



KIELDER

WATER & FOREST PARK

in partnership with KOAS and
Northumberland National Park
Dark Skies Presentation

Welcome and Introductions

- **Journey so far**
- **The importance of Dark Skies**
- **Dark Sky Park / Reserve**
- **How do we get the 'awards'**
- **The potential benefits**
- **Discussion**

Dark Skies – the journey so far

Dark Skies – new term for old activities

- 1998 Star Parties started
- 2003 Star Camps started
- 2008 Observatory opened (25th April)
- Stargazing programme



Dark Skies – the journey so far

- **National Park Cawfields Dark Skies Discovery Site**
- **Working with AONBs to promote Discovery Sites**
- **Working together to investigate the complementary Dark Skies Park and Reserve Status**
- **Starting consultation**
 - **Community meetings**
 - **Business Forum**
 - **Open Meetings**
 - **Parish Councils meetings**
 - **Facebook**
 - **Business on-line forum**

The Importance of Dark Skies

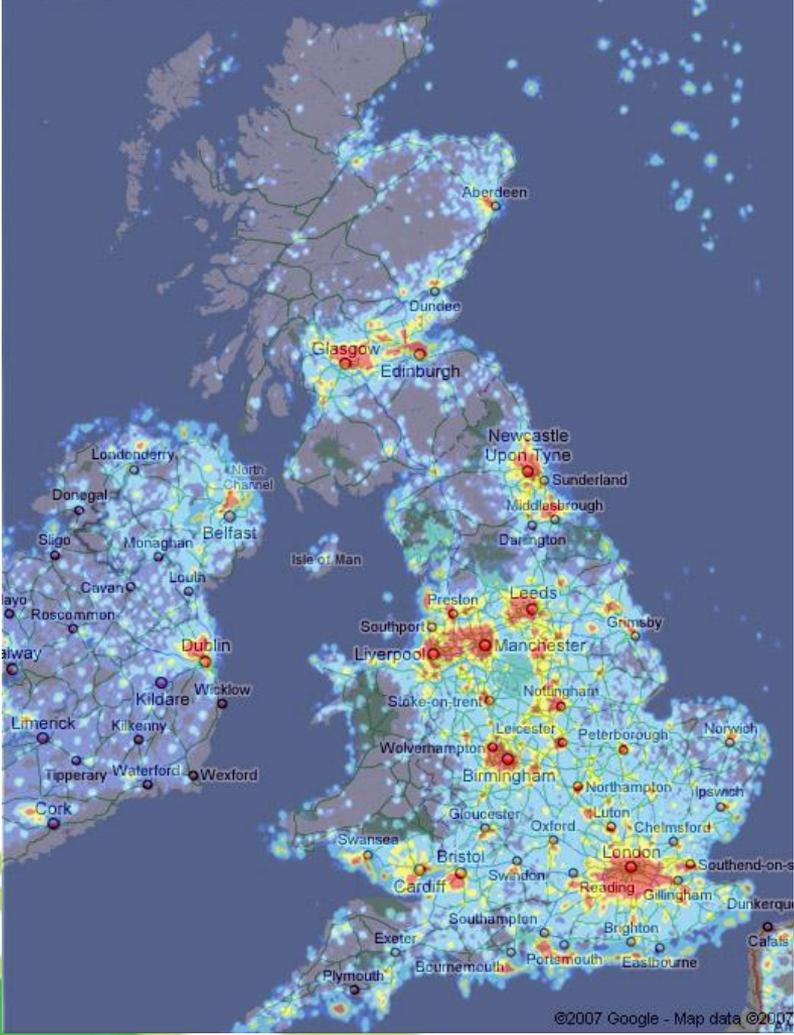
- Kielder and National Park have a very special asset – their Dark Skies
- They also have fantastic access to dark skies and therefore the stars
- Dark Skies are an important for
 - Contributing to the experience of tranquillity
 - Health
 - Conservation

But this wonderful asset is being eroded across the country

We do need to act to protect our Dark Skies



Britain from Space



Light Pollution in the City

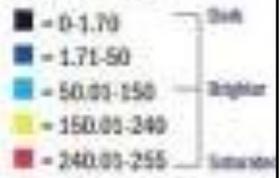


Night Blight in the North East

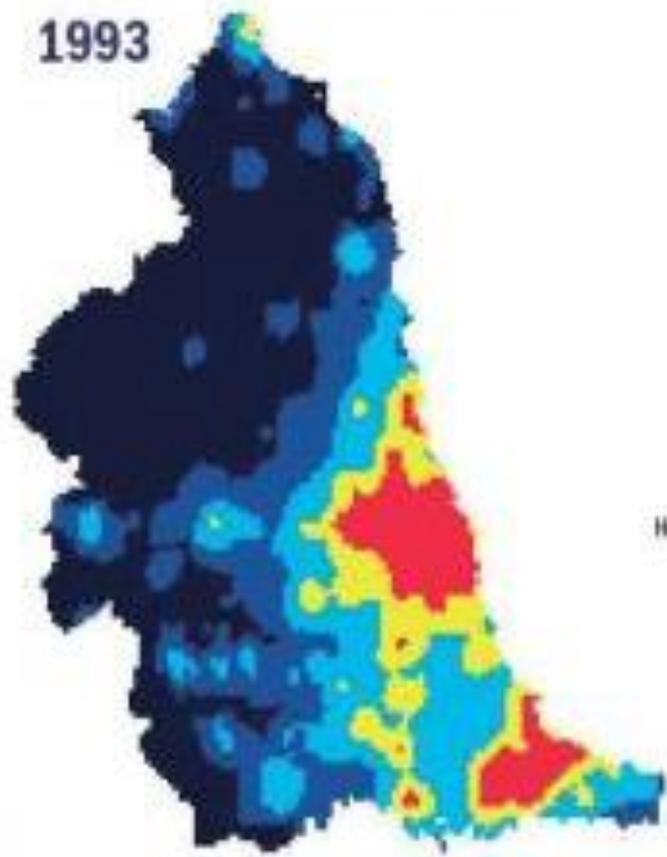
Satellite data shows that light pollution is rapidly increasing in the region, leaving less and less countryside where we can still enjoy starry, starry nights

Key

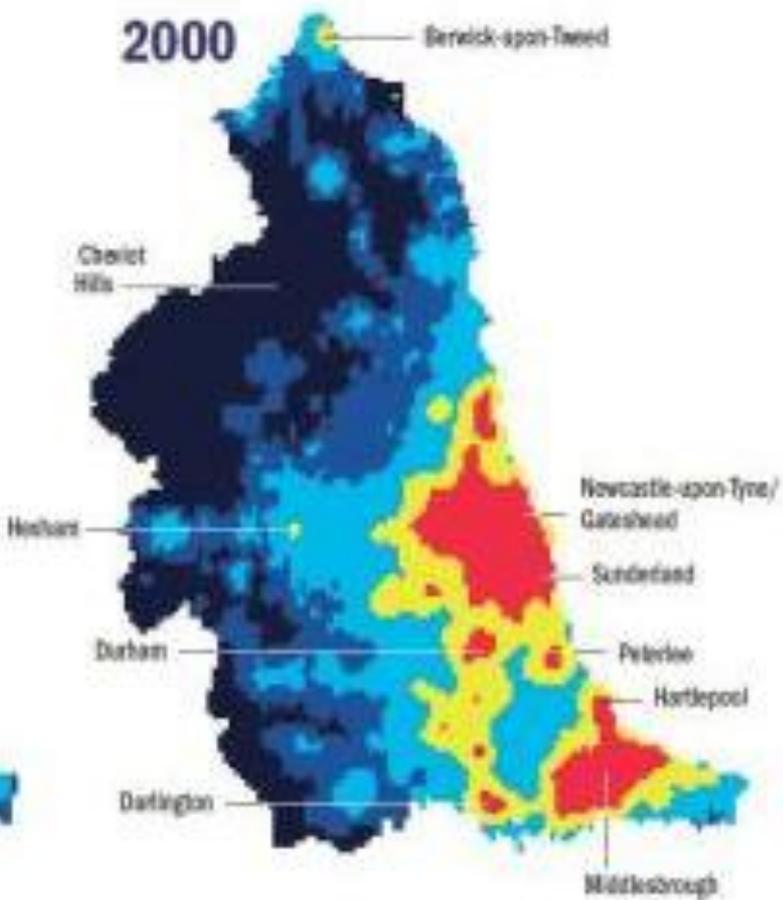
These traps were created from pixels representing a square kilometre. They are a colour representation of satellite measurements of artificial light at night. The light is measured on a scale from 0 to 255; 0 means the satellite is detecting no light in that pixel and 255 means the satellite's detector is saturated with light.



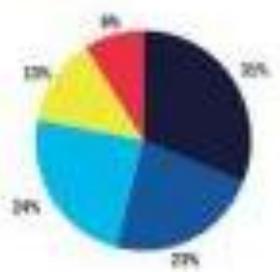
1993



2000



The North East in 2000



Light pollution nearer to home



Light Pollution means

- 85% of UK population will never see true darkness
- Less than 2% of UK population will ever see the Milky Way
- Over 30% of the population leave a light on outside all night
- 100w bulb on for a year creates a cubic metre of CO₂
- Wasted light in the UK is estimated to cost £1 bill, £100m from street lighting

Light Pollution is light that shines where it is neither needed nor wanted.

Good lighting - right lights in the right place to do the right job at the right time.

Dark Skies Park / Reserve

International Dark-Sky Association – established in 1988

The International Dark Sky Parks program's goal is to identify and honour protected public lands with exceptional commitment to, and success in implementing, the ideals of natural night preservation and/or restoration.

National Bridges, Utah (Gold)

Cherry Springs SP, Pennsylvania (Gold)

Clayton Lake, New Mexico (Gold)

Big Bend NP, Texas (Gold)

Galloway FP, Scotland (Gold)

Galloway FP

Zselic Nat Park, Hungary

Monteville, Ohio

Goldendale Ob Park, Washington

Hortobagy NP, Hungary

The Headlands, Michigan

Quebec Reserve

Exmoor Reserve



Dark Skies Park / Reserve

are broadly defined as a park or other public land possessing exceptional starry skies and natural nocturnal habitat where light pollution is mitigated and natural darkness is valuable as an important educational, cultural, scenic, and natural resource.

The UK is redefining the terms but broadly:

Parks tend to be one or a small number of owners with lighting control over the area. Can have Core and Buffer zones

Reserves have a large number of owners and therefore have a dark core and then periphery areas where partners are keen to engage with the dark skies promotion.

Dark Sky Park / Reserve Status – Benefits

International independent recognition for a comprehensive and shared programme to:

- **protect and enhance our Dark Skies – a key asset**
- **support conservation**
- **make Dark Skies accessible**
- **increase learning about our Dark Skies**
- **reduce energy use / wastage**
- **enhance tourism** (currently 12000 pa through Observatory)
- **improve / sustain health impacts of dark skies**

Dark Skies impact on tourism to date in KWFP

2011 independent evaluation of projects at KWFP said:

- Over half of the businesses interviewed thought that the Observatory had had some positive impact on their business, and indeed 16 out of 18 respondents based in KW&FP thought it had had some positive impact on their business.
- Several examples of accommodation providers considering that they had achieved net additional bookings as a result of the events held at the Observatory.
- The key benefit has been to increase bookings between October and March.

Business quote...creation of the Observatory has helped to “*grow turnover by as much as 5%... Benefits to us include – guests coming because of it, guests coming in the winter and so not displacing other potential guests, guests visiting for slightly longer than they would have to fit in a visit to the observatory and lastly guests finding out about the observatory and coming back*”.



Dark Skies Park / Reserve – how do we get the awards ?

Detailed criteria slightly different for each registration – reserve has population related criteria. Common clauses:

- Determine the area of the Dark Sky Park or Reserve.
- Confirmation of dark sky quality – light readings / images / observation of distant objects
- 67% of existing lighting fixtures conform to IDA lighting guidelines - Lighting Audit
- Establish a Lighting Management Plan to be adopted by the planning authority. All lighting within core to conform to or commit to conform to LMP
- Recognise dark skies as an important natural and cultural resource and evidence this through interpretation and outreach programmes
- Leadership example – evidenced by a night sky friendly lighting project or involving 2 external partners in dark sky restoration efforts or educating the public or combination or alternatives

Discussion Time



National Park – consultation proposal for core zone

DRAFT Core zone map - drafted by Jim Patterson (consultant)
A desk-top exercise initially – acknowledging:

- 1) The darkest areas in the NNP
- 2) Those areas that were also accessible (Open Access)

Letters to all residents and Parish Councils from 23rd April.

