

## LIGHT – Light

Residential amenity is particularly sensitive to noise, artificial light, and other site-specific adverse effects. These effects can seriously impact upon health and create considerable animosity between neighbours. The policies and rules have been established to protect residents from such adverse effects.

Artificial lighting, particularly in residential areas, can adversely affect people’s ability to sleep and ability to view the night sky, which affects the cultural values associated with the night sky. The two main causes are the general loss of night sky from the cumulative effects of urban lighting, and the nuisance caused by single sources that emit high levels of glare. The visibility of the night sky is most affected by artificial lighting that is projected upwards and excessive lighting that is reflected upwards, particularly from lighting that creates blue toned light (cooler colour temperatures). Again, such effects can be mitigated through compliance with standards on light emission, including those that control levels across property boundaries, light temperature, and light shielding.

The provisions in this chapter provide for artificial lighting which allows activities to occur outside of daylight hours and increases safety and security, while minimising potential adverse effects beyond the site. The provisions do not apply to specific types of activities or lighting which have a functional need or operational need, such as navigational aids and vehicle lights.

### Objectives

<b>LIGHT-O1</b>	<b>The role of artificial light and effects on amenity values</b>
To maintain and enhance amenity values that make the Wairarapa a pleasant place in which to live, work, and visit, by managing use of artificial light.	
<b>LIGHT-O2</b>	<b>Brightness and clarity of the night sky</b>
To preserve the brightness and clarity of the Wairarapa night sky.	
<b>LIGHT-O3</b>	<b>Provide for security and safety</b>
Activities are able to use artificial lighting for operational and functional purposes and to provide for the security and safety of people and property.	

## Policies

<b>LIGHT-P1</b>	<b>Avoid light spill and glare on adjoining sites and roads</b>
Manage the intensity, location, and direction of artificial lighting to minimise light spill and glare onto adjoining sites and roads.	
<b>LIGHT-P2</b>	<b>Protect the clarity and brightness of the night sky</b>
Manage the light colour temperature, shielding, and hours of operation of outdoor artificial lighting to mitigate skyglow to protect the clarity and brightness of the night sky.	
<b>LIGHT-P3</b>	<b>Effects of artificial light on amenity values are compatible with the receiving zone</b>
Manage activities with unacceptable visual effects from artificial light on amenity values, in accordance with the qualities of each environmental zone.	
<b>LIGHT-P4</b>	<b>Role of artificial lighting</b>
Provide for appropriate levels of artificial lighting to enable the safe and efficient undertaking of outdoor activities, including night time working, recreation, and entertainment.	

## Rules

<b>LIGHT-R1</b>	<b>Outdoor artificial light and glare</b>
<b>All Zones</b>	<p>1. Activity status: <b>Permitted</b></p> <p>Where:</p> <p>a. Compliance is achieved with:</p> <ul style="list-style-type: none"> <li>i. LIGHT-S1;</li> <li>ii. LIGHT-S2; or</li> <li>iii. LIGHT-S3.</li> </ul>
<b>All Zones</b>	<p>2. Activity status: <b>Restricted discretionary</b></p> <p>Where:</p> <p>a. Compliance is not achieved with LIGHT-R1(1).</p> <p>Matters of discretion:</p> <ul style="list-style-type: none"> <li>1. The effect of non-compliance with any relevant LIGHT standard that is not met and the matters of discretion of any standard that is not met.</li> </ul>

## Standards

<b>LIGHT-S1</b>	<b>Standards for outdoor artificial light and glare</b>	
<p>1. A maximum artificial light level of 8 lux (lumens per square metre) measured at 1.5m above ground level at the site boundary.</p> <p>2. All outdoor lighting shall have a colour temperature of light emitted of 3000K Kelvin or lower.</p> <p>3. All outdoor lighting with a light output of 500 lamp lumens or greater shall be shielded or tilted so as to not emit any light at or above a horizontal plane measured at the light source.</p> <p>Exception: The provisions do not apply to specific types of activities or lighting which have a functional need or operational need, such as navigational aids, rail signals and lights, mobile machinery associated with primary production and vehicle lights.</p> <p>Note: The standards for light must be measured and assessed in accordance with Standards AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting.</p>	<p>Matters of discretion:</p> <ol style="list-style-type: none"> <li>1. The extent to which the light will adversely affect adjoining sites.</li> <li>2. The effects of light direction on the safe and efficient operation of the road or rail network.</li> <li>3. The extent to which the lighting is necessary for functional and operational requirements, such as security, heritage, public amenity, or safety.</li> <li>4. The hours during which the lighting will operate.</li> <li>5. Proposed methods to avoid, remedy, or mitigate potential adverse effects including the height, orientation, angle, light colour temperature, and shielding of the light source.</li> <li>6. The extent to which the light will contribute to skyglow and adversely affect the quality of viewing of the night sky.</li> </ol>	
<b>LIGHT-S2</b>	<b>Outdoor sports lighting</b>	
<p>The emission of light from outdoor sports lighting must meet the following standards:</p> <ol style="list-style-type: none"> <li>1. All outdoor sports lighting shall have a colour temperature of light emitted of 5700K Kelvin or lower.</li> <li>2. Outdoor sports lighting shall be designed to the illumination levels recommended in AS 2560.2:2021 Guide to Sports Lighting, all parts. Maximum permitted illumination level is to be that recommended for “Level 3” competition standard. The lighting design initial levels shall not exceed the recommended average service</li> </ol>	<p>Matters of discretion:</p> <ol style="list-style-type: none"> <li>1. The extent to which the light will adversely affect adjoining sites.</li> <li>2. The effects of light direction on the safe and efficient operation of the road network.</li> <li>3. The extent to which the lighting is necessary for reasons of security, heritage, public amenity, or safety.</li> <li>4. The hours during which the lighting will operate.</li> <li>5. Proposed methods to avoid, remedy, or mitigate potential adverse effects including the height, orientation,</li> </ol>	

<p>illuminance level by more than 50% and shall meet the recommended uniformity.</p> <p>3. Luminous intensity from any light source for any viewing angles at 1.5m height, at a distance of 45m beyond the field shall not exceed 1000 candela.</p> <p>4. Outdoor sports lighting shall not operate between 10.00pm and 6.00am.</p> <p>5. All outdoor sports lighting shall provide the following controls:</p> <ul style="list-style-type: none"> <li>a. Automatic curfew controls to ensure the lighting is off between 10.00pm and 6.00am.</li> <li>b. Local control to turn lights on and off.</li> <li>c. If the lighting has a lighting level for competition, it shall also have a selectable lower lighting level for training.</li> </ul> <p>Exception: The provisions do not apply to specific types of activities or lighting which have a functional need or operational need, such as navigational aids and vehicle lights.</p> <p>Note: The standards for light must be measured and assessed in accordance with AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting.</p>	<p>angle, light colour temperature, and shielding of the light source.</p> <p>6. The extent to which the light will contribute to skyglow and adversely affect the quality of viewing of the night sky.</p> <p>7. For outdoor sports lighting, whether the lighting is consistent with the requirements of AS 2560.2:2021 Guide to sports lighting.</p>
<p><b>LIGHT-S3</b></p>	<p><b>Road lighting</b></p>
<p>1. Urban carriageway lighting must meet:</p> <ul style="list-style-type: none"> <li>a. AS/NZS 1158.3.1:2020 Lighting for roads and public spaces Part 3.1 Pedestrian area (Category P) lighting – Performance and design requirements; or</li> <li>b. AS/NZS 1158.1.1:2022 Lighting for roads and public spaces - Vehicular traffic (Category V) lighting - Performance and design requirements; and</li> </ul>	<p>Matters of discretion:</p> <ul style="list-style-type: none"> <li>1. The extent to which light or lack of light will adversely affect adjoining sites.</li> <li>2. The effects of light or lack of light on the safe and efficient operation of the road network.</li> <li>3. The extent to which the lighting is necessary for reasons of security, heritage, public amenity, or safety.</li> </ul>

<p>c. NZ Transport Agency (Waka Kotahi) M30 Specifications and guidelines for road lighting design.</p>	<ol style="list-style-type: none"><li>4. The hours during which the lighting will operate.</li><li>5. Proposed methods to avoid, remedy, or mitigate potential adverse effects including the height, orientation, angle, light colour temperature, and shielding of the light source.</li><li>6. The extent to which the light will contribute to skyglow and adversely affect the quality of viewing of the night sky.</li></ol>
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