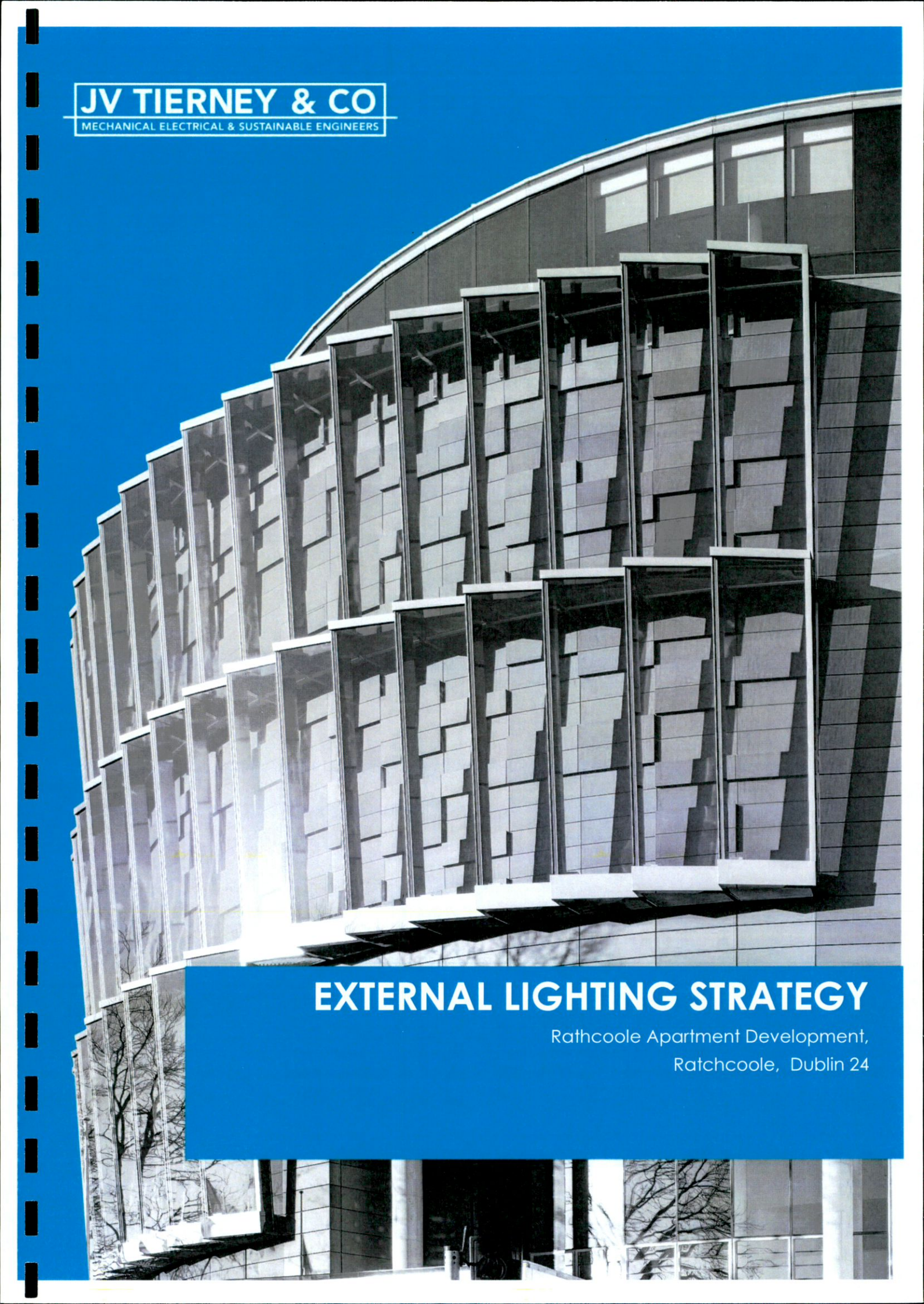


JV TIERNEY & CO

MECHANICAL ELECTRICAL & SUSTAINABLE ENGINEERS

EXTERNAL LIGHTING STRATEGY

Rathcoole Apartment Development,
Rathcoole, Dublin 24



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External Lighting Strategy For Rathcoole Apartment Development, Rathcoole, Dublin 24

Rev:	Issue Date:	Prepared By:	Checked By:
1	03/11/2021	SM	NT



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1. Executive Summary

The assessment below for Rathcoole Apartments development in Dublin 24 provides design evidence that the designed external lighting scheme shall be fit for purpose, achieve all applicable regulatory requirements and concludes that the light spill and glare from the new development and area around the building within the new development boundaries will have minimal impact on the surrounding area.

The recommendations made in this report for the area lighting are as follows;

- Zero Upwards Light Output Ratio {ULOR} column light fittings are used.
- The height of the roadway lights are restricted to 8m maximum.
- The lighting installation shall be controlled via a combination of timeclock and photocell operation which will restrict the lighting operation to only when essential.

2. Design Guidelines

The lighting design for the proposed Rathcoole apartments development will be designed in line with the following industry standards, best practice guidelines and local authority guidelines;

- I. South Dublin County Council Public Lighting Standards.
- II. I.S 10101:2020 National Rules for Electrical Installations.
- III. ET211:2003 Code of Practice for Public Lighting.
- IV. EN 13201 Road Lighting Standards.
- V. BS 5498:2013 Code of Practice for Design of Road Lighting
- VI. Luminaires should be selected to ensure that when installed, there shall be zero direct upward light emitted to the sky (all output shall be at or below 90° to the horizontal) to help prevent sky glow from light pollution in the night sky.
- VII. The light emitted from these fittings shall have no photo biological risk and shall be categorised as 'Exempt Group' in relation to emissions of Blue Light, Infrared and Ultra-Violet Radiation in accordance with EN 62741:2008.
- VIII. All luminaires shall have a Luminous Intensity Classification of between G4 and G6 to IS EN 13201-2:2003/BS 5489-1:2013 and recommendations of Institution of Lighting Professionals and Bat Conservation Trust 'Bats and Lighting in the UK' documentation and Bat Conservation Ireland Guidance Notes for Planners, Engineers, Architects and Developers December 2010.
- IX. Guidance note for the Reduction of Obtrusive Light GN01:2011, produced by the Institute of Lighting Professionals (ILP).

- X. All luminaires shall comply with IS EN 60598; and all luminaires shall be energy efficient LED source fittings with sharp cut off optics.

3. Methodology

J.V. Tierney & Co. will contact all Public Utilities companies for telecom and electricity services and will carry out the full coordination of the utilities throughout, including security services for the scheme. These services will be collated and run in specific service zones with agreement from all the stakeholders.

The proposed lighting scheme will be designed using LED fittings with high performance optics to provide visual comfort. The lighting scheme will specifically respond to the landscape treatment and be sensitively designed to ensure minimum light pollution.

Luminaires will be selected to ensure that when installed there shall be zero direct upward light emitted to the sky (all output shall be at or below 90° to the horizontal) to help prevent sky glow from light pollution in the night sky.

The light emitted from these fittings shall have no photo biological risk and shall be categorised as 'Exempt Group' in relation to emissions of Blue light, Infrared and Ultraviolet Radiation in accordance with EN 62741:2008.

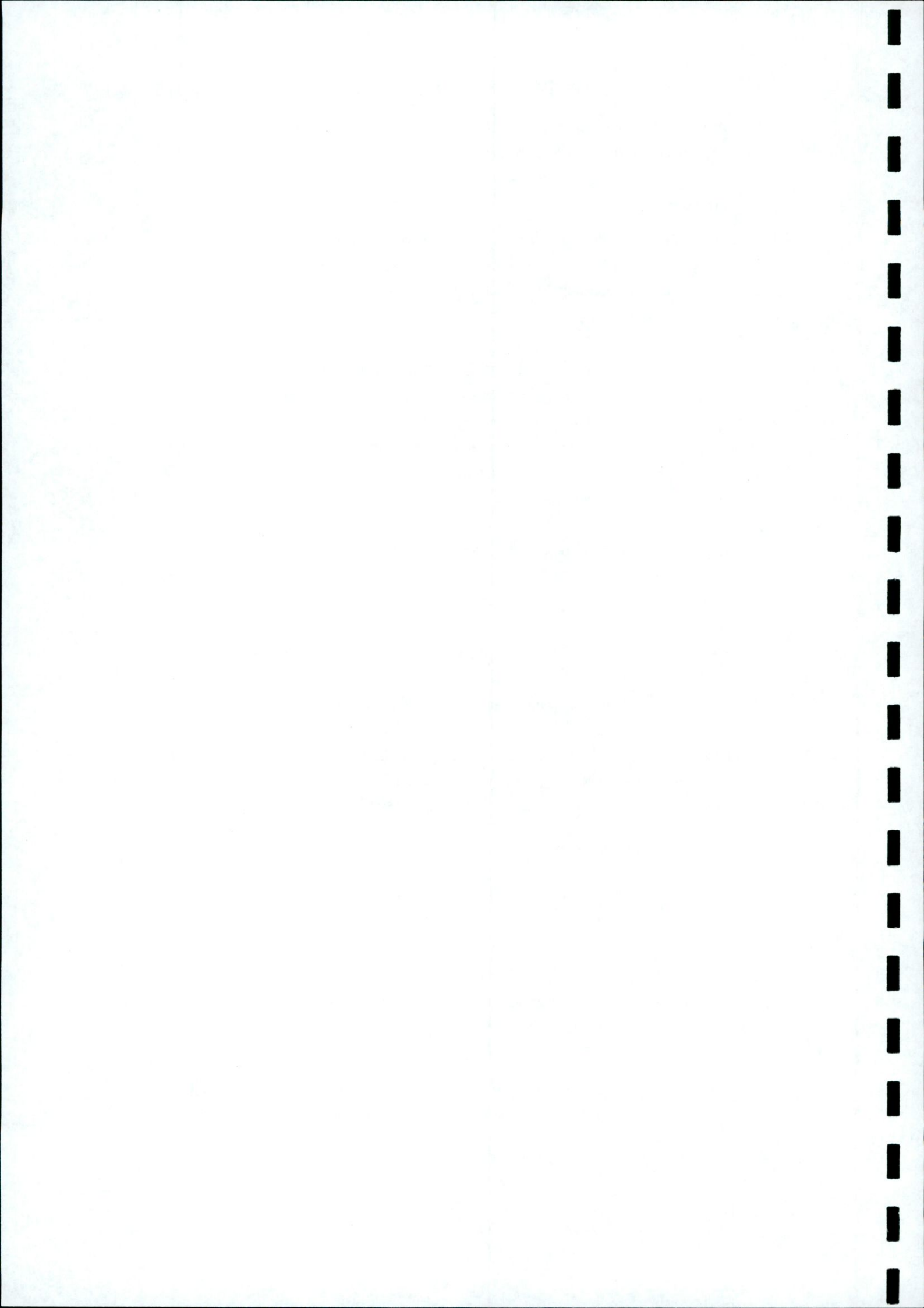
All luminaires shall have a Luminous Intensity Classification of between G4 and G6 to IS EN 13201-2:2003(E)/BS 5489-1:2013 and recommendations of Institution of Lighting Professionals and Bat Conservation Trust 'Bats and Lighting in the UK' documentation and Bat Conservation Ireland Guidance Notes for Planners, Engineers, Architects and Developers December 2010. As also recommended in the above guides and standards, Variable Lighting and Part-Night Lighting shall be utilised. Following a grant of permission for the development a bat contour assessment will be carried out in line with the above standards.

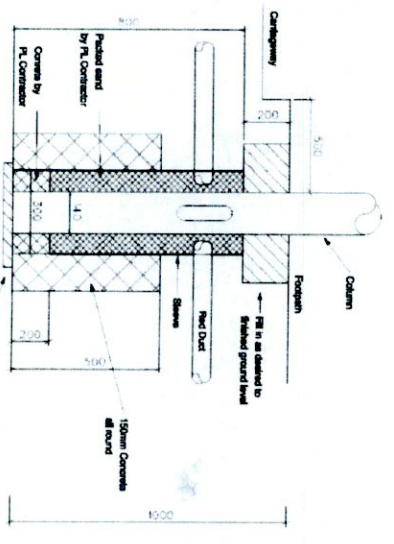
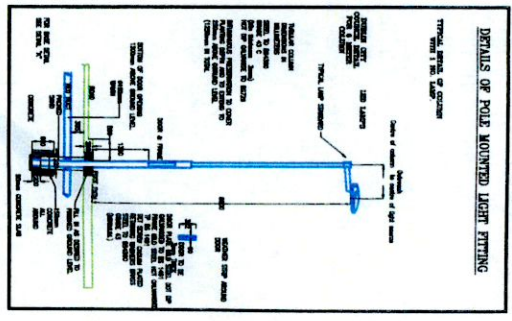
4. Calculation Procedure

The proposed final lighting scheme will be designed using the lighting design software Relux to ensure all regulations are achieved and to review its effects on the local residents, ecology and environment.

The lighting design within the site boundary shall generally be carried out utilising up to 8metre high lighting poles and bollard lighting. The lighting shall be automatically controlled via photocell and timeclock combination.

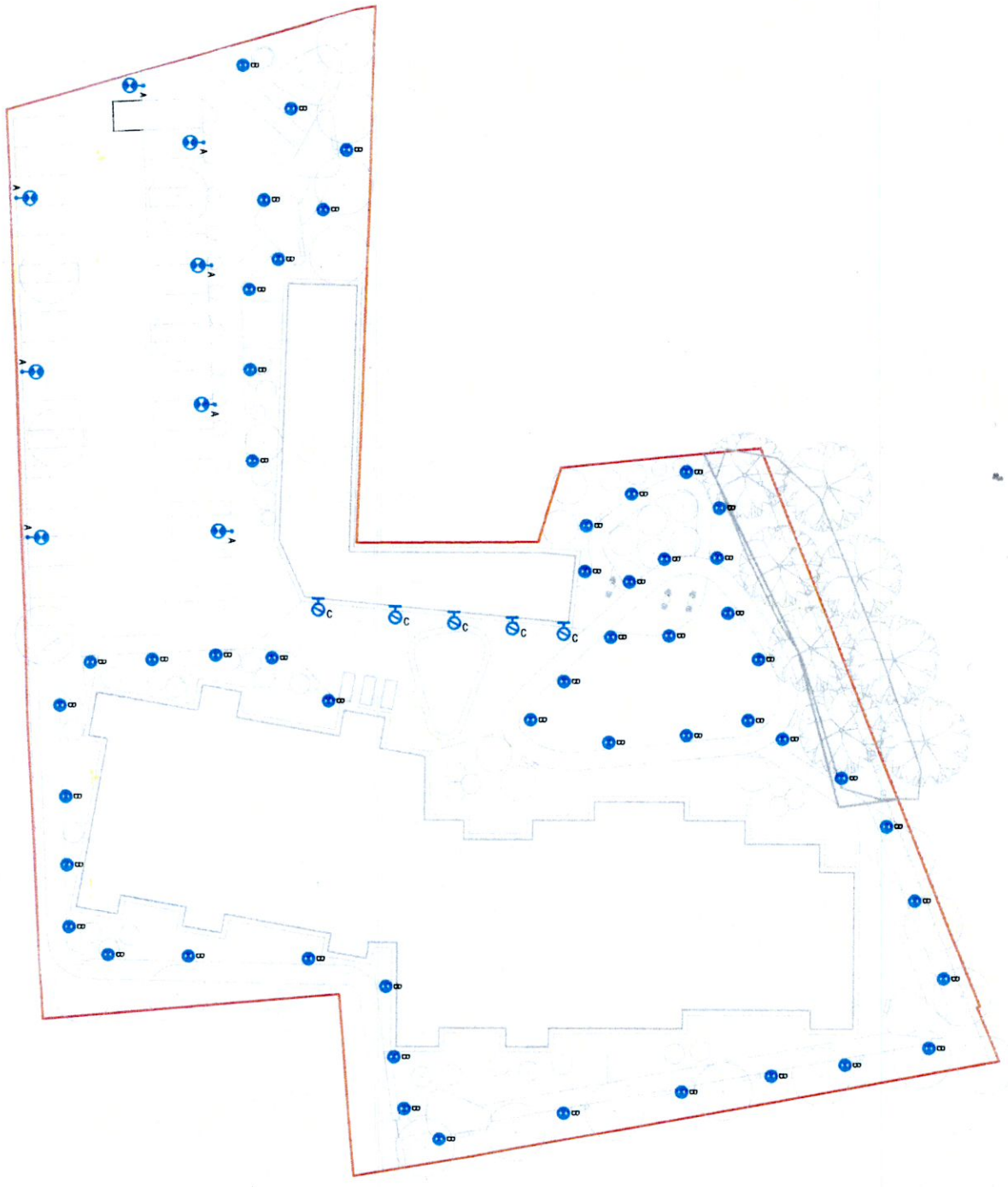
All light fittings used shall comply with the requirements set out within the Institute of Lighting Professionals Guidance notes for the Reduction of Obtrusive Light GN01:2011.





LEGEND

- A 8M COLUMN 0.7M SINGLE HEAD LED LAMP SOURCE WITH INTEGRAL LIGHTING CONTROL MODULE
- B 8M COLUMN 0.7M SINGLE HEAD LED LAMP SOURCE WITH INTEGRAL LIGHTING CONTROL MODULE
- C 8M COLUMN 0.7M SINGLE HEAD LED LAMP SOURCE WITH INTEGRAL LIGHTING CONTROL MODULE



REV	DATE	DESCRIPTION	BY	CHK
1	15-11-21	ISSUED FOR PLANNING	SM	NT
2	15-11-21	ISSUED FOR PLANNING	SM	NT

PROJECT	RATHCOOL HOUSING NEWCASTLE ROAD RATHCOOLE DUBLIN 24
ISSUED FOR PLANNING	4249 (80)-00-01
DATE	15-11-21
SCALE	1:250@A11
PROJECT NUMBER	4249
ISSUED FOR PLANNING	P01

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