

Lighting Design Strategy for Biodiversity (Condition 11)

Application reference: 25/00374/OUT

Site: Land Adjacent Home Farm, Bradgate Hill, Groby, Leicestershire

Condition: 11 – External Lighting Strategy for Biodiversity

Supporting report: Wildlife Consultants Ltd, Ecological Appraisal, March 2025

1. Purpose of the strategy

This document is submitted to discharge Condition 11 of planning permission 25/00374/OUT. It sets out a lighting design that:

- complies with **ILP GN08/23 – Bats and Artificial Lighting at Night**
- avoids illumination of sensitive habitats
- prevents disturbance to foraging and commuting bats
- delivers safe access and residential amenity

The strategy applies **individually to both plots** (mirror handed) and will be installed **prior to occupation** of each dwelling.

2. Sensitive ecological features

The ecological appraisal identified:

- mature trees and quarry edge providing **potential bat foraging/commuting habitat**
- generally low site ecological value but **sensitivity at boundaries**

Accordingly:

- rear garden boundaries
- quarry-side boundaries
- tree lines

are treated as **dark corridors** and will not be illuminated.

3. General lighting principles

The development will follow the principles below:

- **no floodlighting**
- no lighting of treelines, hedgerows or bat flight paths
- lighting mounted at **low heights**
- **downward directional** fittings only
- **warm white light only (<2700K)** to minimise blue spectrum impact
- **no UV light sources**
- **PIR / motion-activated** where appropriate
- **timers/curfews** to minimise hours of operation
- zero upward light output ratio (ULOR = 0%)
- **light spillage restricted to domestic curtilage**

4. Proposed lighting locations and types

A) Front doors

- **1 low-spill wall downlight per front door**
- mounted at **2.0–2.2 m** height
- full cut-off downward beam

- PIR controlled
- low lumen output suitable for access only

B) Rear doors and terrace areas

- **downlights to rear doors** (as above) for access only
- minimal coverage limited to immediate patio area
- no illumination of garden boundaries

C) Paths and parking areas

- **short bollard lights to paths and driveway edges**
- used only where essential for safe access
- maximum height **≤1.0 m**
- flat-top or louvered design
- asymmetric optics avoiding sideways spill
- spaced to avoid overlapping light cones

D) Areas deliberately left unlit

The following will **remain unlit**:

- rear garden perimeter
- tree lines
- quarry-facing boundary
- hedgerows

- identified ecological “dark corridor”

5. Performance criteria / technical limits

Lighting will comply with the following biodiversity thresholds:

- **horizontal spill at habitat edge ≤ 1 lux**
- **vertical illuminance at trees/hedgerows ≤ 0.2 lux**
- ULOR = 0%
- CCT ≤ 2700 K
- No column lighting
- No high-intensity security lighting

Lux contour plans will ensure zero illumination of:

- quarry edge
- tree canopies
- bat commuting routes

6. Control measures

All external lighting will be:

- PIR or timed
- capable of curfew reduction after 23:00
- manually overrideable to OFF

- not left permanently illuminated

Security lighting, if installed, will:

- be **low-lux**
- be **short duration**
- have **narrow beam angles**

7. Installation and maintenance

Lighting will be installed:

- in accordance with manufacturer instructions
- without upward tilting
- with shields/baffles where needed to control spill

Future replacement will maintain:

- downward-only fittings
- warm-white spectrum
- compliance with ILP GN08/23

8. Compliance statement

This strategy:

- identifies sensitive ecological receptors
- demonstrates lighting avoidance of those receptors
- follows **ILP GN08/23**

- accords with Condition 11 and Policy DM6
- aligns with recommendations in the March 2025 Ecological Appraisal