

## **Proposed Motions:**

“That Council direct staff to consider including bird-safety guidelines in the Highlands building bylaw. In particular, the requirement that glass deck-railings have an effective collision-avoidance treatment and the recommendation that bird hazards be considered in building and window design.”

“That Council include a short article on making a properties more bird-friendly, provided by SLUSC, in an upcoming newsletter.”

## **Background:**

It has been estimated by Environment Canada that almost 270 million wild birds are killed each year in Canada by human activities. About 25 million of these are likely due to window collisions alone: <https://www.ace-eco.org/vol8/iss2/art6/>.

Highlands has qualities that make a bird-friendly building bylaw both desirable and important:

- a large amount of unspoiled habitat used for breeding, wintering and migration by many species of birds
- a general desire by residents to protect its wildlife and natural beauty
- some building features, often adopted to increase enjoyment of our beautiful surroundings are particularly hazardous to birds, such as glass deck railings, and corner windows.
- residents may not be aware of how many birds are killed by their glazing as it often overlooks heavily-vegetated areas.

There are also little-known bird hazards that Highlanders could easily reduce, such as:

- open pipes (e.g. chimneys and fence posts), large gratings, greenhouses, etc. which can trap birds.
- improper placement or use of bird feeders
- Poorly placed or excessive lighting

## **Other jurisdictions and organizations are moving towards adopting bird-friendly building guidelines:**

*Ontario MPP Chris Glover's Petition:*

TO THE LEGISLATIVE ASSEMBLY OF ONTARIO:

WHEREAS an estimated 25 million birds in Canada die each year due to collisions with windows on buildings, including many migratory and bird Species at Risk;

WHEREAS materials to prevent the collision of birds into windows can proactively be incorporated into the designs of new buildings;

WHEREAS the Canadian Standards Association has established a national standard for Bird Friendly Building Design which has been adopted by some municipalities;

THEREFORE, we the undersigned petition the Legislative Assembly of Ontario to:

Incorporate the CSA 2019 Bird Friendly Building Design standard into the Ontario Building Code, requiring bird-friendly materials to be used in new residential and commercial building windows.

*Toronto has adopted mandatory bird-friendly design guidelines as part of their “Toronto Green Standard”*

<https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/design-guidelines/bird-friendly-guidelines/>

Some American cities have also adopted mandatory requirements. Other Canadian Municipalities of various sizes, such as Vancouver, Guelph and Ottawa have adopted voluntary guidelines or are working towards some sort of bird-safety policy.

<https://capitalcurrent.ca/ottawa-finally-considers-bird-friendly-building-guidelines-15-years-after-toronto-vancouver/>

*UBC’s Bird-Friendly Design Guidelines*

<https://planning.ubc.ca/sustainability/sustainability-action-plans/green-building-action-plan/institutional-building-requirements/bird-friendly-design>

## **Resources for Architects and Planners:**

*Excerpts from The Canadian Standard’s Association Bird-Friendly Building Design Standards (link below):*

### **“ A2. General**

...

The increased use of design elements such as curtain walls and window wall glazing, as well as picture windows and transparent railing systems on private homes, has dramatically increased the incidence of bird collisions. Cities have become increasingly dangerous for birds to navigate. Recent estimates suggest that about 25 million birds die each year from window collisions in Canada. Research suggests that bird collisions with windows are indiscriminate. They can occur anywhere, at any time, day or night, year-round, in any weather conditions, at glass facades of all sizes in every type of environment from residential and rural settings to dense urban cores, affecting migratory, resident, young, old, large, small, and male and female birds. In short, collisions and mortality occur anywhere birds and glass coexist. ...”

“The scale of the problem is considerable, but there are already a myriad of examples of innovative design solutions available that incorporate bird-friendliness into buildings, whether intentionally or incidentally, without sacrificing architectural standards. In new construction, bird-friendly design strategies can be incorporated from the initial design stages, but there are also many ways to reduce mortality at existing buildings. Architects, designers, planners, and legislators can all play key roles in solving this problem. ...”

“By understanding and avoiding collision hazards in building design, incorporating visual markers into the most predictably hazardous parts of a building, reducing light pollution, and identifying architectural approaches that integrate bird-friendliness with energy conservation and other objectives, buildings can be planned and designed more sustainably — to the benefit of humans, birds, and the natural environment as a whole...”

### **“A7. Glazing**

...

Birds strike transparent windows as they attempt to access potential perches, plants, food or water sources, and other lures seen through the glass. Glass skywalks and linkways connecting buildings, glass walls around planted atriums, windows that form glass corners, and exterior glass guardrails or walkway dividers are dangerous because birds perceive an unobstructed route to the other side.”

“ Glass can have an image or pattern screened, printed, or applied to the glass surface. By using patterns of various sizes and densities, manufacturers can create any kind of image, translucent or opaque. Ceramic frit and acid-etched patterns are commonly used to achieve design objectives other than preventing bird collisions, including a reduction in the transmission of light and heat, privacy screening, or branding, but these images in the glass also project enough visual markers to be perceived by birds and to help them avoid collisions with the glass. There is some debate regarding the effectiveness of ultraviolet markers in preventing bird collisions.

The size and spacing of visual markers are important factors that affect the degree of risk reduction for bird collisions. The larger the markers and the denser the pattern, the more effective they are in appearing as solid objects to birds. Studies have shown that visual markers spaced a maximum of 10 cm apart vertically or 5 cm horizontally are effective at deterring bird collisions with glass, but a tighter pattern of 50 x 50 mm has been proven to be even more effective.

Patterns can also be applied to existing glass through the use of film products. Applied to external surfaces, including windows, film products can be designed with any image or pattern. Film laminates are often applied to buildings for purposes such as security or advertising (just as they are on transit vehicles for advertising purposes). However, the film on buildings can be used simply for the protection of birds; it need not serve any other purpose and can be integrated with the architectural design of the building...”

### **“A.9.4 Design traps**

Windowed courtyards and open-topped atriums can be death traps for birds, especially if these spaces are heavily planted. Birds fly down into such places and then try to leave by flying directly towards the reflections.”

### **“A.9.5 Lighting**

External lighting used to illuminate the site surrounding a building must provide enough illumination to make the site safe and secure at night, and lighting fixtures on a building site must conform to building and safety codes. Within the parameters of these codes and requirements, for a building to be bird- friendly, light pollution from external lighting must be minimized. Exterior site lighting fixtures should project light downward to eliminate direct upward light and be oriented and placed in such a way as to project light only on non-reflective surfaces on the site, minimize light spill and glare, reduce artificial sky glow, and optimize useful light. Motion

sensors should be used whenever possible. These strategies help to reduce light pollution from reflections and glare off glass on the site.”

<https://birdsafecanada.ca/csa-bfbd/>

*American Bird Conservancy:*

<https://abcbirds.org/glass-collisions/architecture-planning/>