

PROTECTING OUR DARK SKIES

A quick overview for planners, developers and architects to reduce and prevent light pollution to:

- improve our health
- sustain biodiversity
- save energy and money



A CRUCIAL ASSET

Northumberland and Kielder Water and Forest Park International Dark Sky Park is a crucially important asset for the North East.

- It sustains a visitor economy worth millions to the North East, with thousands of jobs
- It inspires children to study STEM via significant education outreach programmes
- It inspires local communities and visitors to think about sustainability
- It generates a high profile for the region

It is the largest Gold Tier Dark Sky Park in Europe, and one of the first in the UK to be so designated by the International Dark Sky Association.



Protected dark skies are essential, given the **drastic impact of light pollution on human health and culture, security, critical infrastructure, and biodiversity.**

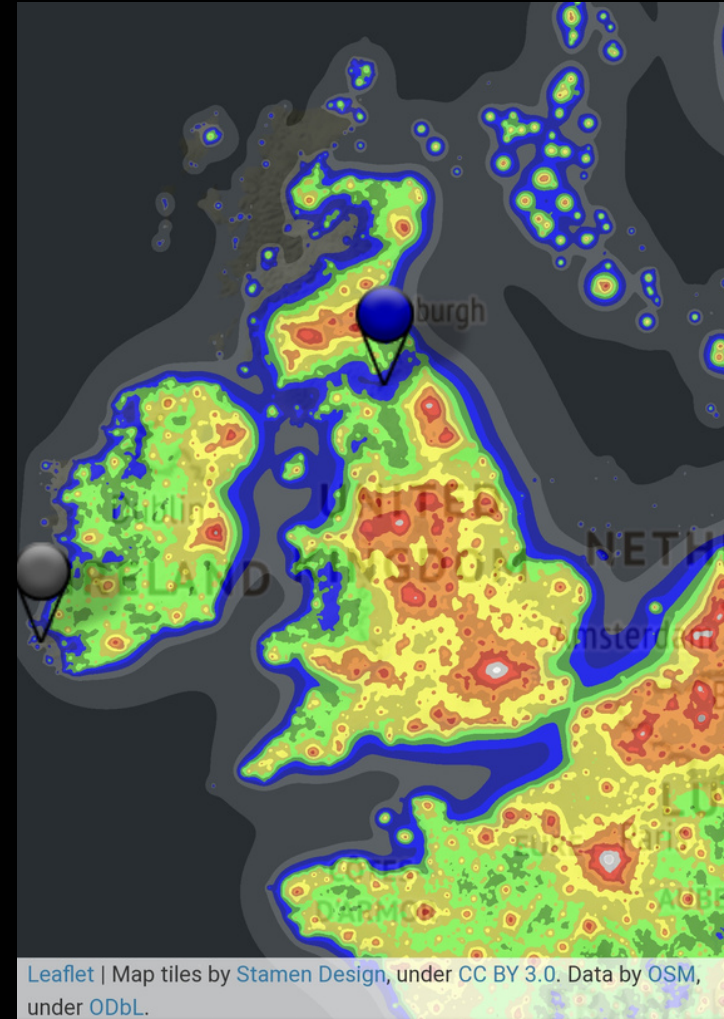
For millennia, every human being has been able to look up and see the stars but it is now estimated that 80% of the world's population lives under skyglow.

There was a **49% increase in light emissions** between 1992-2017 (Sánchez de Miguel et al. 2021), with demonstrable links to mental health, obesity and more.

In 2018, **electric lighting accounted for ~16.5% of energy consumption** and ~5% of greenhouse gas emissions (Zissis et al. 2021)

Local councils spent ~£613 million on street lighting in 2014-15.

LIGHT POLLUTION



UK and Ireland Light Pollution Map

REDUCE AND PREVENT

Light pollution is becoming as serious an issue as noise pollution, flood risk, and environmental contamination.

But light pollution is easy to prevent.

Lighting plans are easy to design, implement and manage, and should be treated no differently to any other environmental consideration when considering new developments or retrofits, domestic or commercial.

A lighting plan saves energy and money, and aligns with the legal framework in the UK:

- Artificial light can be classified as a statutory nuisance by councils under the Environmental Protection Act 1990.
- The National Planning Policy Framework outlines that due consideration should be given to "intrinsic darkness".
- This principle is supported by the work of the Dark Skies All Party Parliamentary Group, which has recommended several measures to government to protect the UK's dark skies.

FIVE PRINCIPLES

USEFUL – All light should have a clear purpose. Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.

TARGETED – Light should be directed only to where needed. Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

LOW LIGHT LEVELS – Light should be no brighter than necessary. Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.

CONTROLLED – Light should be used only when it is useful. Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.

COLOUR – Use warmer colour lights where possible. Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

RULE OF THUMB



LIGHT WHERE YOU NEED IT.

WHEN YOU NEED IT.

IN THE AMOUNT NEEDED.

AND NO MORE.



Help ensure that this view will
be available for future
generations.

Help councils, developers,
businesses and residents save
energy and money.

Help all of us lead a healthier
life.

Help protect and sustain the
planet's fragile ecosystems.

Technical guidance is available
[here](#)



MORE HELP

If you are interested in learning how to embed this thinking in your organisation, developing your own dark sky place, or just have a quick question, you can email hello@ida-uk.org



DARK SKIES NORTH EAST

Dark Skies NE is a group of organisations which work together to protect our dark skies and focus the spark of wonder people experience in a dark sky park as a catalyst for positive change.

We are committed to

- preventing and reducing light pollution
- encouraging innovation in solutions that protect dark skies
- contributing to healthier communities
- supporting new designated dark sky areas
- developing the dark sky economy
- supporting all families to access dark sky sites

Dark Skies NE activity is supported by CPRE, Forestry England, Institute of Physics, International Dark Sky Association - UK chapter, Kielder Observatory, Kielder Water and Forest Park Trust, North of Tyne Combined Authority, Northumberland County Council, Advance Northumberland, Visit Northumberland, Northumberland National Park Authority, and the Eoyal Astronomical Society.