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The Iron Line

External Lighting Strategy Statement

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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 lighting at the proposed Iron Line Welcome Centre, 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 welcome centre.

This document also deals with some aspects of the internal lighting.

2.0 Luminaire Criteria

All luminaires used in the external lighting design for the Iron Line Welcome 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 3000K throughout.

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 80lm/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
- 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, generally only employing lighting where specifically required. This has been considered from the outset and has been the primary driver of the design.

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

External lighting is minimised wherever possible. No lighting is proposed to the access roads or to the car parks. It is solely proposed around the welcome building, either via low level recessed wall lights, ceiling lights under the rotunda, or bollards at the crossing. Light distribution will be highly controlled and is proposed in areas which are enclosed by the buildings to limit light spill away from the building.

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

Uplighting shall not be used anywhere externally, or internally where light may spill externally.

4.2 Internal Lighting

Internal lighting contributes to the external lighting and lighting pollution.

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

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

[1] Any introduction of additional lighting elsewhere on the scheme as the design develops will strictly follow the guidance within the Cumbria Good Lighting Technical Advice Note, however no additional lighting requirements are foreseen.

4.3 Control Strategy

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

There will not be a dawn-til-dusk strategy employed. Lighting shall not automatically operate overnight. The lighting shall only operate for a short period at dawn and dusk when these times coincide around the normal operational hours of the welcome building. 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 switched 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 being left in this mode.

Provisionally, it is proposed that all external lighting will be automatically switched off between 2100hrs and 0700hrs. 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

Some wildlife show sensitivity to infrared light outside the visible spectrum. Consideration will be given to this when planning any CCTV camera locations which often uses infrared at night.
This shall be reviewed during the design process, and where possible motion activated, none-persistent infrared sources will be considered, if required.