

Pell Frischmann

excellence through innovation

Design Summary

Date – 23 July 2015

Proposed Integrated
Waste Management Facility,
Rivenhall Airfield,
Coggeshall Road,
Braintree, Essex.

Exterior Lighting Design.

Rivenhall Airfield IWMF, Offices and Visitor Centre

Proposed External Lighting for Car Parking and Pedestrian Access

Since the initial planning application lighting technology has moved at an accelerated pace to a point where LED lighting is becoming the rule rather than the exception. The original lighting designs incorporated lighting units with HID lamps, which whilst delivering a white light source are not as energy efficient in operation and do not possess the same longevity of life.

The proposed lighting consisting of column mounted LED luminaires and LED bollards has been designed to comply with the requirements of the planning consent with regard to both the maximum average maintained lighting levels and the hours of operation. The overall efficacy of LED lighting allows lighting installations to be designed and built with equipment operating at lower wattages than traditional discharge lighting therefore reducing the carbon footprint and providing an operational cost saving.

Due to the size of the car parking area and the level of proposed soft landscaping bollard lighting is not the most suited option as the restricted height of the light source severely affects the overall quality of lighting achievable. It is therefore proposed that 6m lighting columns incorporating Urbis Schreder 'Axia' 16W LED luminaires are utilised as they achieve the overall low level of lighting below the 5 lux maximum average maintained restriction for this development. The Urbis Schreder 'Pharos' 16W LED bollard is proposed where smaller areas require lighting, such as footpaths or around buildings.

The lighting calculations provided not only indicate the levels of surface lighting over the car parking and pedestrian access areas but also how the amount of spill light is controlled. The red in colour contour line represents where the predicted lighting level of 0.2 lux which is equivalent to the level of light measured on the ground from a full moon on a clear night. The blue contour line representing 0.1 lux indicates how over a short distance the light levels on the ground diminish and therefore minimise the impact on the surrounding area.

The proposed lighting equipment has been chosen not only for its ability to produce a compliant design meeting the requirements of the planning consent but also for its green credentials. A copy of the Schreder Product Environmental Profile for the 'Axia' has been provided for reference along with the product information for both the 'Axia' and 'Pharos'.



Urbis Schreder
'Axia' LED



Urbis Schreder
'Pharos' LED
Bollard

In compliance with planning condition 13 the lighting design for the proposed Rivenhall IWMF offices and visitor centre is submitted for approval.

Condition 13:

No development shall commence until details of signage, telecommunications equipment and lighting within the Woodhouse Farm complex (comprising Woodhouse Farmhouse, the Bakehouse, and the listed pump together with the adjoining land outlined in green on Plan 1 (which can be found in the S106 agreement) have been submitted to and approved in writing by the Waste Planning Authority. The signage, telecommunications equipment and lighting shall be implemented in accordance with the details approved.

Prepared for:

**Gent Fairhead & Co Limited
c/o Court of Noke
Pembridge
Herefordshire
HR6 9HW**

Prepared by:

**Pell Frischmann
Unit 12
Maryland Drive
Tongwell
Milton Keynes
MK15 8HF**