

Further Submission Plan Change 22

12 January 2023

Introduction

1. This is a further submission lodged on behalf of the Community Services and Facilities Manager of the Mackenzie District Council.
2. My name is Paul Wilson. I am a qualified lighting designer (Tech IES) and recipient of a Dark Sky Award from the Royal Astronomical Society of New Zealand. I am a Dark Sky advocate and provide professional services on the development of Dark Sky places including the Rakiura Dark Sky Sanctuary.
3. In my lighting design practice I undertake lighting design work for public spaces such as parks, cycle paths and sports fields.
4. This is a further submission in respect of the submission of Mr Bryan King of Strategic Lighting Partners Ltd PO Box 25-229 St. Heliers Auckland 1740
5. I wish to be heard in support of my further submissions

Technical Input

6. I support the submitters concern that technical advice has not been obtained from lighting practitioners. Such advice may have pointed out the impracticality of the proposed Standards with respect to readily available luminaires and the potential for the proposed Standards to be counter-productive.

Standard LIGHT-S3

7. The proposed Standard LIGHT-S3 for "The correlated colour temperature of outdoor lighting shall not exceed 2500 K" is in my view impractical and if adopted will have negative consequences for the property owners including the Mackenzie District Council.
8. The Submitter contends that "Typical warm colour temperatures commercially available are 2000K, 2200K, 2700K, 3000K". While these colour temperatures *may* be available via specialist commercial suppliers they are not available to a typical consumer.
9. 3000K has in recent years become more widely available in both the retail and commercial environment for low power applications (including street and area lighting) but remains unavailable for floodlight applications including security lights.
10. Outdoor lighting with a CCT <2500K is in my experience very difficult to source for a lighting professional and I would suggest a consumer or electrician would have

considerable difficulty sourcing complaint product without sourcing it off-shore from a specialist supplier.

11. I consider that if adopted the proposed Standard LIGHT-S3 may be counterproductive in that existing poorly aimed or cool white lights such as metal halide fixtures will not be replaced as the general public and most electricians will be unable to source appropriate fixtures at 2500K.
12. I consider that Standard LIGHT-S3 should be amended to read “The correlated colour temperature of outdoor lighting shall not exceed 3000 K. I suggest moving towards correctly mounted, full cut off fixtures at 3000K will have a positive effect on the night sky compared to having little progress made replacing existing lighting because property owners cannot source compliant lighting.
13. There does not appear to have been any consideration in how to address the need for high powered flood lighting which arises for application such as yard lighting or sports field lighting where health and safety issues arise. A suitable exception to Standard LIGHT-S3 needs to be developed that enables motion controlled (short duration) or time controlled applications of high powered flood lighting to be utilised.
14. I note that proposed MDC Standards exceed the current requirements of the International Dark Sky Association Fixture Seal of Approval programme (<https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/apply-fsa/>) which allows light sources up to 3000K and the IDA-Criteria for Community-Friendly Outdoor Sports Lighting (<https://www.darksky.org/wp-content/uploads/bsk-pdf-manager/2022/06/Final-OSL-v1.2.pdf>) which does not have any restriction on colour temperature due to the impracticality of doing so.

Light Management Plans

15. I support the submitters suggestion that Light Management Plans could be a useful tool in managing the effects of lighting where it is impractical to meet the “ideal” colour temperature of 2500K.



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On Behalf of Brian Milne
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