# Changes in street lighting

There is no statutory duty for Local Authorities to provide lighting in public places, but there is, apparently, a moral duty.

Most planning authorities take the disturbance to wildlife of development seriously, and work to mitigate and reduce the damage. Highways lighting is a Devon County Council responsibility but is often devolved to the District, as the local Planning Authority (until we get to Unitary authorities).

Recent improvements include the use of, energy efficient, LEDs. The affordable version of these were at the blue UV end of the spectrum, however now warmer soft white lamps are cheaper, even dimmable and centrally controllable.

We are now at the end of of a twelve-month countywide trial reviewed in February 2026. changes agreed as below

Exeter

- Dimmed to 40% output 9.30pm-12.30am
- Switched off 12.30am-5.30am
- Return to 40% 5.30am-6.30am

Market towns

- Dimmed to 40%output 8.30pm –12.00am
- Switched off from 12.00am-5.30am
- Return to 40% output 5.30-6.30am

Rural Areas

- Dimmed to 40% output 7.00pm-12.00am
- Switched off 12.00am-5.30am
- Return to 40% 5.30-6.30am.

These changes have been assessed for safety by the police, and, as has been shown by other retrospective surveys, no difference in road accidents or personal safety have been associated with reduction in light intensity.
The lighting on main roads remain unchanged, but policies for protection of wildlife in environmentally sensitive areas have improved.

To understand these changes one has to be familiar with names.

- We have been through sodium vapour (orangish), mercury (bright white) and fluorescent (blueish) lamps, now we fit LEDs, capable of almost any colour you like!
- In the old days, light emitted was measured in Lumens and light as seen by us, ie reflected on surfaces was measured in Lux.
- For wildlife planning purposes, less than 0.5 lux (equivalent to bright moonlight) illuminating a sensitive area was acceptable.
- Now we measure the light temperature...in Kelvin. The higher the kelvin the bluer the light, and we have found blue/green light (3-4000 Kelvin) interferes with human and wildlife behaviour more than amber ( less than 2,700 Kelvin).
- Shorter wavelengths with higher frequency, that is blue-UV end of the spectrum, lead to more damage of genetic material

Buglife recommends 2,200 Kelvin in sensitive areas such as those impinging on SSSIs.

In Chudleigh, after persistent requests over three years, the bright 4,000 Kelvin, tall column lamps at the entrance of the new estate on Station Hill,  were changed to 2,700K and the number of of Greater Horseshoe bat passes has increased, from none or very few, to 6 or even 12 on early evening surveys at the top of Station Hill.

A recent development in Newton Ferrers AONB has specified 1,700K on a 30mph road when 3,000K is the norm for road lighting, so it appears that wildlife friendly lighting is more affordable and easier to control.

## Further Considerations

- Blue/green lighting at any level alters behaviour of invertebrates, therefore distorting their distribution.
- Reddish lighting interferes less in general with inverts and mammals, but Horseshoe bats still avoid even low level red light.
- The accepted Lux level of 0.5 should be reduced to 0.36 and contain no blue light.
- Roosts and flyways should be totally dark.
- Bollard lighting is not necessarily useful because of upward glare.
- Any light should be shielded from landing on vegetation or water.
- Be aware that any pale surface reflects and expands the bright area.

The fashion for garden leisure lighting may well impact on wildlife even though it may be at low levels, the only way to tell is to do surveys using bat recorders and camera traps in the first instance but it will be difficult to assess any effect accurately.

A walk through Chudleigh at night demonstrates the various difference of managing public space lighting.

- Lower Trindle Close, no street lighting but low-level door lights and spill from windows.
- Station Hill near the Oaks, warm light on 6m columns on main road. Blue white column light on the residential streets. No lighting on flyways.
- Bright white LED lights on main road through Chudleigh.
- Millstream Meadow, 15 year old estate with amber lights on tall columns with old fashioned lamps, not shielded, so spreading laterally and upwards.
- Park off Millstream meadow, short column with similar old fashioned amber light of low intensity which seems to be tolerated by the Greater horseshoe bats who use the dark vegetated passage as a flyway.

Tessa Frost
April 2026

There is more to find on Bat Conservation Trust and Institute of Lighting Professionals