



Report to: Development Services Committee

Date Report: October 22, 2013

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**SUBJECT:** Draft Bird Friendly Study and Guidelines

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**RECOMMENDATION:**

- 1) That the staff report entitled “Draft Bird Friendly Study and Guidelines” dated October 22, 2013 be received;
- 2) That the Draft Study entitled “Bird Friendly Guidelines (October 2013)” be circulated for input;
- 3) That a stakeholder workshop be held to receive input into the Draft Bird Friendly Guidelines with the building and development community and other interested parties;
- 4) That staff bring back the final Study and recommendations following the stakeholder workshop;
- 5) And further that staff be authorized and directed to do all things necessary to give effect to this resolution.

**PURPOSE:**

The purpose of this Report is to provide Development Services Committee with an overview of the City’s Draft Bird Friendly Guidelines (October 2013) document as prepared by the North-South Environmental (North-South), release the document for input and to obtain authorization to schedule a stakeholder workshop.

**BACKGROUND:**

Bird Friendly Guidelines are documents prepared by municipalities to reduce bird window collisions. In 2008, Markham Council received a number of presentations regarding bird window collisions and began the implementation of municipal retrofits of buildings including Fred Varley Art Gallery, 8100 Warden Avenue and Markham’s Civic Centre, using best management practices and the assistance of staff from the Fatal Light Awareness Program (FLAP) Canada, an organization dedicated to managing bird window collisions in Toronto. Further policy direction provided in Markham’s Draft New Official Plan (2012) and Greenprint - Markham’s Sustainability Plan (2011), identified the management of bird window collisions is a Council priority.

In 2013, Markham’s Bird Friendly Guidelines project was awarded to a multi-disciplinary consulting team led by North-South. The team is comprised of Wallman Architects, the Landplan Collaborative Ltd., Dr. Daniel Klem, Professor of Ornithology and Conservation Biology at Muhlenberg College and Mr. Michael Measure, Executive

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Director of Fatal Light Awareness Program Canada. A link to the Draft Bird Friendly - Draft Study and Guidelines can be found in **Appendix A**.

The purpose of the study was to provide background information on documented bird strikes in Markham, bird migration implications, guidance on the types of treatments and techniques that should be implemented in site design, building design and the retrofit of buildings and other implementation measures that Markham could consider to reduce bird window collisions.

### **DISCUSSION:**

The Draft Study is intended to provide the City with guidelines on how to administer bird friendly treatments in site plan design, building design and retrofit of buildings to reduce fatal bird window collisions. These Guidelines are intended to be made available to builders and developers in Markham and to be incorporated in the City's planning and building approvals processes to ensure a consistent approach City-wide to the management of bird strikes. These Guidelines were developed from a review of various city examples around North America and will exceed the requirements of other jurisdictions.

The Study includes the review of migratory bird patterns and the review of existing breeding and resident bird locations. The highest number of collisions is related to small, forest-dwelling migratory songbirds which migrate at night. Markham is in an area of high density of migrants, which follow the edge of Lake Ontario. Due to the lack of bird window collision monitoring in Markham, the accurate number of collisions are unknown. As a result of a high concentration of birds in Markham and the potential increase in the development of glass buildings and light levels due to future intensification, the Draft Bird Friendly Guidelines identify not only best practices for window treatments, but other actions such as lighting and education that could assist Markham in reducing bird window collisions.

The Study also highlights the legal implications that building owners and developers have with regard to the protection of birds from window collisions. Markham has the legal responsibility under the *Ontario Environmental Protection Act*, *Ontario Species at Risk Act*, and the *Migratory Birds Convention Act* to undertake reasonable measures to protect birds from harm. Markham has undertaken its due diligence in regard to public buildings through retrofitting a number of municipal buildings including the Varley Art Gallery, 8100 Warden Avenue and the Markham Museum, and also designing new municipal buildings including the proposed South-East Community Centre and newly constructed Cornell Community Centre. In addition, City staff through the development review process have referred development applicants and consultants to the City of Toronto Bird-Friendly Development Guidelines (2007) when providing advice on Bird Friendly treatments. However, with consideration of Markham's future growth it is now necessary to show leadership and introduce a more detailed and location specific "Made in Markham" solution.

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The leading factors for bird window collisions are reflectivity and glazing of glass. The birds cannot distinguish the difference between habitat reflected in glass and the real habitat. Transparency, design traps, proximity of vegetation to glass are also factors that cause bird window collisions. Collisions generally occur between the ground and approximately the first 16 m of a building elevation which generally corresponds to the height of site vegetation. Lighting may also attract birds to find places to rest within cities during stopovers. Lights usually confuse birds and cause them to fly blindly.

The primary solution identified in the Bird Friendly Guidelines to prevent bird window collisions, is to make building glass visible to birds, by reducing reflection and transparency. The study suggests that a proportion of glass should be treated with primary treatments such as applying external semi-transparent stripes, dots or other patterns, as well as, secondary treatment such as closely-spaced window mullions, internal blinds and shades and ultraviolet patterns. Lighting treatments are also suggested, to mitigate exterior lighting by shielding, so that light projects downward rather than skyward. Interior light could be mitigated by “lights out” program.

Implementation of window treatments is recommended through the adoption of best practices from sources such as FLAP Canada and the American Bird Conservancy. The Study recommends a new multi-faceted program which may include, the development of bird-friendly guidelines checklist, updates to the municipal lighting by-laws, development of an education and outreach program and a monitoring program.

The Bird Friendly Guidelines will serve as a tool to assist staff, planning and urban design professionals, architects and the building community in incorporating bird friendly treatments and techniques in the design of their buildings, site plans and the retrofit of buildings to minimize bird window collisions.

### **Stakeholder Consultation**

As part of the study process, a stakeholder workshop is recommended to be held in November 2013. This workshop will invite the participation of the building community, local retail management, building owners, developers, and interested parties in providing input into the study recommendations. Input and comments received will be considered in the finalization of the guidelines. It is recommended that Council authorize staff to hold a stakeholder workshop to receive input on the draft Guidelines.

### **FINANCIAL CONSIDERATIONS AND TEMPLATE: (external link)**

There are no financial implications with the release of this draft Study.

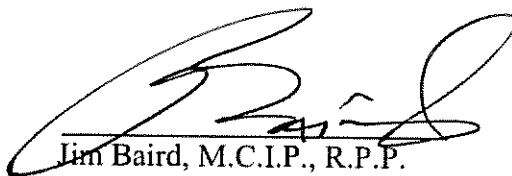
### **BUSINESS UNITS CONSULTED AND AFFECTED:**

This report has been circulated to Planning, Asset Management, and Sustainability Office for comments. Where comments have been received they have been incorporated into the Guidelines.

**RECOMMENDED BY:**



Rino Mostacci, M.C.I.P., R.P.P.  
Director of Planning and Urban Design



Jim Baird, M.C.I.P., R.P.P.  
Commissioner of Development Services

**ATTACHMENTS:**

Appendix 'A': Bird Friendly Guidelines – Draft Study and Guidelines prepared by North-South Environmental Inc. (October 2013). Available on-line only.

File Path: Q:\Development\Planning\MISC\M1549 Bird Friendly Guidelines\Staff Reports\DSC Staff Report\_Bird Friendly Guidelines Study - October 22 2013.docx