

Case study:
**Brooklyn Botanical Garden's
Visitor Center**

Architects:

Weiss/Manfredi Architecture/Landscape/Urbanism
Marion Weiss and Michael Manfredi.

Opened: May, 2012



Statistics

22,000-square-foot
\$28 million exhibit and
event space with
10,000 square foot green
roof, connected by
breezeway to gift shop
(with copper roof).



Bird-friendly glass

Botanical gardens of necessity have glass buildings that can be dangerous for birds. Throughout the Visitor Center, the glass has an elegant pattern of vertical lines spaced to signal ‘no fly zone’ to birds. The pattern is made of frit – small ceramic dots applied to the glass when it is manufactured.

Solar Shading

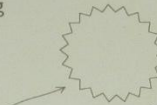
Fritted glass is a special patterned glass that deflects the sun's heat and diffuses light. This treatment of the overhang and windows helps to reduce heat gain by decreasing the amount of direct sunlight shining into the space.



BIRD SAFETY

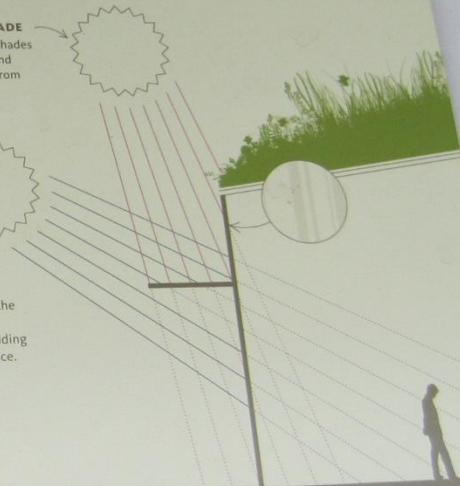
Patterned glass is easier than clear glass for birds to detect when in flight.

SUMMER SHADE
The overhang shades the windows and deflects heat from summer rays.



WINTER LIGHT

In the winter, when the sun is lower in the sky, more sunlight shines into the building and warms the space.



The Visitor Center has a south-facing overhang and windows with fritted glass.

Signage explains environmental strategies used in the center, including the fritted pattern on the glass, which is designed to deter bird collisions. The pattern on the glass also helps control heat and light.



Photo: Christine Sheppard, ABC

Visitor center glass is insulated for thermal control and the fritted pattern is on an inside surface. Under some conditions reflections may obscure the frit pattern. The building will be monitored for collisions over its first year to evaluate this risk and the general success of the glass.



Situations like this one, where birds can see through a building, can be collision hazards. Here, the frit pattern on both glass walls is visible, reinforcing the 'do not fly' signal.





Green roofs can attract birds near glass but can also provide feeding and even nesting habitat. This roof includes over 40,000 plants.



Gift shop glass is not patterned but birds are unlikely to frequent the breezeway location.



Reflection of this striped glass could reinforce the 'no fly' signal

Photo: Christine Sheppard, ABC