

Johnathon Lowe
Miller Homes
103 Dalton Avenue
Birchwood Park
Warrington
WA3 6YF

ERAP (Consultant Ecologists) Ltd ref: 2021-272e

6th December 2021

Dear Johnathon,

RE: Northenden Campus, Sale Road, M23 0DD: Ecological Review of Street Lighting Design Plans

Thank you for forwarding over the S38 Street Lighting Design Plans (drawings SHD426-SHD-HLG-NORT-DR-EO-design-Layout-R0 Sheets 1 and 2) prepared by SHD Lighting for the site at Northenden Campus, hereafter referenced as a the 'Lighting Design Plan'.

I have reviewed the plans in consideration of the following guidance, as provided in Sections 5.3 and 5.4 and of our *Ecological Survey and Assessment* report (ERAP (Consultant Ecologists) Ltd, 2021) which state:

"Design and implementation of an appropriate and sensitive lighting strategy to avoid any adverse effects on wildlife such as foraging bats, including the avoidance of lighting where not required. The lighting scheme will be designed with reference to current guidance, namely:

- *Guidance Note 8: Bats and Artificial Lighting in the UK (Institution of Lighting Professionals & Bat Conservation Trust, 2018); and*
- *Bats and lighting: Overview of current evidence and mitigation guidance (Stone, 2014)."*

And

"5.4.3 Paragraph 180, bullet point 'c' in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

5.4.4 Any lighting to be used during the construction phase must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the retained habitats as lighting overspill may deter use by wildlife such as foraging bats."

The plans have also been reviewed in consideration of our 'Figure 1: Plan to Show Location and Specification of Bird and Bat Boxes. V4. (ERAP (Consultant Ecologists) Ltd, November 2021).

Following our review of the lighting proposals and the landscape planting plans, the following statements are made:

- a. The lighting proposals comprise the installation of 45 6.0 metre high columns fitted with Philips Gen2 Luma Luminaire that, in terms of highway illumination are specified to achieve:

Minimum maintained average illuminance (Eav): >5.00 lux <7.50 lux

Minimum illuminance (Emin): >1.00 lux

Emin/Eav (uniformity): >0.20 (>20%)

- b. All illumination will be located immediately adjacent to the new highways / access roads; no unnecessary or 'feature' illumination is proposed at the site;
- c. The use of LEDs will ensure that the light is directional and produces a narrow beam;
- d. The use of tall (6.0 metre high) columns with lanterns at the top has enabled light to be directed downwards at an acute angle which acts to reduce horizontal spill. This is evidenced by the isolux contours annotated on the Lighting Design Plan and is in accordance with current guidance;
- e. The positioning of the properties and the illuminated access roads through the site has ensured that the illumination is positioned away from the retained boundary trees and shrubs, particularly those at the site boundaries, that have been identified to be suitable for the attraction of foraging bats;
- f. None of the guidance currently states a lux (quantity of light) threshold that will deter (or will be tolerated) by bats as this is difficult to determine owing to variations in bat species and levels of habituation. However, as demonstrated on the Lighting Design Plan, owing to the use of directional LEDs mounted on tall columns, the lux levels beyond a maximum of approximately 10 metres from the edge of the highway is less than 0.2 lux which is regarded as a 'low level' (i.e. a clear full moon is up to 0.3 lux¹);
- g. The lux levels beyond the site boundary to be created by the proposed lighting do not exceed 0.2 lux. Therefore, there is minimal risk of a cumulative increase in artificial illumination and light levels around as a result of a combination of any extant illumination on the existing roads and the new street lighting;
- h. The proposed lighting is not directly over a reflective surface (such as water or a light-coloured surface) which would act to reflect light upwards and contribute to the lux values; and
- i. Owing to the position of the lanterns, the lux values and the directional LED light, light overspill to habitats beyond the site boundary will not occur.

Conclusion

Following our review of the Lighting Design Plan and consultation of the current guidance it is concluded that the lighting proposals at the Northenden Campus site are not contrary to current guidance.

The specifications and proposals seek protect the opportunities for foraging bats, and other crepuscular fauna, and the proposed roost provisions to be installed, from adverse effects associated with excessive illumination.

Future Maintenance

To ensure that the conclusions of this assessment remain valid it is essential that the lighting proposals are implemented in accordance with the Lighting Design Plan prepared by SHD Lighting and that any future repairs or the installation of replacement luminaires / lamps are carried out on a like-for-like basis.

¹ https://www.use-ip.co.uk/datasheets/lux_light_level_chart.pdf

I trust this letter is of assistance, please contact me if you have any queries.

Yours sincerely,



Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM
Principal Ecologist

