

Clause 6 in Report No. 11 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on June 28, 2018.

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Bird-Friendly Standards

Committee of the Whole recommends adoption of the following recommendations, as amended, in the report dated June 8, 2018 from the Commissioner of Corporate Services and Chief Planner:

1. Council receive this report for information.
2. The Regional Clerk circulate this report to the local municipalities and to the provincial and federal Ministries of the Environment and Climate Change.

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Report dated June 8, 2018 from the Commissioner of Corporate Services and Chief Planner now follows:

1. Recommendation

It is recommended that this report be received for information.

2. Purpose

This report responds to Council's March 29, 2018 motion (Attachment 1) directing staff to report back on implementation of bird-friendly standards for the Region.

3. Background and Previous Council Direction

Council requests staff to prepare a report regarding the implementation of bird-friendly standards for York Region

On March 29, 2018, Council approved a motion directing staff to report back on the implementation of bird-friendly standards for York Region. The motion identifies the importance of birds as an indicator of ecological health, references

the City of Markham's implementation of [bird-friendly guidelines](#) and the need for York Region to demonstrate leadership in this area.

Window collisions is a leading human-related cause of bird deaths

Environment Canada ranks window collisions as one of the highest human-related causes of bird deaths in Canada. Second only to cat predation, it is estimated that bird-window collisions result in approximately 25 million bird deaths annually. Volunteers working with the Fatal Light Awareness Program have documented 45,000 bird-window collisions in the Greater Toronto Area since 2000. In the City of Markham, 899 bird-window collisions were catalogued between 2000 and 2012.

Research shows there are a number of factors that increase risk of injury or death from bird-window collisions, including:

- Migratory birds are more at risk of injury or death from window collisions with a large number of collisions occurring during fall migration
- Forest dwelling, migratory songbirds often attracted by light become disoriented and trapped in unfamiliar urban areas
- The majority of window collisions occur during the day while migratory birds are searching for food and shelter in unfamiliar environments
- While collisions are associated with all building types, increased risk of collision is related to the amount of glass installed in a building. As a result, high-rise glass buildings are responsible for a higher number of bird deaths on a per building basis

City of Toronto and City of Markham have developed bird-friendly guidelines

In 2007, the City of Toronto developed bird-friendly guidelines that provide a comprehensive list of strategies to make new and existing buildings less dangerous to migratory birds. In 2016, the City of Toronto produced two best practice documents that address the primary causes of bird-window collisions: Bird-Friendly Glass Best Practices and Bird-Friendly Lighting Best Practices that support implementation of required performance measures in the Toronto Green Standard.

In 2014, Markham Council endorsed Bird-Friendly Guidelines to encourage site and building design that minimizes the risk of collision for birds residing in, and migrating through, the City of Markham. As summarized in Attachment 2, the Bird-Friendly Guidelines provide Markham with a strong urban design tool to

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reduce bird-window collisions as the City continues to urbanize and intensify. A number of actions were identified by Markham staff to support implementation of the Guidelines, including:

- Incorporate bird-friendly treatments and requirements into the site plan approval process
- Demonstrate leadership by including bird-friendly treatments in all municipal buildings, where feasible
- Develop an education and outreach program that promotes bird-friendly treatments on existing buildings

Both guidelines identify and address building and site features that influence bird-window collisions including the amount and types of glass, building size, landscaping and exterior and interior lighting. The most effective solutions to preventing bird-window collisions incorporate strategies which:

- Make glass more visible to birds by reducing reflectivity and transparency
- Manage interior and exterior lighting to avoid light directed upwards and/or extending beyond the target area (strategies and fixtures designed to minimize light pollution are also referred to as dark-friendly or dark sky compliant)

Examples of bird-friendly building and lighting strategies are provided in Attachment 3.

## 4. Analysis and Implications

Council is committed to the creation of high-quality, sustainable communities

Council has committed to ensuring the protection of a healthy natural heritage system rich in native diversity. Vision 2051 encourages the integration of natural heritage systems into our communities and recognizes natural heritage systems as an important component to quality of life, community resiliency and economic prosperity in York Region. The York Region Official Plan also identifies the important role natural heritage planning plays in supporting wildlife, creating complete communities and sustainably managing growth.

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York Region is incorporating bird-friendly practices into existing programs, projects and operations

York Region has implemented programs and projects with an emphasis on being bird-friendly through public education, habitat creation and bird protection, including:

- Annual York Regional Forest events focusing on birds
- Forest management and prairie creation at York Regional Forest Tracts
- Issuing sustainable forest harvesting permits with a timing restriction to protect spring bird breeding season

Regional buildings are being retrofitted with bird-friendly window film at select locations

To date, a total of 9 bird-window collisions have been reported at York Region owned facilities including the Administrative Centre and 145 Harry Walker Parkway North in Newmarket. As an owner and operator, York Region is responsible for ensuring Regionally-owned buildings are constructed and operated in accordance with all legislative requirements including the Environmental Protection Act.

While York Region has no corporate policy requiring bird-friendly treatment on Regional facilities, there are a number of projects that have been completed or are currently underway incorporating best practices, including:

- Bird-friendly window film installed at the Bill Fisch Stewardship and Education Centre supporting the environmental and sustainable objectives for that site
- Piloting bird-friendly window film at 145 Harry Walker Parkway North which may be expanded to the Great Hall at the Administrative Centre
- Implementing bird-friendly lighting at York Region Transit facilities and glass applications on bus shelters
- Incorporating patterned glass on the bridge, atrium glass wall and exterior stair cases at the Annex Building to minimize bird-window collisions

Staff are considering options to address corporate sustainable building standards which could include bird-friendly practices.

As the approval authority for site plans Local Municipalities are best suited to address private bird-friendly practices

Under the *Planning* and *Building Code* Acts, local municipalities have the legislative authority to approve site and building designs. The *Planning Act* gives local municipalities the ability to address matters relating to exterior design of buildings through site plan approval, including the character, scale, appearance and design features of buildings including landscaping, lighting and other exterior design elements. This planning tool is used to implement municipal urban design objectives and ensure high quality design of sites, buildings and streetscapes. A local municipality is prohibited from issuing a building permit unless site plan approval and zoning by-law requirements have been met. As the approval authority, local municipalities are best positioned to leverage these tools to ensure effective implementation of bird-friendly practices.

Local Municipalities employ a variety of approaches to implement bird-friendly practices

Staff undertook a scan of land use planning policies, sustainability plans and design guidelines to better understand how bird-friendly practices are implemented by local municipalities in York Region. As shown in Table 1, the majority of local municipalities have implemented official plan policy or design guidelines that address bird-friendly strategies, to varying degrees. Local municipalities in York Region take the lead to implement bird-friendly design standards administered through the site plan approval process.

**Table 1**  
**Summary of Local Municipal Bird-Friendly Policy and Guidelines**

Municipality	Official Plan Policy	Guidelines	Description
Aurora	Dark Sky	No	Requirement for development of Green Development and Design Standards that address dark sky compliance practices for exterior lighting
East Gwillimbury	Bird-friendly	Yes	Requirement for development of Thinking Green Standards that address bird-friendly and dark sky practices
Georgina	Dark Sky	No	Healthy and Complete communities objectives include the reduction of light pollution in order to preserve the night sky
King	Bird-friendly	No	Sustainable development policy requiring applications to be reviewed to

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Municipality	Official Plan Policy	Guidelines	Description
			ensure windows are designed to reduce bird collisions
Markham	Bird-friendly	Yes	Policy requirement and design guidelines addressing bird-friendly design
Newmarket	Bird-friendly	Yes	Policy and site plan process manual addressing bird friendly practices
Richmond Hill	Urban Design	Yes	Policy requirement for development of urban design and sustainability metrics addressing bird-friendly practices
Vaughan	Urban Design	Yes	Policy requirement for development of urban design standards and sustainability metrics addressing bird-friendly practices
Whitchurch-Stouffville	Urban Design	No	Policy requirement for development of urban design standards
York Region	Urban Design	No	Support for local municipal initiatives

\* Dark Sky refers to strategies and technologies used to reduce light pollution

Consultation on wildlife protection and management will occur through the Municipal Comprehensive Review

Regional staff are consulting with local municipalities on an on-going basis through the Municipal Comprehensive Review. As these consultations continue, staff will identify the City of Markham's Bird-Friendly Guidelines as a best practice and encourage local municipalities to implement guidelines through site plan control at the local level and assess the need for supportive policies in the York Region Official Plan.

## 5. Financial Considerations

There are no financial impacts associated with this report. The financial impacts of implementing corporate sustainable building standards would be identified in a subsequent report.

## 6. Local Municipal Impact

As noted above, bird-friendly practices are best implemented through site plan control by local municipalities. The majority of local municipalities have policies that address bird-friendly practices such as building design and lighting (dark sky) requirements. Through the Municipal Comprehensive Review, Regional staff will encourage implementation of bird-friendly standards through site plan control at the local level.

## 7. Conclusion

This report examines the leading causes, risk factors and implementation strategies that can be used to reduce deaths associated with bird-window collisions. York Region has demonstrated leadership by implementing bird-friendly strategies at high-risk Regional facilities. Staff will continue to explore opportunities to implement wildlife protection and management standards on Regional facilities, as appropriate. Regional staff will seek public and local municipal input on sustainably managing growth including wildlife protection and management through the Municipal Comprehensive Review.

For more information on this report, please contact Teresa Cline, Senior Planner at 1-877-464-9675 ext. 71591.

The Senior Management Group has reviewed this report.

June 8, 2018

Attachments (3)

#8547044

Accessible formats or communication supports are available upon request

**Bird Friendly Standards Motion – March 29, 2018**

Moved by Regional Councillor Heath, seconded by Regional Councillor Li:

Whereas research indicates that across Canada, 25 to 30 million birds are killed annually by collisions with buildings;

Whereas the majority of these deaths are preventable;

Whereas birds are an indicator of ecological health and provide ecological services such as pollination and insect control, while generating millions of dollars through the bird watching industry;

Whereas the City of Markham has implemented bird-friendly guidelines and requirements of bird-friendly design and is fulfilling recommendations of the Markham Greenprint Sustainability Plan;

Whereas municipalities across the province are adopting similar strategies in their communities;

Whereas the Ontario Architects Association supports province- wide standards to regulate this growing conservation issue;

Whereas it is now an offense under the Environmental Protection Act (EPA) to emit reflected light that kills or injures birds. Building owners and operators across the province seek direction on how best to mitigate this leading cause of bird death;

Whereas The Regional Municipality of York needs to demonstrate leadership in the protection of birds;

Therefore be it resolved that staff report back regarding the implementation of bird-friendly standards for The Regional Municipality of York by the end of June 2018.

## Overview of the City of Markham Bird Friendly Guidelines

### Chapter 1.0 Introduction and Policy Framework

- Identifies the issues and risk factors associated with bird-window collisions and the supporting policy context for development of the Bird Friendly Guidelines.

### Chapter 2.0 Birds in Markham

- Identifies three types of birds that reside in Markham; year round residents, birds that breed in Markham but migrate south in the winter, and migrant birds.
- Identifies that migratory birds are most at risk of bird-window collisions
- Identifies the role Markham's Greenway System plays in providing habitat to resident and breeding birds.

### Chapter 3.0 Bird-Window Collisions

- Describes what is currently known about bird-window collisions in Markham (900 collisions reported between 2000 and 2012)
- Describes the factors that increase the risk of bird-window collisions including glass and reflective surfaces, lighting, and building height

### Chapter 4.0 Bird-Treatments

- Describes primary treatments that are implemented through the site plan review process including:
  - treatment be applied on 85% of contiguous glass area greater than 2m<sup>2</sup> and within 16m from finished grade
  - increasing the visibility of glass by applying visual markers to the exterior glass surface (dots, strips, frit or etched patterns)
  - installing netting in front of glass



Pictures showing window film, dots, netting and etched glass window treatments  
Source: Markham Bird-Friendly Design Guidelines

- Describes secondary treatments where views are imperative, including:
  - treatment be applied on 15% of contiguous glass area greater than 2m<sup>2</sup> and within 16m from finished grade on areas without primary treatment
  - internal blinds and shades
  - external coverings, louvers and mullions
- Describes interior and exterior lighting treatments to reduce light pollution



Pictures showing internal blinds, external coverings, and mullions  
 Source: Markham Bird-Friendly Design Guidelines

## 5.0 Implementation and Guidelines

- Recommends that the Bird-friendly Guidelines be adopted by Council as a living document and updated to reflect best management practices
- Recommends that the site plan approval process be updated to include a bird-friendly checklist
- Recommends that existing buildings be audited and retrofitted wherever possible and feasible
- Recommends development of bird-friendly communications.

## Appendices

The following appendices are included in the guidelines:

- Applicable legislation
- Best Practices Summary
- Markham Retrofit Projects
- Existing Condition Summary
- Bird Identification

### Summary of Bird Friendly Building Design Strategies

Strategy	Description
Increase visibility of glass	<ul style="list-style-type: none"> <li>- Apply visual markers on the exterior glass surface</li> </ul>
Interrupt reflective glass	<ul style="list-style-type: none"> <li>- Increase the density of visual markers through the use of:               <ul style="list-style-type: none"> <li>▪ spandrel panels (opaque glass element installed between floors of a building, and</li> <li>▪ mullions (vertical bars between panes of glass)</li> </ul> </li> </ul>
Exterior visual markers	<ul style="list-style-type: none"> <li>- Include design elements that better articulate a building's exteriors, such as:               <ul style="list-style-type: none"> <li>▪ Decorative grills</li> <li>▪ Fenestration patterns</li> <li>▪ Sunshades, louvres, window screens</li> </ul> </li> </ul>
Reduce appearance of clear passage	<ul style="list-style-type: none"> <li>- Design corner windows, glass walkways to reduce the appearance of clear passage to sky or vegetation</li> </ul>
Dampen reflection	<ul style="list-style-type: none"> <li>- Use canopies or sunshades to cover ground level windows</li> <li>- Use screens, drapes, or blinds to increase the opacity of clear glass</li> </ul>
Reduce attractants and landscape reflections	<ul style="list-style-type: none"> <li>- Ensure outdoor landscaping is at an appropriate distance from glass</li> <li>- Avoid interior landscaping near windows</li> <li>- Locate bird feeders within 1 metre of the building</li> </ul>
Reduce light pollution	<ul style="list-style-type: none"> <li>- Reduce unnecessary light-spill through shielding and targeted lighting</li> <li>- Down lighting should be selected over up lighting</li> <li>- Flood lighting should be avoided</li> <li>- Use minimum wattage fixtures</li> </ul>