588/401 Himley Village S278 Street Lighting Design Summary

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Introduction

This design summary document has been prepared by EDS Ltd to provide further evidence on the lighting category selection and any reasons behind design solutions achieved.

1.0 Existing Information Supplied

A topographical survey has been supplied by Rob Pembridge of Hydrock for a proposed development at Himley Village, Oxfordshire. The survey shows the locations of the proposed road that will require a new lighting design.

2.0 Design Brief

To produce a lighting design for the proposed development that achieves the appropriate lighting levels as per the British Standard for street lighting whilst avoiding property entrances/driveways and trees where applicable.

3.0 Design Stage

It has been assessed by EDS Ltd that the lighting levels shall be as per the British Standard BS 5489 recommendations: -

Lighting Reality Grid No	BS5489-2013 Lighting Class	Results
588/201 (New Access Junction)	C3	Refer to Lighting Reality Report
588/201 (Existing Main Road)	M4	Refer to Lighting Reality Report
589/201 (Main access Roads)	P3	Refer to Lighting Reality Report
589/202 (Side Roads)	P4	Refer to Lighting Reality Report

As per PLG02 for conflict areas flowchart below, 2no. conflict area junction outside of a residential road is connecting to a 60mph road, therefore M4-C3 class has been selected.



Minimum maintained illuminance (Eav) Maximum maintained illuminance (Emin) for further detailed calculations, please refer to the Lighting Reality report.

4.0 Risk Assessment

Ambient luminance.

The ambient luminance is deemed low for this area. The scheme is located adjacent to an existing settlement of houses.

Visual Guidance/traffic control

There is good visual guidance along on all proposed roadway.

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5.0 Design Solution

The street lighting proposals have been submitted using a total of 90no. DW Windsor 3000K Lanterns to conform with OCC requirements. Lanterns shall be installed on new 10m, 8m, 6m and 5m raise and lower (in areas of limited maintenance access) steel columns to OCC specification.

The proposed street lighting luminaires have been selected to be as efficient as possible. The lighting engineer at OCC shall advise the column numbers for the site during approval.

6.0 Site works Installation

All street lighting installation works should be carried out whilst taking into account the current Health and Safety regulations and also where applicable the current CDM2015 regulations.

As the 'Designer' under the CDM 2015 Regulations, EDS Ltd expects the 'Client' to fully understand their role and responsibilities under the current CDM Regulations.

Where works exceed 30 days or 500 person days of construction work a project becomes notifiable under the CDM2015 regulations via an F10 form. This form must be submitted by a 'Client Appointed' CDM Co-ordinator to the Health and Safety Executive. Works that do not exceed the 30 day or 500 person days rule may still need to have the CDM2015 regulations applied but may not be notifiable. It is advised that the companies CDM2015 regulations trained personnel assess the project and make the necessary arrangements to meet the CDM2015 regulation requirements. If in doubt it is recommended that the company seeks professional advice.

As designers under the CDM2015 regulations it is our duty to recommend that an 'ASLEC' approved contractor be used for the electrical installation works. All lighting installation works should comply with the IEE 17th Edition Wiring Regulations (BS 7671 The IEE Wiring Regulations). This is the national standard to which all domestic and industrial wiring installations must conform to.

A Generic Risk assessment should be carried out by the approved contractor prior to the commencement of any site work. Specific Risk Assessments should then be carried out for all electrical street lighting works.

EDS Ltd — Design Methodology

It is recommended that the approved contractor undertakes site supervision of the new installation at all times. Once the contractor has completed the installation works the contractor is to confirm the installation complies with the IEE 17th Edition Wiring Regulations by producing electrical test certificates. All electrical test certificates shall be submitted to the WCC Electrical Engineer.