

St Andrew's Court

**External Lighting
Statement**

For Planning

9th September 2024

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ISSUE HISTORY

Issue	Date	Description
P01	21/06/2024	Draft Design Team Issue
P02	03/07/2024	Planning Issue
P03	09/09/2024	Revised Planning Issue – Ground Floor Update

MAX FORDHAM LLP TEAM CONTRIBUTORS

Engineer	Role
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1.0 EXECUTIVE SUMMARY

This report describes the proposed external lighting strategy for the St Andrew's Court site.

It highlights the external areas which are to be illuminated, the method of illumination and the target lux levels in line with industry and local planning guidelines.

The strategy proposed aims to meet the minimum light levels require for different areas of the site to allow safe movement, deter crime whilst also minimising the effects of light spill and pollution that could affect neighbouring properties and also limit the negative effects on biodiversity, including bats.

The proposed lighting design will aim to provide a cost effective and efficient solution through the careful specification of fittings and lamps, their considered arrangement, and the use of controls to limit the use of artificial lighting outside of normal operating hours or when adequate daylight is available.

At this stage, the report and appendices only show the general strategy and limiting factors. The exact location, specification and quantity of light fittings will be defined and coordinated with the design team at the detailed design stage.

2.0 DESIGN GUIDELINES

The design guidelines considered in the preparation of the external lighting design for the proposed development St Andrew’s Court were as follows:

- Dublin County Council Road Lighting Standards
- Dublin County Council Public Lighting Services Specification
- EN 13201 Road Lighting Standards
- CIBSE SLL Lighting Guide 9
- ILP and Bat Conservation Trust (BCT) Guidance Note 08

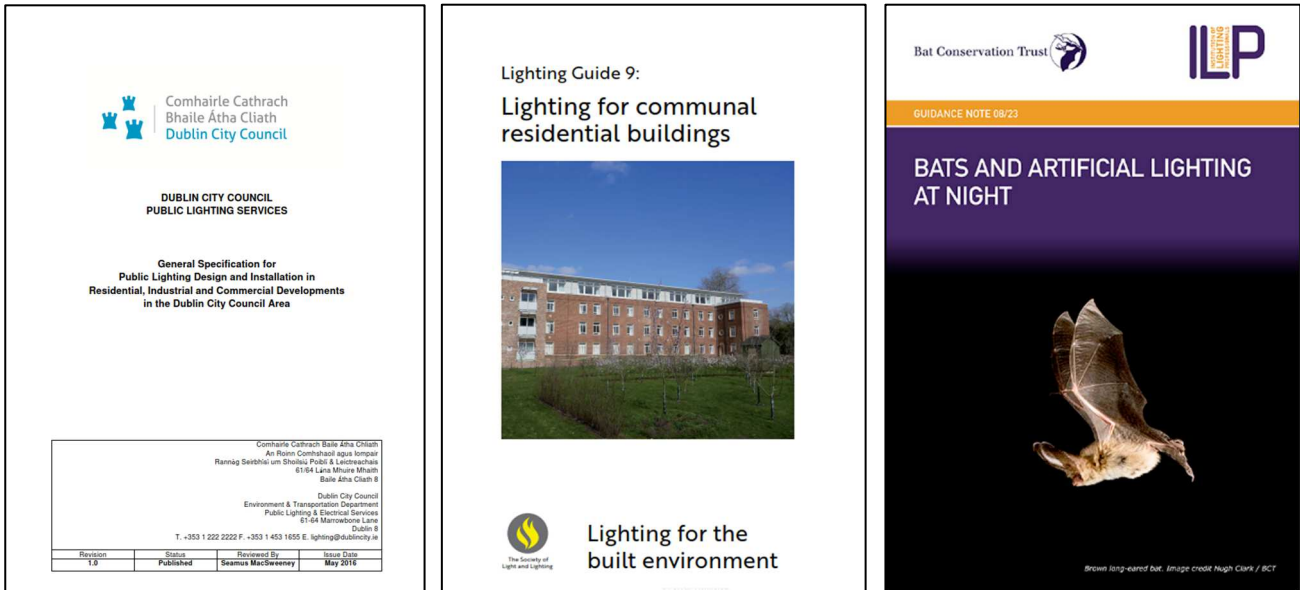


Figure 2: Guidelines considered.

2.1 Lighting Aims and Objectives

The aims and objectives of the external lighting design for the proposed St Andrew’s Court housing renewal scheme are as follows:

- To provide adequate levels of light to external areas, allowing the spaces to be used effectively and safely whilst designing against ‘over-lighting’ of these spaces.
- To select luminaires so that there is zero upward light emitted into the sky to prevent ‘sky glow’ from light pollution.
- To select light fixtures and their accessories with an appropriate colour temperature, and so that the light is set an appropriate height.
- To limit light trespass into the windows of ground level dwellings and neighbouring properties
- To deter crime as per recommendations

3.0 PROPSOED LIGHTING DESIGN

Please refer to the following MXF drawings SAC-MXF-ZZ-00-DR-E-31000, SAC-MXF-ZZ-01-DR-E-31000, SAC-MXF-ZZ-RF-DR-E-31000, in Appendix A which describes the extent of the proposed external lighting strategy at relevant levels.

The preliminary strategy has been produced, based on the information listed in this report. The following sections below set out the main considerations sought when forming the external lighting strategy.

3.1 External Lighting Design Levels

Limiting Lighting Levels

The following table summarises the ILP’s Lighting Guide’s recommendations for reasonable constraints for external lighting installations in a range of different environmental zones:

Obtrusive Light Limitations for Exterior Lighting Installations						
Environmental Zone	Sky Glow ULR (max %)	Light Intrusion (into Windows) Ev (lux)		Luminaire Intensity I (kcd)		Building Luminance Pre-curfew
		Pre-curfew	Post-curfew	Pre-curfew	Post-curfew	Average L (cd/m2)
E0	0	0	0	0	0	0
E1	0	2	0.1	2.5	0	0
E2	2.5	5	1	7.5	0.5	5
E3	5.0	10	2	10	1.0	10
E4	15.0	25	5	25	2.5	25

Where Environmental Zones E4 stands for High district brightness areas (Town city centre with high levels of night-time activity). St Andrew’s Court site will therefore be under Environmental Zone “E4” because it is in Dublin City centre.

Design Lighting Levels

External lighting will be designed to deliver adequate lux levels in accordance with BS EN 12464-2, lighting of outdoor workplaces and the ILP’s Lighting Guide 9

In particular, the following light levels will form the basis for the detailed external lighting design:

- Communal entrances - 50 lux
- External courtyard footpaths - 5-10 lux
- Vehicular routes - 5 lux
- Communal deck access - 50 lux
- Communal roof terrace - 10 lux
- Private residential amenity - 30 lux
- Roof – 10 lux

3.2 Control of Light Spill to Neighbouring Areas and Night Pollution

The proximity of the St Andrew's Court site to the neighbouring proposed residential development is to be carefully considered, particularly light spill from landscape or roof lighting into dwelling windows.

To achieve this, any lighting provided in the landscape and on the roofs will be selected to:

- Have down angled light beams in their specification
- Be activated and controlled by presence, in line with Section 3.4

3.3 Consideration of Bats

In line with the recommendations of IPL and BCT Guidance Note 08 and the Bat Survey report conducted, the following principles will be considered in addition to the main aims and objectives mentioned in Section 2 of the report:

- Lighting should be designed to minimize light spill into bat commuting and foraging areas.
- Ensure illuminance of <1 lux in areas of new tree planting or if any trees are retained.
- Use warm white (2700K or lower) LEDs to minimise blue light disturbance. Light sources should lack UV and peak above 550nm.

Once the detailed landscape design for the communal courtyard is finalised, lighting to new trees and planter areas will be carefully designed in the detailed design stage to meet recommendations in bullets 1 and 2 above.

The specification of the proposed lighting fittings will be chosen to meet the recommendations of bullet 3 above in terms of colour temperature and limited UV.

3.4 External Lighting Control

All external light fixtures are proposed to be controlled via motion sensors and photo-cell timers to ensure that lighting is only on or as required to be for each of the reasons stated above.

With regards to emergency escape on the external decks and exits of the building, and crime deterrence at ground floor, some lighting may be set to sustained minimum levels of illuminance.

APPENDICES

Appendix A – Sitewide External Lighting Layouts

NOTES:

1. To be read in conjunction with all other MXF information.
2. This drawing shows the scope and intent of luminaire requirements in external areas, not the full extent of ancillaries required for a complete installation.
3. External lighting requirements comply with the following standards and guidelines:
 - BS EN 5489-1
 - BS EN 8300-2
 - CIBSE guide LG6 & LG9
 - BS EN 13201
4. Public road lighting to comply with BS EN13201. New public road to be classed as a P4 system.
5. Landscape architect to confirm the extent of the courtyard walkways.

LEGEND:

Key	Area Served	Lux Level	Ref.	Luminaire Reference	Fed Via
	Communal Deck Access	50 Lux	CIBSE Guide LG9	EX.3	Landlord DB
	Private Amenity	30 Lux	CIBSE Guide LG9	EX.4	Apartment Consumer Unit





FENIAN STREET

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LEGEND:

Key	Area Served	Lux Level	Ref.	Luminaire Reference	Fed Via
	Communal Roof Terrace	10 Lux	CIBSE Guide LG9	EX.2	Landlord DB
	Roof Access	10 Lux	CIBSE Guide LG9	EX.5	Landlord DB

