

Ladies and Gentlemen,

My name is mentioned in today's agenda to present a Paper concerning the problem of garbage dumps in the vicinity of airports.

At the time we announced this Paper (as a national working group), we did not have as much material concerning this problem at our disposition as it is available to us now.

For instance the "wild life hazards to aircraft conference and training work shop" held in May this year in Charleston (USA) produced a lot of the needed information.

We prefer not to give the impression that we are specialists in presenting a wheel as a new invention and so decided not to publish a Paper on the subject, but only to mention differences of opinion and circumstances.

In the Netherlands, district authorities design a regional landscape plan. The same authorities are also responsible for a garbage disposal plan and this means that, among other matters, also new sites for garbage dumps show up in these regional landscape design plans. These plans are published and during a certain period after that publication those who have any interest in a position to comment. This is the only opportunity for having a plan changed, and if, then only when the plan for that change is justified.

C.A.A. has, on advice of the National Working Group, sent out a letter to all local district authorities responsible for landscape planning, concerning potential bird strike problems.

Until now in discussions about dump locations we referred to a zoning and land use planning system Canada used for designing, for instance MIRABEL INTERNATIONAL AIRPORT, which results in a minimum distance of 5 to 9 kilometres between an airport and a garbage dump.

Until some time ago we only could adhere to safety of these standards but on the other hand we have also indications that smaller minimum distances safely could be allowed, so we started to analyse the problem related to local circumstances.

Like probably many of you have done, we have been looking for criteria for combining knowledge about aircraft flight characteristics and altitudinal distribution of bird strikes.

Concerning this altitudinal distribution we learned from statistics that in the Netherlands about 83% of the bird strikes occur below an altitude of 400 feet, but these are not figures showing a direct relation with a sanitary landfill or an alike bird attracting location.

We still want to know what the situation is like over a garbage dump.

At this moment a field research by radar is in progress under the supervision of Mr. Buurma from the Royal Netherlands Air Force and we hope that this will result in more appropriate figures for the bird situation over a garbage tip.

Concerning the minimum slope of the aeroplanes' flight path, we had to refer to the FAA one engine out regulations as mentioned in F.A.R. 125 which are accepted by the Netherlands as an airworthiness requirement. This results in a slope of 2.4% (1.37°).

Another reference we have to look at in this respect, is the ICAO Annex 14 in which standards are mentioned for obstacle limitation surfaces.

We tend to accept these standards as elements for the calculation of the minimum distances, because a risk for bird strikes of more than 70 or 80% at a certain altitude is comparable with the definition of an obstacle.

Using the ICAO obstacle limitation standards would result in using an aeroplane climb surface with a slope of 2% (1.15°). This in contradiction to some other Countries which use a 3° glide path.

Considering a bird strike risk of 83% below the altitude of 400 feet as an example, we would come to the conclusion that in climb sector of a runway the distance between the runway end and a garbage tip will have to be at least 6.1 kilometres.

Final adoption of standards in the Netherlands guidelines for bird strike prevention depends on results of further research of which we hope to report on the next BSCE Meeting.

All suggestions are welcome.

Thank you.