OFF AERODROME REPORTING SOFTWARE

Within the world of aviation, there is much written and said by numerous and various stakeholders relating to the important issue of attempting to prevent Wildlife/Bird strike at aerodromes.

Naturally, much of the focus is centred on the aerodrome itself; however, in line with the International Civil Aviation organisation’s (I.C.A.O.) recommended best practices, the focus should include areas in the vicinity of the aerodrome, as well as birds that over fly not only the airport, but also the approach and climb out areas.

Such process should include a collection and analysis of data to properly assess the hazard, in order to then develop mitigating proactive and reactive measures for risk reduction – this would include liaison with non airport agencies and local landowners, together with owners of “further afield” higher risk sites (e.g. land fill sites) to ensure the airport operator is aware of developments that may contribute to increasing the hazard.

It stands to reason therefore that in addition to pro-active management of the risk on the aerodrome, off airfield monitoring of bird species and behaviour should occur to include such things like species, volumes, flight lines etc.

Scarecrow has, for over 30 years, been providing systems that broadcast distress calls to airports across the world, which form part of their control management of birds. In 2007 Scarecrow then launched its popular Ultima product, later becoming the present day Scarecrow B.I.R.D. Tab™ System, which provides a simple to use “touch screen” data logging system for airports, and which incorporates full reporting and analysis software to help airports assess and tackle the on aerodrome risk.

In line with regular client feedback, and in conjunction with key personnel from four UK based airports, plus three other various background stakeholders, Scarecrow set about designing a product that met the needs of airports in relation to their off aerodrome monitoring and reporting.

LAUNCHING “O.A.R. – Off Aerodrome Reporting”

O.A.R. is a software solution that not only provides a touch screen data logging feature of all that is observed on any particular site, but also provides a full reporting and analysis module so that it can provide an indication of how off aerodrome activity observed may be impacting and effecting what is being seen in terms of bird activity on aerodrome.

For those airports that have combined the use of the Scarecrow B.I.R.D. Tab™ software with O.A.R., this can be seen more visually through a combined mapping process.
Various Sites:

O.A.R. incorporates a simple to use “Site Management” programme for those identified sites that are within a pre-defined distance but bespoke to the specific needs of the aerodrome, and where there is a risk that high level bird activity/presence could represent a risk to flight safety.

There is no limit to the number of sites that could be applicable, and the full contact details per site are available to the Patroller via the hand held tablet when out on their survey.

The patroller also has an option to create a new “Observed Site” when en route to another location, and log some basic details. This will then be reported back to management to determine what, if any, action should be taken.

Site details include, for example:

- Full site contact details
- Wildlife types typical to site
- Site topography
- Wildlife behaviour options
- A “Red, Amber, Green” site status indicator

Scheduling Visits:

The system allows for all core details of each site to be detailed, which includes a note of the proposed frequency of visit (e.g. monthly, quarterly) as determined appropriate by the Airport Operations Team. The software system then allows for an automated scheduling of visits in line with the airports suggested programme appropriate for that site, removing a manual planning task.

The scheduling tool splits the sites into three categories being “Overdue”, “Due in the next 14 days” and due between 14-28 days” – these are drawn from the frequency of site visits as input into the site core details, and the date of the last site report. Sites where no report is due within the 28 days are not included.

The on screen scheduling list provided also details rough locations in relation to the aerodrome for efficient grouping of sites, and then allows for sites to be selected as required for creating a printable report which forms the basis of a patrollers visit schedule.

Site Patrols/Observations:

When on site the Patroller has a very simple to follow process of touch screen activity to report what is being observed. They have access to previous site reports and historic activity charts built into the system, so that at a glance they can determine whether the risk appears
to be getting worse; in which case they can log that some form of further action may be required.

Site surveys undertaken will include recording certain features, for example:

- Wildlife species observed, including the volume and behaviour per specie.
- Weather prevailing at the time of survey.
- Details of any actions performed and the outcome of those actions.
- Any over flight details, including direction of flight.
- Option to include photographs taken on site.

In the event that the Patroller notes something new, then the option exists for this to be added into the system and accepted for future use.

**Analysis/Reporting**

The O.A.R. software produces a “Site Survey Report” and also has the flexibility of producing a wide range of bespoke reports via an integrated filtering process.

The individual Site Survey Report confirms details of what was observed/logged at the last survey – it equally includes charts displaying the volume of birds observed per specie over the last 5 survey reports, plus the total volume of birds observed at the last report, broken down by volume of each specie.

Beyond the Site Survey Report, the system also allows for a much wider analysis process – if, for example, on aerodrome you were noting an increased activity with crows, the option exists to filter all data collected just down to that on the crow, but across multiple sites. This would then show the sites where crow activity has been noted, and by reviewing the volumes and over flight patterns etc it may be possible to determine if any of these sites is potentially causing the uplift in on aerodrome activity; if so, tackling that particular site problem could then lead to reduce bird sightings on aerodrome, and in turn reduced risk.

**Summary**

The Scarecrow O.A.R. software makes recording what is observed off aerodrome quick and simple, and the subsequent detailed reporting and analysis that is available as a consequence of quality data, means airports should be well placed to better manage their risk in a much more efficient manner, and also well placed to display the highest standards of management against the continuing battle against Bird Strike risk.