



THE CORPORATION OF THE TOWN OF GODERICH

BY-LAW NO. XXX OF 2022

BEING A BY-LAW TO REGULATE OUTDOOR ILLUMINATION FIXTURES ON MUNICIPAL PROPERTY TO ENSURE RESPONSIBLE LIGHTING AND CONSERVATION OF THE NATURAL ENVIRONMENT WITHIN THE TOWN OF GODERICH

WHEREAS the *Municipal Act, 2001* allows municipalities to pass by-laws respecting matters within their sphere of jurisdiction which includes Town lands such as highways, road allowances, parks, trails, and other land owned by the Corporation;

AND WHEREAS Section 129 of the *Municipal Act 2001, S.O. 2001* allows municipalities to prohibit and regulate with respect to outdoor illumination;

AND WHEREAS the municipality will follow the regulations outlined within *Ontario Regulation 332/12: Building Code*, under the *Building Code Act, 1992, S.O. 1992, c23* for exterior lighting of municipal properties;

AND WHEREAS the Corporation of the Town of Goderich acknowledges that light pollution can reduce visibility for pedestrians and vehicles and have a negative impact on human health, wildlife migration as well as the natural environment, and controlling this wasted light can result in energy savings and greenhouse gas emission reductions;

AND WHEREAS the Town of Goderich will follow the requirements within the Town of Goderich Official Plan for exterior lighting on municipal property;

AND WHEREAS the Town of Goderich Official Plan states that natural areas will be protected, restored, and enhanced to recognize natural hazards, to protect their important natural habitat functions, and/or to conserve scenic landscapes;

AND WHEREAS the Corporation of the Town of Goderich acknowledges that the municipality lies adjacent to Lake Huron, a migratory pathway for various types of wildlife, and has a responsibility to prevent impacts on wildlife and hazards to navigation;

AND WHEREAS the Corporation of the Town of Goderich recognizes its responsibility to consider sensitive lighting, specifically with a downward orientation, low wattage, energy efficiency and minimizing glare, particularly at municipally owned waterfront areas;

NOW, THEREFORE, THE COUNCIL OF THE CORPORATION OF THE TOWN OF GODERICH ENACTS AS FOLLOWS:

1. DEFINITIONS:

For the purposes of this by-law:

“Corporation” means the Corporation of the Town of Goderich;

“Designated Staff” shall mean the Director of Operations, Chief Building Official or authorized contractor acting under their direction;

“Glare” shall mean a form of light pollution where light overloads the human visual system, typically by direct vision of a light source (Schedule A);

“Light Pollution” shall refer to the general term used to describe misused light. Light pollution may be caused by glare, light trespass, spill light, overlighting and sky glow (Schedule A);

“Light Trespass” shall mean a form of light pollution where light intrudes from a nearby source, typically through a window or onto a property (Schedule A);

“Luminaire” or “Light Fixture” shall mean a complete lighting unit consisting of one or more electric lamps, the lamp holder, any reflector or lens, ballast (if any), and any other components and accessories;

“Night Blindness” shall mean the inability to view properly in darker areas of the same scene;

“Overlighting” shall mean a form of light pollution where illumination is more than what is required for a person to see properly (Schedule A);

“Spill Light” shall mean a form of light pollution where light falls outside of the boundaries of the property intended to be illuminated (Schedule A);

“Sky Glow” shall mean a form of light pollution where the sky over an urban area is illuminated, caused by stray light from thousands of fixtures in a city or town (Schedule A);

2. SCOPE

- a) This By-Law shall apply to all municipally owned facilities, streetlights, park lights and other outdoor lighting fixtures (luminaires) owned by the Corporation of the Town of Goderich.
- b) All outdoor lighting fixtures (luminaires) shall be installed in conformance with this By-Law and with the provisions of *Ontario Regulation 332/12: Building Code*, under the *Building Code Act, 1992, S.O. 1992, c23*, as applicable and under permit and inspection if such is required.

3. INTENT:

The purpose of this By-Law is to provide a basic standard with respect to outdoor lighting for municipal streetlights, park lights and facilities within the Town of Goderich.

4. GENERAL PROVISIONS:

4.1 Administration of the By-law

This By-law shall be administered and enforced by the Designated staff.

4.2 Responsibility of the Municipality

When streetlights, park lights and other types of exterior lighting on municipal facilities and property (not found within the exemptions section of this By-Law) need replacement, consideration will be taken to purchase an effective lighting fixture that will provide a shield to the light source and focus light downward, decreasing glare and light trespass (Schedule B).

The type of luminaire proposed to be installed on municipal facilities, streetlights, park lights or other lighting on municipal property will be included in the annual budget. The Corporation will prioritize the purchase of effective lighting fixtures from the selection defined in Schedule C, potentially with the Dark Sky Seal of Approval (Schedule D). This decision by Designated staff will be based on the availability of the fixtures, time frame of purchase and installation, funding available within the annual budget, and at the discretion of the Director of Operations.

4.3 Lighting within the Town of Goderich Official Plan

This By-Law shall follow the environmental goals of the Town of Goderich Official Plan, which include:

- a) To protect, restore and enhance the natural environment through wise management and careful use;
- b) To raise public awareness, as well as encourage and practice stewardship of the natural environment;

Additionally, the Official Plan states that, “natural areas will be protected, restored, and enhanced to recognize natural hazards, to protect their important habitat functions and/or to conserve scenic landscapes.”

4.4 Property Standards for Lighting

This By-Law shall work in conjunction with the lighting requirements established in the Town of Goderich Property Standards By-Law (By-Law 63 of 1999) and any amendments thereof.

4.5 Municipal Property Illumination

All artificial lighting on municipal property (other than exempted municipal property noted in Section 5) shall be arranged as to minimize unnecessary light trespass. Lighting on municipal property lawfully in place prior to the date of passing of the By-Law shall be grandfathered. As lighting is replaced, the Corporation will consider the purchase of effective lighting fixtures from the selection defined in Schedule C, potentially with the Dark Sky Seal of Approval (Schedule D).

4.6 Best Practices for External Lighting include:

- a) Minimize glare – shield the light emitting surfaces from direct view
- b) Eliminate direct upward light – direct upward light is projected directly upward by inefficient lighting fixtures
- c) Reduce spill light – spill light reaches beyond areas that need to be lit for safety and security reasons
- d) Optimize useful light – useful light is used to illuminate areas for navigation and safety

- e) Enhance urban design – architectural form should be complemented by using light wisely for place-making and to design a more welcoming pedestrian environment that will be monitored over time
- f) Use appropriate colour temperature – use an appropriate colour temperature to the context of its application (i.e., maximum 3000K in residential areas including multi-use areas with residences, maximum 4000K along high traffic arterial roads)
- g) Use Dark Sky compliant fixtures – select fixtures that have the Dark Sky Fixture Seal of Approval (Schedule D).

4.7 Considerations for Safety and Security Lighting

The goal of safety and security lighting is to protect people and property, as well as to discourage criminal activity by creating an environment where such activity may be easily and accurately observed. Security lighting can be a major source of glare, overlighting and night blindness if designed poorly, specifically if the glare of an unshielded luminaire blinds an observer and makes it difficult to see into shadows.

Where security lighting is required, motion sensor activated lighting saves energy, reduces light pollution, and should be used in conjunction with security cameras. Additionally, the use of shielded or cutoff luminaires are recommended to control glare (Schedule C).

4.8 Considerations for Replacement of Streetlighting

Streetlighting is a critical component of municipal infrastructure. However, streetlighting is a significant contributor to sky glow, illuminating the night sky due to stray lights. Additionally, light trespass can become an issue when streetlighting is close to residential dwellings.

Full cutoff or shielded streetlighting is designed to direct light to the roadway and sidewalk surfaces. This eliminates stray light causing sky glow and lessens glare by shielding the viewer from a direct view of the light source. Full cutoff or shielded fixtures also minimize access light entering nearby properties.

4.9 Considerations for Replacement and Design of Park and Green Space Lighting

The Town of Goderich has numerous properties dedicated as parks and green spaces for the enjoyment of residents and tourists, for use in the daytime and during the evenings. Wall pack fixtures mounted to park buildings and/or pavilions shine horizontally and can be a major source of glare.

As park and green space lighting needs replacement, the following considerations will be taken to improve the management and direction of light:

- a) Installation of fixtures that are full cutoff to ensure they light pathways or sitting areas without causing glare
- b) Installation of full cutoff wall pack fixtures on park buildings and/or pavilions. mounted at the appropriate height
- c) Manage sports lighting for minimum impact

5. EXEMPTIONS:

5.1 Lighting that is exempt from this By-Law include:

- a) Exit signs and other illumination required by the *Ontario Building Code*
- b) Lighting for outdoor stairs and ramps, as required by the *Ontario Building Code*
- c) Holiday and temporary lighting (less than ninety days use in any one year)
- d) Football, rugby, soccer, basketball, baseball, hockey, lacrosse, softball, and any other outdoor recreational lighting
- e) Searchlights and/or strobe lights for construction projects or emergency purposes

6. PROHIBITED MATTERS:

6.1 Hinder Duties of Designated Staff

No person shall hinder or obstruct, or attempt to hinder or obstruct, Designated staff in the exercise of the powers and performing the duties authorized and contained in this By-Law.

6.2 Prohibited Illumination on Municipal Property

- a) The use of laser source light or any similar high intensity light for outdoor advertising or entertainment purposes is prohibited
- b) The operation of searchlights for advertising or entertainment purposes is prohibited
- c) The use of strobe lights is prohibited, except for construction/maintenance projects or emergency purposes

7. ENACTMENT:

That this By-Law shall come into force and effect on the day of its final passing.

That the Mayor and Clerk are hereby authorized to execute and affix the Corporate Seal.

8. SHORT TITLE:

This By-Law may be referred to as the “Dark Sky By-Law”.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS XX DAY OF XX 2022.

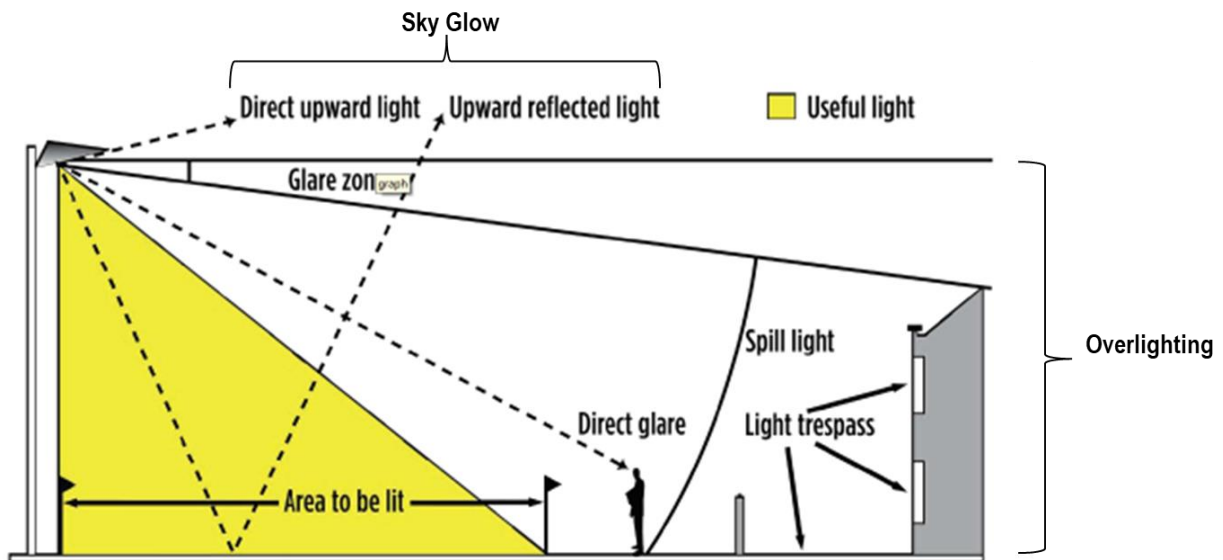
ACTING MAYOR, Myles Murdock

CLERK, Andrea Fisher

Schedule A

Diagram of the Various Forms of Light Pollution

(Adapted from Best Practices for Effective Lighting, City of Toronto)



Light pollution is often caused by the way light is emitted from lighting equipment. Ineffective external lighting contributes to glare, light trespass, spill light, overlighting and sky glow. These effects of light pollution can be minimized and/or eliminated through architectural design, by choosing proper lighting equipment, as well as how luminaires are mounted/aimed to illuminate a certain area.

Schedule B

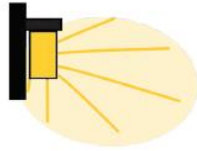
Comparison of Ineffective versus Effective Lighting

(Adopted from Best Practices for Effective Lighting, City of Toronto)

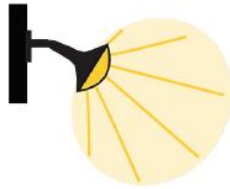
Ineffective Lighting

Fixtures that produce Glare and Light Trespass could disturb your neighbours, as well as waste energy.

Typical wall light



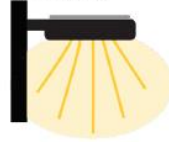
Area floodlight



Typical yard light



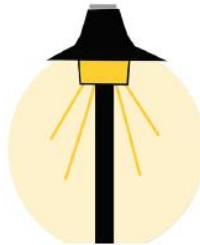
Darksky-friendly wall light



Area floodlight with hood



Yard light with reflector

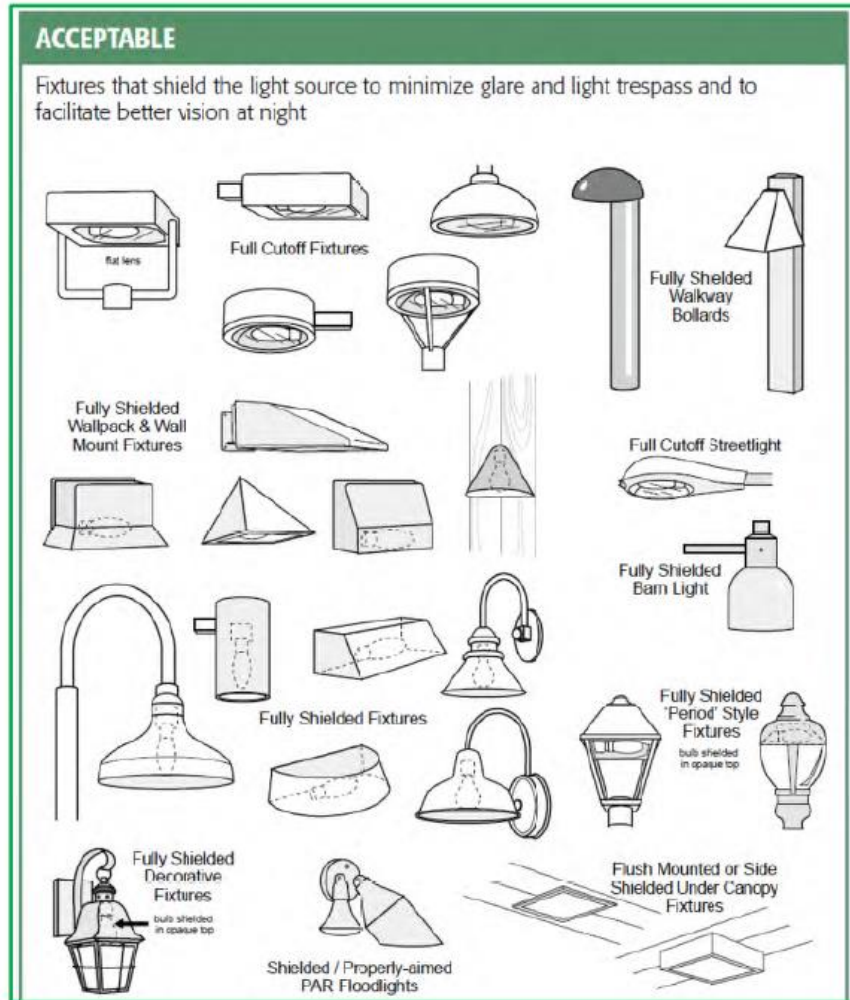


Effective Lighting

Fixtures that shield the light source minimize Glare and Light Trespass. It saves money and energy.

Schedule C

Examples of Lighting Fixtures that Decrease Light Pollution (Adopted from By-Law 2014-029, Township of Muskoka Lakes)



Schedule D

Dark Sky Seal of Approval



The International Dark-Sky Association (IDA) is the authoritative voice on light pollution. The IDA has developed the Fixture Seal of Approval program to provide objective, third-party certification for lighting that minimizes glare, reduces light trespass and does not pollute the night sky. Participating retailers work closely with IDA to ensure their products are properly listed and certified as Dark Sky Approved.