

Minutes from the 14th meeting of The Nordic Bird Strike Advisory Group (NBSAG)

Reykjavik, Iceland, 20 – 21 October 2011

Agenda:

1. Opening Arni Birgisson, Isavia
 - Agenda
 - Practical and social arrangements
2. Presentation – Norway I Kjell Are Westrum, Oslo Airport
3. Presentation – Norway II Paal Ranestad, Avinor
4. Presentation – Norway III Christian K. Aas, Natl. History Museum, Univ. Of Oslo
5. Presentation – Finland I Pentti Korkalainen, Trafi Aviation
6. Presentation – Finland II Juha Joutsen, Finavia
7. Presentation – Iceland I Ingolfur Gissurarson, Isavia
8. Presentation – Iceland II Ragnar Saevarsson, Isavia
9. Discussions
10. Next meeting
11. Closing

Attendees:

Finland Juha Joutsen, Finavia
Mikael Lindroos, Finavia
Osmo Leppanen, Finavia
Pentti Korkalainen, Trafi Aviation

Iceland Arni Birgisson, Isavia
Asmundur Isak Jonsson, Isavia
Bjarni Sighvatsson, Isavia
Erikur Omar Sveinsson, Isavia
Gudmundur Larusson, Isavia
Ingolfur Gissurarson, Isavia
Ragnar Saevarsson, Isavia
Richardur Thor Asgeirsson, Isavia
Thorbjorn Danielsson, Isavia
Throstur V. Soring, Isavia
Vilhjalmur Ragnarsson, Isavia

Norway Christian K. Aas, Natural History Museum, Univ. Of Oslo
Kjell Are Westrum, Oslo Airport
Pal Ranestad, Avinor
Trond Rasmussen, Avinor

The Minutes

1. Opening, agenda, practical and social arrangements

Mr. Arni Birgisson welcomed the participants and presented the agenda, practical and social arrangements. Fridthor Eydal, Isavia, was suggested as note-taker for the meeting. Arni also gave a presentation on Isavia that is a government owned limited company, established in 2010 to operate the national system of airports and air navigational services. The company has 700 employees including subsidiaries.

2. Presentation – Norway I

Kjell Are Westrum, Oslo Airport, presented the animal strike prevention program at Oslo Airport. The airport is located in a wooded area with a lot of medium sized birds, mostly Crows. There are no large birds. Traps of the Norwegian Crow Trap design are used extensively to catch birds at the airport that are then released. About half of the bird population is removed by this method. Red List birds are just released and keep coming back. Flocks of birds are constantly dispersed and there are quite a few cases where aircraft have to wait during dispersal. 1 of the 3 main flocks of birds has been exterminated this year. Migratory birds are scared away on a routine basis. A total of 928 birds were killed in 2010, mostly on the airport grounds. In 2009 the number was less than 700. Seabirds are expected to increase in the area due to increase of sediment ponds (pollution traps) around the airport.

There have been no cases of mammal strikes this year although fox are not shot anymore. The fox are in fact quite good at taking bird eggs and chicks inside the airport. There have been fox strikes, though in the past and also rabbit strikes. Most of the forest near the airport is gone so rabbits come out frequently. Dogs that escape from aircraft on arrival present the greatest problem with animals at the airport. This year there have been 5 – 6 such cases of this type.

An experiment with using long grass seed in between the taxiways failed due to sandy in the soil.

3. Presentation – Norway II

Pål Ranestad, Safety Manager, Stavanger Lufthavn, Sola and Advisor, Bird Control of Avinor, delivered a presentation on the status bird strikes in Norway, risk assessment for Airports with a low number of aircraft movements and bird strikes, the use of laser in bird control. He also presented relevant information from the last IBSC Conference and introduced the next IBSC Conference to be held in Stavanger in 2012.

Airport management and staff receive BSC training and risk assessment is conducted at every airport with regular meetings with experts of the Natural History Museum, Norwegian Wildlife Committee and the CAA, airlines, Avinor and the military. A new model of assessment is being implemented which takes into account, the probability, number of birds observed, qualitative or quantitative numbers, number and frequency of occurrence and history. Risk analysis is different for each airport based on predominant species. Some species are hit more than others. The risk may be high with few strikes, but the risk is there. Better reporting shows increased numbers of bird strikes, mostly small to medium size. A BS occurrence registration tool is being tested at three small airports and seems to work well so it

can be used to provide valuable information. A point was made of the importance of establishing an active role for Air Traffic Controllers in BS Control.

Laser systems for bird control have been installed at 3 airports in Norway with good results on crows and seagulls and for preventing nesting in affected areas. The system, however, does not affect birds that fly over the areas. Hand held lasers also work very well, but they give strong reflections and are thus only used in lieu of weapons. Correct training in use is key to success. He also noted that high grass of different types is being tested as normal grass tends not to be stiff enough.

The last IBSC Conference included an interesting presentation by Mr. John Allan who asked whether the scientists and the IBSC really deliver what the industry needs and pointed out that:

- Number of bird strikes are still increasing
- Reporting is slowly being better
- Number of aircraft movements is increasing
- Strikes with some high risk species start to decrease, (good management)
- Bird strike rate is increasing or decreasing in different parts of the world
- Bird strike rate at smaller airports is still increasing
- Risk/movement is probably lower than 10 years ago
- But there is no significant step-change

It was also presented that different priorities prevail at different parts of the world with examples of different actions:

- RWY lights may attract insects, which may attract birds
- Cooperation with local ornithologists to determine the bird activity close to airports (Australia)
- Dogs are used in CPH, training school for airport dogs in Australia
- Use of different lights on aircraft, which may have an effect on birds, to avoid bird strikes. Good results so far, will be published

The next ISBC Conference will be held in Stavanger on 25 – 29 June 2012

4. Presentation – Norway III

Christian K. Aas, Natural History Museum, University of Oslo presented a briefing on the 2011 Bird Strike North America Conference that was held at Niagara Falls last September. A new amendment to Annex 14, Vol I was presented at that meeting together with the following:

- Birdtams must give accurate info about risk – species, numbers, exact place in space – rather than just general information
- Research among pilots show that pilots don't pay too much attention to bird strike risk, even though they can affect the outcome. More knowledge, training and procedures are needed
- Bird remains identification of USAF strikes in 2010 show that 11 % are multiple strikes, and that 69 % of these are with 2 birds, the rest with 3 or more

- Different aircraft strike birds at different rates: Airbus 320 have much more bird strikes than B-737. Birds avoid aircraft, adult birds more so than the young
- Data collected on 5 airports in eastern U.S. showed that fewer birds were present when grass was between 31-40 cm, where greater bird numbers were present in <31 cm grass. Waterfowl were most often present in 0-10 cm grass and raptors most often in 11-20 cm grass
- Engines are improved according to rules, and further improvements will not give a significant positive effect. Reduced number of strikes is more important

5. Presentation – Finland I

Pentti Korkalainen, Finnish Transport Safety Agency, Aviation presented a report on BS Control in Finnish aviation with a detailed summary of bird strike reporting. The Trafi Aerodromes Unit supervises 25 aerodromes operated by Finavia, 2 private aerodromes, 57 airfields, 6 ultralight fields and 25 heliports.

Trafi is responsible for the compilation of statistics and Finavia is in charge of monitoring and dissipating of birds in practice and the developing of methods and is one of the major incident reporting source.

6. Presentation – Finland II

Juha Joutsen, Finavia, gave a presentation on a databased diary for bird controllers that is utilized to gather information on possible bird/wildlife problems at airport, to find out the areas where the bird/wildlife problem is greatest and to help bird patrols' work planning and get reliable documentation of prevention operations. The system is easy to use, allows easy reporting and produces a database of statics.

Juha also gave a presentation on a fatal bird strike incident where a glider aircraft collided with a Goose vulture in Jaca, Spain earlier this year.

7. Presentation – Iceland I

Ragnar Saevarsson, Isavia, presented a report on the BS Control at Keflavik International Airport. Bird control at Keflavik is governed by Airport Safety Policy, Aerodrome Manual and established procedures for patrol and control operations. The bird control area extends to both air side and land side areas in cooperation with local municipalities. Preventive measures include, planting of Lupine since 1985, dispensing fertilizer on runway shoulders to enhance grass growth "conservation" of fox population. Control operations include the use of air cannons, sound recordings and shooting of birds on and off the airport with the result that there has been a drastic downturn in the seagull population and the number of birds shot in the last 5 years. No seagulls nest in the airport area and the number of strikes is very low.

8. Presentation – Iceland II

Ingolfur Gissurarson, Program Manager Safety and Quality, Airports and Infrastructure Division, presented a report on BS Control at Icelandic domestic airports. Recording of BSC actions on most airports except Egilsstadir leaves much to be desired although most airports are zoned to enable recording of operations. The most common bird at Icelandic airports

besides Seagulls, are the Greylag Goose and Arctic Tern. Stormmáfur is a common seagull type that is a protected species and has its largest nesting area on the Akureyri airport proper. Repeated petitions to the environmental authority for permission to control the population have been unsuccessful so nothing can be done about this menace. Grimsey Island off the north coast that only has 3 – 4 flights per week has experienced 20 bird strikes recorded this year. In Isafjordur, the Arctic tern has a nesting ground beside the runway, but the population has reduced drastically by natural causes. The Airport at the Vestmann Islands is another interesting case where Oyster catchers and Seagulls are abundant, but also the airport fence is no match for the sheep from local farms that stop at nothing to get to the grass that has been planted in the runway safety zones. Egilsstadir conducted a study of the bird problem at the airport that sits next to a relatively large river. There is a relatively large nesting area of the Greylag geese on small islands next to the airport. Airport employees spend a lot of time trying to reduce birds on the safety areas. Agricultural management has not been conducted.

Tools employed were the bird data for 2009 and airport and airline employees, with the aid of a cause and effect diagram, interrelationship diagram and a Pareto chart to focus on those causes that will have the greatest impact if solved. Based on the Pareto principle, 20 percent of the source will cause 80 percent of any problem. End result of study: Prevent Geese from nesting.

Ingolfur asked what methods were being used to gather bird control data on Nordic airports and whether the Opscom system that Isavia uses for other purposes is being used for that purpose. Norway uses a self-developed Galaxy type system and consideration is given to including flight patterns of birds at airports in the system. Finland is developing a system with RB Logger control software that will hopefully be implemented next year. Juha Joutsen gave a short presentation of how the system works.

9. Discussions

Christian K. Aas introduced the NBSAG website and welcomed suggestions as to what information should be presented on the site. He recommended a bank of ideas on trial and error reports and evaluations that would be protected by log on, and the adoption of a uniform presentation format for the group meetings. A suggestion was made to consider having a chat forum on the website.

Arni Birgisson explained the different conditions that prevail in coordination with local environmental authorities in Iceland where Keflavik enjoys a very cordial relationship, but the same cannot be said for the other two major airports at Reykjavik and Akureyri.

In Norway there is a good relationship of this kind and authority for action is granted when necessary. Chasing birds away from airports is also permitted together with the prevention of nesting in the vicinity. Special aviation legislation goes above common environmental legislation. It is also helpful to have just one point of contact for applications og action permits for all airports. It is recommended by the Aviation Committee on Strike prevention that hunt and kill methods be employed to make birds aware of the danger, but great care must be taken concerning red-listed species.

Keflavik has no problems. Numerical statistics are provided to the Environmental Agency, but it is important to present the advantages and safety aspect to the authorities and scientific community. Overpopulation of fox is not a problem either since when the cubs grow up the parents chase them away from the area which is only big enough for a single domain.

The issue was raised of the development of the NBSAG as a forum in the future, whether the group should be enlarged or disbanded and the effort concentrated in other forum, e.g. some European platform or global meeting with European branch or an informal meeting of Nordic countries during a larger forum. Pilots have been involved in the meetings before but have not shown an interest lately. They and aviation safety officers do attend the global bird strike meeting though. The lack of representation from Denmark in this meeting does not represent a declined interest.

Continuation of the Nordic forum was considered desirable for the sharing of similar problems, but an updated contact list is required to make it practicable. It was suggested that the meeting could be combined with some Nordic event or the annual Airport Equipment exhibition in Munich. The following suggestions were presented for consideration:

- Continue with the present annual NBSAG meeting
- Combine with the annual Nordic Airport Meeting
- Combine with a larger international event

It was noted that the present forum is rather simple to manage and fund and a combination with another event could become more complicated.

Some discussion was of BSC methods, i.e. the use of fake snakes that failed, consideration of using hatching boxes in old buildings where the eggs could be accessed and whether anyone knew of other effective methods than shooting the birds. Norway has tried hundreds of ways, but it is clear that nothing matches the results from shooting. Non-shooting methods such as trapping have been given much publicity due to political correctness. In Finland the prevailing method is scaring birds away and shooting only when very necessary. No traps are used. Loud noises were used at Keflavik in the 1980's, but the element of death is required for it to be effective. Playing bird distress calls on loudspeakers has proven to be effective.

Norway is hosting the next IBSC Conference to be held on 25 – 29 June 2012 in Stavanger. The event marks the 30th anniversary of this international forum that will entail some special events in celebration. 250 participants are expected to attend. Christian Aas, Pal Ranestad and Espen Kurthi Are preparing the program for the conference and seek interesting presentations. The Egilsstadir study was suggested as was the Finnish bird control data recording software briefing.

Finally, Arni Birgisson gave a briefing on the effects of the volcanic eruptions last year in Iceland.

10. Next meeting

Based on an informal rotation schedule, Denmark should be the host for the next meeting. As Denmark is not represented this time, it was agreed that Christian Kierulf Aas would send reminder to Jens Erik Ditlevsen.

11. Closing

The meeting closed with the exchange of gifts and expressions of an excellent meeting.