

Our ref: 9212 / AGE / JSE

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12th September 2019

Dear Matthew,

WOODHEAD ROAD, HOLMBRIDGE WEST YORKSHIRE – MITIGATION RECOMMENDATIONS WITH RESPECT TO BAT SPECIES

The following information is provided as a result of our recent conversation with Tom Stephenson Environment Officer at Kirklees Council to discuss comments with regards to planning application 2019/62/91227/W. Concerns were raised regarding the potential disturbance of bats from increases in lighting levels along the adjacent River Holme which is designated as an important wildlife corridor forming part of the Kirklees Wildlife Habitat Network. In conclusion support was given for any lighting scheme to be designed with reference to the Bat Conservation Trust and Institute of Lighting Professionals guidance¹, in order that potential impacts on bats can be mitigated. Any lighting scheme should also be undertaken by a suitably experienced lighting engineer who is able to determine lux level calculations arising from the proposed lighting design. It is my understanding that such a lighting scheme is required in order for the local authority to determine the planning application.

All UK species of bat are listed on the Conservation of Habitats and Species Regulations 2017 (as amended) making it illegal to deliberately disturb and such animal or damage / destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Artificial light within the vicinity or along the flightpath of a roost can cause disturbance and potential abandonment of the roost (Downs *et al.* 2003², Packman *et al.* 2015³). Artificial lighting can also affect the distribution of insect prey species, thereby further affecting bat foraging, both positively and negatively,

¹ Bat Conservation Trust & Institute of Lighting Professionals (ILP) (2018) *Guidance Note 8: Bats and artificial lighting in the UK*. Bats and the Built Environment Series.

² Downs, N.C. *et al.* (2003) The effects of illuminating the roost entrance on the emergence behaviour of *Pipistrellus pygmaeus*. *Biological Conservation* **111**, 247-252

³ Packman, C., Zeale, M., Harris, S. and Jones, G. (2015) Management of bats in churches – pilot. *English Heritage Research Project*: **6199**

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dependant on the species present. Studies have also shown that continuous lighting in the landscape, such as along roads or waterways can create barriers that many bat species cannot cross, especially slower flying species (Fure, 2012⁴).

Lighting considerations should be incorporated into the development for both during the construction phase and post development to ensure any light spill is within recommended parameters¹.

Construction Phase Lighting Considerations

- During the construction period no lighting is present at night, i.e. between 30 minutes prior to sunset and 30 minutes after sunrise.
- Any upward lighting should be avoided
- Lighting is directed to where it is needed. Light spill onto the watercourse should be avoided.

Post Development Lighting Considerations

- Lighting should be LED luminaires due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. All luminaires should lack UV elements. Metal halide, fluorescent sources should not be used.
- A warm white spectrum (ideally <2700 Kelvin) should be adopted to reduce the blue light component
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012⁵).
- Security lighting should only be placed on the northern elevation and will be low wattage (<70W) motion censored lights⁵ and on a short timers (1min).
- Only luminaires with an upward light ratio of 0% and good optical control should be used.
- Low-level, downward directional luminaires can be considered to retain darkness above.
- Light spill onto the adjacent River Holme including spill from glazing along the elevation should be 1 lux or less.
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- Light spill can also be successfully screened through soft landscaping as well as the installation of walls, fences and bunding.
- Glazing treatments can be used to achieve reduced illuminance targets. Products such as retrofit window films and factory tinted glazing.
- Following the implementation of all other mitigation options, the use of accessories such as baffles, hoods or louvres can be considered to reduce light spill and direct it only to where it is needed

I trust you will find the foregoing satisfactory. However, if you wish to discuss this further or require any further guidance please do not hesitate to contact me.

Yours sincerely



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⁴ Fure, A (2012) Bats and lighting – six years only. *The London Naturalist*. **No 85**

⁵ Stone, E.L (2013) *Bats and lighting: Overview of current evidence and mitigation*.