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## **Review of proposed lighting at *Lindsell, Dunmow, CM6 3QL***

To whom it may concern,

Practical Ecology Ltd were commissioned by KANE GOODCHILD PROPERTY LTD to undertake a Preliminary Roost Assessment (PRA) at Lindsell, Dunmow, herein referred to as the 'Site'. The Site is approximately 0.5ha (central OS grid reference TL 64032 27982, postcode CM6 3QL) and is located in Lindsell, Dunmow in Essex. The site comprises of a bungalow dwelling with outbuildings and car breaking facilities. The surrounding landscape is comprised of the village of Lindsell and predominantly of arable land to the wider area, with areas of woodland, lines of trees and hedgerows.

The proposed development of the site includes demolishing the bungalow dwelling and one outbuilding to construct five residential dwellings.

It was noted that lighting installed as a result of the scheme, in both the construction and operational phases of the development, could disrupt commuting and foraging routes of bats, as well as affecting potential roost features on the retained buildings. Recommendations were made for lighting to follow the following guidance:

- Prevent unnecessary light spill onto any foraging, commuting, or roosting habitat existing on site or installed as part of the development, including boundary habitats, trees, or bat box locations.
- Minimise light spill by eliminating any bare bulbs and upward pointing light fixtures.
- Keep the spread of light near to, or below, the horizontal plane, by using as steep a downward angle as possible and/or a shield hood. Flat, cut-off lanterns are best.
- Use luminaires with peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Reduce the blue-light component by using warm white spectrum (<2700Kelvin) bulbs.
- Use luminaires without UV. Metal halide, fluorescent sources must not be used.
- Limit the height of lighting columns to 8m and increase the spacing of lighting columns to reduce the spill of light into unwanted areas.

The scale of the development and the proposed external lighting mean that no lighting plot has been created, showing the scale and spread of light from the proposed new lighting external onsite. The exact specification and locations of lighting is also unknown, however, there are known details about the lighting which provides information for an approximate assessment.

No column or bollard lighting will be installed. The proposals for lighting onsite are outlined as follows:

- Each dwelling to have four fittings (one on each elevation);
- Each fitting a low (<6 watt) LED;

- Porch lights to be fitted with a motion sensor;
- Other lights to be fitted with an internal on/off switch located by the rear and utility door.

As no lighting will be illuminated for the duration of a night, there is a significantly reduced impact from installed lighting and potential impacts on bats are minimal. However, the following should still be considered and followed:

- **Keep the spread of light near to, or below, the horizontal plane, by using as steep a downward angle as possible and/or a shield hood. Flat, cut-off lanterns are best and will avoid lightspill outside the area around doorways.**
- **Reduce the blue-light component ideally using warm white spectrum (<2700Kelvin) bulbs with no bulbs over 3000 Kelvin used.**
- **Use luminaires without UV. Metal halide, fluorescent sources must not be used.**
- **Integrated bat boxes to be positioned away from external light sources.**

With these measures in place, it is not considered that the development will impact bats, lightspill onto boundary vegetation will likely comply with guidance from the Bat Conservation Trust<sup>1</sup>.

Kind regards,

Alex

Alex Jessop MSc, Ecologist at Practical Ecology Ltd.

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<sup>1</sup> Bat Conservation Trust, Bats and artificial lighting in the UK; Bats and the Built Environment series, Guidance Note 08/18