

## National Planning Policy Framework consultation: response from the Royal Astronomical Society

1. This is the official response from the Royal Astronomical Society (RAS) to the consultation on the proposed reforms to the National Planning Policy Framework (NPPF) and other changes to the planning system.
2. The RAS represents more than 4,000 astronomers and geophysicists, in the UK and around the world, in occupations in academia, industry, education and public engagement, and journalism, as well as others in the wider economy. Our members are described as ‘Fellows’.
3. Our interest in the NPPF centres on light pollution, specifically Artificial Light at Night (ALAN) originating from ground-based sources. We have raised this issue in previous NPPF consultations, most recently via the All-Party Parliamentary Group (APPG) for Dark Skies in 2023.
4. Light pollution is known to have significant consequences for human health (the subject of a recent inquiry by the House of Lords Science and Technology Committee<sup>1</sup>) and biodiversity (for example on invertebrates as highlighted by the charity Buglife). The London Assembly Environment Committee also published a report calling for a light pollution strategy for the capital in 2023<sup>2</sup>.
5. The central interest of the RAS in this is the impact it has on our view of the night sky, and the consequent damage to the science of astronomy. A sense of wonder about the universe around us, including in direct views of the sky, has long been recognised as a ‘STEM attractor’<sup>3</sup>, encouraging young people in particular to pursue education and careers in science and engineering, thus helping to plug skills gaps in areas vital to UK economic growth.
6. Recent research (Kyba et al. 2023<sup>4</sup>) indicates that global light pollution is increasing rapidly, with the brightness of the night sky increasing by 7-10 per cent a year over the last decade. In the UK, CPRE maps from more than 4,000 ground observers<sup>5</sup> complement satellite light pollution maps<sup>6</sup> commissioned by the same organisation, with both of these indicating that 95% of the UK population experiences light polluted skies.
7. Chapter 9 of the NPPF draft text, “Supporting Green Energy and the Environment”, highlights the need to “safeguard environmental resources”. We agree with this premise, argue that mitigating and minimising light pollution is an essential part of this effort.
8. It is therefore vital that it is retained in the new guidance, as stated in paragraph 191 of the NPPF draft text: “Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the

---

<sup>1</sup> <https://committees.parliament.uk/publications/40937/documents/199438/default/>

<sup>2</sup> [Light Pollution Report | London City Hall](#)

<sup>3</sup> See e.g. J. Osborne and S. Collins “[Pupils’ and Parents’ View of the School Science Curriculum](#)”, 2000.

<sup>4</sup> [Citizen scientists report global rapid reductions in the visibility of stars from 2011 to 2022 | Science](#)

<sup>5</sup> [Star Count 2023 - CPRE](#)

<sup>6</sup> [England’s Light Pollution and Dark Skies \(cpre.org.uk\)](#)

potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

“... c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

9. This stipulation should not be limited to existing dark rural areas, but should be enhanced to consider how to reduce light pollution in urban and suburban settings.
10. We note too the benefits of controlling light pollution and the associated wasted energy as a specific and deliverable way of addressing climate change. CPRE estimates that street lighting accounts for 15-30% of a typical council’s carbon emissions, with other major contributions from illuminated outdoor advertising and poor domestic security lighting.
11. The new NPPF should also embody the recommendations set out in “Ten Dark Sky Policies for the Government<sup>7</sup>” published by the APPG for Dark Skies in 2021. These cover the legal framework, lighting standards and governance to mitigate light pollution, all matters that should be included in planning policy.

---

<sup>7</sup> [Policy Plan — APPG for Dark Skies \(appgdarksbies.co.uk\)](https://www.appgdarksbies.co.uk/policy-plan)