

Insight Department: Dark Skies & Astro-Tourism

May 2019

 Visit
Scotland | Alba™

Welcome

Observing the night skies have inspired people since the time of antiquity. The ability to gaze up to the stars and ponder their meaning has been the privilege of travellers and locals alike for millennia. Today, astro-tourism, based on the interest of tourists in space-related activities such as dark sky observation, astronomy, astro-photography and space technology, is seeing increasing popularity.

John Barentine, the director of public policy at the International Dark-Sky Association defines Astro-tourism as “any kind of tourism that involves the night sky or visiting facilities related to astronomy like observatories, and combining that with a broader sense of ecotourism where interaction with nature is what the visitor experience is about”. Increasingly with light pollution in urban areas obscuring the night sky, the desire to travel to “dark sky” locations has witnessed growth, leading to the astro-tourism phenomena.

Scotland's northern latitudes (for those longer winter nights) and expanse of dark skies, unpolluted by artificial light, presents opportunities for tourism operators to present a product to visitors that only a few destinations in the world can offer. Scotland is already recognised as a world class dark skies destination with several locations officially certified by the International Dark Skies Association. When you combine our locational benefits with a history and heritage of astronomy, the possibility of seeing Aurora Borealis and more recently the development of a burgeoning space travel and technology sector, there are plenty of opportunities to create attractive products for visitors which transcend regional and seasonal boundaries.

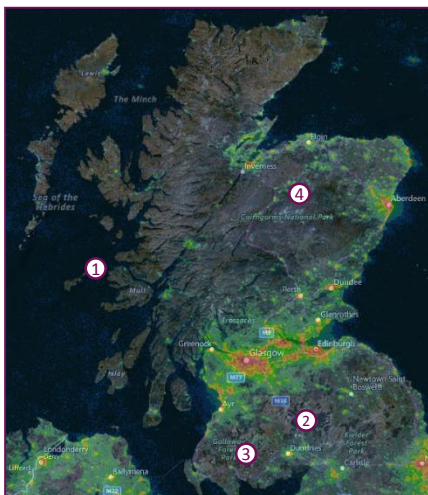
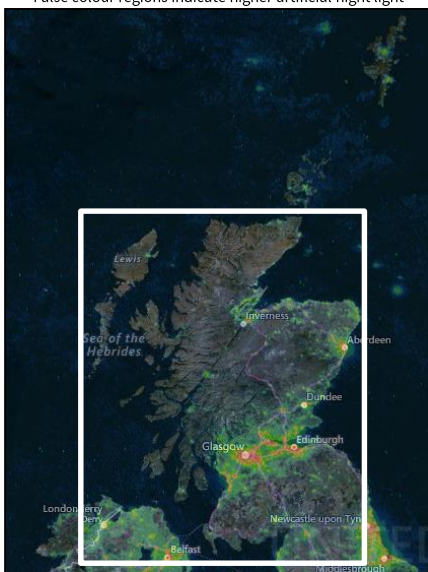


Dark Skies tourism and astro-tourism are already firmly embedded within several regions of Scotland and seeing the benefits of these increasingly popular forms of tourism. Consumers are redefining their requirements of this form of activity and interpreting it their way. This is opening up new opportunities in products that might be delivered, from the pure science of astronomy through to the growth in wellness products such as “star bathing”, an offshoot of forest bathing.

Dark Skies in Scotland

The International Dark-Sky Association (IDA) is the recognised authority on light pollution and is the leading organisation combating light pollution worldwide. Its mission is to preserve and protect the night time environment and our heritage of dark skies through environmentally responsible outdoor lighting. The International Dark Sky Places conservation programme recognises and promotes excellent stewardship of the night sky. The programme was founded in 2001 to encourage communities, parks and protected areas around the world to preserve and protect dark sites through responsible lighting polices and public education.

Light Pollution Map for Scotland
False colour regions indicate higher artificial night light



- 1) Coll - **Certified IDA International Dark Sky Communities**
- 2) Moffat - **Certified IDA International Dark Sky Communities**
- 3) Galloway Forest Park - **Certified IDA International Dark Sky Parks**
- 4) Tomintoul and Glenlivet - **Certified IDA International Dark Sky Parks**

Scotland has four International Dark Sky Places - two parks and two communities (see map for locations). An IDA International Dark Skies Park is land possessing an exceptional or distinguished quality of starry nights and a nocturnal environment that is specifically protected for its scientific, natural, educational, cultural heritage, and/or public enjoyment. IDA Communities are legally organised destinations that minimise light pollution and undertake efforts to educate about the importance of dark skies.

Each destination promotes their strong star gazing potential to visitors. For example “Coll & The Cosmos” is a collaboration between Coll Bunkhouse, accommodation provider and Cosmos Planetarium, a mobile planetarium service, delivering astro-tourism facilities to the location. (<https://collbunkhouse.com/dark-skies-coll-cosmos/>)

Galloway Forest Park in southwest Scotland spans 777 km² of forested glens, lochs and some of the highest land in southern Scotland.

It's home to the Scottish Dark Sky Observatory, near Dalmellington. There are two powerful telescopes and the observatory's roof rolls off, so visitors feel like they're truly out in the wild.

Tomintoul and Glenlivet earned the award of becoming Scotlands second International Dark Sky Park. The park is not only the darkest park in the UK but it is also the most northerly Dark Sky Park in the world. Waymarked paths lead visitors to the vantage points with big skies and distant horizons.

The impact and influence of Dark Skies Tourism

Visitor interest in Dark Skies tourism and Astro-Tourism has prompted many destinations and locations to capitalise on the natural assets that clear night skies have to offer.

In 2016, as Scotland prepared to witness the first ‘supermoon’ in 70 years, a video was posted from VisitScotland’s official Facebook page tempting astro-tourists to explore strange new worlds via the country’s top dark sky hotspots. It was viewed around 60,000 times (mediacentre.visitscotland.org/pressreleases/the-whole-of-the-supermoon-1647568)

A supermoon is the name given to a full moon when it is closest to the Earth and appears one-third brighter and 14 per cent bigger than a normal full moon.

According to the International Dark-Skies Association, Dark Skies designation has been found to be an effective marketing tool providing new and unique ways to draw visitors. It benefits regions by attracting visitors especially outside of peak season, boosting visitor income and occupancy rates for accommodation providers. (www.darksky.org/3-benefits-of-a-dark-sky-designation/).

A study of astro-tourism at Bryce Canyon National Park, Utah which has dark sky programming, found “*up to 10 percent of park visitors may be involved with the formal Astronomy and Dark Sky Program and/or more informal astronomy activities.*”

The study also found the number of visitors attending evening programs in the park nearly doubled from 13,451 to 23,878 with an estimated increase in economic impact from \$1.1 million to \$1.7 million.

A “Dark Sky Park Economic Impact Assessment” looked at the impact on local business a year after Galloway Forest Park in Scotland became an IDA Dark Sky Park. The report found that for every £1 spent on installing dark sky friendly lighting in the area, there was a return on investment of £1.93, due to an increase in tourism, and concluded that the economic benefits are probably much more. (<https://forestryandland.gov.scot/images/corporate/pdf/dark-sky-park-eia-report.pdf>)

Did You Know?

Space exploration and Scotland have had a long and close relationship.

Neil Armstrong, the first person to walk on the moon in July 1969, was made the first, and only Freeman of the town of Langholm, Dumfries & Galloway – the traditional seat of the Armstrong clan.

The following lunar mission in November 1969, Alan Bean the Apollo 12 lunar module pilot reputedly carried a swatch of MacBean tartan in honour of his Scottish heritage.

Finally, it is foretold that Montgomery Scott, famed Engineer of the starship USS Enterprise will be born in Linlithgow, West Lothian. In 2016, when marking the 50th anniversary of the science fiction franchise Provoost Tom Kerr said “*Linlithgow is proud to be the future birthplace of Montgomery ‘Scotty’ Scott in 2222...*”

Trends and Opportunities of Astro-Tourism



Astro-tourism is billed as the next big thing in sustainable tourism. Lonely Planet announced dark skies as one of their travel trends for 2019¹.

For tourism providers that find themselves outside a dark skies park, there are still many opportunities to promote this valuable tourism trend. Examples include collaboration with local astronomy groups to publishing Aurora alerts, astro-photography pictures on your social media channels to organising themed events like family star walks in parks. Furthermore, by building a knowledge of local astronomical attractions and heritage which may be passed on to your guests and visitors for inspirational excursions and tours will spread the benefits of tourism regionally.

Did You Know?

Warren Field, near Crathes Castle, Aberdeenshire² is the location of a Mesolithic monument built about 8,000 BCE. It is believed to have been used as a lunar calendar and considered to be the oldest lunar calendar yet found.

Star gazing and astro-tourism link neatly with another prominent tourism trend – Wellness. A 2015 article in Psychology Today³ reviewed a study by Dr Paul Piff titled “Awe, the Small Self, and Prosocial Behaviour,” published in the *Journal of Personality and Social Psychology*. The research described awe as “*that sense of wonder we feel in the presence of something vast that transcends our understanding of the world*” and identified that we commonly experience awe in nature.

Star bathing, a mindfulness activity where we gaze up at the stars generates a sense of awe promoting altruism and positive social behaviour. Researchers found star bathing (similar in effect to forest bathing), puts our individual lives in perspective by helping realise that there is something much bigger than yourself in the universe.

Tourism providers are providing products that can deliver this need among travelling consumers. In a world where light pollution prevents many urban residents seeing the vast night sky clearly, destinations are providing innovative glamping pods with retractable or transparent roofs, heated outdoor hot tubs and the provision of telescopes for guests to do their own space exploration.

In Summary... Astro-Tourism is an identified leisure tourism trend among travellers today. Scotland’s expanse of clear, dark skies with possibility of Aurora / Northern Light activity make it an excellent destination to benefit from this opportunity. With Scotland growing as a centre for space industry innovation, from satellite manufacture in Glasgow to the announcement of the UK’s first space port in A’Mhoine Peninsula in Sutherland, there are many business tourism opportunities too.

¹ <https://www.lonelyplanet.com/travel-tips-and-articles/travel-trends-for-2019-dark-skies/40625c8c-8a11-5710-a052-1479d27547aa>

² <https://online.aberdeenshire.gov.uk/smrpub/master/detail.aspx?tab=info&refno=NO79NW0012>

³ <https://www.psychologytoday.com/gb/blog/the-athletes-way/201505/the-power-awe-sense-wonder-promotes-loving-kindness>

CONTACT US

Insight Department

VisitScotland
Ocean Point One
94 Ocean Drive
Edinburgh EH6 6JH

0131 472 2222
research@visitscotland.com

May 2019

Visitscotland.com visitscotland.org

Disclaimer: The work presented in this paper combines previously published research from VisitScotland with primary research and interviews conducted by VisitScotland's Trends Team specifically for this study. VisitScotland has published this report in good faith to update stakeholders on its activity. VisitScotland has taken all reasonable steps to confirm the information contained in the publication is correct. However, VisitScotland does not warrant or assume any legal liability for the accuracy of any information disclosed and accepts no responsibility for any error or omission

All images are credited to VisitScotland unless stated, all rights reserved