

# *Glass - a deadly trap for birds*

*In the civilised world death from collisions with glass fronts of buildings and windows is a major bird conservation issue. Estimates indicate that in the U.S. birds alone are killed in numbers comparable with a major oil spill - every day! Many buildings could be constructed in a more bird-friendly way, many traps could be avoided. We show you where danger lies and how it can be mitigated. Bird protection begins in your own home!*



# HOW TO PREVENT WINDOW COLLISIONS

## Birds and glass – a problem with underestimated dimensions

Birds can easily fly around obstacles in their habitat but they are not prepared for invisible obstacles like panes of glass. Today, the danger of collisions is increasing. Studies have shown that per year and building at least one bird dies, presumably many more because the number of undetected cases is very high. In Switzerland, there are more than 1.3 million buildings. Often collisions happen where it was not expected.

Even when birds do not seem to show any injuries after colliding, every second individual dies later due to internal bleeding. Almost all groups of birds are affected, with rare and threatened species among them.



*Who would have thought that these protective glass panes would cause problems? However, many birds chose the seemingly direct route to the park behind the stadium and were killed.*

## Glass is a double safety hazard:

- It reflects the surroundings: trees and the sky are reflected and indicate a suitable habitat.



- It is transparent: the bird sees a bush behind the glass pane and does not perceive the obstacle.



## Dangerous places!



*Walkway*



*Wind shelter*



*Bike shed*



*Noise screen*



*Conservatory*



*Glass corner*



*Station shelter*



*Reflecting glass front*

## Preventive measures before construction

Before you use glass at sites where it could pose a danger for birds, please consider:

- Does it have to be transparent or highly reflecting glass? (1)?
- Would a mobile system put up only when needed suffice (e.g. wind shelter)?
- Would a type of construction be an option where the panes are moved back between walls (2)?
- Is there an acute danger and how could it be prevented?

## Use alternatives:

- Ribbed, corrugated, matted, sandblasted, etched, coloured, printed, halftone, stippled glass with minimal reflection (3, 4, 5)
- Glass coated on both sides (e.g. for shop windows)
- Frosted glass, cathedral glass, glass bricks, translucent polycarbonate sheets
- Other non-transparent material
- Lattice windows
- Skylights instead of side windows
- Tilt glass panels instead of joining them at right angles

*Standard commercial tinted glass is not recommended because it reflects the surroundings.*

## Protective measures after construction

Principles to be considered:

- Only markings applied across the whole surface and contrasting with the surroundings are effective.
- 2 cm wide adhesive tape applied vertically at maximum 10 cm apart (6, 7, 8) (or 1 cm wide strips at 5 cm distance) are very effective, as well as grids etc.
- Use only high-quality adhesive tape or film.
- Apply markings on the outside whenever possible.

*Caution: Adhesive film can cause tension in the glass. In exceptional cases this can cause the glass to break. In case of doubt please contact the glass manufacturer.*

## Simple, but effective

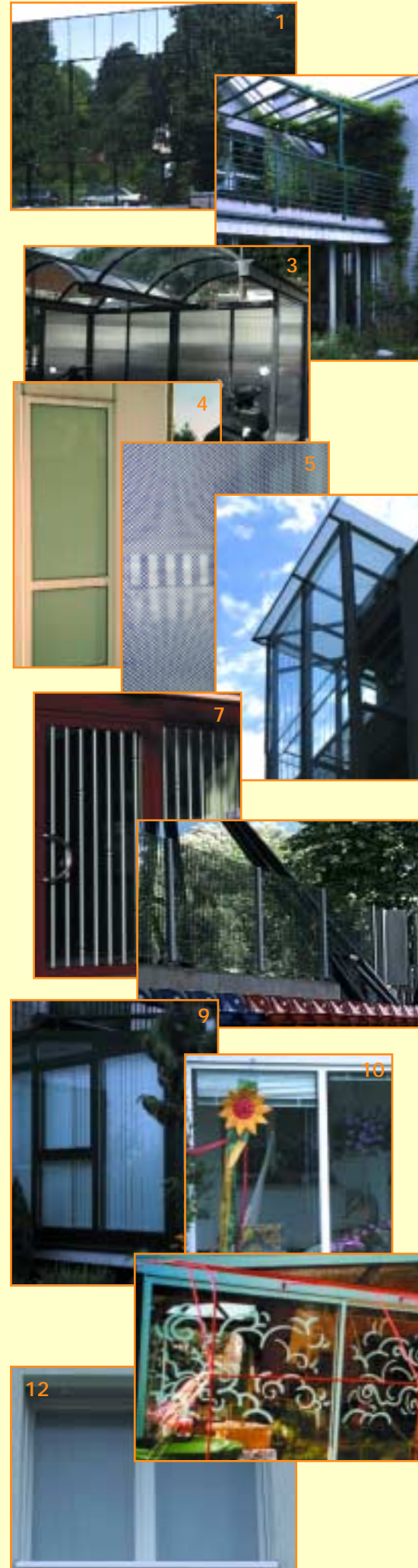
Sometimes the following measures are effective as well (if possible applied on the outside of the panes):

- Venetian blinds, roller blinds, curtains, cords, strips of foil
- Strip curtains, slats in conservatories (9)
- Coloured decorations, children's drawings with finger or window colours (10, 11)
- Company signs, shop window decorations, decoration sprays
- Grilles, mosquito nets (12), large-meshed, coarse nets or perforated metal sheets

*Bird feeders, nest boxes etc. should either not be placed close to windows (at maximum 1 m), or if they are, then very close, so that after a sudden start towards the window a bird has not yet reached a high speed.*

## Designing the surroundings

The more attractive for birds a site is, the higher is the risk of collision. On transparent noise screens with adjacent bushes we found a collision rate that was four times higher than on stretches without. Where large glass surfaces are unavoidable we suggest not planting any trees or bushes in the near surroundings and to remove existing ones. Dense plants in winter gardens/conservatories increase the risk too.



## What to do when a bird collides?

A bird lies on the ground, dazed, is breathing heavily and does not fly off. Put it in a cardboard box with air holes and place the board in the dark. After one to two hours carry it outside (do not experiment inside the house!) and let the bird fly. If it does not fly off, take the bird to the nearest bird care station/animal hospital (in Switzerland, the Swiss Ornithological Institute or SVS/BirdLife Switzerland have got addresses, elsewhere contact your local bird protection society), or to a small animal veterinary practice.

## Do you need advice?

If you design a building or have problems at existing ones, local bird societies may be able to help.



*So-called blowups prevent collisions at glass fronts of high buildings – and have great commercial appeal.*

## Products

Strips are best applied in the factory before installation (e.g. with screen printing, etching, brushing, sandblasting). For application afterwards adhesive tape and other decorations of different quality are found at specialist dealers. For lasting solutions choose high-quality products suitable for outdoor use. At the Swiss Ornithological Institute red and yellow raptor silhouettes are available (6 for CHF 10.-), at SVS/BirdLife Switzerland also adhesive tape (rolls of 10 m for CHF 10.-).



*Not suitable: Black bird silhouettes are often hardly visible and are not effective.*



*Only partly suitable: Coloured raptor silhouettes offer some protection. Several silhouettes should be applied per window pane.*



*For home use: Vertical strips of insulating tape and non-reflective adhesive tape (e.g. Scotch Magic 810) offer good protection but do not last very long.*



*For professional use: Scotchcal products by 3M are long-lasting and available in different colours.*

*Suggestion: Silhouettes and adhesive tape are applied to clean panes. To avoid bubbles moisten the glass and smooth the foil with a plastic scraper after applying. Old foil can be removed more easily if the glue is warmed with a hair dryer.*



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**3M**

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