

All-Party Parliamentary Group
for Dark Skies

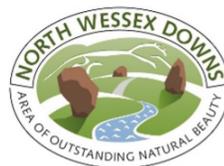


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Ten Dark Sky Policies for the Government

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The APPG for Dark Skies would like to thank the 170+ individuals and organisations who provided evidence to our consultation, as well as recognise the following organisations for their support:



Foreword by our Co-Chairs



“The case for controlling light pollution has scientific, educational, environmental, aesthetic and economic dimensions. It’s a deprivation for us all to never see a dark night sky. It’s not just astronomers who would miss it – just as it’s not just ornithologists who would miss songbirds if they disappeared from our gardens. Light pollution is a waste of energy too. The government should implement modest changes in the planning and regulatory system that could stem and indeed reverse the current trend. Such measures would certainly earn the gratitude of the next generation and would surely command broad support today.”

Lord Rees of Ludlow
OM, FRS, FEng, FMedSci, FRAS
Astronomer Royal



“I founded the APPG for Dark Skies shortly after being elected to Parliament so that future generations may still be able to see the stars and the Milky Way – something that is already impossible in many parts of the country. This paper reflects our role as a forum for parliamentarians and organisations across the public, private and third sectors to work together. Bad lighting, new development and ‘horizon light pollution’ are a constant threat and this policy plan will provide a basis for the focus of our future campaigns in Parliament.”

Andrew Griffith MP
Founder and Co-Chair

Ten Dark Sky policies for the government

The UK Parliament's All-Party Parliamentary Group for Dark Skies exists to fight light pollution in order to protect our dark skies for future generations. We provide a forum for parliamentarians and organisations across the public, private and third sectors to work together to discuss issues impacting the visibility of the night sky and promote the adoption of 'dark sky friendly' lighting and planning policies wherever appropriate. We principally focus on efforts to preserve the night sky within the UK but also include international issues within our remit.

The group was founded in January 2020 by our Co-Chairs Lord Martin Rees of Ludlow, the Astronomer Royal and former President of the Royal Astronomical Society, and Andrew Griffith, MP for Arundel & South Downs.

This document was produced following a consultation in which over 170 academics, legal professionals, national park associations, professional and amateur astronomers, members of local and national government, lighting professionals, engineers and businesses. It sets out the major causes of growing light pollution in the UK which threaten dark sky preservation and advocates policy solutions to mitigate or remedy such issues.

Why now?

Environmental pollution caused by artificial light at night (ALAN), commonly referred to as light pollution, is growing exponentially in terms of its geographic presence and reach. In summer 2016, CPRE, the countryside charity published 'Night Blight' maps of Britain's light pollution and dark skies, in which it commissioned Land Use Consultants (LUC) to create maps using data captured by a satellite at 1.30am throughout September 2015¹. It found that only 22% of England had pristine night skies, completely free of light pollution, compared with almost 57% of Wales and 77% of Scotland. When the two darkest categories are combined, almost half of England has what most of us regard as dark skies. More recently CPRE's annual Star Count found that in 2020 61% of people are in areas with severe light pollution – meaning that they could count fewer than ten stars in the Orion constellation, an increase in the number of people experiencing severe light pollution from the previous year when 57% of people taking part fell into that category². However, there is still much worth preserving in the UK, which emits the second-lowest quantity of ALAN per capita in Europe³.

Given the number of International Dark Sky designated areas in the UK, the number of protected landscapes with an interest in protecting dark skies and the formation of the UK Dark Skies group, the time has come to update the UK approach to light pollution and more effectively protect dark skies. Awareness of its environmental impacts is growing and so this is an ideal time to empower all levels of society to take control of their lighting footprints and help to protect this special and threatened natural resource.

Recent Government announcements to review the planning constraints represents both a threat and an opportunity. The APPG for Dark Skies and its partners will seek to ensure that any revision of planning guidelines improves the protection of dark skies.

Why care about light pollution?

Human health and safety

While it is a commonly held belief among the public that brighter outdoor spaces at night are safer from both traffic and crime perspectives, there is little empirical evidence to support this intuition⁴. Research from the London School of Hygiene and Tropical Medicine and University College London suggests that crime and road collisions do not increase in switched-off or dimmed areas nor show an improvement in safety through changing to white light⁵. Conversely, a growing amount of evidence suggests that light exposure at the wrong time has profound impacts on human circadian, physiological and neurocognitive function. Although the extent of the causal link between health issues and exposure to distinctly outdoor light sources remains difficult to measure in epidemiological studies conducted by researchers in the US, ALAN has been found to be associated with poorer sleep and prevalence of mood and anxiety disorders, indicating the necessity to consider outdoor illumination at night as a factor in human health and wellbeing⁶. Though further research is needed, the policy implications of such discoveries about exposure to unnecessary light at night are potentially significant⁷.

Obtrusive light

The Institution of Lighting Professionals (ILP) provides guidance⁸ on the reduction of obtrusive light. This guidance is based on international Standards recommendations⁹ and describes obtrusive light as unwanted ALAN likely to cause nuisance, danger or distress to humans through light intrusion, spill light and bright light sources in the field of view. Exterior lighting for domestic and commercial applications is widely available and affordable. Unfortunately, there is little information provided with these products regarding the amount of light needed or how it should be installed. This tends to lead to the purchase of inappropriate more powerful products poorly installed producing many times more light than is necessary, burning all night, causing glare and distress to neighbours and spoiling the night environment.

Nature and wildlife

In addition to imperiling the immediate human connection to the cosmos through the loss of dark night skies, light pollution is associated with a host of known and suspected hazards to wildlife¹⁰. A literature review from Nature magazine in 2018 concludes that: "early results suggest that light at night is exerting pervasive, long term stress on ecosystems, from coasts to farmland to urban waterways, many of which are already suffering from other, more well-known forms of pollution"¹¹. The article mentions a UK study of a 13-year record of the timing of bud opening in trees, and night-time satellite data found that artificial lighting was linked with trees bursting their buds more than a week earlier – a magnitude similar to that predicted for 2 °C of global warming.

DEFRA's "UK Biodiversity Indicators" report from 2019 shows that there has been a sharp decline in insect numbers in recent decades, with a 31% drop in insect pollinators between 1980 and 2016 and a 60% decline in the 2,890 "priority" species from 1970 to 2016¹². Similarly, the National Biodiversity Network's State of Nature report from 2019 says that

increases in light pollution particularly affect biodiversity in urbanised areas¹³. A 2017 Nature paper on the connection between light pollution and the decline in pollinating insect species suggested a serious threat to world food production in coming decades, illustrating that light pollution could have a serious long-term impact on important aspects of global human sustainability¹⁴.

What can be done?

Just as with acid rain, lead pollution and CO2 emissions, it is perfectly possible to rectify light pollution through policy and legislative action. There are now several models around the world of countries that have legislated for the improved protection of dark skies, such as France and South Korea, without harming social utility or commercial interests¹⁵. Approaches have been based on improved pre-emptive and preventative planning regulation, curfews and metrics limiting light output. These are set out in dedicated legislation aiming to address most if not all of the problems that will be set out in this paper.

To revolutionise our approach to light pollution in the UK, fresh ideas are needed across three broad themes: challenging the existing legal framework for the parts of the planning process which regulate light pollution; overhauling the rules applicable to outdoor lighting installations; and introducing new initiatives at every level of government which educate and incentivise the reduction of light pollution and obtrusive light.

Update the existing legal framework

The existing legal framework regulating light pollution is derived from statute and therefore can only be amended by Parliament. New legislation is therefore likely to be necessary to truly protect the UK's dark skies and night-time landscape.

1. **Strengthen the National Planning Policy Framework:** for the first time ever, make extensive specific reference to the control of obtrusive light in the National Planning Policy Framework.
2. **Expand the scope of the planning permission process:** introduce regulations for exterior lighting that are similar to those which currently cover advertisements.
3. **Strengthen Statutory Nuisance Provisions:** remove exemptions to give local authorities a more effective method of preventing nuisance lighting.

Supercharge standards for lighting

Following examples from other countries such as the 'French Law 2018'¹⁶, an overhaul of the rules applicable to outdoor lighting installations and internal light spill is paramount to prevent, limit and reduce light pollution.

4. **Create a statutory Commission for Dark Skies:** set up a statutory body to punish non-compliance and empower local authorities and councils to enforce regulations.
5. **Set standards for the brightness and colour temperature of lighting:** establish legal limits to the amount of blue light that luminaires can have in their spectrum and encourage manufacturers, distributors and installers of lighting to adopt best practice in this area.
6. **Set standards for the direction and density of lighting:** introduce a legal requirement that all lighting units are sold and distributed with instructions for the control of obtrusive light and dark skies-friendly mounting instructions and issue penalties for non-compliance.
7. **Create 'best practice' for the use of lighting:** design a national program of best practice 'Dark Sky Hours' in which categories of lighting can be either dimmed or turned off completely in consultation with the community, lighting professionals and local police.

Incentivise dark sky governance at the national, local and individual level

Introduce new initiatives at every level of government which educate about the effects of light pollution as part of wider climate change awareness and create clear incentives for dark sky preservation.

8. **Appoint a designated 'Minister for Dark Skies':** give a new cross-departmental Minister a clear remit for the control and prevention of light pollution, as well as oversight of planning and environmental policies that concern dark skies.
9. **Create a 'Dark Sky Towns & Cities' initiative:** give local government the power to go further to reduce light pollution by creating a voluntary 'Dark Sky Town/City' classification.
10. **Emphasise the role of education:** work with educational and cultural institutions and NGOs to achieve widespread public awareness of the issue of light pollution.

Update the existing legal framework

The existing legal framework regulating light pollution or obtrusive light is derived from statute and therefore can only be amended by Parliament. New legislation is therefore likely to be necessary to truly protect the UK's dark skies.

I. Strengthen the National Planning Policy Framework

For the first time ever, make extensive specific reference to the control of obtrusive light in the National Planning Policy Framework (NPPF) and specify when light pollution concerns should be considered.

Problem: The NPPF¹⁷ was introduced as a concise and useable planning document to aid developers and designers in the design and construction of developments within the UK. However, the most recent National Planning Policy Framework from 2019 makes little reference to lighting with regard to the control of obtrusive light with paragraph 180 section c being the only reference, which states: “limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation”.

Though a number of local authorities have adopted policies that seek to do this, a key failing of the existing legal regime is that a number of development proposals are simply not assessed against such policies at all.

Policy response: The language in the NPPF on avoiding light pollution should be significantly expanded, allowing local planning authorities to impose specific planning conditions related to external lighting, including curfew hours, standards for brightness and colour temperature, as well as the direction and density of lighting, all of which will be discussed in further detail in the following section of this document.

NPPF policy on light pollution should require all proposed developments to conduct a dark sky impact assessment and ensure that there is no net impact of a scheme on the dark sky location. This could in time include changes to lighting schemes of existing developments, not only new development. Amendments could also address relative darkness, for example, where an isolated industrial site would cause light pollution in an area that is relatively dark compared to the surroundings.

II. Expand the scope of the planning permission process

Introduce regulations for exterior lighting that are similar to those which currently cover advertisements.

Problem: By section 57(1) of the Town and Country Planning Act 1990¹⁸, planning permission is required for the carrying out of any “development” of land. However, the installation of any lighting inside and outside a building does not amount to “development” and therefore will not require planning permission.

This means that, for example, the installation of new floodlighting within a sports stadium, where the floodlights themselves are not visible from outside, will not require planning permission under the existing regime. Even where floodlights are installed on the exterior of the building, this may not amount to development. Currently it is only necessary to consider whether the external appearance of the building has been materially affected. If it has not, “development” has not taken place, and planning permission is not required. In deciding whether or not the external appearance of the building has been materially affected, only the impact of the structure itself on the external appearance of the building can be considered. This therefore excludes significant amounts of exterior lighting and internal spill through glazed surfaces, where the lighting itself often does not materially affect the external appearance of the building.

Even where planning permission is required, under the current planning regime planning permission can be granted automatically – in particular in relation to agricultural uses, and for ports and airports. These are two types of development that can result in significant light pollution, the former through large-scale agricultural lighting such as glasshouses; the latter through floodlighting often on tall columns.

Should planning permission be required, the development must be assessed against the policies in the development plan. There is a duty to determine the application in accordance with the development plan, unless material considerations indicate otherwise: see section 38(6) of the Planning and Compulsory Purchase Act 2004¹⁹. In this respect, the National Planning Policy Framework, itself a material consideration, states that: “Planning policies and decisions should...limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation”. A number of local authorities have adopted policies that seek to do this, but a key failing of the existing legal regime is that a number of development proposals are simply not assessed against such policies at all due to the aforementioned ambiguity around whether or not light can be classed as “development”.

Policy Response: Introduce regulations for exterior lighting that are similar to those which currently cover advertisements such as billboards in Section 220 of the Town and Country Planning Act 1990.

Provisions should be introduced to enable the Secretary of State for Housing, Communities and Local Government to make regulations to restrict or regulate the use of external lighting and glazing in buildings leading to light emanating from the premises, so far as this is expedient in the interests of amenity or public safety. As with advertisements, consent could then be required for certain types of external lighting and the regulations would provide for enforcement mechanisms, including the power to remove unauthorised lights. This approach would provide for a code for the regulation of external lighting, which would mean that it could be controlled through the planning system regardless of whether or not that lighting amounted to “development” or whether planning permission had been granted under the General Permitted Development Order. Areas that are particularly sensitive to lighting, such as Areas of Outstanding Natural Beauty, National Parks and International Dark-Sky Association designations, could receive enhanced protection.

Through this simple change, modelled on the existing powers that relate to advertisements, all of the issues identified with the planning regime above could be resolved. It would ensure that light emitting development above a certain threshold would need to be assessed against local and national policies and could not be automatically permitted either on the grounds that no “development” has taken place, or under permitted development rights.

III. Strengthen Statutory Nuisance Provisions

Remove exemptions to give local authorities a more effective method of preventing nuisance lighting.

Problem: Under section 79(1)(fb) of the Environmental Protection Act 1990²⁰ (inserted by section 102 of the Clean Neighbourhoods and Environment Act 2005), “artificial light emitted from premises so as to be prejudicial to health or a nuisance” is a statutory nuisance. If it is satisfied that a statutory nuisance exists or is about to occur or recur, the local authority must serve an abatement notice under section 80 of the EPA 1990 requiring that the nuisance is abated or restricted to prevent its occurrence or recurrence. Complainants will also be able to take a private action in the local magistrates’ court under section 82 of the EPA 1990.

This does give local authorities some power to regulate light emissions. However, in order to amount to a statutory nuisance, the emission must be “prejudicial to health, or a nuisance”. This sets a high threshold, and one that is focussed on the impact of light emissions on humans, rather than the environment.

Under section 79(5B) of the EPA 1990, a number of exemptions from the statutory nuisance provisions also exist for certain premises. This includes: (i) airports; (ii) harbour premises; (iii) railways premises; (iv) tramway premises; (v) bus stations and any associated facilities; (vi) public service or goods vehicle operating centres; (vii) lighthouses; (viii) prisons. Light emissions from these premises will not amount to a statutory nuisance.

Further to this, the EPA 1990 sets out that all industrial, trade, business or outdoor sports facilities have the defence of “best practical means” available to them, meaning that compliance is necessary only to the extent that it is “practicable” to the current state of technical knowledge and to the financial implications, and does not impede their ability to provide safe working conditions. This gives a considerable degree of flexibility to landowners to argue that no offence has been committed, even where a statutory nuisance has been committed from the emission of light.

Policy Response: Change the statutory nuisance regime limiting the exemptions in section 79(5B) of the Environmental Protection Act 1990. Under the current regime people affected by light nuisance from exempt premises can find it difficult to obtain redress. If the exemptions were removed, local authorities would have a more effective method of preventing nuisance lighting from these premises. Further, the “best practicable means” defence would give adequate protection for the legitimate use of light for health and safety reasons, and that responsible operators already employing “best practicable means” would not have to take additional measures to abate artificial light nuisance.

The difficulty with current enforcement is also that at present “health and nuisance” are subjective and difficult to prove. This will continue to be the case if “nuisance” has no comparable standard. A nuisance should be defined as any lighting at design and installation that does not conform to established guidance, legislation or standards. If the light is not conformant, it is automatically classed as a nuisance unless a deviation from guidance, legislation or standards is agreed with the local authority.

Further to this, relevant sections should be added to the Wildlife and Countryside Act 1981²¹, the Environment Act 1995²² and the Conservation of Habitats and Species regulations 2017²³ to include prohibiting ‘accidental or deliberate disturbance by inappropriate artificial light’, with “inappropriate” defined as lighting that is not dark sky compliant or creates significant impacts by its luminance or illuminance.



Foel Tower in the Elan Valley, Cambrian Mountains
Photo by Nigel A Ball FRAS
www.nigelaball.com

Supercharge standards for lighting

Following examples from other countries such as the ‘French Law 2018’²⁴, an overhaul of the rules applicable to outdoor lighting installations and internal light spill is paramount to prevent, limit and reduce light pollution.

IV. Create a Statutory Commission for Dark Skies

To oversee and enforce significant changes in lighting law, set up a statutory body to punish non-compliance and empower local authorities and councils to enforce regulations.

Problem: At present, it is the responsibility of Local Planning Authorities to develop planning policies that reduce the potential for light pollution or the Local Authority Environmental Health department to investigate causes of light nuisance. Often, Local Authorities do not have the required level of technical expertise to adequately assess lighting proposals where these are proposed within planning applications or where lighting has become a statutory nuisance.

Policy Response: Establish a new independent regulator responsible for exercising authority over light pollution issues, with powers to propose legislation and hold the government to account, including through the courts if necessary. These responsibilities could be integrated into the structure of existing organisations such as the Environment Agency or the new Office for Environmental Protection which will be established by the Environment Bill. Otherwise, they could form a stand-alone non-ministerial public body.

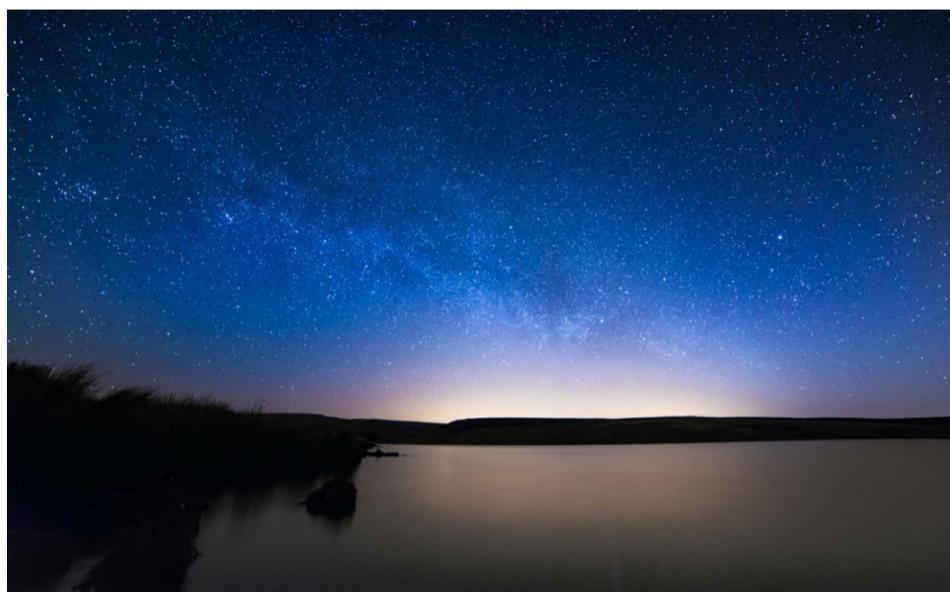
Such an organisation could be managed by a board comprising representatives such as lighting professionals, national parks, AONBs and environmental, public health, and astronomical organisations. This body would also encourage and sponsor lighting research and would hear appeals, grant licenses and exceptions. Funding from this body would go into measuring the impact of the policy changes proposed. It would also be responsible for research into the cost-benefit analysis of protecting our dark skies and what it means for communities, in a way that is complementary to legislation in order to help create the culture change that is needed.

This body would develop and approve training, qualifications and oversee competence accreditation schemes for individuals and companies to undertake lighting impact assessments and investigations.

Technically competent local council Environmental Health Officers should be legally required to inspect and prevent and control light pollution and spillage, with the power to issue fines in the same way that they can for fly-tipping or polluting to seashores, rivers and other water sources. During inspections, property and/or business owners must be able to supply the lighting and installation specifications.

In addition to this, give new powers to National Parks, AONBs and International Dark Sky

Reserves, Parks and Communities to pursue light spill from neighbouring districts. All relevant policies and plans going forward should be informed by regularly monitored sky quality readings with a set measurement standard as darkness varies through the night and the year. Cooperation between neighbouring local authorities and protected areas could take place around light pollution 'catchment zones'.



Sky over Grimwith Reservoir
Photo by Matthew Savage

V. Set standards for the brightness and colour temperature of lighting

Establish legal limits to the amount of blue light that luminaires can have in their spectrum and encourage manufacturers, distributors and installers of lighting to adopt best practice in this area.

Problem: Both LED and metal halide fixtures contain relatively large amounts of blue light in their spectrum, which brightens the night sky more than any other colour of light. Exposure to blue light at night has been shown to harm human health and disrupt wildlife.

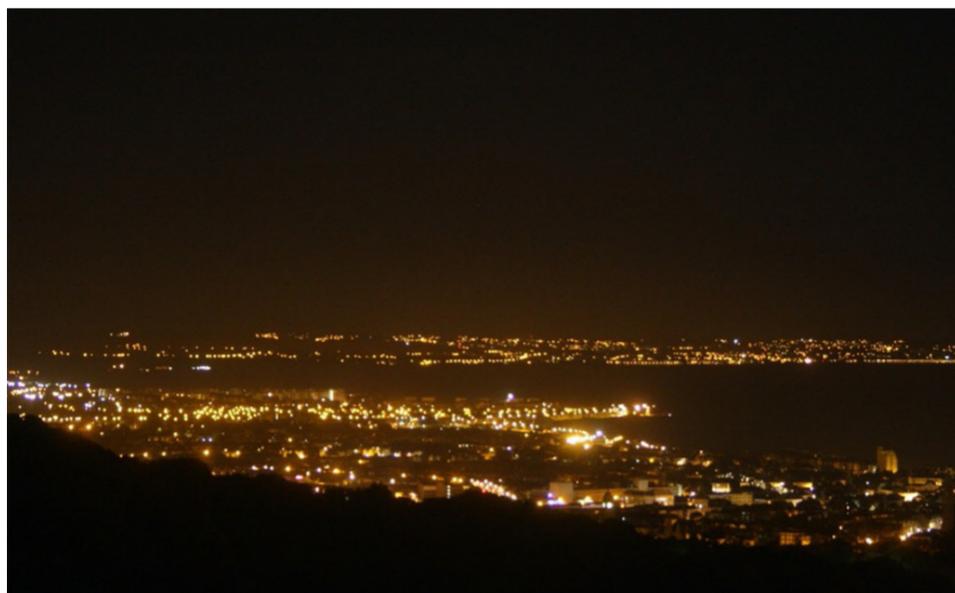
The ready availability of bright LED luminaires, with long life, easy installation and relatively low power consumption is leading to a rapidly growing proliferation of inappropriate external lighting. These lights are sold in wholesalers, DIY stores, specialist shops and online suppliers and often their high brightness is the main selling attribute. Usually there is a very limited choice of colour temperature and the majority for sale are cold/white.

Policy Response: There need to be better specifications for lighting provision, including appropriate zoning, as well as improved luminaire specification which must avoid pressure only to buy what is cheapest. Legislate to ensure the public's choice of lighting is broadened to include more representation of the correct type of lighting, while ensuring that local authorities can maintain these standards for all planning applications. Introduce regulations to control the brightness of road lighting compliant with the recommendations of British Standards for road lighting²⁸, or council approved policies, meeting the needs of the road user groups at various times during the night, floodlighting of buildings, sports facilities and domestic and commercial premises, guided by the principle of 'right light, right time, right place'.

For public or private outdoor installations, including streets, roads and highways, open air or semi-covered car parks, and non-residential buildings inside and outside urban areas, only 'warm' light sources should be used for lighting, meaning the Correlated Colour Temperature should not exceed a maximum value of 3000 Kelvins. In certain protected areas such as nature reserves and national parks, this limit should be lowered so that the Correlated Colour Temperature of lighting must be less than or equal to 2400 K and meet any specific design guidance for that area. Some areas that have dark sky status have developed guidance aimed at a wider audience, with Northumberland National Park being just one example of publishing a good practice guide for outdoor lighting²⁴.

Certified community light management plans could be developed and implemented by planning authorities where the dark sky quality is good and requires maintenance and in areas where the dark sky quality is poor and requires improvement. This would see multi-level policies on lighting design, luminaire installation and policies on technical lighting parameters merged to create one lighting strategy for individual areas or regions.

Guidance notes from the Institution of Lighting Professionals (ILP)¹⁵ and the International Dark-Sky Association²⁵ give examples of acceptable and unshielded fixtures.



View of light pollution over Eastborne from Warren Hill
Photo by Daren Baskill

VI. Set standards for the direction and density of lighting

Introduce a legal requirement that all lighting units are sold and distributed with instructions for the control of obtrusive light, dark skies-friendly mounting instructions and issue penalties for non-compliance.

Problem: Evidence submitted by the South Downs National Park Authority shows that sky glow is the main determinant in dark sky quality. Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, especially between zero and ten degrees above the horizontal, producing a luminous background, or sky glow. This results in significantly reducing the ability to view the stars. This is in addition to the fact that glare from poorly shielded outdoor lighting is also harmful to the health of the general public, because it decreases vision by reducing contrast.

At present there is no enforceable way of reducing sky glow, nor are there standardised guidelines for dark skies-conscious installation, as lighting is very rarely sold with accompanying instructions on how to shield from and control unwanted obtrusive light.

Policy Response: Appropriate shielding and mounting guidelines should be established and made mandatory. Instructions on lighting units themselves and in their packaging can be enforced by law and all private exterior lights could be marked with directions for horizontal fitting, with penalties for inappropriately mounted lights.

Regulations must be introduced by a statutory body for public or private outdoor installations, including streets, roads and highways, and car parks, both in and outside urban areas, that stipulate that the Upward Lighting Ratio (the percentage of light emitted from the luminaire above the horizontal) must be 0%. This should apply within the boundaries of observation sites and nature reserves, for illumination of heritage structures, the built environment, private and public parks and garden installations.

For outdoor public or private installations, including streets, roads and highways, and car parks, inside and outside urban areas, 95% of the light flow emitted below the horizontal should be in a half-angle cone of 75.5°.

Establish a new maximum allowable illumination level, calculated in lumens per square metre, that does not exceed 20 Lux. This would need to be caveated against health and safety requirements in workplaces, as there are instances where 20 lux is insufficient for certain activities, such as some agricultural work which requires 50 lux in limited spaces to comply with British standards.

To reduce sky glow, all public owned lighting should be dark sky-friendly lighting, with street lighting schemes being subject to a 'proof of need' and operated at the 'lowest level of illumination' requirement before installation. 'Buffer zones' could also be established to protect dark sky landscapes from city sky glow.

VII. Create ‘best practice’ for the appropriate times of use for lighting

Design a national program of best practice ‘Dark Sky Hours’ in which categories of lighting can be either dimmed or turned off completely in consultation with the community and local police.

Problem: An estimated 830,000 tonnes of CO2 pollution is produced in wasted energy by the UK’s 7.5 million streetlights due to the light they direct above the horizon²⁶, making street lighting a contributor to greenhouse gas emissions. In addition to this, there remains little evidence to support the notion that lighting helps to reduce crime, though appropriate lighting is necessary to stimulate the night-time economy and support some vulnerable members of society.

Differing forms of area-specific lighting ‘best practice’ would help to reduce some of this damage being done. Moves to implement lighting curfews or dimming regimes can be implemented in consultation similar to the system described in ILP Guidance²⁷ on the application of adaptive lighting within the public realm.

Policy Response: Implement generalised national presumption of ‘Dark Sky Hours’ between 12:00am and 5:00am. Light curfews should be implemented and specify times of the night at which lighting must be dimmed or extinguished completely, based on the type of application and the setting in which lighting is employed. Allow limited exceptions for public displays of lighting during holiday periods and encourage use of motion sensing switches and similar technologies

Encourage local councils to develop and implement policies that embrace variable lighting levels (dimming) to their street lighting according to user group need as it changes during the night. These processes are described in British Standards²⁸ and ILP guidance²⁷, including the processes for undertaking consultation, determining suitable timetables, monitoring and reporting.

Introduce planning regulations to prohibit dusk to dawn outdoor exterior lighting for private purposes, unless controlled by Infra-Red or movement detection sensors. While in some cases streetlights contain programable LEDs, the ILP notes that not all Local Authorities use Central Management Systems (CMS) and some drivers are not programable, meaning that in some cases Local Authorities would have to replace all streetlight gear trays wholesale at a cost²⁷. It is therefore important to promote use of fixed dimming regimes or CMS where appropriate, in line with the recommendations of British Standards²⁸, whilst allowing Local Authorities the necessary transition time to adopt Dark Sky Hours.

Incentivise dark sky governance at the national, local and individual level

Introduce new initiatives at every level of government which educate about the effects of light pollution as part of wider climate change awareness and create clear incentives for dark sky preservation.

VIII. Appoint a designated ‘Minister for Dark Skies’

Appoint a designated ‘Minister for Dark Skies’: give a new Minister a clear remit for the control and prevention of light pollution.

Problem: The full list of ministerial responsibilities, including Executive Agencies and Non-Ministerial Departments, has historically made very little reference to the monitoring of dark skies and reduction of light pollution.

Policy Response: Give a new cross-departmental Minister a clear remit for the control and prevention of light pollution, as well as oversight of planning and environmental policies that concern dark skies.

Place a duty on all public bodies and government departments to reduce light pollution year-on-year as part of their wider climate change emission reductions and health and well-being benefits.



The Arch, Cwmystwyth, Cambrian Mountains
Photo by Nigel A Ball FRAS
www.nigelaball.com

IX. Create a 'Dark Sky Towns & Cities' initiative

Give local government the power to go further to reduce light pollution by creating a voluntary 'Dark Sky Town/City' classification.

Problem: At present, a lack of awareness of light pollution and dark skies is evident throughout society. The general public and many authorities do not have sufficient regard for the impact of light pollution in decision making. The lack of awareness is systemic within local government and delegated authorities, with many planners, environmental health officers and councillors lacking sufficient knowledge of the issue.

CPRE's Shedding Light survey found that almost two thirds of local authorities have a lighting policy in their Local Plan or similar, but the majority of these are the continuation of existing policies – and only a third had proactively adapted it to even comply with the National Planning Policy Framework²⁹.

Policy Response: Councils should be encouraged to work with businesses to introduce a 'dark sky building classification' or certification system, helping to demonstrate through exemplar projects and case studies that meeting more strict light pollution criteria does not limit the lighting design itself. Guidelines from the International Dark-Sky Association light database and accreditation system could be used to inform a UK-wide luminaire classification system.

One issue to acknowledge with implementation is the fact that in England many areas planning is dealt with at a District or Borough level, whereas road lighting is dealt with by County Councils.

X. Emphasise the role of education

Work with educational and cultural institutions to achieve widespread public awareness of the issue of light pollution.

Problem: Whilst every point in this report requires or involves government or local government action, such action will only provide part of the answer to preserving dark skies until there is widespread public awareness of the issue, and acknowledgement that it must be dealt with as a matter of urgency.

Policy response: Short of a government-commissioned review into how the education system of each national administration is incorporating the issue of light pollution into wider environmental education, the government should seek to work with professional educators and the astrotourism sector to help them improve the quality of teaching and students' learning in this area.

Moving forward, the APPG for Dark Skies is committed to supporting a strong focus on the damaging effects of excessive light pollution and how to mitigate them across the school curriculum at every level up to 16 (KS 1, 2 and 3, and GCSE), in the same way that climate change is now addressed within the curriculum.

Beyond this, collaborations which explore the issue of light pollution should be made with national museums and science centres that receive funding from the Department for Culture, Media and Sport.

With special thanks to:

Our partners

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Affiliated National Parks and Areas of Outstanding Natural Beauty

Cranborne Chase AONB
High Weald AONB
Friends of the Lake District
Northumberland National Park

North Pennines AONB
North Wessex Downs AONB
Pembrokeshire Coast National Park
Snowdonia National Park

Our members

Co-Chairs:

Andrew Griffith MP

Lord Rees of Ludlow

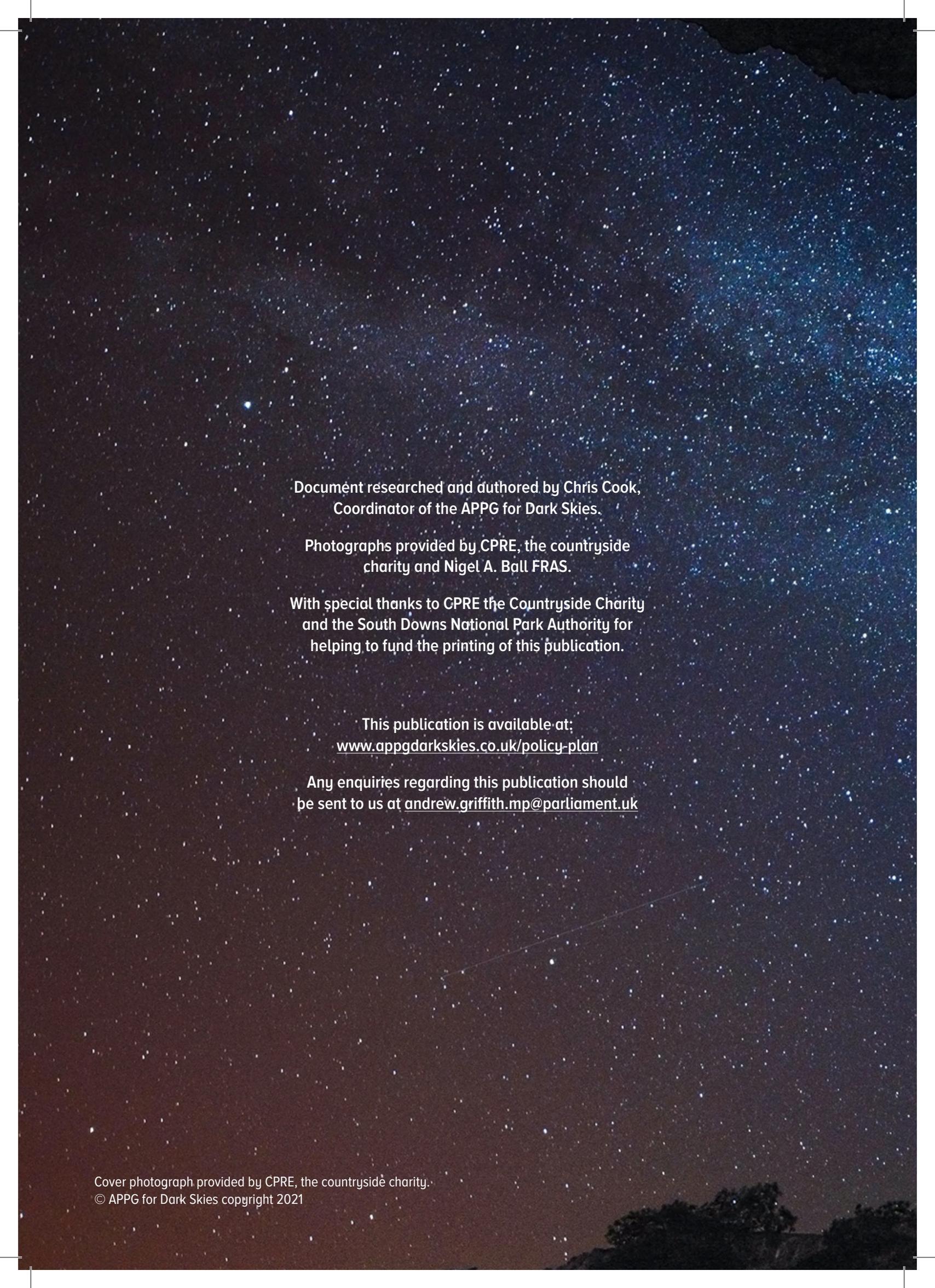
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Any enquiries regarding this publication should
be sent to us at andrew.griffith.mp@parliament.uk