



Mackenzie

DISTRICT PLAN REVIEW

TOMORROW'S MACKENZIE
KA AWATEA HŌU

Section 42A Report: Plan Change 22 - Light

Report on submissions and further submissions

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Contents

List of submitters addressed in this report:.....	4
Abbreviations used in this report:	4
1. Purpose of Report	5
2. Qualifications and Experience	5
3. Scope and Format of Report.....	6
4. Plan Change Overview	6
Relationship with Wider MDPR	7
5. Procedural Matters.....	7
6. Statutory Framework.....	8
7. Assessment of Submissions	9
Overview of Submissions	9
Structure of Report	9
8. Provisions where no Change Sought	10
9. Extent of what the Plan Change Addresses.....	10
Submissions	10
Analysis	10
Recommendation	11
10. The Area to Which the Provisions Apply	11
Submissions	11
Analysis	12
Recommendation	13
11. Application of Provisions to Infrastructure	13
Lighting on Pivot Irrigators	13
Submissions	13
Analysis	13
Recommendation	13
Regionally Significant Infrastructure	14
Submissions	14
Analysis	14
Recommendation	15
Street Lighting.....	16
Submissions	16
Analysis	16
Recommendation	17
12. Policy and Rule Framework	17
Policies (LIGHT-P1 and LIGHT-P2)	17
Submissions	17

Analysis	18
Recommendation	19
Rules (including Matters of Discretion)	19
Submissions and Analysis	19
Recommendation	21
Standards	21
Submissions and Analysis	21
Recommendation	24
Definitions.....	25
Submissions and Analysis	25
Recommendation	25
13. Other Matters	25
Monitoring and Enforcement	25
Submissions	25
Analysis	26
Recommendation	26
Relationship with other Statutory Bodies	26
Submissions and Analysis	26
Recommendation	26
Development of Strategic Lighting Plan and Further Technical Input	26
Submissions and Analysis	26
Recommendation	27

List of submitters addressed in this report:

Submitter Ref	Further Submitter?	Submitter Name	Abbreviation
1		Amy Menard	
2		Preetha Sreedharan	
3		Rochelle Clarke	
4		Goran Balvan	
5		Ingemar Dierickx	
6		Gavin Loxton	
7		Jill Jenkins	
8		Graham Palmer	
9	Y	Opuha Water Ltd	Opuha
10		Rex Williams	
11	Y	Genesis Energy	Genesis
12		Environment Canterbury	ECan
13		Grant Pearson	
14		Marion Dierickx	
16		Karen Morgan	
17		Victoria Campbell	
18		Bryan King	
19		Tekapo Landco Ltd and Godwit Leisure Ltd	TL&GL
20	Y	Waka Kotahi	
21		Liz Harpelton	
22		Walter and Zita Speck	
	Y	Mackenzie District Council, Community Services and Facilities Manager	MDC

Abbreviations used in this report:

Abbreviation	Full Text
AMIDSR	Aoraki Mackenzie International Dark Sky Reserve
Council	Mackenzie District Council
MDP	Mackenzie District Plan
MDPR	Mackenzie District Plan Review
PC21	Plan Change 21
PC22	Plan Change 22
RMA	Resource Management Act 1991

1. Purpose of Report

1. This report is prepared under s42A of the RMA in relation to Plan Change 22 (Light) to the MDP. The purpose of this report is to provide the Hearing Panel with a summary and analysis of the submissions received on this plan change and to make recommendations in response to those submissions, to assist the Hearing Panel in evaluating and deciding on the submissions.
2. In preparing this report I have had regard to the Strategic Direction chapters introduced through Plan Change 20, and to the zoning framework for commercial and residential areas proposed in Plan Change 21 (PC21).
3. The conclusions reached and recommendations made in this report are not binding on the Hearing Panel. It should not be assumed that the Hearing Panel will reach the same conclusions having considered all the information in the submissions and the evidence to be brought before them, by the submitters.

2. Qualifications and Experience

4. My full name is Elizabeth (Liz) Jane White. I am an independent planning consultant, and have been self-employed (trading as Liz White Planning) for 18 months. I hold a Master of Resource and Environmental Planning with First Class Honours from Massey University and a Bachelor of Arts with Honours from Canterbury University. I am a full member of the New Zealand Planning Institute.
5. I have over 15 years' planning experience, which includes experience working in both local government and the private sector. My experience includes both regional and district plan development, including the preparation of plan provisions and accompanying s32 evaluation reports, and preparing and presenting s42A reports. I also have experience undertaking policy analysis and preparing submissions for clients on various RMA documents, and preparing and processing resource consent applications and notices of requirements for territorial authorities. I am assisting the Mackenzie District Council in the MDPR process, and was the main author of the PC22 provisions and s32 report.
6. Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note and that I have complied with it when preparing this report. I have also read and am familiar with the Resource Management Law Association / New Zealand Planning Institute "Role of Expert Planning Witnesses" paper. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person. Having reviewed the submitters and further submitters relevant to this topic I advise there are no conflicts of interest that would impede me from providing independent advice to the Hearings Panel.

3. Scope and Format of Report

7. This report considers the submissions and further submissions that were received in relation to PC22. It includes recommendations to either retain provisions without amendment, delete, add to or amend the provisions, in response to these submissions. All recommended amendments are shown by way of ~~strikeout~~ and underlining in **Appendix 1** to this Report. Footnoted references to the relevant submitter(s) identify the scope for each recommended change.
8. The assessment of submissions generally follows the following format:
 - a. An outline of the relevant submission points
 - b. An analysis of those submission points
 - c. Recommendations, including any amendments to plan provisions (and associated assessment in terms of s32AA of the RMA where appropriate).
9. In some cases, due to the nature of submissions made, the outline of submissions and analysis is set out within the same section.
10. Further submissions have been considered in the preparation of this report, but where they are not specifically mentioned it is because they are limited to the matters raised in original submissions and the subject matter they cover is canvassed in the analysis of the original submission. However, further submissions are mentioned where they include additional matters for consideration.
11. Clause 16(2) of the RMA allows a local authority to make an amendment to a proposed plan without using a Schedule 1 process, where such an alteration is of minor effect, or may correct any minor errors. Any changes recommended under clause 16(2) are footnoted as such.

4. Plan Change Overview

12. The Operative MDP contains provisions which control light emissions within the District, within Section 12. PC22 proposes to delete those provisions relating to light from Section 12 (which also contains provisions related to signage) and insert a new standalone chapter into the MDP relating to light, following the NP Standards format.
13. The Operative MDP provisions include rules focused on two key outcomes: minimising nuisance effects from lighting; and reducing light pollution which affects the ability to view the night sky within a defined area (the Outdoor Lighting Restriction area which covers most, but not all of the current Aoraki Makenzie International Dark Sky Reserve (AMIDSR)). PC22 largely proposes to retain these controls, but update or expand them to:
 - a. Expand the area to which light pollution provisions apply, such that rather than being limited to the currently defined area the provisions would apply district-wide;

- b. Amend the standards relating to light pollution to make them more up to date, for example to better manage LED lighting; and
- c. Better address potential nuisance effects by introducing limits on light spill between adjoining properties, consistent with other district plans.

Relationship with Wider MDPR

- 14. While PC22 is limited to the proposed standalone Light chapter, the proposed standard relating to light spill (LIGHT-S5) is zone-based, with controls differing depending on the zoning of the site within which the light spill is measured. This means that as the MDPR progresses, the levels applying to some sites could change, if, for example, a site currently zoned recreation is subsequently rezoned to a residential or commercial zoning. This is a matter that is relevant to the appropriateness of the zoning of any site and is one matter to be considered alongside a range of other factors when any new zoning is proposed in subsequent plan changes. It is also acknowledged that in reviewing some of the zones, the lighting standard applied may be determined not to be appropriate. For example, PC22 proposes that the same limits be applied to all Special Purpose Zones; when these zones are reviewed, it may be considered appropriate that some are subject to greater or lesser controls. However, any such change would need to be proposed through a subsequent plan change or variation to PC22. As such, I do not consider that any issues arise from the approach taken.

5. Procedural Matters

- 15. At the time of writing this s42A report there have not been any pre-hearing conferences, clause 8AA meetings or expert witness conferencing in relation to submissions on this topic.
- 16. As noted in the summary of submissions, the submission forms lodged by Fire and Emergency New Zealand (15) and by Walter and Zita Speck (22) expressed that their submissions related to Plan Changes 21 and 22; however the content of the submission did not appear to relate at all to PC22. Verbal confirmation was obtained from both submitters that their submissions are only on PC21 and not on PC22. Therefore, these submissions are not addressed in this report.
- 17. B. King (18) makes a range of comments on the s32 report, seeking changes to it. Under s32 of the RMA, an evaluation report is required which provides an assessment of the provisions proposed in PC22. As such, the report is a record of the reasons why the provisions in PC22 are proposed. Where, through the submission and hearing process it is determined to be more appropriate to change the provisions, a further evaluation under s32AA of the RMA is required. Because the s32 and s32AA evaluations relate to the provisions, changes cannot be sought to the s32 report in and of itself. However, it is apparent in reading the submission that while referring to the s32 evaluation, the majority of matters raised in the submission are relevant to, and could be addressed by changes to, the provisions themselves. As such, I have assessed the submission in the following sections, in relation to the provisions to which the comments are relevant. Where the matter raised in the submission is only relevant to the s32 itself and not to the provisions, this report does not comment on the matter raised.

6. Statutory Framework

18. The assessment under the RMA for this Plan Change includes whether:
 - a. it is in accordance with the Council's functions (s74(1)(a));
 - b. it is in accordance with Part 2 of the RMA (s74(1)(b));
 - c. it will give effect to any national policy statement or operative regional policy statement (s75(3)(a) and (c));
 - d. the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA (s32(1)(a));
 - e. the provisions within the plan change are the most appropriate way to achieve the objectives of the District Plan (s32(1)(b)).
19. In addition, assessment of the plan change must also have regard to:
 - a. any proposed regional policy statement, and management plans and strategies prepared under any other Acts (s74(2));
 - b. the extent to which the plan is consistent with the plans of adjacent territorial authorities (s74 (2)(c)); and
 - c. in terms of any proposed rules, the actual or potential effect on the environment of activities including, in particular, any adverse effect (s76(3)).
20. The assessment of the plan change must also take into account any relevant iwi management plan (s74(2A)).
21. Specific provisions within the RMA and in other planning documents that are relevant to PC22 are set out in the Section 32 Report. These documents are discussed in more detail within this report where relevant to the assessment of submission points.
22. The assessment of submission points has also been undertaken in the context of the Section 32 report prepared for PC22. All recommended amendments to provisions since the initial Section 32 evaluation was undertaken must be documented in a subsequent s32AA evaluation and this has been undertaken, where required, in this report.

7. Assessment of Submissions

Overview of Submissions

23. Twenty submissions¹ and four further submissions were received on PC22. No submitters opposed PC22 as a whole.
24. Eleven submitters² support PC22 in full, seeking its retention as notified. The reasons for support include that the provisions will: support retention of the dark night sky, including Dark Sky accreditation; have positive impacts on health and wellbeing; support dark sky tourism; benefit astronomy research; protect flora and fauna from harmful impacts of light; and help protect natural features and landscapes. Genesis (11) also submitted in support of the objective, rules and standards, seeking only that a complementary definition be added (this point is addressed later in this report).
25. For reasons set out later in this report, I recommend some changes to the provisions. I therefore recommend that these submissions (A. Menard (1), P. Sreedharan (2), R. Clark (3), G. Belvan (4), G. Loxton (6), J. Jenkins (7), G. Palmer (8), Genesis (11), ECan (12), K. Morgan (16), V. Campbell (17) & L. Harpelton (21)) are accepted in part, noting that while I have recommended changes to the provisions, they are relatively discrete, do not alter the underlying intent, and in my view will continue to achieve the outcomes identified by these submitters.
26. The remaining submitters are also generally supportive of the intent of PC22, but seek a range of changes to the provisions. These include changes intended to improve the clarity or workability of provisions; to exempt specific activities from meeting the standards; and to increase the level of control on some activities. Some submitters have also sought that some of the provisions only apply within the current AMIDSR, rather than within the whole District. These are discussed in more detail in the following sections of the report.

Structure of Report

27. This report deals firstly with matters on a topic-by-topic basis where a matter is raised by a submitter or submitters that is relevant to more than one provision but stems from the same concern. These topics are:
 - a. The extent of what PC22 addresses;
 - b. The area to which the light pollution provisions apply; and
 - c. The application of provisions to infrastructure, including lighting on pivot irrigators, regionally significant infrastructure and street lighting.

¹ Noting, as set out earlier, that the submissions from Fire and Emergency NZ (15) and Walter and Zita Speck (22) do not apply to PC22.

² A. Menard (1), P. Sreedharan (2), R. Clark (3), G. Belvan (4), G. Loxton (6), J. Jenkins (7), G. Palmer (8), ECan (12), K. Morgan (16), V. Campbell (17) & L. Harpelton (21).

28. Following this, the report addresses the remaining submission points on a provision-by-provision basis, in the order of policies, rules, standards, and definitions.
29. The final section of this report then deals with any remaining submission points not otherwise covered.

8. Provisions where no Change Sought

30. PC22 proposed to delete various provisions within Section 12 of the Operative MDP which pertain to outdoor lighting. No submitters opposed these deletions. I therefore recommend these provisions be deleted.
31. The following provisions included within PC22 were either not submitted on, or any submissions received sought their retention. As such, they are not assessed further in this report, and I recommend that the provisions are retained as notified, except where consequential changes are required to them as a result of changes to other provisions:
 - a. The 'Introduction' section of the Light chapter
 - b. LIGHT-R2 Security Lights
 - c. LIGHT-R3 Skylights
 - d. LIGHT-TABLE 1

9. Extent of what the Plan Change Addresses

Submissions

32. B. King (18) is concerned that PC22 is too limited in scope and does not address ecological impacts and the protection of flora and fauna; human sleep and health impacts of light at night; and outdoor hospitality and tourism precincts.

Analysis

33. The matters addressed in the Light Chapter are essentially captured in the overarching objective LIGHT-O1, which seeks to provide for outdoor lighting in a manner which protects views of the night sky and manages light spill effects to both maintain amenity values and the safe operation of the transport network. In my view, effects on sleep and health are encompassed in a broad sense in the reference to amenity values. If this is not considered sufficient by the Hearing Panel, then I consider that clause 1 of the objective could be amended to refer to "*amenity values and health*" which better reflects the wording used in s5 of the RMA.
34. In terms of the ecological impacts of lighting, I accept that the chapter does not seek to manage this. However, the controls on lighting, albeit applied for other purposes, will also inadvertently manage some ecological effects. The submitter does not identify what changes would be required to the provisions (if any) to address ecological effects; nor why these are necessary to

achieve the purpose of the RMA. As part of the background work undertaken on PC22, a range of other District Plans were reviewed, including those of neighbouring authorities as well as recently proposed second generation district plans.³ All but one of these plans do not include any provisions related to addressing potential ecological impacts from lighting. Broadly speaking, the aim of the lighting provisions within these plans is focused on managing nuisance and amenity effects of lighting, and in some cases, light pollution. The proposed approach in PC22 is consistent with this and I consider this to be appropriate. For completeness I note that the proposed Waimakariri District Plan does refer to minimising adverse effects from lightning on a range of matters, including amenity values, health and safety and ecology.⁴ I note however, that there are no additional rules proposed directly relating to this, with the proposed approach being similar to that of PC22; the only addition is that where the standards are not met, the matters of discretion include consideration of “*effects of lighting on ecology and natural values.*” While I do not consider it necessary to expand the Light chapter to include reference to ecological impacts, if the Hearing Panel were to consider this appropriate, I would recommend a similar approach to that proposed in Waimakariri, namely that it is a matter that consideration is given to where the standards are breached.

35. In terms of “*outdoor hospitality and tourism precincts*” I am not sure what exactly is envisaged by the submitter in relation to this. The provisions apply across the District, and in relation to light spill levels, the controls differ between different zones, reflecting that the outcomes sought between zones differ. In particular, higher levels are anticipated in commercial and mixed use zones, which likely encompass the areas to which the submitter refers. In order to achieve the objective, I do not consider that other zone-specific spatial variations are required.
36. Based on all of the above, I recommend this submission point by B. King (18) is rejected.

Recommendation

37. I recommend, for the reasons given above, that no changes are made to the provisions in relation to this submission point.

10. The Area to Which the Provisions Apply

Submissions

38. In terms of where the rules apply, B. King (18) considers that it is not clear if it is intended that lighting is regulated the same within and outside the AMIDSR. He considers that application of the AMIDSR lighting parameters to other areas that require public lighting for road safety, pedestrian safety, urban amenity and outdoor hospitality would not be appropriate. He seeks that a more selective application of the rules should be applied, based on professional advice and the preparation of a “Regional Lighting Masterplan”.

³ These included: Proposed Porirua District Plan, Draft Timaru District Plan; Proposed Selwyn District Plan; Proposed Waimakariri District Plan; Ashburton District Plan; Central Otago District Plan; Proposed Queenstown Lakes District Plan; Waimate District Plan and Waitaki District Plan.

⁴ LIGHT-O1 of the proposed Waimakariri District Plan.

39. At a more specific level, B. King seeks to reduce the maximum colour temperature from 2500K to 2200K (proposed in LIGHT-S3) where within the AMIDSR area, but considers that 2200K may not be acceptable outside of the AMIDSR, particularly for areas such as town centres, retail and hospitality precincts. Waka Kotahi (20) also seeks that LIGHT-S3 is amended so that a colour temperature of 2200k applies within the AMIDSR, and 3000K outside it, stating that 3000k is sought for “*safety reasons*” outside of the Dark Sky Reserve.
40. As noted earlier, eleven submitters support the Plan Change in full and seek the provisions are retained as notified. Four of these submitters also explicitly mention support for extending the rules to apply District-wide.⁵ Reasons for this include that it will support efforts to protect the night sky experience across the entirety of the District, that its extension is necessary to protect the Dark Sky Reserve, which is a District-wide asset, and such an approach aligns with Te Manahuna Ki Uta / Destination Mackenzie.

Analysis

41. Firstly, the actual colour temperature levels proposed in LIGHT-S3 are addressed later in this report where the standards are discussed. This section of the report is limited only to consideration of the appropriateness of applying different standards outside the current AMIDSR area.
42. I consider that it is clear within both the Light Chapter as well as the s32 report that the rule framework and related standards are proposed to apply across the whole District, regardless of the current boundary of the AMIDSR. This is also a matter that community feedback was specifically sought on and as noted in the s32 report, over 80% of respondents to a survey undertaken on various matters addressed in PC21 and PC22 supported the rules relating to protection of the dark sky being applied across the whole District.⁶ As noted above, several submitters also support the extension of the rules across the whole District.
43. I also note that the current rules, while pertaining to the AMIDSR area only, apply to Tekapo and Twizel townships as well as rural areas, and include areas traversed by the State Highway. Of note, they apply the same within commercially zoned areas as they do within other zones. I therefore do not consider that the potential effects of restricting lighting in terms of road safety, pedestrian safety, urban amenity and outdoor hospitality differ within the current AMIDSR compared to outside of it.
44. I therefore recommend that the submission points by B. King (18) and Waka Kotahi (20) are rejected, to the extent that they seek the application of different rules within and outside the AMIDSR.

⁵ P. Sreedharan (2), G. Palmer (8), K. Morgan (16), V. Campbell (17).

⁶ Section 32 Report: Plan Change 22 – Light, 20 September 2022, at 6.4.

Recommendation

45. I recommend, for the reasons given above, that the provisions are retained as notified insofar as they apply to the whole District.

11. Application of Provisions to Infrastructure

Lighting on Pivot Irrigators

Submissions

46. Both I. Dierickx (5) and M. Dierickx (14) support the intent of the provisions and the protection of the night sky, but consider that the proposed policies are too narrow. In particular, they are concerned that they do not include strobe lights on pivot irrigators which they consider detract from the ability to view the night sky and impact on the night-time landscape. To address this, changes are sought to the language used in LIGHT-O1 and a new provision sought, or amendment to LIGHT-R1, to ban strobe lights on pivot irrigators/agricultural equipment. In a further submission Opuha questions the vires of regulating light from pivot irrigators on the basis that they are not “buildings” under the Plan’s definitions, and also notes enforcement difficulties resulting from existing use rights. It is also concerned about the health and safety, and potential environmental, implications of banning lights on pivot irrigators.

Analysis

47. I note that LIGHT-R1 applies to all outdoor lighting, regardless of type, except for security lighting which is separately specified. Such lighting must meet the proposed standards, which include directional requirements (LIGHT-S1), shielding from above (LIGHT-S2), limits of the colour temperature of the light (LIGHT-S3) and restrictions on the lamp type that may be used (LIGHT-S4). As such, these requirements will apply to any new lighting proposed, including pivot irrigators. These requirements are similar to those currently applying, except that the colour temperature and lamp type rules are proposed to replace the current filtration standard, and the current rules only apply within the Outdoor Lighting Restriction area. I do not consider it appropriate to ban certain forms of lighting, as if such lighting meets the permitted standards then its effects will be no different to those of other types of lighting; and conversely, if it cannot meet the standards then it must either not be used, or a resource consent would be required. I consider this approach to be more appropriate and targeted at achieving the outcomes sought than banning a particular type of lighting. I therefore recommend that submissions of I. Dierickx (5) and M. Dierickx (14) are rejected with respect to their request to ban strobe lights on pivot irrigators.

Recommendation

48. I recommend, for the reasons given above, that that no changes are made to LIGHT-O1 or LIGHT-R1 in relation to these submission points.

Regionally Significant Infrastructure

Submissions

49. Opuha (9) is concerned that the provisions do not adequately provide for temporary floodlighting for the management of Regionally Significant Infrastructure, such as the Opuha Dam, during natural hazards events. It seeks additions to the LIGHT-O1 and LIGHT—P1 and a new rule, to provide for temporary lighting which may not meet the standards, but which may be required during natural hazard events to ensure the safe and efficient operation of Regionally Significant Infrastructure. Genesis and Waka Kotahi support the changes sought in further submissions to allow for temporary lighting that may exceed the standards in specific situations and for regionally significant infrastructure. Genesis however considers the rule proposed should provide for both temporary and emergency uses.

Analysis

50. My understanding of the submission is that temporary lighting, which might be required to operate significant infrastructure during natural hazards events, may not meet the standards set out in LIGHT-S1 to LIGHT-S5 and therefore breach LIGHT-R1. Broadly speaking, I consider that it would be appropriate to provide essentially an ‘exemption’ for such infrastructure in such circumstances – as such circumstances are temporary and outside the control of the operator of the infrastructure. I also note that several other proposed Plans also include an exemption or permitted status for temporary lighting “for the purpose of emergency response”.⁷ However, I have the following concerns with the specific changes sought:
- a. I do not consider that the addition to the objective is necessary, as the stem of the objective already refers to allowing for outdoor lighting to provide safety and security for activities, which covers infrastructure. Clause 2, to which an additional reference to regionally significant infrastructure is sought, does not however relate to ‘enabling’ lighting; rather is relating to managing light spill to achieve particular outcomes. The addition sought would instead require management of light spill from other activities on the operation of infrastructure, which I do not understand is what the submitter is ultimately seeking. Given this, I do not consider a change to the objective is necessary.
 - b. Similarly, LIGHT-P1 provides direction on how the location, design and operation of outdoor lighting is to be managed. The ‘exemption’ for lighting associated with infrastructure is not a control on the location, design and operation and therefore in my view the addition does not fit within this policy. In my view the limited circumstances in which the exemption is sought would not conflict with this policy in any case and therefore I do not consider additional specific policy support is required. For completeness I note that LIGHT-P1 relates to the nuisance/safety-focused standards whereas the light pollution-focused standards are driven by LIGHT-P2. This

⁷ Proposed Waimakariri District Plan LIGHT-R1; Proposed New Plymouth District Plan LIGHT-R1; Proposed Selwyn District Plan LIGHT-R4.

policy already seeks to minimise potential for upward light spill “*as far as practicable*”. In my view, emergency response lighting would align within this.

- c. The specific rule wording sought refers to temporary lighting required for the safe and efficient operation of Regionally Significant Infrastructure. This would appear to go beyond lighting which might be required to operate significant infrastructure during natural hazards events and instead provide for any temporary lighting associated with operating infrastructure. In my view this is different to limited circumstances in which lighting might be required due to a natural hazard event and which is outside the control of the infrastructure operator. I also agree with Genesis’ further submission that the rule should refer to emergency purposes, consistent with other proposed district plans noted above.
 - d. The wording proposed refers to ‘regionally significant infrastructure’ which is an as yet undefined term. While a definition could be included in PC22 to support any changes to the provisions, in my view it would not be appropriate to do so ahead of the review of the wider infrastructure provisions.
51. One of the difficulties with undertaking the MDPR in stages is also the unknowns surrounding future stages which will impact on the overall integration of the provisions. In this instance, Stage 3 is intended to include a review of the infrastructure provisions. Currently, it is therefore not certain whether the infrastructure provisions will be ‘standalone’ in the sense that it may be determined that activities managed in a new Infrastructure chapter should not be subject to the provisions in the Light Chapter and/or the exemption sought by the submitters could instead be incorporated within the future Infrastructure chapter. Notwithstanding this, given the matter is currently before the Hearing Panel I consider it appropriate to address this matter now, within the Light chapter provisions.
52. Overall, I consider it is appropriate to include a limited exemption of the kind sought by the submitter within the rule framework, but I do not consider that changes to the objective and policy framework are required to support such a rule. To address the matters I have raised in relation to rule drafting, I recommend that the rule is drafted so that it applies to all infrastructure, but is limited to emergency situations. As a consequence of this, I recommend that a definition of ‘emergency’ is added. The recommended definition is that used in both the Christchurch City District Plan and proposed Waimakariri District Plan. I therefore recommend the submission by Opuha (9) is accepted in part.

Recommendation

53. I recommend, for the reasons given above, that a new rule is added to the Light chapter to permit temporary outdoor lighting that is for emergency purposes, including for the safe and efficient operation of infrastructure during a natural hazard event. I also recommend that a related definition of emergency is included in the Definitions chapter. The specific amendments recommended are set out in **Appendix 1**.

54. In terms of section 32AA, I consider that the additional rule is more appropriate in achieving the outcomes sought in LIGHT-O1, as it relates to providing for lighting required for safety reasons. I consider that the targeted rule still aligns with the policy direction in LIGHT-P1 and LIGHT-P2, and will not compromise the achievement of clauses (1) and (2) of LIGHT-O1, because it applies only in specific and limited circumstances. Overall, I therefore consider it to be a more efficient and effective way to achieve the outcome sought.

Street Lighting

Submissions

55. G. Pearson (13) is concerned that PC22 does not address overhead street lights, which he considers to be “*the greatest source of light pollution*” within the District. Waka Kotahi (20) requests that further consideration be given to how street lighting will be provided for through the Light Chapter. They state that there is provision for outdoor lighting to maintain the safe operation of the transport network, but there is no provision for street lighting and the associated light standards do not directly provide for this. It specifically seeks that an additional rule is added which permits artificial outdoor lighting for land transport infrastructure and public pedestrian or cycle use, stating that there is currently no provision for emergency responses, street lighting or other temporary uses.

Analysis

56. I note that LIGHT-R1 does apply to street lights, as this rule applies to any form of outdoor lighting. This is consistent with the approach in the operative MDP, which also applies to all outdoor lighting including street lights. However, I note that such lighting is subject to standards LIGHT-S1 to LIGHT-S5. These standards are intended to allow for the use of outdoor lighting, while ensuring such lighting protects the views of the night sky and maintains amenity values and traffic safety. I understand G. Pearson to have concerns about the ability to view the night sky beyond a street light, but note that this would only occur when looking across the horizon, rather than when looking up into the night sky. LIGHT-P2 is instead more concerned with minimising the potential for upward light spill. In my view, the controls provide an appropriate balance between the need for lighting to assist with the safe operation of the transport network, while reducing upward light spill. I therefore do not consider that additional controls on street lighting are necessary.
57. In relation to Waka Kotahi’s submission, I understand the additional rule sought would permit street lighting, but without the requirement to comply with the standards. Given the submission appears to consider that the proposed rules do not apply to street lighting, the submitter may wish to clarify, in light of my comments regarding the application of LIGHT-R1, if their concern is that artificial outdoor lighting for land transport infrastructure and public pedestrian or cycle use would not, or should not have to meet these standards, and therefore why it is necessary and appropriate to exempt it through the additional rule proposed. Based on a preliminary review that I have undertaken of other recently proposed plans, the approach sought by the submitter (to separate out street lights and exempt them from meeting standards) does not appear to be common. The proposed plans for Porirua and Timaru, for example, do not contain

an exemption for street lighting, and those of Waimakariri and New Plymouth only apply an exemption for traffic signals (of which there are none within the Mackenzie District). The Proposed Selwyn District Plan does take a different drafting approach, in that the rule framework does include a specific rule for outdoor lighting which is for roads and public pedestrian accessways and cycleways. However, such lighting is still subject to standards, including that they be shielded from above.⁸

58. I am also concerned that excluding street lighting from compliance with the standards (if that is what is sought) would be a significant shift and have the potential to undermine the achievement of the objective. In my view it would not implement the direction (in LIGHT-P1) to require outdoor lighting to minimise, as far as practicable, the potential for upward light spill that would adversely affect the ability to view the night sky. This is because I do not understand it to be “impracticable” for street lighting to comply. Finally, I note that the changes recommended in relation to LIGHT-S3 addressed later in this report may in any case address the submitter’s concerns. Therefore, my preliminary view is that a separate rule for street lights is not necessary or appropriate.
59. Because I am not recommending changes in response to their submissions, I recommend that the submission points from G. Pearson (13) and Waka Kotahi (20) are rejected. However I note that the clarification of how the rule framework applies to street lights may address some of their concerns.

Recommendation

60. I recommend, for the reasons given above, that no changes are made to the provisions in relation to these submission points.

12. Policy and Rule Framework

Policies (LIGHT-P1 and LIGHT-P2)

Submissions

61. B. King (18) states that LIGHT-P1 is not sufficiently detailed to be meaningful, and states that more information is required in relation to the location (zoning) of outdoor lighting, the design of outdoor lighting, including application of guidelines, and the operation of outdoor lighting including the application of electronic controls to mitigate nuisance effects. In relation to LIGHT-P2, he suggests the use of a lighting control system for street lighting, parks, reserves, and public spaces, as a tool for mitigating light pollution. He states that these systems are very effective at

⁸ LIGHT-REQ3 requires that the lighting for roads and public pedestrian accessways and cycleways shall:

- a. *Utilise flat glass luminaires; and*
- b. *Be directed downward and shielded from above to ensure that all light shines below the horizontal;*
and
- c. *Have a maximum uplight value of U0; and*
- d. *Have the ability to connect to control systems to enable lighting to be turned off or dimmed.*

off-peak dimming and trimming to cut unnecessary lighting, reduce energy and operational carbon emissions, as well as saving money via reduced energy and maintenance expenses.

62. TL&GL (19) seek amendments to LIGHT-P1 and LIGHT-P2 to refer to skylights, given that these are not 'outdoor lighting'. It considers that this will improve plan clarity.
63. Waka Kotahi (20) seeks amendments to LIGHT-P1 to refer to the safety of all transport network users, rather than simply to "traffic" in clause 1, and refer to "obtrusive light" instead of "light spill or glare" in clause 2. The latter is to align with the wording used in AS/NZS4282:2019 (Control of the Obtrusive Effects of Outdoor Lighting). It also seeks that LIGHT-P2 is amended to provide clarification that upward light can be reflected off surfaces which cannot be controlled by the technical attributes of the artificial lighting. This is through the addition of reference to limiting and restricting spill light and other obtrusive light, in addition to minimising upward waste light.

Analysis

64. I disagree that LIGHT-P1 is not sufficiently detailed to be meaningful. The policy outlines the course of action to be undertaken, which is then implemented through the rules. In this case, it directs that the location, design and operation of outdoor lighting is to be managed in such a way as to ensure the lighting is compatible with the zone in which the lighting is received; and so as not to distract or interfere with traffic. The rules then include locational, design and operational controls relating back to these aims. In relation to the matters raised by B. King in relation to LIGHT-P2, in my view, these are matters that sit outside the District Plan. More specifically, they relate to operational management considerations that are not necessary to achieve the outcomes sought for lighting within the District Plan. In my view, provided the lighting meets the proposed standards, it is not appropriate for the District Plan to further control such operational matters. I therefore recommend these submission points by B. King (18) are rejected.
65. With respect to skylights, I accept that there is currently a disconnect between the rule relating to skylights and the related policy LIGHT-P2 and agree with amending the policy to encompass skylights. However I do not consider a change is required to LIGHT-P1 as the direction in this policy is not implemented through the rule relating to skylights. As such, I recommend the submission point by TL&GL (19) is accepted in part.
66. I largely agree with the changes sought to LIGHT-P1 by Waka Kotahi, as the changes to clause 1 better reflect that the controls relate to safety of road users. However, I prefer that reference to 'road' rather than 'transport network' is used, because the rule which implements the policy relates to roads. While accepting that the transport provisions are yet to be reviewed, I also note that 'roading network' is the term generally used in the MDP. In relation to the changes sought to clause 2, my understanding is that 'obtrusive light' refers to light which is "unwanted" and which can cause annoyance, discomfort or distraction; whereas light spill relates to light which fall outside the boundaries of a property from which the light is emitted; and glare relates to light which causes discomfort or reduced visibility. The policy is about managing lighting so

that it is commensurate with the environment it is received in. I therefore consider that in this context reference to light spill is more appropriate, as 'obtrusive light' would by its nature be that which is not compatible, making reference to it in the clause nonsensical. Having considered the terms used, I do however, agree with deleting reference to 'glare', because I consider reference to light spill to be most appropriate. Overall I recommend the submission point by Waka Kotahi (20) is accepted in part.

67. While I understand the intent behind the change sought by Waka Kotahi to LIGHT-P2, I note that the rules only seek to manage upward light and do not regulate potential reflectivity, which as noted by the submitter cannot be controlled by the technical attributes of artificial lighting – the technical attributes being those that the rules control. The change sought would therefore not be implemented through the rule framework and my understanding is that it would be difficult to do so. I also do not consider that potential reflectivity would be of such a level that it would compromise achievement of the objective. I therefore consider the current policy wording to be more appropriate and recommend this submission point (Waka Kotahi (20)) be rejected.

Recommendation

68. I recommend, for the reasons given above, that LIGHT-P1 is amended to refer to the safety of road users in clause 1, and only to light spill (and not glare) in clause 2. The amendments recommended are set out in **Appendix 1**.
69. I recommend, for the reasons given above, that LIGHT-P2 is amended to refer to skylights.
70. The scale of change does not require a section 32AA evaluation because they are minor changes to provide greater clarity, rather than changing the intent of the policies.

Rules (including Matters of Discretion)

Submissions and Analysis

71. R. Williams (10) seeks amendments to prohibit high intensity light sources in the Rural Zone, as they can cause distraction and pollute the night sky. It is my view that the rules, in combination with the standards applying to them, already appropriately restrict lighting in the Rural Zone that may cause distraction and/or pollute the night sky. I consider the use of a restricted discretionary status where any standards are breached, to be appropriate, and I do not consider that the effects of any rule or standard breach is sufficient to justify a prohibited activity status. I therefore recommend the submission is rejected.
72. Waka Kotahi (20) considers that LIGHT-R1 should refer to "artificial" outdoor lighting, to ensure the rule refers to all forms of powering outdoor lighting such as solar and wind generation rather than only mains powered lighting. It is not clear to me how reference to outdoor lighting would currently exclude solar and wind powered lighting and therefore I do not consider the addition to be necessary. I therefore recommend the submission point is rejected.

73. TL&GL (19) seeks that a link is included in LIGHT-R1 to LIGHT-MD1 as it is currently not linked in the ePlan. While I agree with this, and therefore recommend the submission point is accepted, I note that a technological fix is required rather than a change to the provision, and the matters in LIGHT-MD1 will apply regardless of whether there is a working link between the provisions in the ePlan. I understand the e-Plan is being updated to correct this.
74. B. King (18) states that light emissions from interior lighting are difficult to manage as they emanate from interior lighting from commercial buildings and private dwellings, and they are fragmented in scale. He does not consider that it is practical to limit interior lighting by regulation. I note that this comment is made in relation to a statement in the s32 and therefore it is not clear whether any changes are sought to the rules. I note that the only rule in the PC22 applying to interior lighting in LIGHT-R3 which relates to skylights. As noted in the s32 report, additional rules controlling interior lighting were considered, but were determined to be inefficient, as it would be very difficult to monitor and enforce. The costs associated with this approach, in terms of it imposing a high level of control on ongoing property use, were also not considered to outweigh the benefits.⁹ I consider that the submitter's comments are consistent with this and effectively support the approach taken. On this basis, I recommend this submission point be accepted.
75. TL&GL (19) submit that the "*positive contribution of lighting*" should be added to the matters of discretion (LIGHT-MD1 and LIGHT-MD2). They consider that lighting has the ability to contribute positively which should be recognised. In my view, such a matter of discretion is broad, and it is not clear what may or may not be considered. It is likely that any lighting proposed which breaches the proposed standards would have some positive benefit and in my view this should not be used in all circumstances to counter the effects that such a breach might have. I also note that there is an existing matter of discretion which refers to operational and functional need for the lighting to exceed the standards, which I consider is more appropriately targeted to particular positive benefits. I therefore recommend this submission point is rejected.
76. In relation to all the rules, TL&GL (19) seek that the format of the rules are amended to remove 'where' criteria for permitted rules and only link to standards, including the current 'where' criteria as standards, where appropriate. They consider that the use of the word 'where' within the rules creates a standard within the rule. TL&GL (19) also seek that numbering is removed from rules where there is only one point. It is my opinion that these are matters for the Council to determine as part of the drafting approach, as it has no practical effect on the application of the rules. I also note that it is common in other district plans for rules to include both a requirement to adhere to standards, as well as containing criteria within the rule itself (i.e. the "where" component). This is often used to distinguish between criteria which apply to various activities (and which are therefore contained in standards) and criteria which apply only the activity to which the rule applies. I consider that less clarity would be provided if the current

⁹ Section 32 Report: Plan Change 22 – Light, 20 September 2022, at 9.6.

criteria contained in each rule is shifted into a separate standard which, in each instance, would only apply to one rule. I therefore recommend these submission points are rejected.

Recommendation

77. I recommend, for the reasons given above, that the rules are retained as notified, except where changes are recommended elsewhere in this report.

Standards

Submissions and Analysis

78. B. King (18) supports the introduction of light spill limits as a practical and enforceable means of spill light minimisation. He notes that as the AS/NZS obtrusive light technical standard is currently under update it will be necessary for MDC to review and align with latest requirements. Given the rule framework relating to light spill limits (LIGHT-S5 and LIGHT-TABLE 1) does not refer to the technical standard it is not clear to me what, if any, changes might be required to the district plan framework, should the technical standard be updated. Noting the submitter's support for the rules, I recommend the submission point is accepted in part.
79. TL&GL (19) seek that LIGHT-S1 is amended to refer to directing light "downwards" and away "from" roads etc, in order to improve plan clarity. In my view, the purpose of the rule is to ensure that light is not directly faced towards roads such that it would impact traffic. In my view, this need not necessarily be downwards, nor would a light which faces downwards, but which still directly faces the road, (due to the height of the lighting mount or the topography of a site) be appropriate. I therefore prefer the notified wording and recommend the submission point is rejected.
80. Waka Kotahi (20) seeks that LIGHT-S1 is amended so that the requirement to direct exterior lighting away from any adjacent roads, residential properties and lakes, is not applied where the intended use of the lighting is for the specific purpose of transport infrastructure use. While I agree in principle with this, the standard requires that lighting is directed away from any *adjacent* road. It would therefore not apply to lighting *within* the road reserve. The wording is also consistent with that used in the current MDP and has not, to my knowledge, given rise to any issues in relation to lighting within the road reserve. I therefore do not consider a change is necessary. I do however agree with correcting the standard to add the word "from" which the submitter has identified is currently missing. I therefore recommend the submission point is accepted in part.
81. TL&GL (19) seek that LIGHT-S2 is amended to delete "*that the edge of the shield shall be below the whole of the light source*" in order to improve plan clarity. I note that the wording sought to be deleted is consistent with that used in the operative MDP. I am not aware of any issues having arisen with the interpretation of the current plan. The only change made in the PC22 provisions from the operative wording, intended to provide further clarification, is the addition of the words "*so that all the light shines below the horizontal*". The wording in question is also

used in the proposed Waimakariri District Plan;¹⁰ whereas the wording sought by the submitter is consistent with that used in the proposed Selwyn District Plan.¹¹ Given the lack of issues with the existing wording I do not consider there is a particular need to alter the wording. However, on balance I prefer the wording sought by the submitter as in my view it is clearer to understand while not altering the effect of the rule. As such, I recommend this submission point be accepted.

82. Waka Kotahi (20) seeks that LIGHT-S2 is reworded to provide clarity relating to the direction of artificial outdoor lighting. The wording sought is “*A shield is attached to the luminaire is only required if all luminous flux is not directed below the horizontal when the luminaire is mounted in its normal operation position.*” In my view the alternate standard is unclear as to what is or is not required and is not consistent with the drafting used in other plans. I recommend this submission point be rejected.
83. As noted earlier, B. King (18) seeks to amend LIGHT-S3 to reduce the maximum colour temperature from 2500K to 2200K where within the AMIDSR area, noting that typical warm colour temperatures commercially available are 2000K, 2200K, 2700K and 3000K. He considers that 2200K may not be acceptable outside of the AMIDSR, particularly for areas such as town centres, retail and hospitality precincts. He further states that it is not appropriate to totally prohibit the use of higher colour temperature light sources, as limited use as part of professionally developed night sky conscious lighting designs is appropriate. He considers that applying 3000K to light sources in tourist, retail, and hospitality precincts; and 3000K or 4000K to spotlighting is unlikely to contribute materially to degradation of the night environment.
84. In a further submission which has been prepared by a qualified lighting designer with experience in Dark Sky lighting, MDC support the concerns of B. King regarding the availability of different luminaries and considers that proposes standard to be impracticable. While acknowledging the commercially available colour temperatures listed by the submitters, it states that these are not available to a typical consumer, and that 3000K is more readily available. The further submitter considers that applying the 2500K standard will be more likely to lead to existing lighting being upgraded to meet the standard and therefore have a greater overall benefit to the night sky. The submitter notes that 3000K is consistent with the International Dark Sky Association Fixture Seal of Approval programme. MDC also note that flood lighting, including sports fields and security lights, is not available at the 3000K level, and not required through the above programme, and considers that a suitable exception to Standard LIGHT-S3 should be developed that enables motion controlled (short duration) or time-controlled applications of high powered flood lighting to be utilised.
85. TL&GL (19) seeks that LIGHT-S3 is amended to increase the maximum colour temperature to 3000K as outdoor lighting of 2500K is difficult to source, and they consider that 3000k provides for a greater range while still managing the effect of such lighting. In the alternate they seek it is amended to 2700K. As noted earlier, Waka Kotahi (20) seeks that LIGHT-S3 is amended so

¹⁰ LIGHT-R2.1.a

¹¹ LIGHT-REQ3.1, LIGHT-REQ4.1.b and LIGHT-REQ5.1.a.

that a colour temperature of 2200K applies within the AMIDSR, and 3000K outside it. It states that 3000K is sought for “safety reasons” outside of the Dark Sky Reserve. However in their further submission, they support TL&GL’s request to increase the requirement to 3000K, on the basis that 2500K is not readily available and in their view 2700K is not suitable across the entire District. Genesis’ further submission opposes the restriction sought by Waka Kotahi to 2200K within the AMIDSR on the basis that the lower threshold has not been adequately assessed and no explanation was offered by the Submitter on why a lower threshold is required. They support retention of the notified standard, or its increase to 3000k as sought by TL&GL, both inside and outside the AMIDSR.

86. I firstly note that no prohibited activity status is proposed; rather, if the colour temperature standard is not met (LIGHT-S3) a restricted discretionary resource consent would be required. The matters raised by B. King are, in my opinion, appropriately considered through such a consent process. This would include the zone within which the lighting is proposed.
87. With regard to the specific standard, I accept that the use of 2500k is problematic, as it would appear to result in a practical limit of 2200K. The proposed colour temperature standard is new, and would replace the current rule relating to filtration. This was recommended in consultation undertaken with the University of Canterbury. Very few other plans appear to include such a standard. Based on the information provided in MDC’s further submission, I consider a 3000K standard to be appropriate, as it is a more efficient approach given availability of lighting at that level, while still being sufficiently effective at minimising impacts on the dark sky. With respect to flood lighting, I note that security lights are subject to a different rule (LIGHT-R2) which requires that they are fitted and controlled with a motion sensor, as well as meeting all the standards. Given the application of all the other requirements and the additional control, I consider it appropriate that they are exempted from the requirement to comply with the colour temperature standard. I consider this change to be within the scope of the matters raised by B. King. I have some concerns that exempting flood lighting may not be effective in achieving the objective. While I note the concerns of MDC that such lighting is not available at the 3000K level, I note that the current approach would be that such lighting would require resource consent, and the matters of discretion would allow for the operational and functional purposes of the lighting to be considered. I am comfortable with this approach. I therefore recommend that the submission point of TL&GL (19) is accepted and those of B. King (18) and Waka Kotahi (20) are accepted in part.
88. B. King (18) considers that reference to Low Pressure Sodium and High-Pressure Sodium lamps – which are included in LIGHT-S4 - should be removed on the basis that they are obsolete lamps with rapidly diminishing commercial availability and as such should not be included in the MDP. In my view, it is the effect of these lamps, and therefore whether these types of lamps will achieve the outcomes sought, that is more relevant. I therefore do not recommend that they are removed and recommend that the submission point is rejected.
89. TL&GL (19) seeks to amend LIGHT-S4 to include the abbreviation “LED”, and also include this in the acronym tables in the MDP, as the acronym is a more familiar term for people. I agree, but

consider that it is not necessary to include the full text and the abbreviation in the rule, if the abbreviation is included in the acronym table. I therefore consider that either the abbreviation only should be used in the rule wording, with the abbreviation also then included in the acronym table, or the rule should be amended to include the abbreviation in brackets as suggested by the submitter. Given it is only used in this rule, and is unlikely to be used in other parts of the Plan, I prefer including the abbreviation in the rule rather than the acronym table. I recommend the submission point be accepted in part.

90. B. King (18) suggests replacing the term “*lamp*” with “*light source*” as he considers that the former term is obsolete in this context, whereas ‘light source’ (fixed within the luminaire) is now the accepted term. While the comment is made in relation to a sentence in the s32 report, the term “*lamp*” or “*lamp types*” are used in LIGHT-R1.1.e and LIGHT-S4. I agree with amending the wording in these provisions as suggested and recommend this submission point be accepted.
91. Waka Kotahi (20) seek that LIGHT-S5 is amended to delete reference to “*measured*”, on the basis that there are several variables that cannot be controlled which influence measurement (such as reflected light, lighting from other sources etc). I am comfortable with its deletion, for the reasons given, noting that while ‘measured’ is used in some other plans, others exclude it. I recommend this submission point be accepted.
92. Waka Kotahi (20) also seek an amendment to LIGHT-S5 to replace the reference to “*roads*” with “*transport infrastructure and public access areas*”. It states that the additional wording provides for a broader context than just roads. While I appreciate the intent to broaden the wording, the difficulty I have is that in my view it would no longer be immediately obvious that the exemption applies to roads. It is also not clear to me what “*public access areas*” would include, as this could include all public spaces such as reserves, where in my view, the rule should apply. My preference is therefore to retain reference to roads as it is then clear where the exemption applies, and it is limited. As such, I recommend this submission point be rejected.

Recommendation

93. I recommend, for the reasons given above, that:
 - a. “*From*” is added to LIGHT-S1 so that it is grammatically correct;
 - b. Wording is deleted from LIGHT-S2 to make the standard clearer;
 - c. LIGHT-S3 is amended to increase the colour temperature to 3000 K;
 - d. LIGHT-R2 is amended so that LIGHT-S3 does not apply to security lights;
 - e. “*Measured*” is deleted from LIGHT-S5 to reflect difficulties with measurement; and
 - f. References in the chapter to “*lamps*” or “*lamp types*” are amended to refer to “*light sources*”.
94. The amendments recommended to the above provisions are set out in **Appendix 1**.

95. The scale of changes (other than to LIGHT-R1 and LIGHT-S3) do not require a section 32AA evaluation because they are minor changes to provide greater clarity, and do not change the intent or effect of the standards.
96. With respect to LIGHT-R1 and LIGHT-S3, the intent of each is to assist in minimising the potential for upward light spill that would adversely affect the ability to view the night sky, and therefore helps to protect views of the night sky. I consider that the notified limit of 2500K is an inefficient approach to achieve the outcomes sought, given it does not align with commonly available outdoor lighting. Applying a higher limit of 3000K is more efficient, and as it aligns with the International Dark Sky Association Fixture Seal of Approval programme, I consider it to still be effective. Similarly, exempting security lights from the need to comply with this standard is a more efficient approach, given the lack of availability of such lighting at the 3000K level. However I still consider it will be effective, given the other controls applying, including the additional requirement for this type of lighting to be controlled by a motion sensor.

Definitions

Submissions and Analysis

97. Genesis (11) seek that a definition of skylight is included within PC22 to support LIGHT-R3 and remove any ambiguity over what constitutes a skylight. While stating that they understand the intent is to prevent light spill from skylights affixed to the roof of a building, they seek a definition which confirms that large windows on walls are not captured by the rule. While I consider that it is commonly understood that skylights are windows located in the roof of a building and therefore would not include any window within the wall of a building, I see no harm in including a definition which specifies this and recommend the submission point is accepted.

Recommendation

98. I recommend, for the reasons given above, that a new definition of “*skylight*” is included in the MDP. The recommended definition is set out in **Appendix 1**.
99. The scale of change does not require a section 32AA evaluation because it provides greater clarity in regard to the application of a rule rather than altering the intent of the provisions.

13. Other Matters

Monitoring and Enforcement

Submissions

100. While supportive of PC22, G. Loxton (6) wishes to know how the Council will test, collect and store light spill data from current and future buildings and infrastructure. He considers that the long term data trend should show improvements to any changes in light ordinances as they occur, to meet the objectives of the plan changes. G. Pearson (13) also notes that the plan does

not outline the enforcement measures to be used against properties that have non-complying lighting.

Analysis

101. Matters relating to enforcement of plan provisions are addressed in the RMA itself rather than within a District Plan. While s75(2)(e) allows for district plans to state *“the procedures for monitoring the efficiency and effectiveness of the policies and methods”*, it is not a mandatory requirement and in my view it is better left to the Council to determine how it wishes to undertake the monitoring of plan provisions in future. I therefore recommend the submission points of G. Loxton (6) and G. Pearson (13) are rejected.

Recommendation

102. I recommend, for the reasons given above, that no changes are made to the provisions in relation to these submission points.

Relationship with other Statutory Bodies

Submissions and Analysis

103. B. King (18) considers that the Plan would benefit from explanation of the relationship between the various statutory bodies that oversee and regulate matters relating to astronomical and ecological values, such as Environment Canterbury, Mackenzie District Council and Department of Conservation, and the *“ways which the parties align for cohesive interaction”* on the protection of these values. I do not consider this to be necessary and recommend that this submission point is rejected.

Recommendation

104. I recommend, for the reasons given above, that no changes are made to the provisions in relation to this submission point.

Development of Strategic Lighting Plan and Further Technical Input

Submissions and Analysis

105. B. King (18) seeks that MDC develop a lighting strategic plan based on International Lighting Commission (CIE) guidelines, and then finalises PC22. He states that an overview document in the form of a Regional Lighting Masterplan is a necessary part of sound regional lighting planning and regulation. It is not clear to me what would be included in such a document, nor how it would relate (if at all) to the District Plan. In my view, preparation of a regional lighting plan does not negate the need for the District Plan to include provisions which seek to manage lighting, in order to achieve the purpose of the RMA; and such provisions are anticipated in the NP Standards. None of the other recent district plans I reviewed include reference to, or appeared to be linked in any way to such a plan, nor do such plans do not appear to be prevalent in New Zealand. I therefore do not agree that PC22 should be held up while such a plan is prepared, and recommend that this submission point is rejected.

106. B. King (18) also suggests that input from lighting professionals and lighting organisations such as Illuminating Engineering Society of ANZ (IESANZ) or Lighting Council New Zealand (LCNZ) be obtained. This is supported by MDC's further submission. He considers that this is essential to ensure light pollution mitigation, safety compliance and fit for-purpose general lighting outcomes, noting that technical standards are also constantly updated and it is essential to ensure reference in the guidance documents and bylaws are current. I firstly note that any party, including these organisations, have had the ability to submit on PC22. The provisions proposed build on those already included in the operative MDP, and technical input from the University of Canterbury has also been sought to assist with updating the provisions. Submissions have also been received from parties with experience in lighting controls. The rules proposed are also not out of step with other district plans. The rule framework proposed also does not rely on, or reference, any technical standards. I therefore do not consider that at this point in the plan change process that it is necessary or appropriate to seek further input from other organisations, and recommend that this submission point is rejected.

Recommendation

107. I recommend, for the reasons given above, that the decision on PC22 is not placed on hold pending development of a lighting strategic plan or further technical input.