TECHNICAL OFFICERS'
WORKING PARTY REPORT

WYE VALLEY NATIONAL LANDSCAPE
AREA OF OUTSTANDING NATURAL BEAUTY
JOINT ADVISORY COMMITTEE

7th July 2025

DARK SKIES

Purpose

To update members on current policies and projects relating to Dark Skies and light pollution.

FOR INFORMATION

Key Issues

- Wales is the first UK nation to introduce national good practice planning guidance to protect its dark skies.
- Retrofitting of dark-skies complient lighting has been completed at Llandogo Village Hall and Trellech Primary School, saving an estimated 528 kg/CO2e.
- Welsh Government funding has been secured to continue the Dark Skies initiative with a focus on ecological networks associated with dark skies.
- CPRE Herefordshire's Dark Skies project has been raising awareness of Artificial Light At Night (ALAN) and the need for Responsible Outdoor Lighting At Night (ROLAN).
- A recent Dark Sky Partnership webinar on 'What makes a good external lighting plan' provided links to useful legislation & guidance.

Reasons

The Wye Valley National Landscape has a significant proportion of dark skies, some of which are amongst the darkest in the UK. Dark skies add to natural beauty, tranquillity and a sense of remoteness. Looking up at starry skies or across moonlit landscapes can be a memorable, magical experience. Dark skies are important for landscape, heritage, wildlife, recreation, tourism, health and well-being. The more of us whom experience the magic of dark night skies, the more value we place on it and want to protect.

Whilst the land has legal protection, the sky above does not in the same manner. Many people rely on light to live their lives. However, misdirected light wastes energy, money, and contributes to climate change. Unintended artificial light pollution takes a silent toll, increasingly eradicating access to the wonder of beautiful night skies. Excessive artificial light can disrupt sleep, potentially leading to serious health issues. It upsets the feeding and breeding cycles of bats, birds, insects and nocturnal animals. Inappropriate lighting, bad design and incremental development is reducing our ability to appreciate the benefit of dark skies. Poorly positioned lighting on rural roads, village streets, houses and other associated development has the potential to contribute to artificial light pollution. It impacts on our experience of the landscape by altering the naturally changing light levels that occur at dusk and before dawn.

There is a need for artificial lighting for safety and security reasons. But such requirements can be met within proactive light management approaches that are both sensitive and effective, and other means to avoid, minimise and reduce unnecessary artificial light pollution. Lighting needs to be in the right place, of the right amount and on for the right length of time.

Implications

In February 2025, Wales became the first UK nation to introduce national good practice planning guidance to protect its dark skies. This guidance, designed for use in the planning system, was produced collaboratively by a working group of multi-disciplinary experts through close partnership between Welsh Government, local authorities, Wales' Designated Landscapes and Natural Resources Wales, and is endorsed by DarkSky International. The document is available here: https://www.gov.wales/dark-skies-guidance.

The Welsh National Parks & National Landscapes have been running a collaborative Dark Skies project over the last 3 years, which delivered retrofitting of dark skies complant lighting and community outreach events, including an annual Welsh Dark Skies Week, usually in late February. In the Wye Valley National Landscape (in Wales) a surveys of excess lighting was undertaken retrofitting completed at Llandogo Village Hall and Trellech Primary School, saving an estimated 528 kg/CO2e.

Welsh Government funding has been secured to continue the Dark Skies initiative with a focus on ecological networks associated with dark skies. This project will improve the condition and resilience of Dark Ecological Networks (DEN), focussing on night-time connectivity of protected sites across all 8 Designated Landscapes. The project will use the Priority Ecological Network mapping to identify target areas, identifying areas and species where the most significant gains can be achieved. This mapping will be used together with further sky quality surveys to identify where Artificial Light at Night (ALAN) is causing breaks in connectivity. The project will target areas where nocturnal connectivity is broken and promote the significant impact that ALAN has on a wide range of species and the associated trophic cascading effects on whole ecosystems. Reduced light pollution and increased connectivity will improve the prevalence and resilience of a wide range of species.

CPRE Herefordshire's Dark Skies project has been raising awareness of Artificial Light At Night (ALAN) and the need for Responsible Outdoor Lighting At Night (ROLAN). A citizen-science is also providing training for local Parish Councils and other groups to carry out light pollution surveys. More information about the project is here: Dark Skies in Herefordshire - CPRE Herefordshire.

Catherine Laidlaw, the shared Planning Officer with Wye Valley and Malvern Hills National Landscapes, recently attended a webinar from the Dark Sky Partnership on 'What makes a good external lighting plan'. The event provided the following links to useful legislation & guidance:

- Clean Neighbourhoods Act 2005 includes nuisance from artificial light.
- Planning Policy Wales Section 6.8 Lighting (for England NPPF Para 198 (c))
- BSI standards:
    - BS EN 12464-2:2024 Outdoor Workplaces
    - BS EN 12193:2018 Sports Lighting
    - BS EN 5489:2020 Road Lighting
    - BS EN 40-3:2013 Lighting Columns
    - BS EN 13032 Photometric Lighting

- International Commission on Illumination (CIE):
    - 150:2017 Obtrusive Light
    - 126:1997 Minimising Sky Glow
    - 115:2020 Lighting of the Roads
- SLL Code for Lighting (2022) | CIBSE recommended publication for understanding principles of lighting and lighting plans. Paid for document, but some free resources related to it available: SLL Free Downloads.
- Institute of Lighting Professionals (ILP):
    - GN01:2021 Reduction of Obtrusive Light
    - GN08:2024 Bats and Artificial Lighting
    - GN09:2019 Domestic Exterior Lighting
    - PLG04 Undertaking Lighting Impact Assessments
    - PLG05 Brightness of Signs
    - PLG23 Lighting for Cycling Infrastructure

The Malvern Hills National Landscape (AONB) Partnership produced Guidance on Lighting in 2023, available here: https://www.malvernhillsaonb.org.uk/wp-content/uploads/2023/06/Malvern-AONB-Lighting-Guidance-Final-1.pdf

Background

Darkness is not given the recognition, nor protection, deserving of a vital habitat. Artificial Light at Night (ALAN) is expanding at an alarming rate – at least 49% over 25 years. It has not been monitored, nor considered from an ecological perspective despite growing evidence it impacts almost all biodiversity.

ALAN currently accounts for 15% of the global electricity resource and 5% of worldwide greenhouse gas emissions, while light pollution costs the UK Goverment £1 billion annually. Reducing ALAN reduces electricity usage and any consequent carbon emissions. As an example, as part of the first phase of Wales Dark Skies project, tennis courts and a rugby club at Llanfwrog have seen a huge carbon reduction and energy saving by retrofitting dark skies compliant lighting. The tennis club are saving 31.2KW/h which is a saving of 61.9% in electricity and carbon emissions. The rugby club are saving 15.8KW/h which is a 45% energy saving. For further reductions the light can be dimmed to 60% which is a saving of 23kW/h; a 66% energy saving plus the option for half pitch lighting if that is all that is required.