



PUBLIC LIGHTING REPORT

PART 8

REJUVENATION AND UPGRADE OF WELLVIEW PARK AND PUBLIC REALM AT WELLVIEW GREEN AND TERRACE.

Project: 2037
Issue: Part 8
Rev: C
Date: 23rd March 2022

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Project Details:

Project: Part 8
 Rejuvenation and upgrade of Wellview Park and public realm at Wellview Green and Terrace.

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Document Details:

Version	Title	Author
Rev C	Public Lighting Report	Fallon Design Ltd

Distribution Details:

Name	Method	Issue Date	Revision
Design Team	Email Copy	23.03.2022	C

1. Introduction

This report outlines the design intent for the proposed public lighting for the Part 8 Rejuvenation and upgrade of Wellview Park and public realm at Wellview Green and Terrace. The area of proposed lighting highlighted on attached drawing 2037-S50-04 is a small percentage of the overall park. The design will minimize the amount of illumination within the park to the pedestrian links through the park where foot traffic is routed. Most of the parks internal walkways are not proposed to be illuminated for the protection and development of the local ecology.

This report outlines the proposed lighting design intent 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 maintenance 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
- Sensitively reduce any impact on the local ecology and wildlife, including the bats as referenced later in this report.

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)
- Fingal County Council Street Lighting Technical Specification.

2. Development Description

The proposed development consists of the Rejuvenation and upgrade of the existing Wellview Park, situated at Church Road, Dublin 15 as well as two existing areas of public realm at Wellview Green and Terrace, totalling approximately 5.5ha. The proposed development includes: landscape and external works; pedestrian access points to existing footpath on west side of Church Road; paving and associated drainage works; regrading of existing grassland areas; planting; public lighting; play areas, signage, street furniture and associated fixtures and fittings; including all ancillary site development. The site area is crossed by a north-south cycle and pedestrian route as part of the wider proposed Church Fields Link Road and Cycle Network (planning register reference Part XI/011/19).'

3. Design Concept

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

The selection of light fittings and their locations will be developed to minimize any impact on the local ecology and wildlife.

Development Lighting - Residential Zone:

- Class P4 of IS EN 13201 (5 lux average, 1.0 lux minimum).

The proposed fitting and associated optics will be mounted on a on 6 m column to minimize light pollution to the local ecology.

4. Proposed Luminaires:

The proposed luminaire for the Linear Park shall be selected for its ability to provide a high quality of light distribution with full shut off optics. Minimum light spillage to assist a low upward light ratio and minimum impact to the local ecology and wildlife.

- Local Authority Approved Fittings
- 2700k colour
- Full cut off lantern
- Step dimming for night time feeding & nocturnal activity
- Dark sky friendly
- Direct down lighting optics
- No decorative lantern or reflective type fittings

The final luminaire selection at detail design stage shall aim to achieve the results illuminating along the designated pedestrian routes within the park. Illuminating the walkway through the park and minimizing light spread and light pollution into surrounding areas. The urban decorative lighting shall be avoided in this application due to the clear distrubution of light up into the trees and into all the surrounding wildlife habitat.

5. Pole Type

The proposed public lighting in the Church Fields Linear Park shall be maintained by base hinged galvanized 6-meter standards. No lighting maintenance vehicle with onboard MEWP is proposed within the park and landscape design. Pedestrian access from both sides of the park through adjoining housing schemes will require a maximum walk of approximately 25 meters to the centre.

Image 5.1: Typical Base Hinged 6 meter public lighting pole:



6. Ecological Impact Design Considerations:

Careful consideration will be given to the design of the Public Lighting with regard to the existing natural habitat and the wildlife. The chosen luminaire will be selected to have a full cut off lantern type and offer a G6 Glare rating and no upward light making it dark sky friendly.

The selected light fitting shall also be selected to include.

- An inbuilt multi step dimming program within the luminaire will allow for night time hours. This means during peak hours of nocturnal foraging, feeding and activity the light level will be minimized.
- 2700k resulting in a warmer light, helping to further minimize the impact on the local wildlife.

The public lighting design will reference the following documents and best practice guides as outlined by the ecology consultant and their recommendations.

- Bats and Lighting in the UK – Bats and the Built Environment Series (Institute of Lighting Professionals, September 2011).
- Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011).
- Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland);
- The Eurobats Mitigation of Lighting Document

7. Upward Light Ratio:

As part of the ecological design elements of the Public Lighting outlined above, additional consideration will be given to the upward light ratio (ULR). A ULR below 1 is ideal for minimizing disruption to Bats and maximizing the level of dark skies in the development.

The overall (ULR) Upward Light Ratio for the illuminated areas will be below recommended levels in the above guidance documents and reference standards.