



# Annual Report 2015

**GOLD TIER** - designated 9<sup>th</sup> December 2013

Northumberland National Park Authority



## A great start, an even better future!

To describe an event as “transformational” is sometimes risky, but we believe the term can justifiably be associated with the International Dark Sky Park designation for Northumberland National Park and Kielder Water & Forest Park.

Since 2013, the public interest in dark skies has continued to grow exponentially with recent developments making a tangible and positive impact to the local economy and residents’ quality of life. More importantly, our dark skies are becoming increasingly valued as a unique and special ‘quality’ that require protection with increasing support for measures to minimise local light pollution.

A major initiative that oversaw significant developments has been the *Animating Dark Skies* project, led by Kielder Water & Forest Park Development Trust in 2014. £250,000 was secured from [partners and DEFRA](#) to deliver a number of projects ranging from the creation of new places to view the night sky, to training tourism businesses to deliver exceptional experiences. This report provides a flavour of what has been achieved and demonstrates our shared commitment to the ideals set out by the International Dark Sky Association.

## ENJOYMENT OF THE DARKNESS



### Kielder Observatory goes from strength to strength

The [Kielder Observatory](#) is regarded as being the jewel-in-the-crown of the Northumberland International Dark Sky Park. Visitors from the world over have flocked to this unique award-winning facility and continue to marvel at the vistas that lie overhead, from the Milky Way star fields to far off galaxies.

Nestled within the boundary of the DSP, the Kielder Observatory typifies why designated areas of protected dark skies are essential. This year, we welcomed more than 18,000 visitors and continue to attract more people into the DSP, so delivering the important message that dark skies are essential and need to be conserved. With a comprehensive and wide-ranging series of events, aimed at all levels, we aim to enthuse, educate and inspire - a quality our natural dark skies excel at!

In 2014, new displays about our dark skies were also installed at other facilities around Kielder Water & Forest Park including Kielder Castle, Tower Knowe Visitor Centre and Kielder Campsite.





## Star Camps draw in the crowds

The Kielder Star Camp continues to thrive and will soon notch 25 events under Northumberland's starry skies since its inception in 2003. It provides a perfect bi-annual occasion for hundreds of astronomers from across the UK to camp out and enjoy England's darkest sky. To mark the creation of the Northumberland International Dark Sky Park a novice's event called the

Peoples' Star Camp was staged for the first time in 2014, which offered hands-on instruction, stargazing and talks. It proved such a big success that the camp will run once again this October. A huge leap forward has also been the creation of a purpose built warm room (right) on the Kielder Campsite, designed by architecture students at Newcastle University, complete with red lights. It is one of a number of significant improvements made to the venue on the back of the popularity of our dark skies (Image above (c) Dave Thompson).



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## New network of Dark Sky Discovery Sites

[Dark Sky Discovery Sites](#) are nominated by communities and organisations as their favourite places locally to see the stars, which are accessible to everyone. In 2014 [31 new DSD sites](#) were created in the Dark Sky Park, and in the adjacent [North Pennines Area of Outstanding Natural Beauty](#). The Animating Dark Skies programme funded the installation of a number of 'roller-panels' at each of the sites, welcoming visitors to the DSP and helping them navigate the night sky above.

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## Star Makers put on a show!

Stargazing breaks are seen an important way to extend the visitor season in Northumberland, so it was necessary to invest in training a cohort of 'Starmakers' (astro-guides), who could work with accommodation providers and local communities to help people navigate and enjoy the night sky. A total of 14 Starmakers were recruited, trained and mentored in the delivery of 42 public stargazing events in 2014. In 2015, many of them went on and became self-employed astro-guides, running many more events at dark sky discovery sites across the DSP and North Pennines. Two such Starmakers are: [Joe Gordon](#) (left), using our 80mm Lunt Solar Scope at Once Brewed on Hadrian's Wall, and [Simon Rowland](#), at Hamsterley Forest.



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## Star Tips for Profit

Astronomers [Richard Darn](#) and [Robert Ince](#) were contracted to introduce and train 100 local tourism businesses about dark skies and to help them to deliver a world-class visitor experience to their guests. 100% of Star Tips attendees said they would recommend the sessions to other businesses and 90% of respondents said the workshop would help them attract custom. Some 44% reported they had already seen a boost from dark skies tourism.

Sue Hugenholtz, owner of [Blacksmith's Cottage](#) (left) said:

*"Since we achieved International Dark Sky Park status, my holiday let business in the Cheviots has become an all year round destination with guests travelling from all over the country for long-weekend, out-of-season breaks in beautiful Northumberland."*

In addition to these courses, we have recently started running **Star Host** training sessions, where accommodation providers acquire more of the basic skills in the use of [www.stellarium.org](http://www.stellarium.org) and use of simple equipment to enable their guests to "go-it-alone".



## New Observatory at The Battlesteads Hotel

The owners of the multi-award winning [Battlesteads Hotel](#), located on the edge of the NIDSP, have responded to the zeitgeist and built a new Dark Sky observatory in its back-yard. Proprietor, Richard Slade and local astronomer, [Roy Alexander](#) are collaborating to deliver a regular programme of dark sky events for hotel guests, local residents and visitors alike. What could be better than viewing the Rings of Saturn with a pint of English Ale in your hand!



## New stargazing pavilion at Stonehaugh

Students at Newcastle University's School of Architecture worked with Kielder Art & Architecture and the Stonehaugh village community to design and build a stunning new pavilion for star gazers and nature watchers. Initiated as part of [Kielder Art & Architecture's](#) Testing Ground programme, the students worked with local people developing designs for a star gazer's pavilion to be the focus for Stonehaugh's Dark Sky Discovery Site. The project was finished in late May and was officially opened on 9th July 2014.

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## New Dark Sky accreditation scheme for tourism businesses

Our partners at Northumberland Tourism have developed new criteria for accommodation providers that will help them reduce light pollution around their properties and market their businesses to interested audiences. Two new logos can be awarded once they agree to meet the conditions listed in each of the relevant [criteria](#). To date, more than 40 businesses have signed up.



## Welcoming others to the dark side

The [North Pennines Area of Outstanding Natural Beauty](#) is located just south of Northumberland National Park and is a protected landscape with a strong commitment to conservation and sustainable tourism. In 2014, it became a partner of the Animating Dark Skies project, contributing to and benefitting from the investments made to developing facilities and running [dark sky events](#). It has also been a strong advocate for better quality street lighting in the North Pennines and supporting local measures to reduce light pollution. Dark Sky events have also taken place in the Northumberland Coast Area of Outstanding Natural Beauty, one the best places in England to view the Aurora Borealis.

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## Universal interest in Astro photography

Photographing the night sky has become a bit of a passion amongst visitors and residents of this part of the world. To encourage people to share their breathtaking and moving captures, a photo competition has been running throughout the year with prizes at quarterly intervals

<http://www.visitnorthumberland.com/darkskies/photo-competition&ssid=731>. Next year it is planned to create an exhibition of all the winning shots to tour around the North East of England.

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## CONSERVING THE DARKNESS

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### Dark Sky Group continues to lead the way

The Dark Sky Steering Group that oversaw the application process to secure the Dark Sky Park designation in 2013 has continued to meet, monitor and steer new development over the last two years. Led by Kielder Water & Forest Park Development Trust, it is attended by representatives from Northumberland National Park Authority, the Forestry Commission, Kielder Observatory Astronomical Society, Northumberland County

Pennines Area of Outstanding Natural Beauty Partnership. It also lobbies for better quality street lighting on behalf of the rural communities within and beyond the Dark Sky Park boundary.



## Communities see the light

Members of the Dark Sky Steering have continued in their own capacity to be ambassadors for dark skies. There have been numerous evening talks given to the WI and other local-interest groups explaining how to reduce light pollution through the simple installation of fully-shielded lights and using lower wattage light bulbs. Surprisingly, the most effective way of getting the message over is using a home-made device that shows the difference between an unshielded light and a fully-shielded light (see images left). The local community of Wall for example, following such a talk have now decided to create a Dark sky Discovery Site of their own and we are working with them to help make it happen.

## Keeping Planning Officers in the dark

Our aim is to share and promote best-practice as exemplified in the DSP Lighting Management Plan, not only to stakeholders within the Dark Sky Park but also to those beyond its boundary. Neighbourhood planning was introduced through the Localism Act in 2011 and gives local communities the opportunity to shape and define how their area should grow and change in the future. A number of new Neighbourhood Plans are currently being proposed and it is encouraging to see a growing support dark sky conservation policies at a local level.

[Tarset & Greystead Parish Council](#) was the first rural parish to complete their Plan earlier this year.

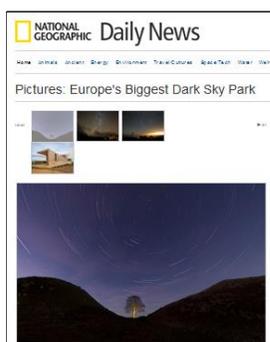
To encourage wider adoption of the Lighting Management Plan, the National Park Authority hosted a Dark Sky Park seminar In April 2015, specifically for Planners and local electrical contractors/lighting engineers.

Local accommodation provider, [Stanegate Hideaways](#) responded afterwards saying:

*“You may recall that I attended the Dark Skies seminar as we are a local accommodation provider on the edge of the National Park. I thought you might be interested to know that we have since spent in excess of £1,000 with [Slate and Nature](#) (see page 19), having replaced existing lights with their “Dark Skies” LED armature lights and replaced nearly every light bulb in three properties with low-wattage Amitex LED bulbs.”* (Damian Rudge)

## New street lighting planned for the Dark Sky Park

Over the next three to four years, Northumberland County Council is embarking on a [major investment programme](#) to replace all of its street lights with LED lanterns. The Steering Group is liaising closely with the County’s Street Lighting Manager to ensure that all rural communities including those in the DSP (120) have the warmer 4000k units. Elsdon (image left) had all of its street lights replaced last year, much to the delight of residents and stargazers.



## Massive media support for Dark Skies

The response to the designation of England first and Europe’s largest Dark Sky Park was phenomenal with global coverage valued to be in excess of £1.5 million. It has helped change the national and international perception of Northumberland as a visitor destination, becoming ‘England’s Dark Sky County’. Dark Skies have featured strongly in two national TV series of [“Tales from Northumberland”](#) hosted by local actor/presenter, Robson Green. An average of 3.7 million viewers watched each episode, generating new audiences from across the UK – a third series is about to be released.

Northumberland Tourism is the County's official tourism organisation and is a member of the Dark Sky Steering Group, helping to raise awareness of the Dark Sky Park through its marketing activities. At the recent Chartered Institute of Marketing Northern Awards 2014 'The land that's just as good with the lights off' Campaign won the category of Best Low Budget Campaign.

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## FUTURE PLANS

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### **The Sill - National Landscape Discovery Centre will set new standards**

On the southern edge of the Dark Sky Park, Northumberland National Park Authority is embarking on a major new development to build [The Sill - National Landscape Discovery Centre](#) on Hadrian's Wall, which will inspire current and future generations about the landscape and dark skies above them. The outside lighting will be exemplary in meeting the exacting standards set out in the Dark Sky Master Plan, with the installation of embedded [solar-powered pathway lighting](#) on the new walk-on roof and around the grounds. It is due to open in June 2017, hosting a comprehensive dark sky events programme on and off-site.

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### **Kielder Observatory has big plans in its sights**

Sky-high plans to develop a world-class astronomy village at Kielder Water & Forest Park are one small step closer, thanks to a new formal partnership. In July 2015, Kielder Observatory Astronomical Society joined the Kielder Water & Forest Park Development Trust. The "sky-high" development of the hugely successful Kielder Observatory will increase the capacity and capabilities of the observatory.



The plans, which will add to the existing facilities, include the creation of a state of the art planetarium, an increased number of telescopes, a new lecture room capable of holding over 60 people, an educational multi-media facility and regular exhibits and demonstrations. The Kielder Observatory Astronomical Society are hoping the plans, which could see visitor numbers quadruple, will be up and running within five years.

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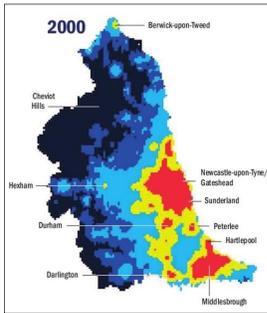
### **Volunteers recruited to monitor DSP and help with stargazing events**

Many people have become inspired by our dark skies and are now giving their time to help run star gazing events at Kielder Observatory and at other venues around the DSP. This winter season, they will out and about taking SQMs at all the sites listed in our original DSP application to the IDA in 2013. We are very grateful to this cohort of volunteers for their enthusiasm and commitment. In addition to the hand-held SQM readings, a permanent SQM counter will be installed at Walltown Country Park on Hadrian's Wall.

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### **National Park Management Plan Review**

The Northumberland National Park Management Plan sets out the shared vision and future aspirations for Northumberland National Park for the next five years. It is now being [reviewed](#) with a draft paper out for public consultation and is available on-line. Within it there is a [stronger commitment](#) (P19) towards the protection of our dark skies. Once approved and adopted, the Management Plan will further reinforce compliance with the IDA's designation.



## CPRE to update its Night Blight Maps

A major call for action that initially mobilised the National Park Authority to work with Kielder Water & Forest Park Development Trust to secure DSP status was the publishing of the [Campaign for the Protection of Rural England's Night Blight Maps](#). These clearly demonstrated the encroaching spread of light pollution into even the most remote parts of England.

These maps that were so effective in communicating the issue of light-pollution are now being updated and the National Park Authority together with four other National Parks, five Areas of Outstanding Natural Beauty, Natural England and the Highways Agency have agreed in principle to fund the next survey. More details will be announced soon.

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These are the hashtags we use for Northumberland dark skies: