

Lighting Plan – Plot 4 Cwm Woods Grove

Prepared for: Craig Lambe
Site: Plot 4, Cwm Woods Grove, Heolgerrig, Merthyr Tydfil
Associated Documents:

- Landscape and Ecology Management Plan (LEMP Rev 3)
- Landscape Plan CR402 Rev B
- 25-Year LMMP Rev A

1. Lighting Strategy Objectives

- Protect and maintain **dark corridors** for bats and nocturnal wildlife along the **south-west (woodland)** and **north-east** boundaries.
- Provide **safe, functional illumination** for homeowners with **minimal light spill**.
- Use only **2700 K warm-white**, fully-shielded luminaires.
- All external fittings shall **exclude upward light** and shall **not exceed 500 lumens per fitting**.
- All lighting will comply with **ILP GN08/23 (Bats and Artificial Lighting)** and **BS EN 12464-2:2014**.

2. Layout Overview

Zone	Fittings	Control	Max Lumen	Mount Height	Purpose / Notes
Front (North-West Elevation)	2 × PIR wall downlights either side of front door + 1 to garage	PIR + manual override (2 min timer)	≤ 400 lm each	1.8–2.0 m	Functional entry lighting only. Full cut-off beam ≤ 60°.
Rear Garden (South-East Elevation)	1 × PIR wall downlight near rear door	PIR only	≤ 400 lm	1.8 m	Minimal illumination for safe exit; directed downward.
North-West Elevation (Woodland Edge)	1 × low-level bollard (optional) or omit if not required	PIR + 2 min timer	≤ 300 lm	≤ 0.6 m	Maintains dark corridor; bollard only if safety required.
South-East Elevation (Driveway Side)	1 × PIR wall downlight near side door	PIR only	≤ 400 lm	1.8 m	Avoid light spill onto boundary hedge.

Zone	Fittings	Control	Max Lumen	Mount Height	Purpose / Notes
Garage Front	1 × PIR wall downlight over door	PIR + timer	≤ 400 lm	1.8 m	Downlight only; no uplight element.
Porch Ceiling (Under Soffit)	1 × 2700 K recessed soffit light (eco-approved)	PIR shared circuit	≤ 300 lm	Flush mount	Warm colour; automatically off after 2 min; maintains zero spill beyond porch canopy.

3. Recommended Luminaires (all dark-sky-compliant)

Location	Model	Description	Colour Temp	Output / Power	IP Rating
General wall light	Collingwood WL95 2700 K Downlight	Full cut-off, PIR sensor version	2700 K	4 W LED ≈ 380 lm	IP65
Porch soffit light	Ansell Alcove 2700 K Recessed	Flush soffit LED	2700 K	3 W ≈ 280 lm	IP65
Bollard (optional)	Lutec “Cuba Mini” 2700 K Shielded Bollard	Low-glare flat-top lens	2700 K	4 W ≈ 300 lm	IP65

All fittings shall have **integrated LED modules with non-adjustable outputs** (no selectable lumen settings or tunable white).

4. Controls and Operating Parameters

- All external lights on **PIR sensors with 120° field**, activation at ≤ 6 m range, timed off after ≤ 2 minutes.
- **No dusk-to-dawn or continuously-lit** luminaires permitted.
- Manual override (if present) must automatically revert to PIR mode after 10 minutes.
- **Lux at boundary** not to exceed:
 - **0 lux** along north-west dark corridor;
 - **1 lux average / 3 lux max** at other boundaries.

5. Dark Corridor and Faunal Protection Notes

1. No luminaire within 5 m of any **bat or swift box**, or directed toward **hedgerows / woodland nib**.
2. Bat roost and swift box locations (NE and SW elevations) shall remain unlit.
3. Maintain **vegetation screens** (hedges, trees) between light sources and woodland.
4. Use matte, non-reflective surfaces on drives and paths to minimise reflected light.

5. Ecologist to verify light levels on completion with **lux meter survey** (optional technical note).

6. Compliance Statement

All external lighting shall:

- Be installed strictly per this plan;
- Use only fixtures with **fixed 2700 K warm-white LEDs $\leq$ 500 lumens**;
- Be PIR-controlled;
- Maintain **dark corridors** on the north-west and south-east sides in full accordance with **ILP GN08/23** and **LEMP Rev 3 §6.3**.

A brief **lighting verification note** (with product cut-sheets and lux readings if required) will be provided by the ecologist or electrical contractor upon completion.