CWC

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The Iron Line, Millom

External Lighting Strategy Statement

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Revision Record

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08/04/2025	3468-CWC-XX-XX-RP-E-0301	P2	AP	IW	AP
			AP	IW	AP

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1.0 Introduction

This statement has been prepared to outline the design currently proposed, and strategies employed that govern the current design and will continue to govern any design development of the external artificial lighting at the proposed Iron Line Visitor Centre, as part of the Hodbarrow Nature Reserve near Millom.

It should be noted that this this document can be taken to apply to the entire Iron Line project, as there is no lighting currently proposed anywhere away from the Visitor Centre.

The external lighting strategy will prioritise securing the long-term conservation and enhancement of the habitats and species at the site. This will be the primary design driver.

Any artificial illumination proposed will be limited to the Visitor Centre. The design will aim to exclude any lighting not specifically essential for public safety, and where required employ light spill control systems to limit light pollution and restricting control systems to limit operation.

This is outlined in more detail within this document.

2.0 Luminaire Criteria

All luminaires used in the external lighting design for the Iron Line Visitor Centre shall adhere to the criteria set out below. The following list is not exhaustive.

All luminaires shall be LED luminaires, with a life expectancy of at least 50,000 hours. The lumen maintenance factors shall be L70, B10 minimum, but generally targeting L90 B10, to ensure quality and longevity of the products.

All drivers and control gear associated with the luminaires shall have a life expectancy of at least 50,000 hours, generally to match that of all other luminaire components.

A colour rendering index of less than 80 shall be avoided wherever possible.

Colour temperature will generally be 2700K - 3000K throughout the scheme. This will be finalized as the design progresses, and will be consistent across the scheme.

All luminaires shall have an IP and IK rating to suit their environment and use. In most case this shall be a minimum of IP65 for building mounted luminaires and IP67 for in-ground luminaires.

All feature and perimeter luminaires shall be equipped with compatible drivers.

Luminaires will generally look to achieve an efficacy of 90lm/W or greater.

3.0 Design Criteria

The new external lighting installation shall be designed for the proposed building in accordance with the following:

- Cumbria Good Lighting Technical Advice Note
- CIBSE Lighting Guides
- ILP Guidance Note 1 (The Reduction of Obtrusive Light)
- ILP Guidance Note 8 (Bats and Artificial Lighting)
- Building Regulations
- BS EN 12464-2
- BS 5489-1

The design will meet all requirements of building regulations, and the design will follow all guidance within the aforementioned design standards and best practice documents wherever possible.

4.0 Scheme Overview

4.1 External Lighting Strategy

The lighting will give specific consideration to the local wildlife, only employing lighting where specifically required. Generally, the design will seek to exclude any lighting that is not specifically required for public safety.

Lighting, both internal and external, is proposed to the Visitor Centre only [1].

Provision of external lighting will be minimised wherever possible. No lighting is proposed to the access roads or to the car parks not associated with the visitor centre. It is solely proposed around the Visitor Centre, either via surface wall lights to the perimeter, ceiling lights under the balcony roof, or low-level columns or dark-sky bollards at crossings.

Light distribution will be highly controlled, highly directional, and use light spill control systems, such as honeycomb louvres and the like, to ensure light spill beyond the task area is negligible.

Uplighting shall not be used anywhere externally.

External lighting shall utilise various control systems to minimise unnecessary operation as outlined in the Control Strategy section.

[1] Any introduction of additional lighting elsewhere on the scheme as the design develops will strictly follow the guidance within Section 3, specifically the Cumbria Good Lighting Technical Advice Note, and follow the strategies and philosophies outlined within this document.

4.2 Internal Lighting

Internal lighting can contribute to the external lighting and lighting pollution, and whilst this is not usually considered as part of the external lighting strategy, this will be controlled due to the environmentally sensitive nature of the surrounding area.

Approach to the internal lighting will be well considered and take due cognisance of external spill out of the building and will minimise where possible.

Any directional lighting will be situated near the permitter to ensure it is directing inward.

No uplighting elements shall be used where light may spill externally.

However, the primary mechanism minimising internal light spill out of the building is the use of lighting controls, outlined in the subsequent section.

4.3 Control Strategy

All external lighting control shall be automated, consider various environmental factors, and be as energy efficient as possible.

There will not be a dawn-til-dusk lighting strategy employed. Lighting shall not automatically operate overnight. The lighting shall only operate for a brief period at dawn and dusk when these times coincide around the normal operational hours of the Visitor Centre. The exact hours of operation are still to be determined with the future operator.

An example of this operation would be assuming 9am-5pm operation, we would expect the lighting to operate any hours between 8am and 6pm which fall before sunrise or after sunset, i.e. for a few hours each day during the winter, and at no other time.

All lighting shall switch on when the daylight starts to fade and switch off automatically when there is enough daylight, but only when these times sit within the agreed operational hours.

Outside the agreed operational hours, the lighting shall switch off via a timer and override contactor arrangement to ensure all lighting is switched off. There shall be an additional control arrangement to allow temporary override of this automatic function if the space is ever to be used for an event, however this shall also be on a time-controlled arrangement to prevent it remaining in this mode for longer than 1 day.

Provisionally, it is proposed that all external lighting will be automatically switched off between 2030hrs and 0730hrs. This will be done through the use of an astronomical time clock and external photocell if required, to prevent external lighting running during daylight hours.

4.4 Security

Lighting is not proposed for the purposes of security.

Security systems such as CCTV, will employ use of light outside of the visible spectrum.

Some wildlife show sensitivity to infrared light outside the visible spectrum, and consideration will be given to this when planning any CCTV camera locations which will require infrared light use at night.

This shall be reviewed during the design process and where possible, motion activated, none-persistent infrared sources will be considered, if required.