

The Courtyard, Edinburgh Road, Reading Berkshire RG30 2UA

Project Ref. 9377-26

LIGHTING DESIGN STRATEGY FOR BIODIVERSITY

Condition 10

Site Address

Silver Birches
Heath Ride
Finchampstead
Wokingham
RG40 3QJ

Client

Jinder Singh Rahi

Planning Permission

Demolition of existing bungalow and erection of replacement dwelling

Prepared By

The Keen Partnership
The Courtyard
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Date

June 2026

1. INTRODUCTION

This Lighting Design Strategy for Biodiversity has been prepared to satisfy the requirements of Condition 10 attached to the planning permission for the redevelopment of Silver Birches, Heath Ride, Finchampstead.

Condition 10 requires the submission and approval of a lighting strategy which identifies ecologically sensitive features and demonstrates that external lighting will not adversely affect bats or other protected species.

This report has been prepared having regard to:

- Wildlife and Countryside Act 1981 (as amended)
- Conservation of Habitats and Species Regulations 2017
- National Planning Policy Framework (NPPF)
- Wokingham Borough Core Strategy Policy CP7
- Bat Conservation Trust Guidance
- Institution of Lighting Professionals Guidance Note GN08/23 – Bats and Artificial Lighting

This report should be read in conjunction with the following drawings:

Drawing 9377-202.4 – Proposed Lighting Site Plan

Drawing 9377-202.5 – Proposed Lighting Elevations

Drawing 9377-202.6 – Proposed Lighting Side Elevations

2. SITE DESCRIPTION

The site comprises a residential plot located on Heath Ride, Finchampstead within an established wooded residential area.

The approved development comprises the demolition of the existing bungalow and associated structures and the construction of a replacement dwelling with associated landscaping, access arrangements and external works.

The site is characterised by mature trees, boundary planting and landscaped garden areas. Woodland habitats are present within the wider surrounding area.

3. ECOLOGICAL CONTEXT

A Phase 1 Bat Survey and Provisional Roost Assessment was undertaken by Dr Jonty Denton CEcol MCIEEM during July 2025.

The survey identified:

- No evidence of bat occupation within the existing bungalow.
- No evidence of bat occupation within the detached garage.
- Low bat roost potential associated with several minor crevice features.
- Mature trees and woodland habitats surrounding the site which provide potential commuting and foraging habitat.

A subsequent Phase 2 Bat Emergence Survey was undertaken on 14 July 2025.

The survey concluded that:

- No bats emerged from any structure on site.
- Bat activity was very low.
- Only occasional common pipistrelle activity was recorded within the wider landscape.
- No bat roosts are present within the buildings.
- No further bat surveys are required.

The survey report recommends that any external lighting should accord with current best practice guidance for bats and artificial lighting.

The primary ecological objective of this strategy is therefore to ensure that surrounding vegetation, trees and potential commuting routes remain substantially unlit.

4. ECOLOGICALLY SENSITIVE FEATURES

The following features are considered sensitive to artificial lighting and require protection:

- Existing mature Oak trees.
- Existing mature Birch trees.
- Existing Yew tree.

- Boundary hedgerows.
- Woodland edge habitats.
- Retained landscaping.
- Potential bat commuting routes around the site perimeter.

These features are shown on Drawing 9377-202.4.

No lighting is proposed within these areas.

5. LIGHTING DESIGN OBJECTIVES

The proposed lighting design has been developed in accordance with Bat Conservation Trust and ILP GN08/23 guidance and seeks to:

1. Maintain dark ecological corridors.
2. Minimise light spill beyond the building envelope.
3. Prevent illumination of retained trees and hedgerows.
4. Prevent upward light spill.
5. Use warm white lighting only.
6. Restrict operating periods.
7. Provide safe access for occupants without adverse ecological impacts.
- 8.

6. PROPOSED LIGHTING LOCATIONS

External lighting is restricted to the following locations:

L1 – Main entrance doorway.

L2 – Front entrance feature lighting.

L3 – Garage entrance lighting.

L4 – Side access route lighting.

L5 – Rear terrace lighting.

L6 – Step and retaining wall lighting.

L7 – Bin and cycle store lighting.

All lighting is located adjacent to the dwelling and away from ecological features.

No freestanding lighting columns are proposed.

No floodlighting is proposed.

No landscape uplighting is proposed.

7. LIGHTING SPECIFICATIONS

The following luminaires are representative examples of approved fittings.

Equivalent alternatives may be used where they achieve equal or better environmental performance.

L1 Main Entrance Wall Light

Manufacturer:
Collingwood

Model:
WL041

Power:
4W LED

Colour Temperature:
2700 Kelvin

Light Output:
300 Lumens Maximum

IP Rating:
IP65

Beam Direction:
Downward Only

L2 Entrance Feature Lighting

Manufacturer:
Astro Lighting

Model:
Mast Light

Power:
3.7W LED

Colour Temperature:
2700 Kelvin

Light Output:
247 Lumens

Beam Direction:
Downward Shielded

L3 Garage Entrance Lighting

Manufacturer:
Ansell

Model:
Horizon PIR

Power:
6W LED

Colour Temperature:
2700 Kelvin

Light Output:
500 Lumens Maximum

Control:
PIR Activated

Mounting Height:
2.3m

Beam Direction:
Downward Only

L4 Side Access Bollards

Manufacturer:
Collingwood

Model:
GL019 Mini Bollard

Power:
3W LED

Colour Temperature:
2700 Kelvin

Light Output:
120 Lumens

Height:
600mm

Beam Direction:
Downward Only

L5 Rear Terrace Lighting

Manufacturer:
Aurora

Model:
AU-R6

Power:
4W LED

Colour Temperature:
2700 Kelvin

Light Output:
300 Lumens Maximum

Installation:
Recessed Soffit Mounted

Beam Direction:
Vertical Downward

L6 Step Lighting

Manufacturer:
Collingwood

Model:
GL052

Power:
1.5W LED

Colour Temperature:
2700 Kelvin

Light Output:
40 Lumens

Installation:
Recessed Step Lighting

Beam Direction:
Downward Only

L7 Bin Store and Cycle Store Lighting

Manufacturer:
Ansell

Model:
Reef PIR Bulkhead

Power:
4W LED

Colour Temperature:
2700 Kelvin

Light Output:
300 Lumens Maximum

Control:
PIR Activated

Beam Direction:
Downward Only

8. ECOLOGICAL LIGHTING CONTROLS

The following requirements shall apply to all external lighting:

Specification 1
Maximum colour temperature of 2700 Kelvin.

Specification 2
Upward Light Ratio (ULR) of 0%.

Specification 3
All fittings shall be fully shielded.

Specification 4
No direct illumination of trees, woodland edges or hedgerows.

Specification 5
Lighting to be PIR activated or timer controlled wherever practicable.

Specification 6
Maximum PIR activation period of five minutes.

Specification 7
No decorative landscape lighting.

Specification 8
No tree uplighting.

Specification 9
No floodlighting.

Specification 10
All luminaires angled downward at less than 70 degrees.

9. LIGHTING LEVELS

The lighting scheme has been designed to achieve the following target levels:

Building Entrances:

5–10 lux

Access Routes:

1–5 lux

Terrace Areas:

Maximum 5 lux

Site Boundaries:

Maximum 0.5 lux

Vegetated Areas:

Maximum 0.2 lux to 0.5 lux

Tree Canopies:

0 lux wherever practicable

These lighting levels are consistent with current ecological lighting guidance and ensure the retention of dark ecological corridors.

10. DARK ECOLOGICAL CORRIDORS

The following areas shall remain unlit:

- Eastern boundary tree belt.
- Western boundary planting.
- Rear woodland edge.
- Oak trees.
- Birch trees.
- Yew tree.
- Boundary hedgerows.
- Peripheral landscaped areas.

No external lighting shall be installed within these areas.

11. INSTALLATION AND MAINTENANCE

All lighting shall be installed in accordance with the approved drawings and this strategy prior to occupation of the dwelling.

Any replacement fittings shall be of an equivalent specification and shall maintain compliance with this strategy.

No additional external lighting shall be installed without prior written approval from the Local Planning Authority.

All lighting shall be maintained in accordance with the manufacturer's recommendations.

12. CONCLUSION

The proposed lighting strategy has been specifically designed to minimise impacts on bats and other nocturnal wildlife through the use of low-level warm white lighting, strict control of light spill, downward-directed luminaires and the retention of dark ecological corridors around the site.

The Phase 1 Bat Survey and subsequent Phase 2 Emergence Survey confirmed that no bat roosts are present within the buildings and that bat activity across the site is low.

The proposed lighting scheme will not adversely affect bat commuting routes, foraging habitat or potential roosting opportunities and therefore complies with:

- Wildlife and Countryside Act 1981.
- Conservation of Habitats and Species Regulations 2017.
- National Planning Policy Framework.
- Wokingham Core Strategy Policy CP7.

The requirements of Condition 10 should therefore be satisfied.

L1 – Main Entrance Wall Light (Collingwood WL041 or similar)





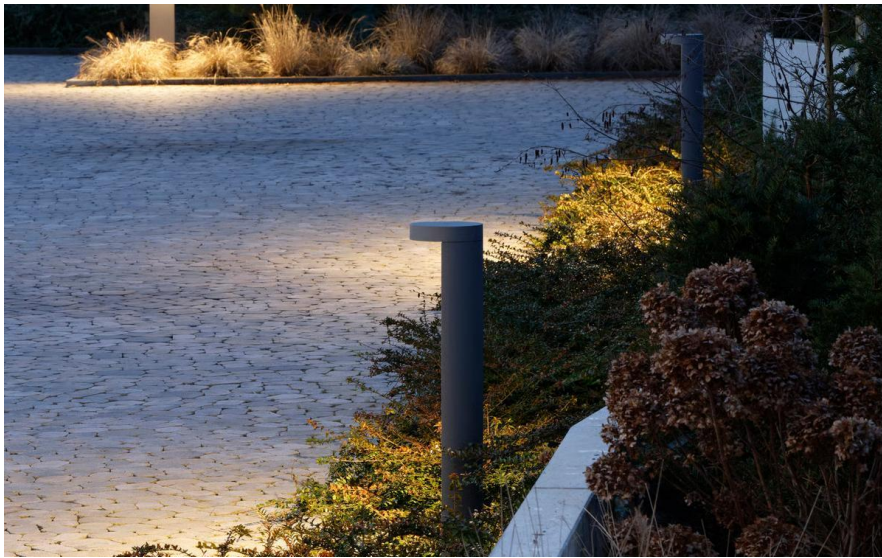
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Specification

- 4W LED
- 2700K warm white
- 300 lumens max
- IP65
- Downward-facing beam

L4 – Side Access Bollard Light (Collingwood GL019 or similar)





6

Specification

- 3W LED
- 2700K
- 120 lumens
- 600mm height
- Downward light distribution

L5 – Rear Terrace Recessed Downlights (Aurora AU-R6 or similar)





5

Specification

- 4W LED
- 2700K
- Recessed in soffit
- Vertical downward beam only

L6 – Step Lighting (Collingwood GL052 or similar)





6

Specification

- 1.5W LED
- 2700K
- 40 lumens
- Recessed installation
- No upward spill

L3 & L7 – PIR Security/Bulkhead Lights





4

Specification

- PIR activated
- Maximum 5-minute run time
- 2700K warm white
- Fully shielded
- Downward beam

For a high-end dwelling like Silver Birches, I would actually use:

- **Astro Lighting** for the entrance and terrace lights.
- **Collingwood** for bollards and step lights.
- **Ansell** for PIR/security fittings.

These brands are widely accepted by planning authorities, have good technical data sheets, and look appropriate for a luxury replacement dwelling.