

Amsterdam Airport Schiphol

B.S.C.E. 16
Working Paper nr. 5

BIRDSTRIKE PREVENTION AT AIRPORTS

A CONTINUOUS STORY...

by Allert H. van Geuns.
Operations Manager
Amsterdam Airport Schiphol.

Schiphol, august 1982.

When I was asked to make a contribution for this congress about "Prevention of collision between birds and aircraft" I realised once more that indeed the only and final solution to the problem would be a real bird-strike: the birds quitting their job of flying, that is "go on strike" and by doing so leave the skies to their mimics, the flying machines.

But as everybody knows, this is wishful-thinking. Looking for a more realistic, definite solution however, all I can name is the possibility of constructing aircraft components "bird-resistant". This is feasible one way or the other, but here technics lead by economics certainly will not allow so for a long time to come.

But let's not be too pessimistic. Facts are that the subject dealt with is given more and more attention and the three parties directly involved i.e. pilots, air-traffic controllers and airport-authorities are putting more and more effort in it every day.

And considering the fact that about 75% of all incidents/collisions take place below 200 feet, it is clear that airport-authorities still can do quite a lot within their responsibility around landing and take-off.

Anyway, at our airport the slogan is to do everything possible within our limits to prevent collisions between birds and aircraft.

In the following then I will explain the policy and approach to the problem of birdcontrol at Amsterdam Airport Schiphol.

Speaking about the number of birds visiting airports, you may notice that Schiphol is among the most favourable sites worldwide. Besides the fact that the field is surrounded by canals, lakes and agricultural area, the airport is also located in a coastal district. Particularly in spring and Autumn the bird migration is bringing lots of birds. In this context it is worthwhile mentioning a recent study revealing that of the 56 meeting places for birds in Western and Southern Europe the Netherlands are the largest resort.

Although since the introduction of jet-engines, bird hazard became really important and urgent, quite a bit of attention for solving the problem had been given to the subject many years before that time.

Aspects to be dealt with are:

- a. land development measures
- b. agricultural use of the airfield

Concerning land development measures, a lot of attention has always been given (and money was spent) for drainage of all grounds. Up to today, re-draining works and releveling of surfaces are being carried out. As far as the agricultural aspect is concerned, a strict limitation of cultivation is enforced. Also yearly, the tenants renting land from the airport-authorities have to discuss with them their so-called "teeltplan". This cultivation-plan indicates the farmer's intention of growings for the following year. The plan has to have approval from the airport. 25% of the grounds at present, are in use for agricultural purposes. The total area at Schiphol has the size of 3750 acres of which a little less than half is grass-area. Another 25% is built up or paved area (buildings, runways, taxi-ways and aprons)

Since especially the long grass cultures (approx. 20 cm.) turn out to be repellent to many kinds of birds, a width of 50 meters at each side along the runways is kept in long grass (taxiways: at each side 30 meters). Usually in long grass, you do not find any sea-gulls and lapwings, but still other species like birds of prey (mice!) will be there. On the other hand, with special chosen crops there is the advantage that for longer periods of time there will be no birds at all (e.g. potatoes for at least 5 month's a year !).

Besides the more fundamental steps as mentioned above there are more direct actions possible which one can summarize in two parts i.e. "active control" and "operational measures".

Active control

In a "bird's eye view" the daily technics available for bird dispersion at Schiphol are:

- a. gascannons in use along runways (to get maximum result, the position and use of the cannons frequently change).
- b. day glow-mills, fly-away-peter-mills, plastic models of seagulls and the Chartwell-Harrier (to chase away birds by their movements).
- c. broadcast of distress calls of birds (in use since 1955).
- d. firing shell-crackers from very pistols with an adopted barrel.
- e. firing pyro-technics (1½ inch birdscaring-cartridges), specially manufactured. (some 12.000 to 15.000 rounds a year are fired).
- f. collecting and "shaking" eggs.
- g. spreading out dead specimen of birds (although only used when all other means fail Schiphol has a permission to shoot birds on a year round basis).

All of the above mentioned technics are, often in combination, used whenever the presence of birds requires so.

Operational measures

A "Working-group for bird-strike prevention" is responsible for the policy and regulations at Schiphol. The Duty Inspector has got the day to day responsibility. A squad of twelve men is available as a bird-patrol (24 hours a day). They are using specially equipped vehicles and are applying all the technics there are for dispersion of birds.

With the above named "operational measures" is meant, amongst others, the continuous inspection of active runways, the inspections before a runway is made available for air traffic control, procedures for warning of bird hazard, and last but not least, restriction of the number of runways in use (limiting the total area to guard).

For general scientific research and know-how about the avifauna we have contacts with ornithologists/ecologists on individual basis, but also with an institute of nature management and with universities.

Many studies and surveillances have been undertaken so far. Of course we have our own statistics form for instance regular countings of bird-population and bird-strikes.

Our statistics show, so far so good, a decrease in the number of bird-strikes taken per 10.000 aircraft movements. No doubt partly due to our efforts which are put into "bird strike prevention".

As far as further contacts are concerned, we think communication about the bird problem is very relevant and in this respect I can name our membership in the "National Working Group for prevention of collision between birds and civil aircraft" and in the "Bird Strike Committee Europe". In addition to this we have close contacts with airline operators, local authorities and the Royal Dutch Air Force.

Concluding from above one may read that we take bird hazard very seriously. Nevertheless one can be assured that we will continue our efforts in this field and we will certainly stay alert, because we have the philosophy that:

EACH BIRDSTRIKE IS ONE TOO MUCH !!

Allert H. van Geuns
Operations Manager
Amsterdam Airport Schiphol

Schiphol, august 1982.

Number of bird strikes per 10.000 aircraft movements (KLM) 1964-1982

