIGN 5
5 LUMINAIRES 6
6 LIGHTING CALCULATION RESULTS 7
6.1 Horizontal Illuminance (lux) – Path / Plaza Area 7
6.2 Horizontal Illuminance (lux) – Access Road 8
6.3 Horizontal Illuminance (lux) – Path / Plaza area 9
6.4 Horizontal Illuminance (lux) – Path / Plaza area 10
7 ENERGY EFFICIENCY 11

1 INTRODUCTION

This report outlines the design intent and technical basis for the proposed public lighting installation on lands at Nos. 23-28 Prussia Street, Dublin 7.

The lighting design has been developed by Fallon Design to provide adequate illuminance levels in compliance with all relevant Irish and European standards. The objectives of the proposed public lighting scheme are as follows:

- To provide adequate illumination to ensure the safe use of access roads and footpaths for vehicular and pedestrian traffic.
- To minimise light spill and lighting pollution to surrounding properties and adjacent areas.
- To reduce glare for pedestrians, cyclists, and vehicular users.
- To utilise high-efficiency LED luminaires to reduce energy consumption and long-term operational costs.

The installation will be designed and constructed in accordance with the following standards, regulations, and guidance documents:

- S.I. No. 291 of 2013 – Safety, Health and Welfare at Work (Construction) Regulations 2013
- ETCI National Rules for Electrical Installations (ET101:2008, as amended)
- IS EN 13201 (Parts 1–5) – Road Lighting
- BS 5489-1:2020 – Code of Practice for the Design of Road Lighting
- CIBSE Lighting Guide 7 – Outdoor and Public Amenity Lighting
- ESB Networks – Housing Scheme Guidebook and National Code of Practice
- Bat Conservation Trust – Guidance Note 08/18: Bats and Artificial Lighting
- Bats & Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (2010)
- Dublin City Council Public Lighting Technical Specification

2 DEVELOPMENT DESCRIPTION

Randalswood Construction Ltd., intend to apply for permission for development on lands at 23-28 Prussia Street, Dublin 7 (D07 X9X6, D07 FW30 & D07 PAF1), (located at the junction of Prussia Street and St. Joseph's Road, and bounded by No. 29 Prussia Street (Protected Structure) to the north, No. 22 Prussia Street to the south, and TU Dublin, Grangegorman Campus and boundary wall (Protected Structure) to the east). The development will consist of proposed modifications to the previously permitted Large-scale Residential Development (LRD) (permitted under planning permissions Reg. Ref. LRD6057/24-S3A and Reg. Ref. WEBLRD6103/26-S3), including modifications to the previously permitted total number of apartment units (110 No. Permitted units to now provide a total of 120 No. Apartment units i.e. 74 No. 1 beds, 43 No. 2 beds, 2 No. 3 beds, and 1 No. 4 bed) as follows:

Modifications to Block C from a total of 53 No. Permitted apartments comprising of 34 No. 1 beds and 19 No. 2 beds, in a permitted building ranging from 7-8 storeys in height, to now provide two additional storeys to this block, to provide for a total of 63 No. Apartments comprising of 40 No. 1-beds and 23 No. 2-beds, with modifications to the unit mix of the permitted seventh floor, in a building now ranging from 7-10 storeys in height, and all apartments provided with private balconies/terraces to south, east and west elevations; 16 No. Additional cycle parking spaces to now provide a total of 240 No. Cycle parking spaces on site, and all associated site works necessary to facilitate the development.

The lighting design covers all public roads, footpaths, and communal external areas intended for adoption (where applicable) or long-term management.

3 DESIGN CONCEPT

The public lighting design has been developed to provide safe and comfortable night-time visibility for residents and visitors, while maintaining environmental sensitivity.

Key design principles include:

- Compliance with the appropriate lighting class in accordance with IS EN 13201 and BS 5489.
- Use of energy-efficient LED luminaires throughout the development.
- Careful selection of luminaire optics to achieve required uniformity while minimising glare.
- Controlled light distribution to reduce upward light ratio (ULR) and obtrusive light.
- Consideration of ecological constraints, including minimisation of impact on bat habitats where applicable.

The scheme is designed to achieve a balance between safety, visual comfort, environmental responsibility, and long-term sustainability.

4 DETAILED DESIGN

The design uses the following:

3 x Klif Series 14w LED 3000K Street Optic Wide A13 mounted on 4m columns.
6 x Chi Series 19w LED 3000K (1 x Street Optic Wide A13 and 5 x Symmetric Optic) mounted on 4m columns.
4 x Neo Groundlight 12w LED 3000K 58° recessed at ground level.

Light levels as follows:

Path/Plaza Area – 5.4 lux average, 1.0 lux minimum (0.20 uniformity).
Access Road – 5.4 lux average. 1.0 lux minimum (0.20 uniformity). These levels comply with IS EN13201-02:2015 /BS 5489-1:2020 for roads & paths – class P4 (5.0 lux average, 1.0 lux minimum).

The lighting design has been developed to achieve Class P4 in accordance with IS EN 13201-2:2015 and BS 5489-1:2020, appropriate for residential access roads and footpaths with low traffic volumes.

The proposed layout is shown on drawing:

1981-S50-02 – Public Lighting Layout

Lighting calculations have been undertaken using approved lighting design software to verify:

- Average maintained illuminance
- Minimum illuminance
- Uniformity ratios
- Glare control (where applicable)

All calculated results demonstrate compliance with the required lighting class.

5 LUMINAIRES

All luminaires proposed are LED type, incorporating:



Luminaire A Data

Supplier	
Type	Veelite Klif 14w LED Street Optic Wide A13
Lamp(s)	8LED 3000K 500mA
Lamp Flux (klm)	1.50
File Name	5KLI07LGA-A13-3K.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	837.6, 327.4, 0.0
No. in Project	3



Luminaire B Data

Supplier	
Type	Veelite Chi Series 19w LED Street Optic Wide A13
Lamp(s)	8LED 3000K 700mA
Lamp Flux (klm)	1.77
File Name	5CHI08LGA-A13-3K.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	533.8, 296.7, 70.9
No. in Project	1



Luminaire C Data

Supplier	
Type	Veelite Chi Series 19w LED Symmetric C6 Optic
Lamp(s)	8LED 3000K 700mA
Lamp Flux (klm)	1.77
File Name	5CHI08LGA-C6-3K.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	304.9, 124.4, 32.3
No. in Project	5



Luminaire D Data

Supplier	
Type	Veelite Neo Groundlight 12w LED 58° Beam
Lamp(s)	LED 3000K
Lamp Flux (klm)	1.55
File Name	Neo G5715.BRFT300 12W LED 3000K 58°.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	5.9, 2.6, 0.7
No. in Project	4

Final luminaire selection will comply with the relevant County Council technical specification.

6 LIGHTING CALCULATION RESULTS

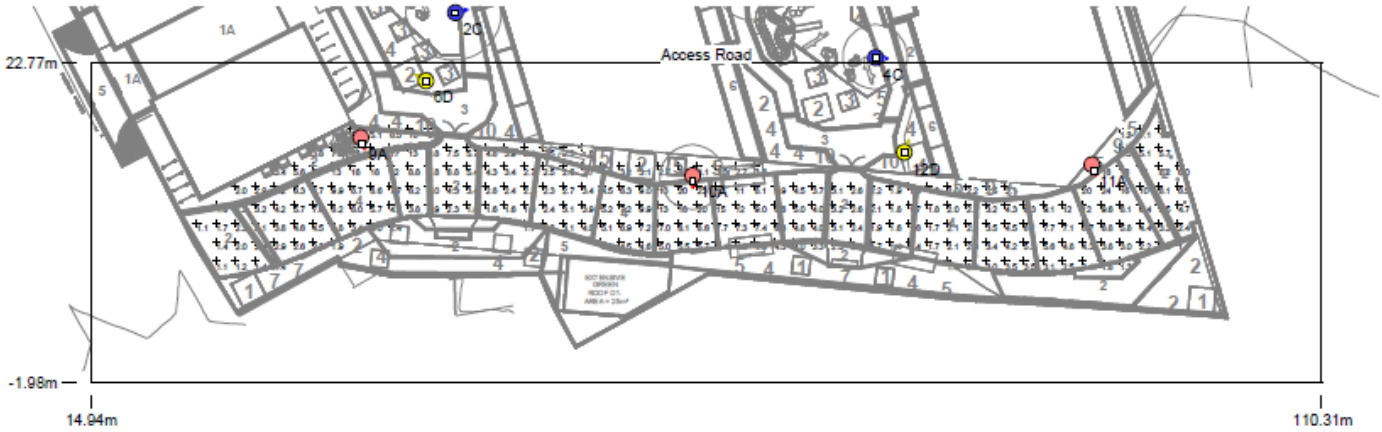
6.1 Horizontal Illuminance (lux) – Path / Plaza Area



Results

Eav	5.49
Emin	1.09
Emax	21.46
Emin/Emax	0.05
Emin/Eav	0.20

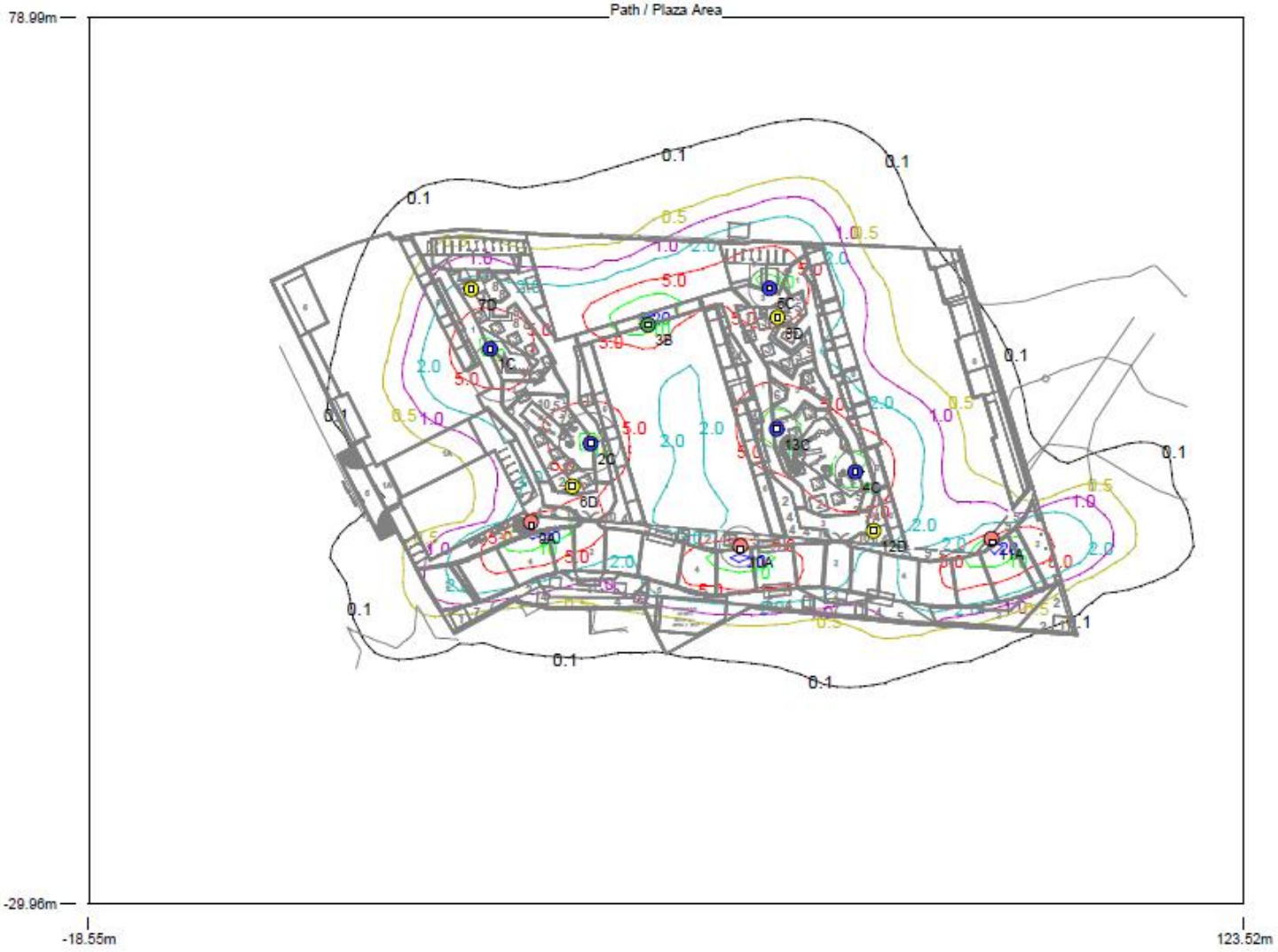
6.2 Horizontal Illuminance (lux) – Access Road



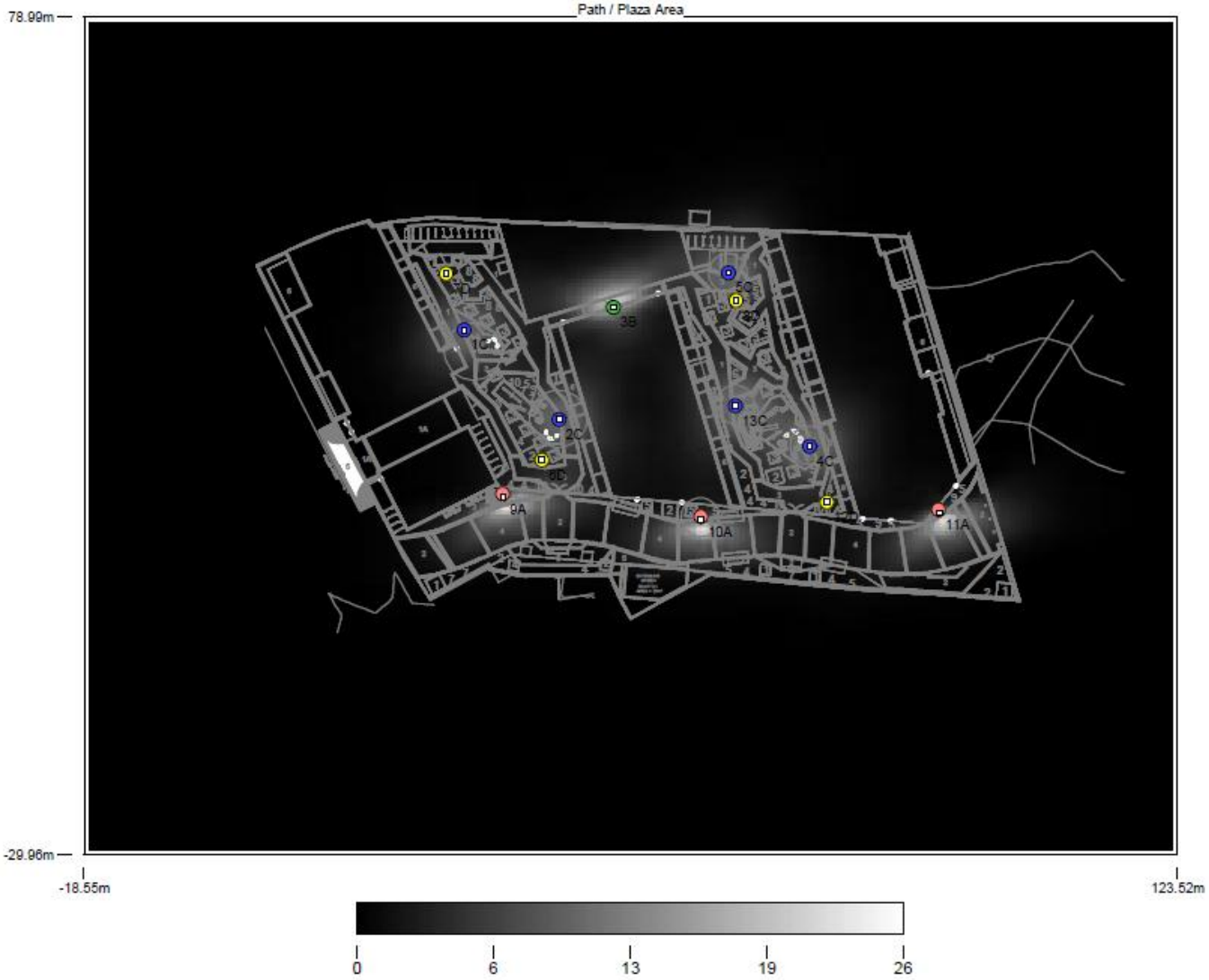
Results

Eav	5.43
Emin	1.09
Emax	25.26
Emin/Emax	0.04
Emin/Eav	0.20

6.3 Horizontal Illuminance (lux) – Path / Plaza area



6.4 Horizontal Illuminance (lux) – Path / Plaza area



7 ENERGY EFFICIENCY

Energy performance has been carefully considered in the design of the public lighting installation to ensure reduced operational costs and environmental impact over the lifetime of the development.

The following measures are incorporated:

- Use of high-efficiency LED luminaires to significantly reduce energy consumption compared to traditional discharge lighting.
- Long service life components to reduce maintenance requirements.
- Integrated programmable dimming profiles to reduce lighting levels during late-night periods of low activity, while maintaining safety compliance.
- Optimised spacing and optical design to prevent over-lighting.

The proposed installation represents a sustainable and compliant public lighting solution suitable for long-term operation.