

## Jonfjärd Stina

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**Från:** Arlind Dervishaj <arlindd@kth.se>  
**Skickat:** den 4 april 2024 11:54  
**Till:** Remiss  
**Ämne:** Boverket's regulations on hygiene, health and the environment as well as water and waste management

Hej,

I came across the proposal on Building Regulations in Sweden from the following links:

<https://www.boverket.se/sv/lag--ratt/boverkets-remisser/boverkets-forslag-till-foreskrifter-om-skydd-med-hansyn-till-hygien-halsa-och-miljo-samt-hushallning-med-vatten-och-avfall/>

<https://www.boverket.se/contentassets/5dfb4b8379644a4da8d3b3cea2335322/extra-remiss---boverkets-forslag-till-foreskrifter-om-skydd-med-hansyn-till-hygien-halsa-och-miljo-samt-hushallning-med-vatten-och-avfall.pdf>

I am writing to express my interest in contributing to this initiative. As an architect with experience in practice, I have worked in the Nordics and several European countries. I have used the EN 17037 (European Daylight Standard) in practice. I have utilized several state-of-the-art daylighting tools and metrics in real projects or developed custom methods through computational design tools. I have showcased my work at prominent venues, such as the "Daylight Symposium" in 2021 in Copenhagen and the "Inside/Out Daylight in Sustainable Urban Design" conference held in March 2023 at ETH Zürich. As a doctoral researcher and teacher at KTH, I have been actively involved in daylight metrics research.

Here are my proposals:

1) I suggest that Sunlight should remain in the current legislation and receive an update - the Sunlight Autonomy.

The Sunlight Autonomy was recently published in LEUKOS, a leading peer-reviewed journal in the field of lighting. This new methodology is relevant to Boverket's proposal for the upcoming regulation. In the paper, we provide evidence of why sunlight is still necessary, its relevance for both urban planning and building design, developing metrics that were missing from EN 17037, as well as making the assessment more robust and objective. Additionally, Boverket's proposal points out some challenges related to sunlight. As a solution, the application of the Sunlight Autonomy metrics can be flexible, providing recommendations for different urban environments with varying densities. This is discussed in the paper. For example, rather than relying on an arbitrary day, or restrictive requirement of sunlight, the number of days that a dwelling/window receives more than 1.5, 3, or 4 hours of sunlight can be reported, e.g., 70% of the year (or expressed as from a certain day of a month, up to a specific day in another month, shown in the paper with an example).

The paper also discusses how these metrics could be introduced progressively in regulations. We are available for a meeting in case we can support you and Boverket. The Sunlight Autonomy metrics overcome the limitations in EN 17037 due to the day of analysis. **Sunlight is also an early indicator of daylight and views in buildings.** Sunlight is also **easier to understand and communicate to various stakeholders.** The EN 17037 provided a geometrical (time-consuming) method for assessing Sunlight but did not provide metrics.

A brief explanation of the Sunlight Autonomy:

The Sunlight Autonomy provides a methodology and metrics to assess sunlight performance at the window, interior, or whole buildings such as facades. It holds relevance for planning and practice from an early design stage. The Sunlight Autonomy overcomes the demonstrated shortcomings of the "Exposure to Sunlight" criteria in EN 17037 and other solar access criteria found in regulations worldwide. Additionally, the Sunlight Autonomy metrics can be climatized, by considering climate data in simulations, and can be measured in real used spaces.

<https://www.tandfonline.com/doi/full/10.1080/15502724.2023.2297967>

2) The View can be assessed with computational design methods. For example, below is another paper where we propose how to calculate views, that covers 3 out of 4 areas of assessment in EN 17037.

Title: New Computational Methods with Sunlight, Daylight, and Quality Views for Regenerative Design

Link: <https://doi.org/10.1051/e3sconf/202236201004>

Med vänliga hälsningar,



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