



Clr Sarah Warren
Bath and North East Somerset Council
c/o Liberal Democrat Group Office
The Guildhall
High Street
Bath
BA1 5AW

31 May 2023

A joint letter, co-signed by:



SEED



Dear Sarah

Bath NES Council - Ecological Emergency Action Plan

The Council has recently published its Ecological Emergency Action Plan, demonstrating a forward-thinking and practical approach which, if fully implemented, should have a significant benefit for our wildlife, habitats and ecosystems. I know how close to your heart this issue is.

Because of this, I would like to alert you to the evident risk posed by certain types of LED lighting, which are common throughout Bath and every town and city in the UK.

Despite the benefits of LED lighting, being low-energy and efficient to operate and with a long life-span, there is increasing scientific evidence that the most commonly used LED lighting is having a devastating impact on insect populations. The collapse of insect numbers negatively affects the food chain, causing birds, bats and other creatures to starve or seek new habitats. Insects are also essential for pollination, to maintain and sustain our ecology, our food sources and our entire ecosystem and biosphere.

Conventional filament lighting provides light which is more or less equally balanced across the colour spectrum. LED lighting by comparison emits blue-rich spectrum light, which rapidly depletes insects of energy and their ability to regenerate cells. LEDs currently emit lower levels of red spectrum and far-red spectrum light which are essential components to enable cell regeneration. The benefits of far-red spectrum light are commonly known and red-light therapy is available on the NHS and routinely used by athletes, as it stimulates cell renewal and blood flow.

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Below are links to two scientific papers which evidence the lethal effects of LED lighting for insect species:

Science Advances Journal: <https://www.science.org/doi/10.1126/sciadv.abi8322>

Nature: <https://www.nature.com/articles/srep07383>

Thankfully, there are alternative solutions available, including more balanced spectrum LEDs and amber and red spectrum low energy lights. These significantly diminish or eradicate the risk of rapid decline of insect species, as demonstrated in trials in Germany and the Netherlands. With the Riverline project gathering pace, there is an excellent opportunity to install alternative lighting solutions which would be more wildlife friendly to support a thriving ecosystem. This in turn would provide the opportunity for positive 'wildlife friendly' marketing but also encourage local and visiting homeowners to understand the risk of LEDs through positive interpretation. This approach could be extended to the 'wildlife friendly spaces' planned for new developments referenced in the Ecological Emergency Action Plan.

I would be very pleased of the opportunity to discuss this further and suggest a meeting to share information and solutions in the first instance. There are several other local people and representatives who are motivated and knowledgeable about this subject and who are co-signatories to this letter.

The outcomes of implementing more wildlife friendly lighting would be incredibly positive, sustaining insect, bird and bat populations and maintaining and enhancing the wild corridor of the river and our many green spaces.

Please let me know if you would like me to convene a meeting with you and this letters signatories to discuss further. We are all keen to provide support and knowledge to address this important issue.

Yours sincerely

Alex Sherman, Chief Executive, Bath Preservation Trust

Charles Draper, Starlit Skies and Chair of Herschel Society

Dr Robert Fosbury, Astronomer Emeritus, European Southern Observatory Hon. Prof., UCL Inst. Ophthalmology

Andrew Grant, Founder and Director, Grant Associates

Sara Grimes, Chair, Transition Bath

Pauline Harris, Co-founder, FACE – Families Acting on Climate Emergency

Simon Holbeche, Chair, Bath Astronomers

Jack Marshall, SEED Landscape Design

Brendan Tate Wistreich, Chief Executive, Bath City Farm