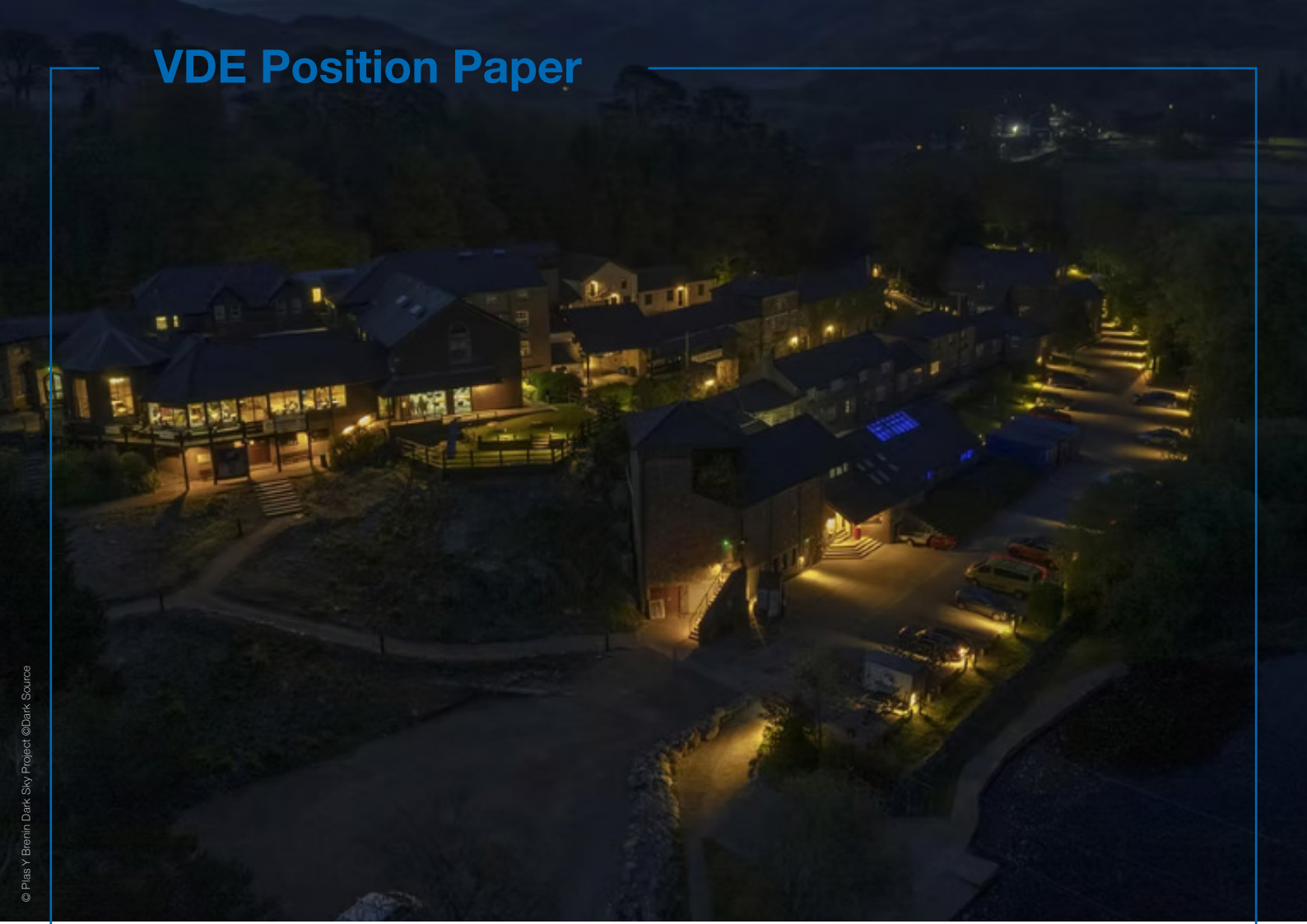




Artificial Light at Night Certification

The Need for Independent Certification of Luminaires for Responsible Outdoor Lighting

www.vde.com

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Preliminary Note:

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Information

This position paper sets out the VDE position on responsible outdoor lighting and the need to address Artificial Light at Night (ALAN) as an environmental issue. It recognizes that outdoor lighting is essential to modern society, while emphasizing that its design, application and operation should minimize unnecessary and unwanted light emissions and their impact on the nocturnal environment.

VDE advocates for a coordinated approach in which appropriate technology, qualified lighting design, effective planning and independent assessment work together. By bringing together manufacturers, designers, authorities, researchers, NGOs and certification bodies, the lighting sector can develop practical and verifiable solutions that balance functional lighting needs with the protection of ecosystems, biodiversity, human well-being and the night sky.

This position paper calls for responsible lighting principles to become an integral part of future policy, planning, procurement and sustainability practices, supported by transparent requirements and independent certification where appropriate.

Contact

For further information on this topic, please contact [Artem Masorin](#), Technical Specialist at the VDE Institute, through artem.masorin@vde.com.

Acknowledgments

This Position Paper was developed in collaboration with [Yana Yakushina](#) ([Horizon Europe PLAN-B project](#), UGent) (ya.yakushina@gmail.com) to facilitate efforts to reduce light pollution and promote lighting technologies that help minimise its impacts.

The VDE Institute acknowledges the cooperation with [DarkSky International](#) in the area of independent testing and certification for responsible outdoor lighting and light pollution mitigation. The VDE Institute is officially recognised as a DarkSky Recognised Lighting Testing Laboratory, supporting manufacturers with testing and certification services for DarkSky submissions, industry outreach activities, and trained technical expertise in accordance with DarkSky program requirements. This collaboration contributes to greater transparency, comparability, and technical credibility in the evaluation of environmentally responsible lighting solutions.

Key Messages

Six Pillars for a Trusted ALAN Ecosystem

This document aims to further support responsible outdoor lighting and calls for participation in independent voluntary certification as a crucial step towards more responsible outdoor artificial light at night (ALAN) technology and practices that take into account adverse impacts on the environment and beyond.



Awareness

The continuous increase in ALAN contributes to the rapid growth of light pollution and the loss of the nocturnal environment. Light pollution has well-documented impacts on astronomical observations, ecosystems, biodiversity, human health and well-being, as well as other protected environmental and other social interests.



Regulations & Policies

At international, EU, and national levels, regulatory and policy developments started to gradually recognize unwanted light emissions as an environmental concern. Consequently, legal requirements for the design, installation, and operation of lighting systems are being progressively introduced to limit the adverse impacts of ALAN.



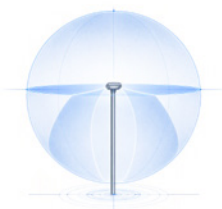
Collaboration

Scientific, technical, and policy initiatives are fostering an interdisciplinary approach to understanding and mitigating the environmental impacts of outdoor ALAN. Collaboration among manufacturers, lighting designers, authorities, NGOs, certification bodies, and research institutions is crucial to effectively address unwanted light emissions.



Application

The reduction of unwanted light emissions requires the use of technically appropriate lighting systems incorporating optimised light distribution, application-specific illuminance levels, suitable spectral characteristics, and smart control technologies. Qualified lighting design and responsible application are equally important as the quality and performance of the lighting products themselves.



Conformity

Independent voluntary certification provides an objective means of demonstrating conformity of lighting products and systems with specified requirements for mitigating unwanted light emissions and responsible ALAN principles. Such certification enhances transparency, comparability and confidence within the lighting market, and also supports the preservation of the night environment.



Procurement

Compliance with requirements for mitigating unwanted light emissions and responsible ALAN management principles should be promoted as an additional criterion in procurement policies, sustainability assessments, and tendering procedures. Demonstrated conformity can support the achievement of environmental and sustainability objectives while providing a competitive advantage in future procurement and bidding processes.

Call for Action

To Participate and Promote Independent Certification to Reduce Light Pollution

To strengthen efforts to address negative effects of ALAN and to foster a harmonized approach to considering its environmental and wider impacts, the VDE calls for:

- Participation in independent certification schemes to minimize unwanted light emissions, ensuring that ALAN technologies do not exacerbate negative environmental impacts, while also providing advantages in procurement and sustainability frameworks.
- The integration of responsible lighting standards into sustainability practices and procurement criteria.
- Greater support for and engagement in the responsible application of ALAN through the use of appropriate, high-quality lighting technologies.

The VDE is open to collaboration with all relevant stakeholders and ready to support lighting manufacturers seeking independent third-party certification to demonstrate their commitment to responsible lighting practices.



About the VDE Institute

The VDE mark is synonymous with safety and quality in electrical devices, components and systems for more than 100 years. The VDE Institute - a subsidiary of the VDE Group - is a world-wide partner for industry customers, business, government authorities, the electrical trade and consumers.

More than 100,000 devices per year are subjected to product, quality and safety tests by the VDE Institutes independent testing engineers before they receive the VDE mark. Around the globe, VDE experts monitor more than 7,000 production facilities. Cooperation agreements with more than 50 countries ensure that the tests performed by the VDE Institute are internationally recognized. 200,000 types of products with millions of model variants bear the VDE mark worldwide. The VDE Prüf- und Zertifizierungsinstitut GmbH, a non-profit organization, employs more than 500 people in Offenbach am Main.

For more information, visit www.vde.com/institute

About the VDE

VDE, one of the largest technology organizations in Europe, has been regarded as a synonym for innovation and technological progress for more than 130 years. VDE is the only organization in the world that combines science, standardization, testing, certification, and application consulting under one umbrella. The VDE mark has been synonymous with the highest safety standards and consumer protection for more than 100 years.

Our passion is the advancement of technology, the next generation of engineers and technologists, and lifelong learning and career development "on the job". Within the VDE network more than 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts, and around 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical. Shaping the e-dialistic future.

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