http://www.dailymail.co.uk/sciencetech/article-2187058/New-type-glass-inspired-SPIDER-WEB-aims-stop-birds-crashing-windows.html

Weave done it! Scientists make new type of bird stopping glass inspired by a SPIDERWEB

By Tom Mcghie **PUBLISHED:** 17:51 EST, 11 August 2012 | **UPDATED:** 17:51 EST, 11 August 2012

A new type of glass inspired by a spider is being introduced in Britain in a bid to stop hundreds of thousands of birds dying by crashing into windows each year.

The high-tech Ornilux has a web of lines coated on to the surface of the glass.

Although the lines are invisible to humans, they reflect ultraviolet light, which can be seen by birds.

Inspiration: The silk of the orb weaver contains UV reflective strands

Created by specialist German firm Arnold Glas, the glass is based on the web of the common orb weaver spider, whose silk also contains UV reflective strands.

The glass, which is 50 per cent more expensive than normal glass, has now been installed in the lookout tower and visitors' centre on Holy Island at Lindisfarne, Northumberland.

The company is also aiming to set up a manufacturing centre in Britain once the economic situation in Europe picks up.

No more accidents: The technology has seen a significant reduction in bird strikes

Dave Wyatt, head of the company's UK operations, said: 'This system has been in development for several years.

Through extensive testing, we have seen a significant reduction in bird strikes.'

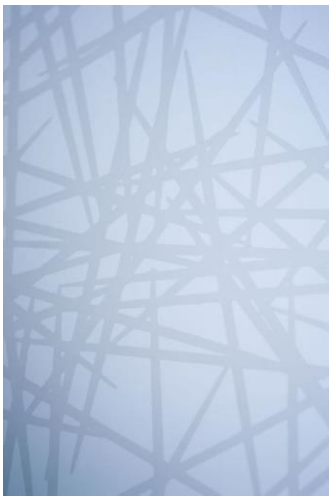
Company spokeswoman Natalie Kopp added: 'We hope more developers and architects start looking at ways to be more bird-friendly with their designs.'

Every year it is estimated that 250 million birds in Europe die by flying into glazing in homes and office blocks.

https://asknature.org/idea/ornilux/#.WMI4Mm8rLIU

Insulated glass reduces bird collisions

ORNILUX is an insulated glass sheeting made by Arnold Glas, a Germany-based company, which is designed to reduce the causes of bird collisions. It uses a special ultraviolet (UV)-reflective coating that appears almost transparent to humans, but is clearly visible to birds, because they can see a broader UV spectrum than humans (see photos in gallery for bird's and human's view of the windows).ORNILUX is now made in the USA by Glasswerks, Inc.Watch video about use of ORNILUX at the Hellebrunn Zoo.



KEY DIFFERENTIATORS

Independent field testing by Dr. Hans-Willy Ley from the Max Planck Institue for Ornithology, tested the effectiveness of ORNILUX glass in avoiding bird collisions. Results for ORNILUX glass showed that 76% of the birds tested avoided the ORNILUX panel and flew towards the conventional glass panel, indicating that the birds recognized the ORNILUX glass as an obstacle due to its reflective UV coating. These results indicated that ORNILUX can help reduce the number of birds killed by collisions with glass surfaces in buildings and private homes.

BIOMIMICRY STORY

The inspiration for the use of UV-reflective patterns came from knowledge of how some species of spiders incorporate UV-reflective silk strands to their webs. The reasons for what some scientists refer to as "decorations" include attracting insects and distracting or warning away larger animals, including birds. This is to the spider's advantage, because if a bird were to fly through the web, the spider would temporarily lose its ability to capture prey.Read the case study and learn more on ORNILUX's website.

CHALLENGES SOLVED

More than 250,000 birds per day in Europe die from collisions with glass windows, and estimates in the United States run into the hundreds of millions. Birds either don't see the glass or they see reflections in the glass, such as trees, that make them try to fly through as if it isn't there. This is a problem world-wide due to the prevalence of glass windows for homes and buildings, and the problem is getting worse. Due to Green Building Practices that focus mostly on energy efficiency, many architects are incorporating larger and larger expanses of glass to let in natural light to save energy. Additionally, the biggest challenge is that people enjoy the aesthetics of glass; this will not change. ORNILUX offers a clear glass solution to allow the aesthetics we enjoy but the protection the birds require.