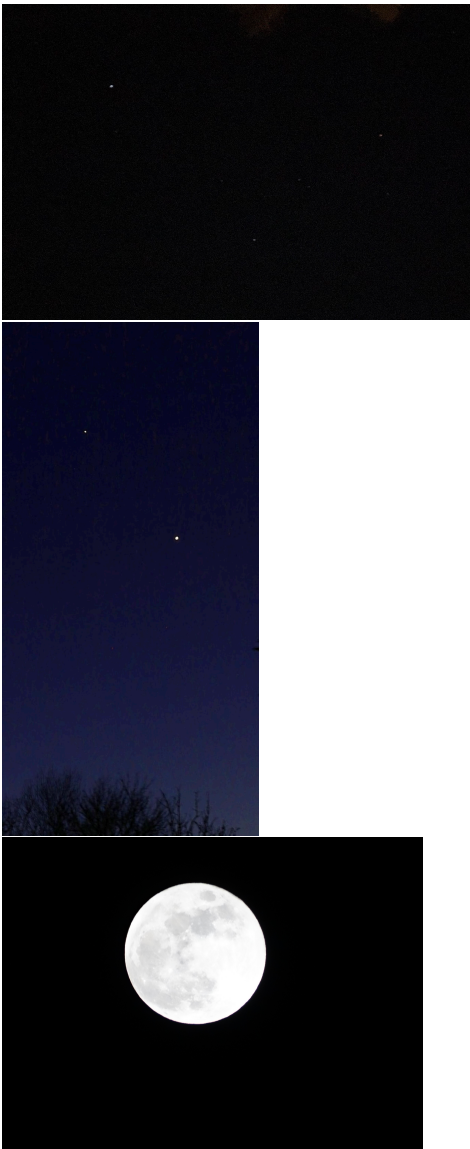


# Dark Skies Evidence Report

## For Fawkham Neighbourhood Plan



# Dark Skies Evidence Report for Fawkhams Parish Neighbourhood Plan

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## Introduction

Paragraph 125 of the NPPF identifies the importance of minimising the impact of light pollution, stating *“by encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”*

Although Fawkhams Parish has no street lighting, there are some buildings - commercial, domestic, equestrian and leisure - which have external lights, such as security lights, floodlights, lanterns and uplighters. Lighting is, of course, needed: for outdoor leisure facilities during winter months, for example, and can be helpful for safety purposes. Lighting does, however, need to be in the right place and used in the right way.

*“An accepted and often valued part of living in or visiting the countryside has always been dark, star-filled skies. These qualities are increasingly difficult to enjoy outside the AONB”<sup>1</sup> and “are a valued part of the experience of tranquil rural areas.”<sup>2</sup>*

Fawkhams is a rural area, for which darkness at night is one of the key characteristics, and also a Parish with a wide range of biodiversity assets which need protection from inappropriate and unnecessary lighting.

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## Campaign to Protect Rural England (CPRE) Evidence

The most detailed ever satellite maps of England’s light pollution and dark skies were released on 13th June 2016 by the CPRE. The maps were produced using satellite images captured at 1.30am throughout September 2015, and are divided into pixels, 400 metres x 400 metres, to show the amount of light shining up into the night sky from that area. This was measured by satellite in nanowatts, which was then used to create a measure of night-time brightness.

These maps show that Sevenoaks District has the 101st darkest skies out of the 326 English districts. Sevenoaks District Council has a policy on outdoor lighting within the Allocations and Development Management Plan, as follows:

### Policy EN6 - Outdoor Lighting

*Proposals for lighting that affect the outdoor environment which meet the following criteria will be permitted:*

- a) where associated with a wider development, the proposal would be well integrated within the scheme;*
- b) any impact on the night sky would be minimised through time-limited and user activated lighting, the alignment of lamps, provision of shielding and selection of appropriate lighting type and intensity;*
- c) there would be no harmful impact on privacy or amenity for nearby residential properties;*
- d) the proposal would preserve or enhance the character or appearance of any Heritage*

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<sup>1</sup> Kent Downs AONB Management Plan 2021-2026, para 3.3 Tranquility and Remoteness

<sup>2</sup> *ibid*, para 3.4 point (g)

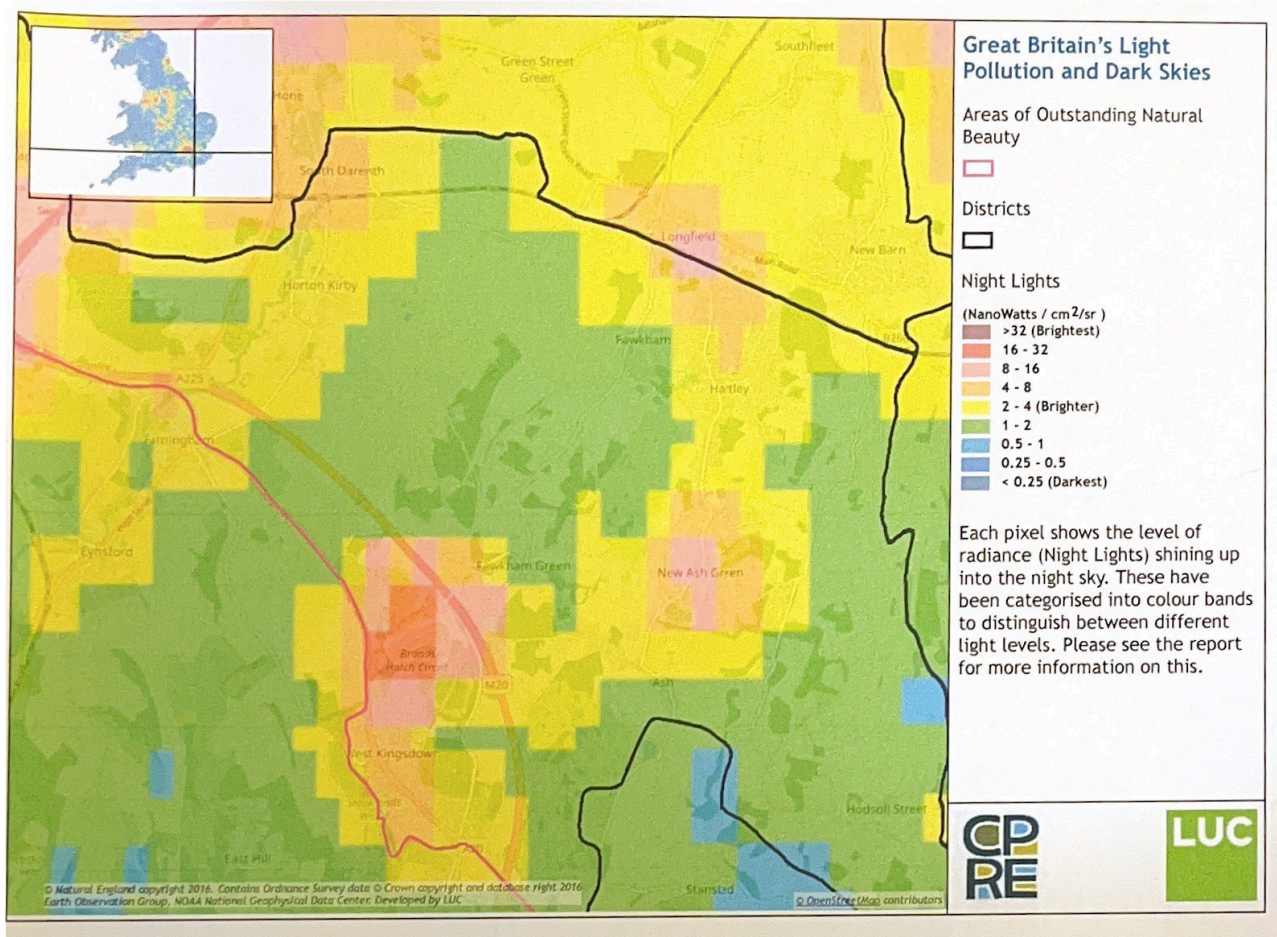
Asset which may be affected;

e) any potential impacts on wildlife would be avoided or adequately mitigated where avoidance is not possible; and

f) where proposals affect Areas of Outstanding Natural Beauty or open countryside, it can be demonstrated that the lighting is essential for safety or security reasons.

Where these criteria are met, proposals incorporating the use of low energy lighting will be encouraged.

Map 1 shows the level of night lights in Fawkhams Parish and the surrounding area.



Map 1 – CPRE Light Pollution and Dark Skies Map 2016

This shows that the majority of the Parish experiences low levels of radiance, especially in comparison with adjoining Parishes which are not washed over by the Green Belt.

At the southern end of the Parish, higher levels of radiance are seen, with the brightest night skies seen over Brands Hatch racing circuit, just beyond the Parish boundary, where lights are left on all night. Fawkhams Parish Council has contacted Brands Hatch circuit's management and has been advised that the majority of lights are required "for security reasons" although adjustments may be possible to some. Map 1 – CPRE Light Pollution and Dark Skies Map 2016

At the northern-most end of the Parish, the influence of lights can be seen, including from the street lights in the settlements of Hartley and Longfield. This area of the Parish also contains Southern Water's pumping station, in which the lights remain on 24 hours a day, although it is unmanned. This is shown in the photographs below. Fawkhams Parish Council has recently

contacted Southern Water and hopes this issue will be soon resolved, resulting in lower level of night lights in this part of the Parish.

*Photographs below show Southern Water Pumping Station and the surrounding area*



The darkest skies are experienced through the central part of the Parish, both along the valley floor and along both the western and eastern ridges.

CPRE believes that darkness at night is one of the key characteristics of rural areas such as Fawkham and that it represents a major difference between what is rural and what is urban. Security lights, floodlights and streetlights all break into the darkness and create a veil of light across the night sky. While CPRE agrees that some of this light is necessary, much of it is wasting energy, shining upwards where it is not needed, spilling into homes and wildlife habitats, disrupting people's sleep and affecting the behaviour of wildlife.

CPRE's research comes at a time of increasing awareness of the harmful effects light pollution can have on the health of people and wildlife<sup>3</sup>:

- There is increasing awareness of the impact that light pollution can have on wildlife, by interrupting natural rhythms including migration, reproduction and feeding patterns. Man-made light is known to cause confusion to migrating birds.
- Research has suggested that moths, which play an important role in pollinating flowers during their nocturnal activity and have declined in abundance by 40% in 40 years<sup>4</sup>, might be disrupted by light pollution – but that this can be alleviated by the use of lower energy lighting or part-time night lighting.
- Buglife state that two-thirds of invertebrates are partially or wholly nocturnal<sup>5</sup> and even diurnal species can be impacted by the loss of their night. The situation is so serious that light pollution is reducing nocturnal pollinator visits to flowers by 62% in some areas.
- Some mammals emerge too early from hibernation as a result of light pollution, and others will try to avoid the light altogether, which disrupts their natural activities such as mating and hunting.

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<sup>3</sup> <https://www.cpre.org.uk/explainer/why-were-working-to-restore-night-skies/>

<sup>4</sup> <https://theconversation.com/pollinators-switch-street-lights-off-at-midnight-to-help-moths-and-nocturnal-wildlife-110114>

<sup>5</sup> <https://www.buglife.org.uk/campaigns/light-pollution/>



- Artificial light, even in LED, contains high concentrations of blue light, which disturbs the circadian rhythms of humans and can disrupt our sleep cycles<sup>6</sup>.
- Despite the steady move towards LED, lighting is responsible for 5% of global emissions, or more than a billion tons of CO2 emissions per year<sup>7</sup>. The more this can be reduced, the better for the environment.

CPRE Kent recommends that:

- Local authorities follow Ashford Borough Council's lead and develop dark skies policies to reduce light pollution in their emerging local plans.
- Councils use CPRE's maps to inform decisions on local planning applications and identify individual facilities that should be asked to dim or switch off unnecessary lights.
- Local businesses review their current lighting and future development plans to save money by dimming or switching off light to reduce pollution as well as to meet their promises over reducing existing pollution.

Hilary Newport, director of CPRE Kent said: *"Our view of the stars is obscured by artificial light. Many children may not have seen the Milky Way, our own galaxy, due to the veil of light that spreads across their night skies. It is known that dark skies are beneficial to our wellbeing. Light pollution can disturb our sleep, prevent our enjoyment of the countryside and affect wildlife, by interrupting natural rhythms including migration, reproduction and feeding patterns."*

*"Councils can reduce light levels through better planning, and with investment in the right street lighting that is used only where and when it is needed."*

## **Fawkham Neighbourhood Plan Steering Group March 2023**

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<sup>6</sup> <https://www.theguardian.com/environment/2022/sep/14/increase-in-led-lighting-risks-harming-human-and-animal-health>

<sup>7</sup> <https://www.theclimategroup.org/led>