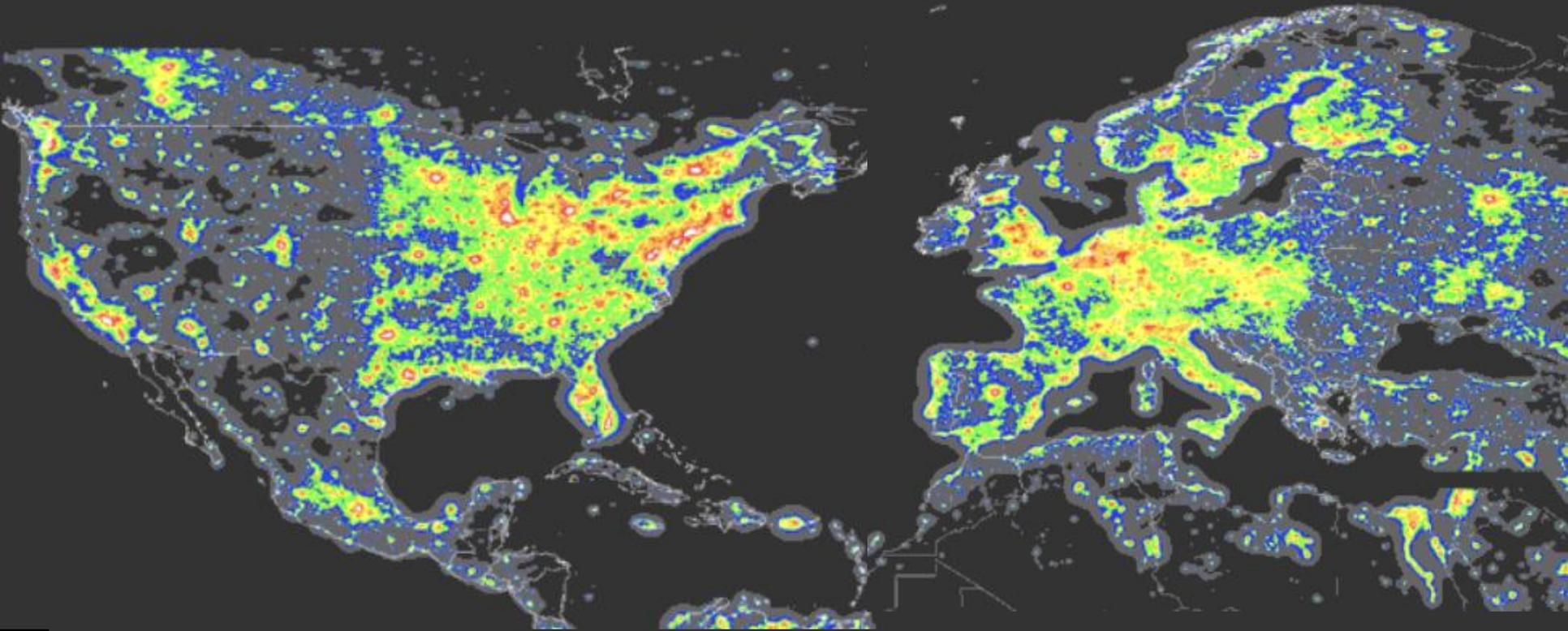


“The Quest for Darker Skies”



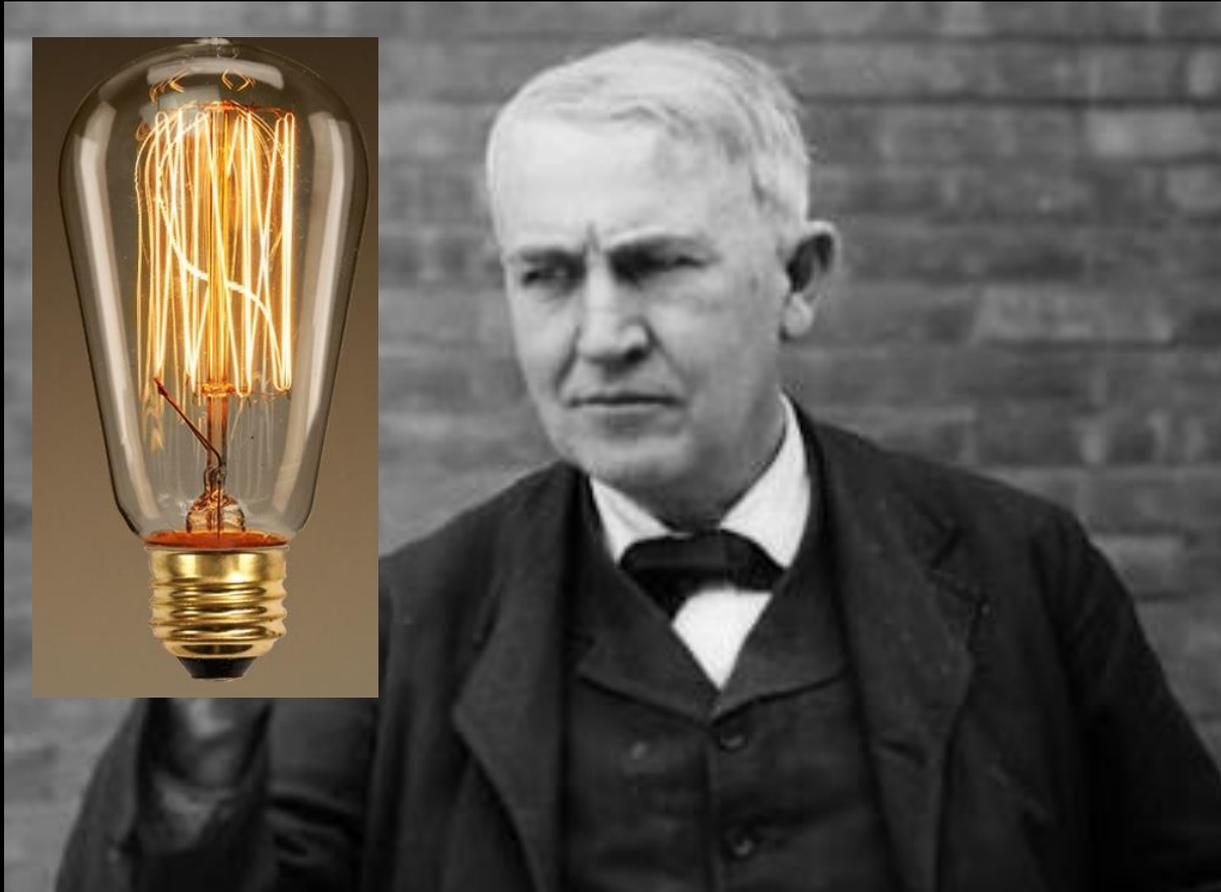
Howard Parkin MBE. BSc. BEd. FRAS
DarkSky International Advocate (IOM)
2025 UCM Research Festival

The World at night



“Houston, (we have) a problem”

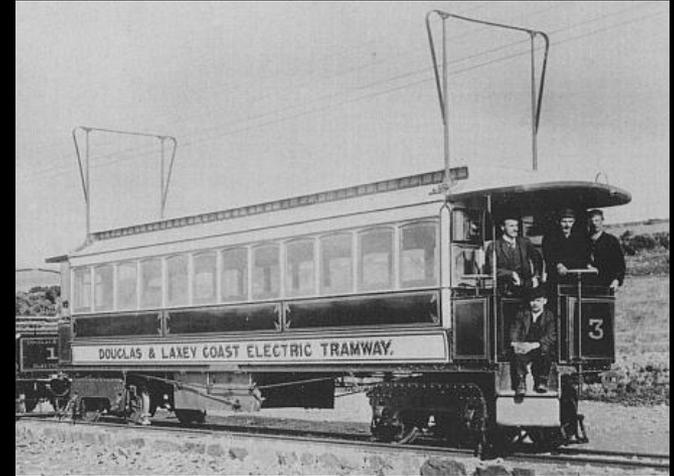
Imagine a world without light!



It was in 1879 that Edison's light bulbs first appeared on New York streets

Port Jack, Onchan had the first street lights in the IOM

- On 11th May 1897 the Douglas and Laxey Coast Tramway (D&LCT) switched on the Islands first electric street lights at Port Jack, Onchan.
- The D&LCT offered to install lighting on Douglas Promenade, in exchange for extending the tramway along Douglas Promenade.
- The offer was declined, and it was not until 25 years later in 1923 that Douglas became one of the last towns of its size in the British Isles to install electric street lighting.



What do these images have in common?



Regents Park, London



Sikhanoukville,
Cambodia



Europe at night

They all show the effects of pollution, a human problem that exists throughout the world.

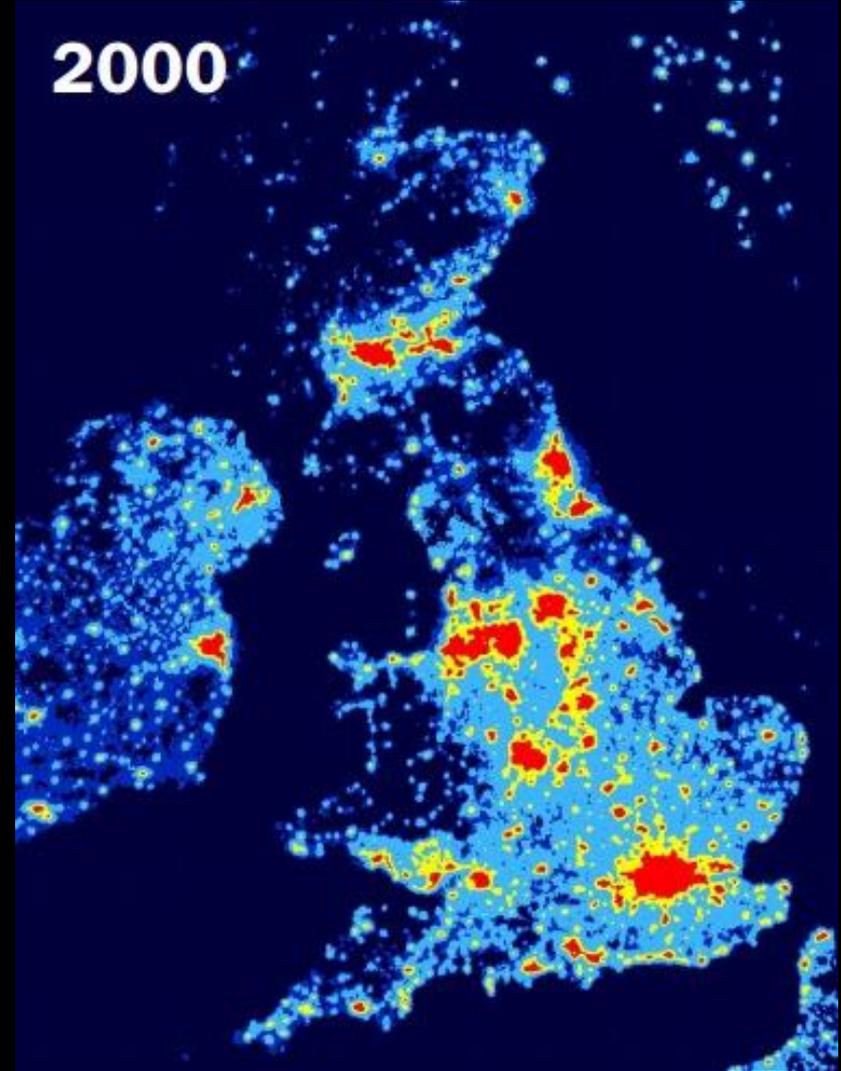
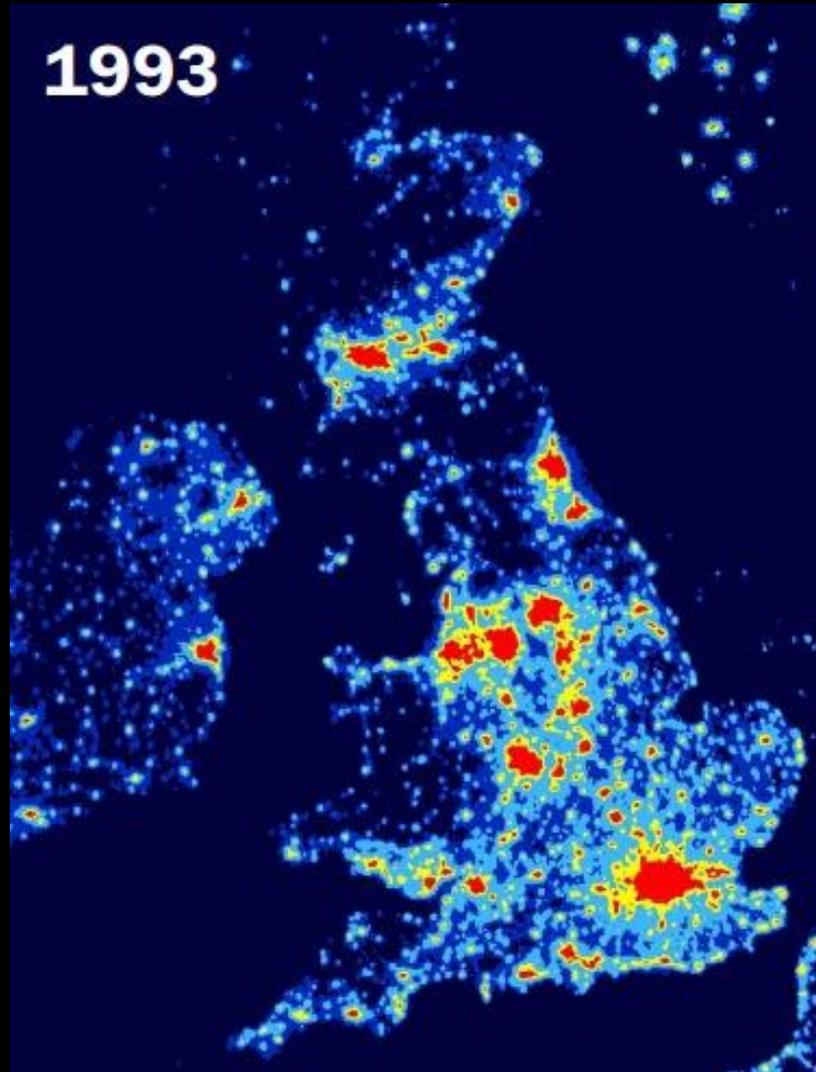
Universal Films opening sequence

Many in the film and TV industry show illuminated cities at night as something of beauty!
It's actually showing us light pollution!

Lights over Europe - 1992-2010



Night Blight in the UK



“Put that light out!”



Taken on a “normal” night



1 yr. earlier during a power cut

Iowa State University Campus

Many people have never seen the Milky Way



But, it can be spectacular from a dark sky site

The Milky Way from the Isle of Man



Clearly visible along with Irish light pollution!

But, its not just astronomers!

AMA Adopts Guidance to Reduce Harm from High Intensity Street Lights

Artificial light at night as a new threat to pollination

Dark sky preservation stepped up in coastal city

Light pollution is associated with earlier tree budburst across the United Kingdom

NYC Dims Lights for Migrating Birds

Stars are 'disappearing from the night sky', astronomers warn

Growth of Light Pollution

Missing the Dark: Health Effects of Light Pollution

Light pollution
Are we losing the night?

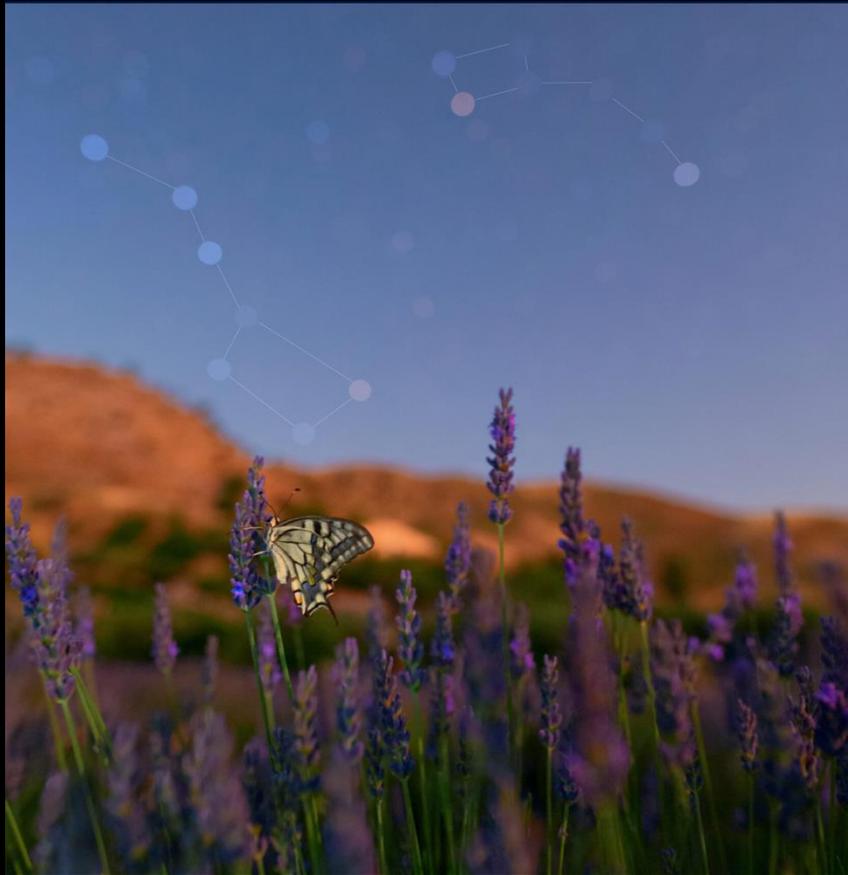
Light pollution: Night being lost in many countries

Protecting a cosmic treasure

Increase in LED lighting 'risks harming human and animal health'

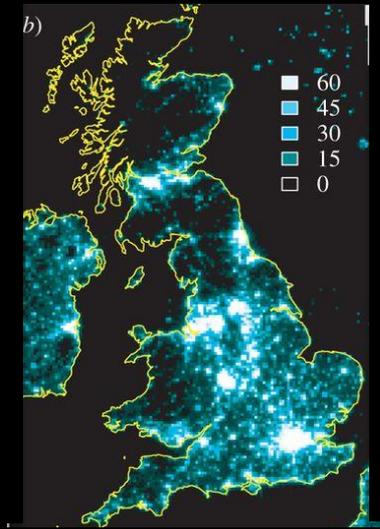
Lights of Human Activity Shine in NASA's Image of Earth at Night

Artificial light is seen as a threat to pollination



A report in Nature magazine (2016) identified excessive light pollution as a threat to terrestrial ecosystems

Artificial light affects tree budding



A Royal Society report in 2015 noted excessive light causes budburst a week earlier in light polluted areas

Light pollution affects wildlife



Lighting is expensive



- The lights at places like Singapore and Kuala Lumpur are stunningly spectacular

- In Kuala Lumpur the lights are on from 7.00pm to midnight.
- That equates to over US\$200,000 per year for the Petronas towers only!



.....and what about the carbon footprint of such lighting?

NYC Dims Lights for birds



Up to a million birds have their migratory patterns disrupted by excessive lighting. This can be reduced by turning the lights off when bird numbers exceed 1,000

Light pollution affects humans



- I noticed this a few weeks ago whilst driving up the M6 motorway in the UK
- The UK Highways Agency has turned off the lights on a number of major roads between midnight to 0500
- A spokesman stated...

“Evidence so far indicates that switching off the lights between the hours of midnight and 5am on carefully selected sections of motorway has not had an adverse impact on safety”

Light pollution affects humans

Light pollution affects humans

There is no evidence that lighting deters criminal activity.



Statistics prove that over 80% of criminal activity takes place during daylight hours.

Melatonin suppression

LED lighting 'risks human health'

Transition to blue light increases the suppression of melatonin.

The Guardian 14/9/22



The dark side of blue LEDs: Melatonin Suppression

New blue LED lighting brings new kind of light pollution.

American Institute of Physics 9/9/22

Melatonin suppression

A French report in 2019 found that LED lighting can harm the human eye

LED lighting 'risks human health'

Transition to blue light increases the suppression of melatonin.

The Guardian 14/9/22

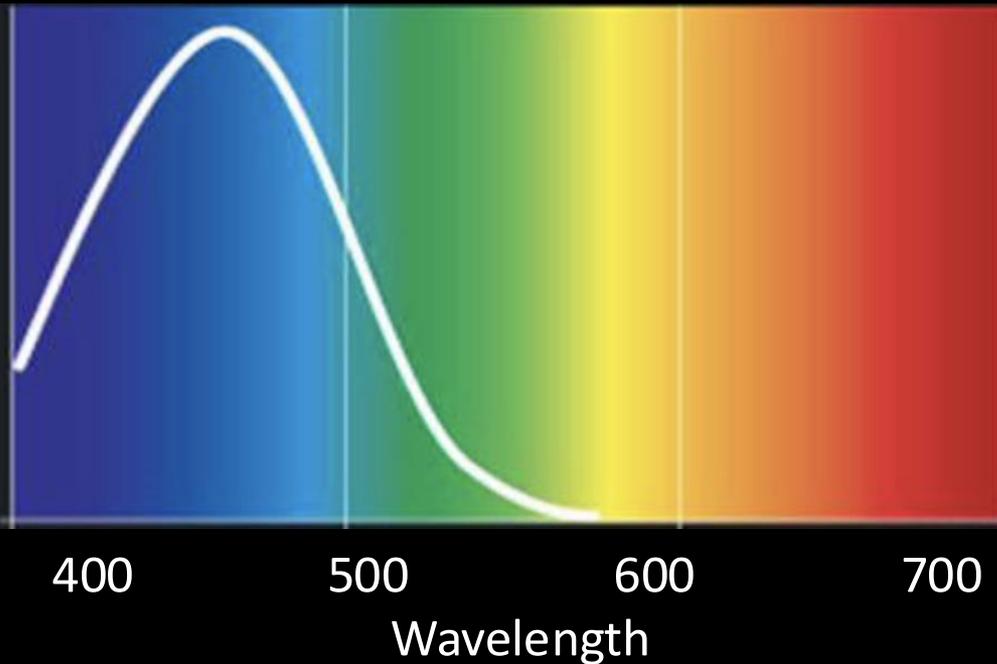


The dark side of blue LEDs: Melatonin Suppression

New blue LED lighting brings new kind of light pollution.

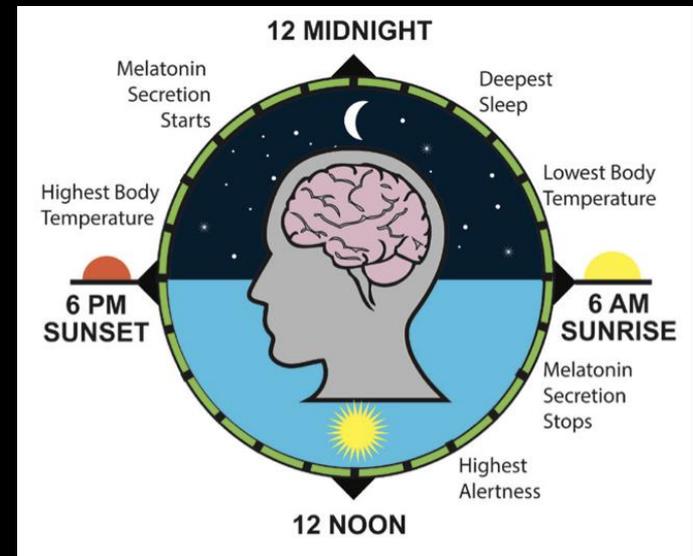
American Institute of Physics 9/9/22

Melatonin suppression

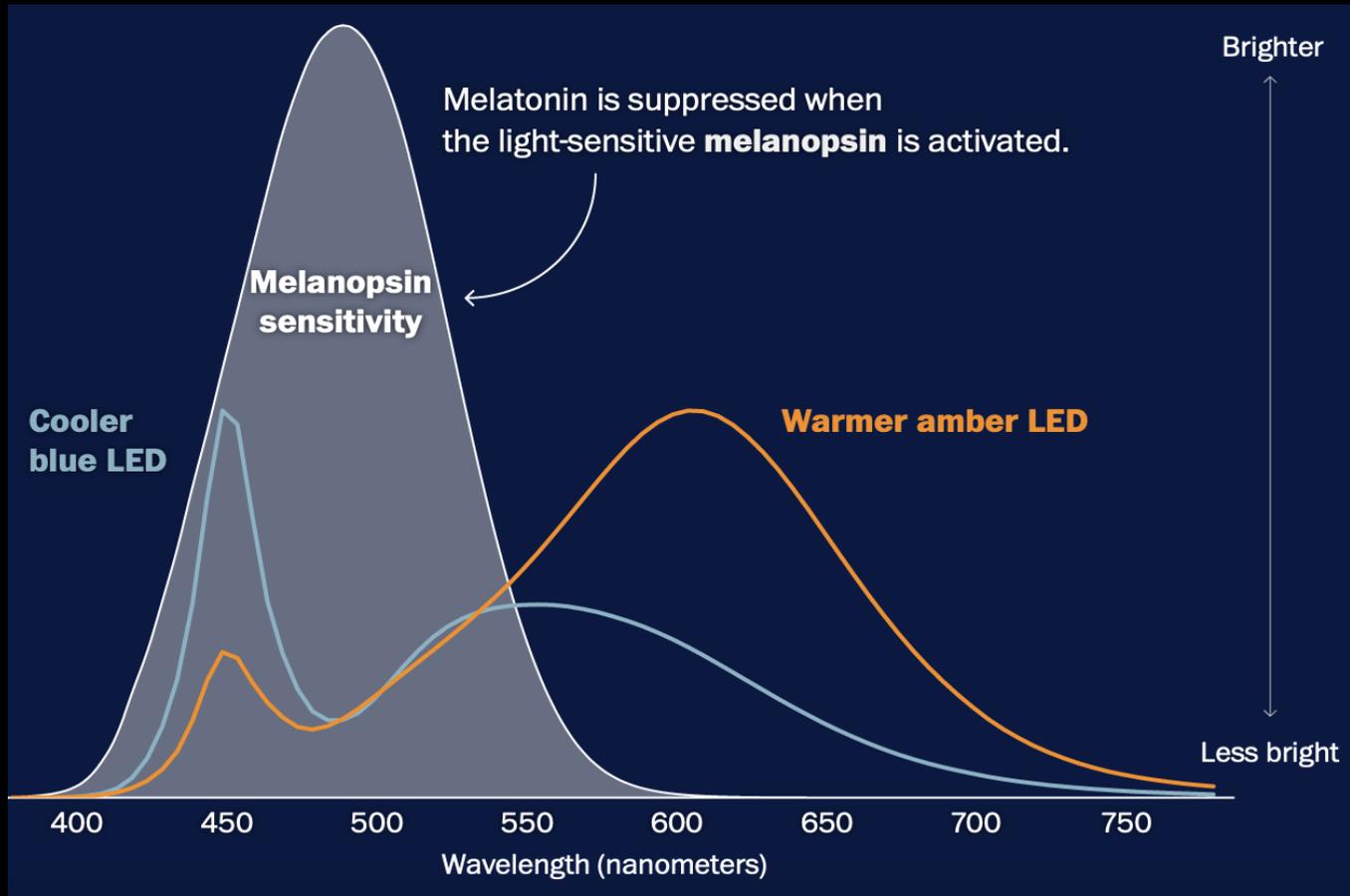


- Disruptions in our circadian rhythm, which can be caused by exposure to excessive light, have been linked to various cancers.

- Shorter wavelength blue light has an adverse effect on the production of Melatonin, a hormone that aids our sleep.



Melatonin suppression



- Consequently, many LED lights have been labelled “probably” carcinogenic by WHO (the World Health Organization) in June 2023.

Macular Degeneration

UV light exposure: Chronic exposure may contribute to retinal damage.



- A 2024 report in the Journal of the AMA revealed that higher levels of exposure to UV light increases the risk of incident of Macular degeneration (MD)
- South Korean studies found that people living in areas with the high levels of streetlights and other artificial light had more than double the odds for MD, compared to those living in areas with lower levels.



New York City at night



An estimated 90,000 birds die each year in New York, by flying into buildings. This figure could be reduced by up to 83% if lighting was turned off/reduced.



Dark skies tourism



Twelve of the UN's seventeen sustainable development goals can benefit from dark skies tourism.

Dark sky organisations

DARK SKY DISCOVERY Welcome...
...to the UK's dark skies - inspiration for everyone.



STARLIGHT
A COMMON HERITAGE



DarkSky

Discovery
in the Dark
Wales



Dark Sky Society



ida INTERNATIONAL
DARK-SKY
ASSOCIATION

**DARK SKIES
ASSOCIATION**



**AUSTRALASIAN
DARK SKY
ALLIANCE**



**Campaign to Protect
Rural England**
Standing up for your countryside

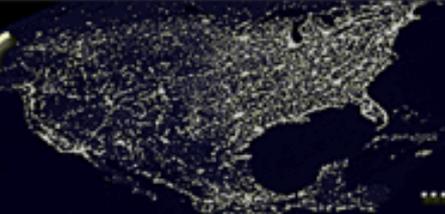


CfDS



DARK SKY SOCIETY

"AMERICA, WE HAVE A PROBLEM ...



...LIGHT POLLUTION!"



DarkSky International

The DarkSky International places program is an independent, certification of dark locations. Over 200 places around the world have been certified since 2001.



DarkSky International



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DarkSky International

DarkSky International offer five types of designations:

1) International Dark Sky Communities

Communities are cities and towns that adopt quality outdoor lighting ordinances and undertake efforts to educate residents about the importance of dark skies.

2) International Dark Sky Parks

Parks are public or privately-owned spaces protected for natural conservation that implement good outdoor lighting and dark sky programmes for visitors.

3) International Dark Sky Reserves

Reserves consist of a dark “core” zone surrounded by a populated periphery where policy controls are enacted to protect the darkness of the core.

4) International Dark Sky Sanctuaries

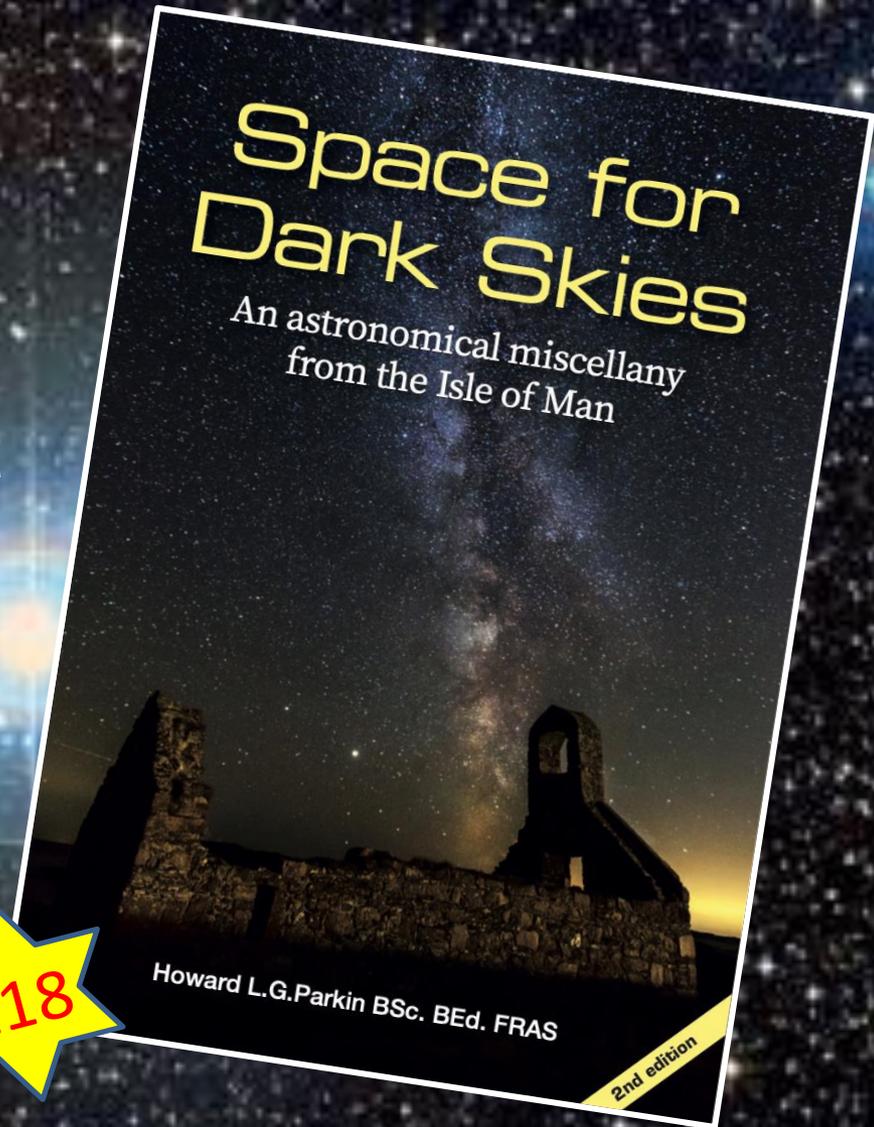
Sanctuaries are the most remote (and often darkest) places in the world whose conservation state is most fragile.

5) Urban Dark Sky places

Urban sites that promote an authentic night-time experience despite being in the midst of significant artificial light.

How did my DSI IOM advocacy occur?

- I was lecturing in 2022 in Alaska.
- I was approached by a US based DSI advocate who had read my book.
- They asked if they could put my name forward.
- I was appointed as the IOM advocate in Sept. 2022.
- My book is available today at a discounted price of £18 for FWAG members.
- I would be pleased to sign copies upon request.



So, just what have we done on the Isle of Man?



The coastal area and central areas of
the Island are totally devoid of any
significant light pollution

IOM Govt. Dark skies initiative

- In January 2012 the IOM Govt. Dept of Community Culture and Leisure announced that in the new marketing strategy for tourism.
- They were exploring a number of new initiatives including
- The Isle of Man as a “Dark Sky Astronomy Destination”

Diversification

- *Find new product or service offerings to target new visitors*
- Events -
Road Race Cyclists, Triathletes, Golfers
- Spa breaks
- Shopping
- Theme parks
- Log cabins and caravans
- **Dark Sky Astronomy Destination**
- Green Tourism
- Wedding Tourism

• Nature and wildlife

• Mythology & Superstition

• Angling

• Wedding Tourism

DARK SKY DISCOVERY

Welcome...

...to the UK's dark skies - inspiration for everyone.

- In September 2012, A successful application was made for 7 Dark Sky Discovery Sites
- This was followed in 2013 by an application for 19 more sites.
- Giving the IOM the greatest concentration of Dark Sky Discovery Sites in the British Isles



We have twenty-six Dark sky discovery sites on the Island

It's official! Promenade is a great place to see the stars



Ramsey Commissioner Dr Alex Allinson, and town clerk Peter Whiteway at Ramsey's Dark Sky



The IOM Dark sky project has received much local support



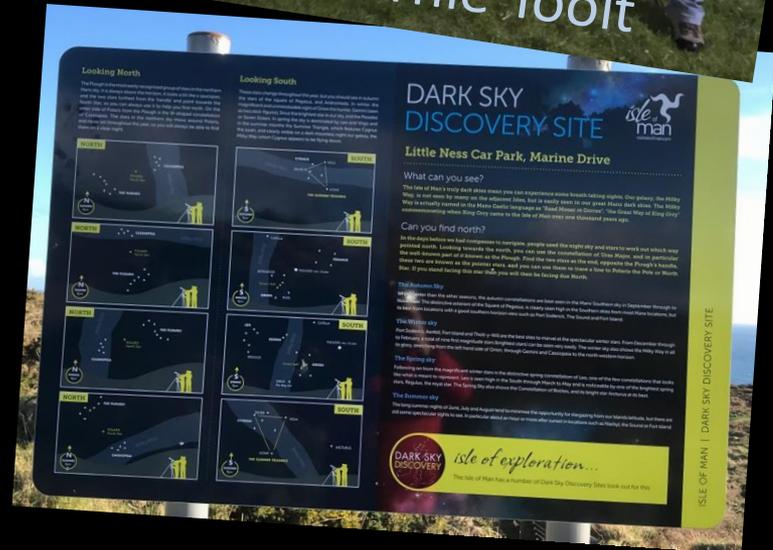
The Stargazers bench



Stargazing at Thie Tootit



"Buy-in" initiatives



Bespoke signage

So, what do we do now?

Studies indicate the sky is brightening by 10% per year



We must make everyone aware of this issue

- Contact your elected representatives
- Speak with your Commissioners or MHK's
- Avoid installing inappropriate lighting.
- Install approved street lighting.
- We ought to apply for international recognition of our unique dark skies

So, what do we do now?

They are pursuing this on the adjacent Isles.



- In 2023 the House of Lords confirmed “*artificial light causes adverse health effects including heart disease and premature death.*”
- York hope to become the UK’s 1st dark city.
- Yns Mon (Anglesey) are pursuing IDS status reducing light pollution via a retrofitting lighting scheme.

So, what do we do now?

They are pursuing this on the adjacent Isles.

UK parliamentarians fighting light pollution to protect our dark skies

APPG FOR DARK SKIES

LEARN MORE

- The APPG is a UK Parliament cross-party group from the Commons and Lords founded in January 2020.
- It focuses on issues about light pollution and dark skies

So, what do we do now?

Some recent developments – October

ALL COMMUNICATIONS TO BE ADDRESSED TO THE CHIEF EXECUTIVE/CLERK
Onchan District Commissioners

A lighting design has been completed by Thorn Lighting and the new scheme should reduce back light and help reduce the impact on the environment, whilst maintaining the correct level of lighting for road safety. The existing columns will be removed and replaced with tubular steel columns used as standard throughout the district in line with the current policy.

Street light replacement scheme given go ahead in Port Erin
The project will see 294 lights replaced with LEDs and some will also have new columns....
...these will replace the current 'sodium' stock and will also be **'dark sky compliant'**.

Isle of Man
IM3 2JT

Dear Resident

Re: Wentworth Close and Turnberry Avenue Street Light Replacements

Onchan District Commissioners have appointed Geoff Cormode Ltd and Electrical Design Solutions Ltd to carry out the replacement of street lighting on the roads known as Wentworth Close and Turnberry Avenue.

We are anticipating the contractor to commence work on the *13th October 2025*. The Contractor will keep you informed of any relevant dates and will assist with any specific requirements you may have. Access to and from your property across the footpath may be restricted at times but any disruption will be kept to a minimum.

A lighting design has been completed by Thorn Lighting and the new scheme should reduce back light and help reduce the impact on the environment, whilst maintaining the correct level of lighting for road safety. The existing columns will be removed and replaced with tubular steel columns used as standard throughout the district in line with the current policy.

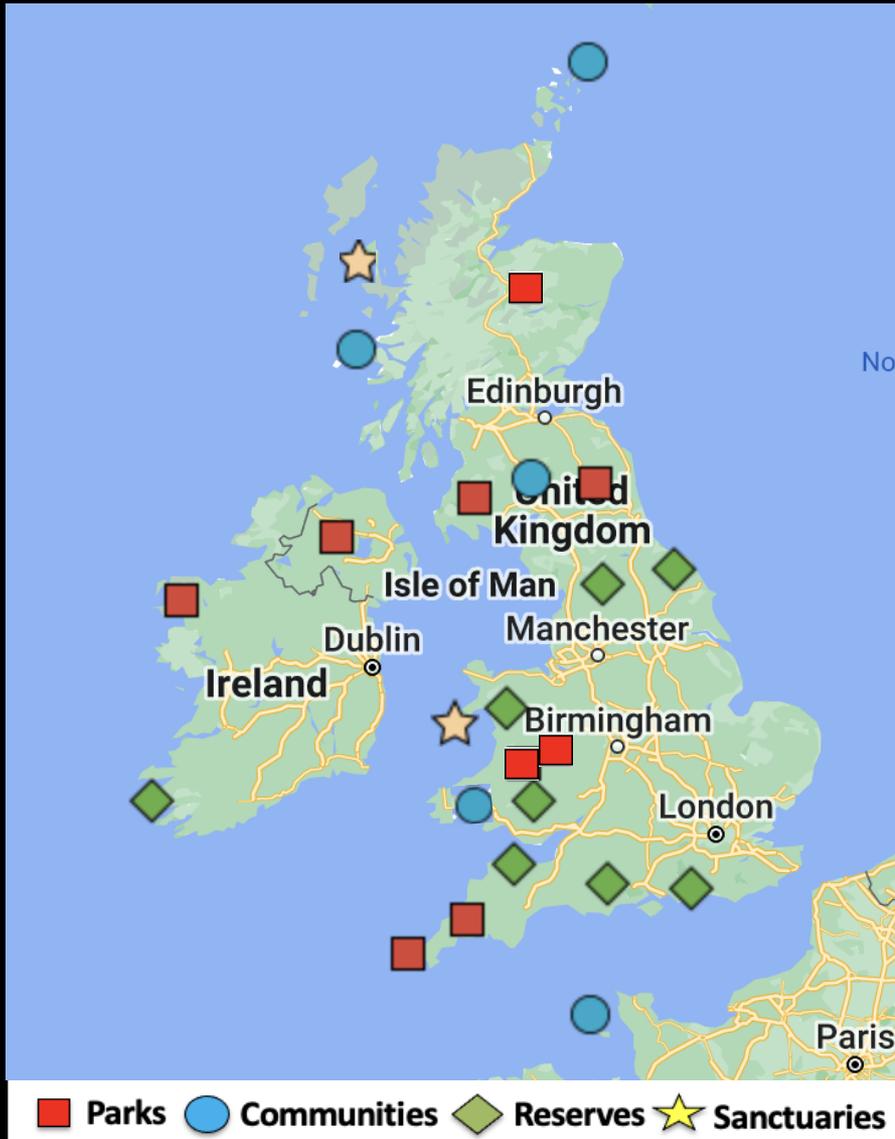
We understand that these works may cause an inconvenience to your daily routines and we would like to thank you for your anticipated cooperation and understanding in assisting us in completing these works as efficiently as possible.

Please contact this office if you have any queries.

Yours faithfully

There are currently no planning requirements for outdoor lighting on the IOM. If we had international accreditation it would be a statutory requirement

24 British Isles IDS places



Location	IDS Type.	Date
1. Galloway	Park	2009
2. Sark	Comm (1 st Isle)	2011
3. Exmoor	Reserve	2011
4. Isle of Coll	Community	2015
5. Brecon Beacons	Reserve	2015
6. Northumberland	Park	2015
7. Kerry	Reserve	2015
Isle of Man	Comm (1st Nation)	2015
8. Snowdonia	Reserve	2015
9. Ellan Valley	Park	2015
10. Moffatt	Community	2016
11. South Downs	Reserve	2016
12. Mayo	Park	2016
13. Bodmin Moor	Park	2017
14. Glenlivet Estate	Park	2018
15. Cranborne Chase	Reserve	2019
16. Yorkshire Dales	Reserve	2020
17. North York Moors	Reserve	2020
18. Om Forest	Park	2020
19. North Ronaldsay	Community	2021
20. West Penrith	Park	2021
21. Bardsey Island	Sanctuary	2023
22. Isle of Rum	Sanctuary	2024
23. Powys	Community	2024
24. Gower	Community	2025

So, what do we do now?

- In January 2025 the Biosphere Stakeholders Group unanimously agreed that the IOM ought to seek DSI status
- Proposals include listing:
 - The Calf or..
 - The Meayll peninsula or..
 - The whole IOM
- To take this forward we need:
 - “Buy in” by our politicians
 - Funding
 - Corporate involvement?

**Let us give our children back
the magic of the night!**



OUTBACK



**Let us give our children back
the magic of the night!**

*“For my part I know nothing with any certainty,
but the sight of the stars makes me dream.”*

Vincent Van Gogh

Thank you for your attention Any Questions?



For further information on this subject, contact me
on howardparkin@manx.net or
DarkSky International at darksky.org