

by David Arber

Risk Management

Emergency planning for the future

David Arber of Redkite looks at the importance of close working between agencies in times of emergency, and outlines the company's emergency planning system

WHEN A BOEING 777 AIRCRAFT

carrying 136 passengers and 16 crew members crash-landed at Heathrow Airport in January, it was regarded as being exceptionally lucky that everyone escaped alive and with only relatively minor injuries.

The escape seemed even more remarkable following eye witnesses' claims that the British Airways flight BA038 from Beijing just managed to clear the airport perimeter fence before landing short of the runway with sufficient force to remove the landing gear from the plane.

The images of the damaged plane with its emergency escape chutes fully extended are still very fresh, and it has been routinely reported that the passengers and crew had a lucky escape. Certainly, luck did play a part but I think there was more to it than just luck.

The cockpit and cabin crew on the Boeing 777 did their job professionally and this probably helped reduce the severity of the incident and contributed to a relatively positive outcome.

The response of Heathrow Airport Fire and Rescue Service and London Fire Brigade was effective and professional, and this may also have helped contribute to the positive outcome. The fact that they performed so well was probably due to the close liaison between the two services who regularly plan and train together for such emergencies.

An eye-witness reported that fire crews arrived "within minutes and evacuated all the passengers."

John Trew, Airport Fire Manager at Heathrow Fire Station, is reported to have commented that apart from the colour of staff uniforms it was difficult to differentiate between the ARRFs and local authority fire personnel; they worked so well together.

Such performance does not come easily! Time, effort and considerable cost are involved in perfecting a collaborative response to an emergency. Safety management and emergency planning have been key themes at two conferences I have recently attended. These were the IAFPA (Far East) Conference in Singapore in October 2007, and the more recent AFOA Conference in Dublin in January 2008. It is likely that at least one of these themes will be re-emphasised at the forthcoming IAFPA (Middle East) Conference in Abu Dhabi this month.

As many major aerodrome incidents demonstrate, emergency planning is not just an airport issue. The ARRFs do spend a significant

amount of their time simulating probable scenarios and emergencies – fortunately, and in the main, this is the only mechanism open to them to practise the possible emergencies they may encounter on an aerodrome.

The ARRFs environment is geared to training and simulation and yet, even in this environment, full-scale exercises are not easy to facilitate. Full-scale multi-agency exercises are even more difficult to organise and resource and have to be undertaken to reduce the impact on the community and the economy. It is worth noting that in the recent incident at Heathrow, 221 flights were cancelled and many long-haul flights departed and arrived late, with 24 incoming flights being diverted to nearby Gatwick, Luton and Stansted. Despite the cost and the other inherent difficulties I think we would all agree that such exercises are needed if emergency services are to respond and work together in a co-ordinated way when major incidents occur.

Establishing a plan is one thing; testing it is another. Heathrow Airport, in close liaison with its emergency planning stakeholders, frequently tests the plan as do other CAA licensed aerodromes. As a result of good liaison and the regular testing of the Heathrow plan it appears that all stakeholders were able to work well together during this incident.

How do you test your emergency plan?

Redkite Systems already supply airports and local authority fire and rescue services with safety management systems; to record staff competence and to record equipment safety inspections and tests.

In addition, and having been made aware of the problem, we have developed a prototype 'Emergency Planning' system that can help emergency agencies develop and assess staff performance in line with the requirements of their emergency plans.

In 'Emergency Planner', a scenario is defined and the participating agencies identified, with staff being allocated to specific roles and functions. The scenario can be modularised to concentrate on different elements of the plan, culminating in a full-scale test to meet UK CAA Aerodrome licensing and International Civil Aviation Organisation (ICAO) requirements.

Breaking an emergency into composite modules has been broached by airport safety regulators, and Redkite Systems have already provided a basic system to accommodate this methodology.

Figure 1 (right) shows some suggested

modules required to be completed in a given scenario. It also shows whether each agency involved (in this instance airport, ambulance, fire, police and 'another agency') has completed all the requirements in each module satisfactorily or is still working to achieve that state.

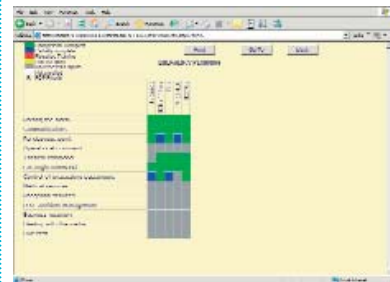


Figure 1

Where a requirement has not yet been completed fully, then the information can be expanded to show what components still require work. In Figure 2 requirements 'a', 'b' and 'c' have been tested satisfactorily but item 'd' has yet to be tested.

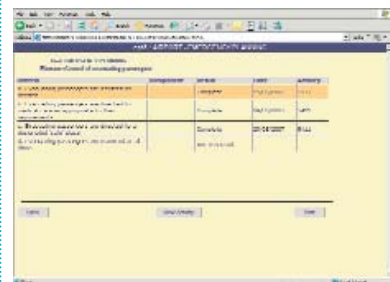


Figure 2

It is possible to drill down further to investigate how the plan was tested and who took part.

This level of detail allows different agencies to either practise their responses in a similar way or look to investigate other approaches.

As all information is available to all authorised account holders via the Internet, records can be updated and interrogated at any time from any location.

Another advantage of the Redkite Emergency Planning System is that many ARRFs and, increasingly, local authority fire personnel are familiar with the Redkite system and we have made every effort to keep this familiarity to reduce training requirements.

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