

Bird-friendly Design Guideline



October 2021

Introduction

Birds have difficulty perceiving windows, especially those made from highly reflective glass/glazing. Birds see reflected habitat and vegetation and try to fly to these areas which results in them colliding with windows. As a result, most bird-window collisions occur within the first 16 meters of the height of a building or the height of mature vegetation.

All glass/glazing poses a collision risk to birds; however, buildings with high levels of glass/glazing that are located near vegetation are at greatest risk of causing bird-window collisions. Buildings with low levels of glass/glazing that are located far from vegetation are at lowest risk of bird-window collisions.

The purpose of the Bird-friendly Design Guideline is to provide effective standards to reduce bird-window collisions in Guelph.

When does the Bird-friendly Design Guideline apply?

The Bird-friendly Design Guideline applies to all development applications subject to site plan approval located within 120 metres (m) of the natural heritage system (Figure 1).

The applicability of the Bird-friendly Design Guideline will be determined at the pre-consultation stage of development.

Guidelines

Within the first 16 m of the height of a building, a minimum of 85 per cent of *exterior glazing* that faces the natural heritage system and/or an *area of vegetation*¹ shall be treated with visual markers.

Visual markers shall:

- be a minimum of 0.5 centimetres (cm) in diameter or larger;
- be spaced a maximum of 5 by 5 cm apart;

¹ This guideline should not be used to exclude the placement of vegetation in proximity to a building. Normal landscaping requirements continue to apply.

- be applied to the exterior surface of low reflectance glass; and
- contrast with transparent or reflective materials under varying daylight conditions.

Visual markers may include fritted or etched glass or fenestration patterns.

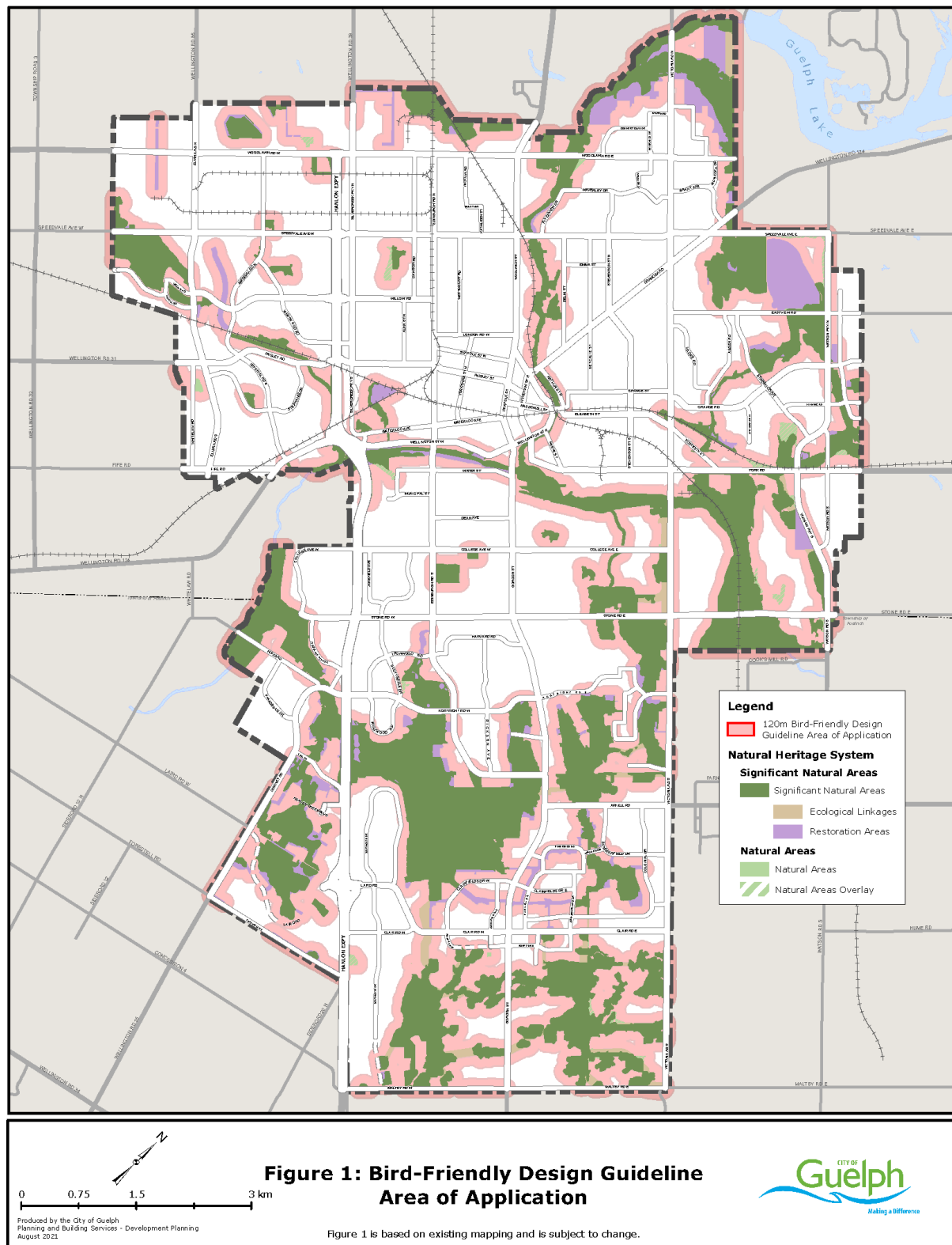
All clear glass corners located within the first 16 m of the height of a building shall be treated with visual markers for a minimum of 5 m extending on each side away from the corner.

All *parallel glass* shall be treated with visual markers.

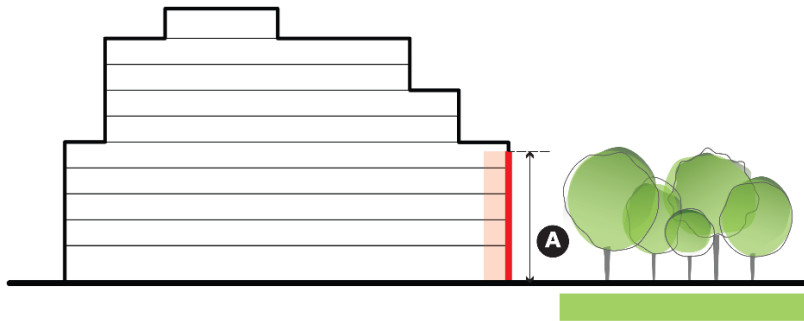
Exterior glazing located behind treated balcony railings is considered to be treated.

Reference the City of Guelph's [Lighting Guidelines for Lighting Plans](#) for bird-friendly exterior lighting best practices.

Figure 1. Bird-friendly Design Guideline area of application

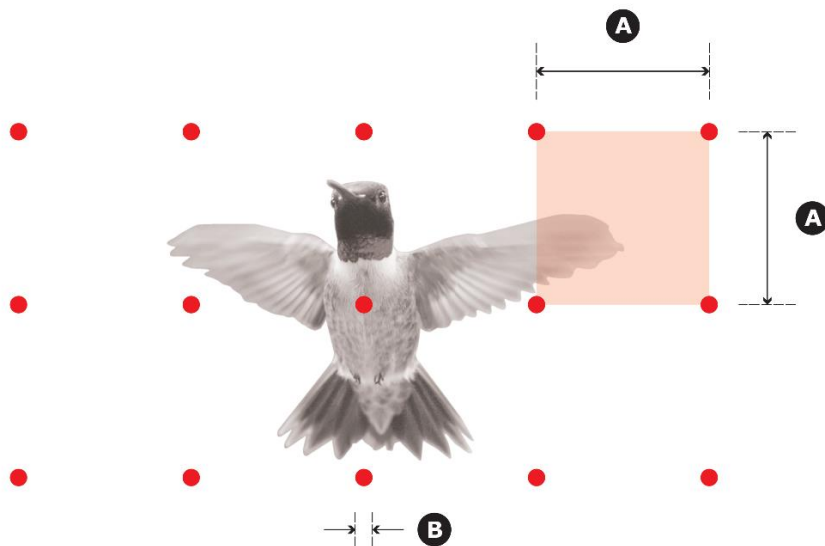


First 16 m of the height of a building facing the natural heritage system and/or an *area of vegetation*



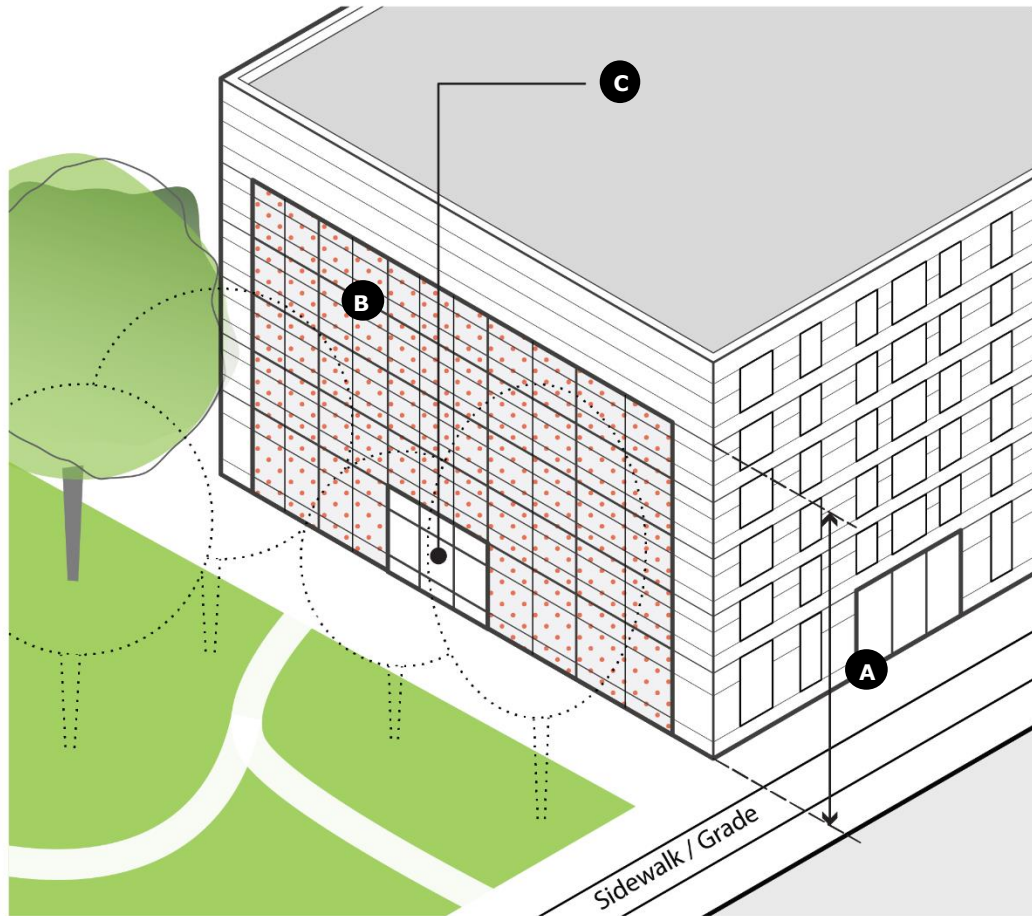
- A** First 16 m of the height of a building facing the natural heritage system and/or an *area of vegetation*

Visual markers



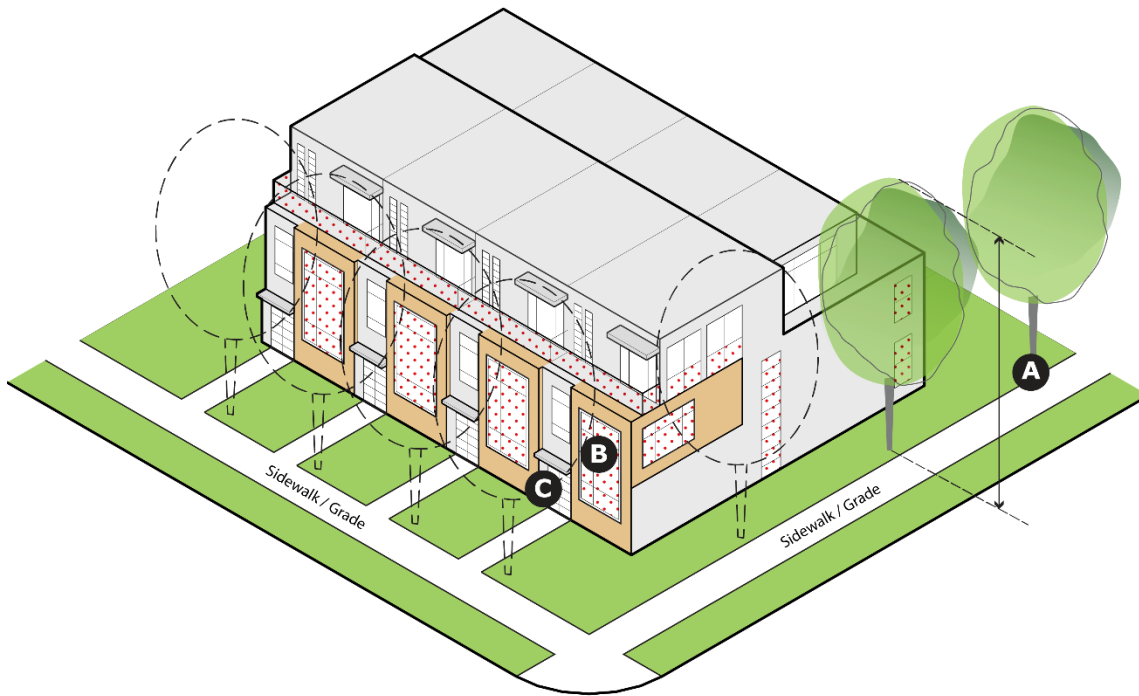
- A** Maximum of 5 cm
- B** Minimum of 0.5 cm in diameter

A minimum of 85 per cent of *exterior glazing* that faces the natural heritage system and/or an *area of vegetation* is treated with visual markers within the first 16 m of the height of the building



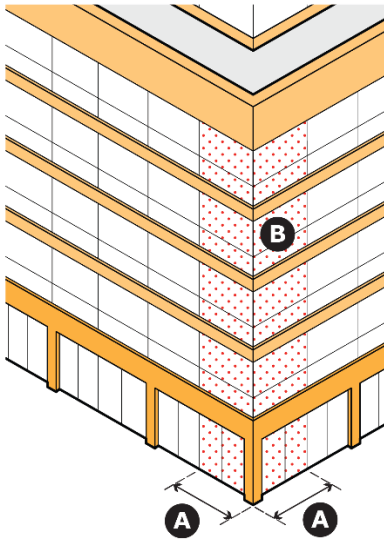
- A** 16 m (mature tree canopy)
- B** Visual markers
- C** Maximum of 15 per cent untreated *exterior glazing*

A minimum of 85 per cent of *exterior glazing* that faces the natural heritage system and/or an *area of vegetation* is treated with visual markers within the first 16 m of the height of the building



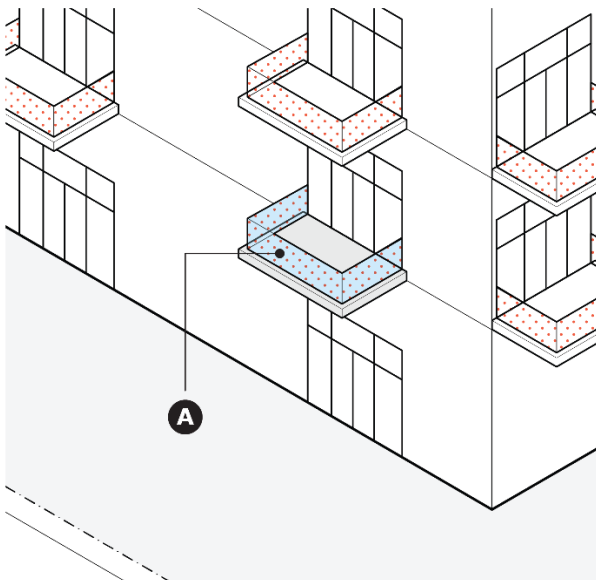
- A** 16 m (mature tree canopy)
- B** Visual markers
- C** Maximum of 15% untreated exterior glazing

Glass corner with visual markers



- A** Minimum of 5 m
- B** Visual markers

Balcony railings with visual markers



- A** Visual markers

Definitions

An *area of vegetation* is a grouping of trees, shrubs and/or herbaceous plants that are close enough to be reflected by *exterior glazing*.

Exterior glazing is any element of a building consisting of a transparent/reflective material such as vision and spandrel glass. *Exterior glazing* includes glass balconies.

Parallel glass is glass installed at any height that is parallel at a distance of 5 metres or less, such as a clear glass corridor or bridge.

Bird-friendly Design Guideline checklist

Elevation drawings should clearly highlight the bird-friendly design features applied through completion of the following checklist:

- Within the first 16 m of the height of the building, a minimum of 85 per cent of *exterior glazing* that faces the natural heritage system and/or an *area of vegetation* is treated with visual markers;
- Visual markers are a minimum of 0.5 cm in diameter or larger;
- Visual markers are spaced a maximum of 5 by 5 cm apart;
- Visual markers are applied to the exterior surface of low reflectance glass;
- Visual markers achieve high contrast with transparent or reflective materials under varying daylight conditions;
- Visual markers consist of fritted or etched glass or fenestration patterns;
- Clear glass corners located within the first 16 m of the height of a building are treated with visual markers for a minimum of 5 m extending on each side away from the corner; and
- *Parallel glass* is treated with visual markers.