

**Address by Glenn Wood**  
**Chief Fire Officer**  
**Airservices Australia**  
**Waypoint Annual Conference**  
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**‘The value of an Aviation**  
**Rescue Fire Service’**

Good afternoon,

That short video presentation shows news coverage of several recent and significant international incidents

The video is certainly not meant to shock or alarm anyone.

What the coverage does however, is reinforce the vital importance of having highly trained aviation rescue fire fighters on the ground, ready and waiting at major airports.

Today I would like to take a few moments to expand on Michelle's opening remarks by firstly looking at some recent international aircraft incidents and then providing a few real life operational examples here in Australia that may assist in highlighting the value of our service.

Before we get started, it's worth noting the two key functions of our service, which are set by Civil Aviation Safety Regulations.

The first function is to extinguish fires and to rescue people from aircraft that have crashed or caught fire and the second is to respond to fires or the threat of fire anywhere on the aerodrome.

These functions are built around the principle objective of an ARFF service which is to save lives.

If we are to achieve this objective, if we are to save lives, then we must maintain a level of operational readiness that ensures the immediate and rapid response to; and effective management of all emergency situations.

Maintaining this level of operational readiness involves many elements of our operating model including the effectiveness of our training and staff development programs, the preventative maintenance we conduct on our vehicles and equipment, our consideration of new technologies and ability to quickly respond to

industry changes, and importantly, incorporating any learnings from major incidents into our operating practices and procedures.

A considerable amount of work and effort is required by our very dedicated and professional fire fighters to maintain this high level of readiness and I'd like to provide a little detail about some of the key areas.

Training underpins everything we do. Each of our fire fighters is required to regularly participate in a range of training exercises including all types of aircraft emergencies, building and structural fires and any other scenarios likely to occur such as motor vehicle accidents, hazardous materials incidents, requests for first aid assistance and fuel spills.

During these training exercises our fire fighters must demonstrate a very broad range of skills, which include driving and operating our fire vehicles and water rescue vessels, effective application of extinguishing agents and search and rescue techniques, operating all firefighting equipment including specialist rescue equipment such as the 'Jaws of life', familiarisation of aerodrome infrastructure including the movement area, buildings and major hazards, familiarisation of the different aircraft types that use the aerodrome, effective casualty management, and, the use of protective clothing and equipment including the wearing of breathing apparatus in hostile environments.

Our fire fighters must also participate in theoretical training sessions to maintain their technical knowledge and keep pace with changes that occur across our industry, and, our fire officers must regularly practice the skills required to lead and manage our response to all emergencies for which ARFFS is the Combatant Authority

The majority of these skills must be practiced at intervals not exceeding 90 days.

Every three years all staff must also attend our central training facility in Melbourne where they are put through their paces in a wide range of aircraft and other emergency scenarios using our world-class A380 training simulator.

Other key areas of our operational readiness include the checks conducted daily on our vehicles and equipment, the preventative maintenance program managed by our Emergency Vehicle Technicians that ensure the reliability and performance of our vehicles, the without notice response readiness checks that test our crews ability to respond immediately in line with our three minute response time requirement, and our ongoing medical monitoring and physical fitness programs.

While safety clearly remains our most important consideration as we go about performing our regulated functions, our focus is also to assist industry - you our customers- to maintain continuity of your operations by minimising the impact or disruption caused by an emergency situation or abnormal operation.

This means we must respond to all emergency situations without delay. When we arrive on scene our actions must quickly make the area safe, effectively manage the emergency and also facilitate the return to normal operations as quickly as possible.

Although there has not been a major passenger aircraft crash in Australia for many years, we continue to review all major incidents to identify where we can make improvements to our emergency response capability.

You may recall this incident at San Francisco in July 2013 involving an Asiana Airlines Boeing 777-200 that crashed on landing. On board were 307 passengers and crew. Of these, 129 were injured with three fatalities.

In terms of the incident response, it was a successful response by ARFF despite the unfortunate event where the passenger was run over.

Reports from this incident show a very rapid knockdown of the external fire which enabled ARFF crews to quickly make entry into the aircraft and assist a number of passengers to evacuate.

What did we learn and what did we change?

Some passengers were trapped in their seats unable to release their seat belt and had to be rescued by fire fighters. Because of this we have since issued a special knife specifically designed for cutting seat belts to all our fire fighters.

One of the key elements of an effective response is to apply foam to fires external to the aircraft and create what is known as a foam blanket as this prevents re-ignition of fuel. At this incident an ARFF vehicle drove through the foam blanket and didn't see the passenger covered by foam. We have strengthened our procedures relating to occasions when we may need to drive our vehicles through foam blankets to ensure what happened in this incident cannot happen here in Australia.

The next incident I wanted to highlight happened at Las Vegas on 8 September 2015 when a British Airways Boeing 777 -200 had an uncontained port side engine failure during take-off resulting in a major fire.

On board were 170 passengers and crew. There were 14 injuries and no fatalities.

In this example we saw a very effective response by the local fire fighting service.

As you can see the fire vehicles quickly positioned and controlled the engine fire in a way that didn't interfere with or impede evacuation of passengers via the aircraft slides.

We have taken a lot of notice of this response and have incorporated learnings which have enhanced our own training and operational capability.

As a result of this incident, we have increased our simulation capability by now including scenarios with aircraft slides deployed at our central training facility in Melbourne.

We also teach our leaders to be more flexible and consider alternative ways of tactically positioning their vehicles to gain maximum fire control while protecting those evacuating from the aircraft.

Another positive from this response was that the damage to the aircraft was minimised, the aircraft was returned to service on 24 March this year (2016).

Our final international example happened on 27 June 2016 at Changi International Airport and involved a Singapore Airlines Boeing 777-300 returning to the airport following an engine oil warning issue. After landing the starboard engine caught fire, seriously damaging the starboard wing. There were 241 passengers and crew on board. There were no injuries or fatalities.

As there was prior warning, ARFF services were on standby which allowed them to be on scene and apply foam to the fire within 60 seconds of the aircraft coming to a stop on the runway.

As a result, this rapid response contained the fire creating conditions for all passengers to safely disembark via the specialist ARFF Air-stair vehicle.

Importantly, the fire was extinguished within five minutes and all passengers safely disembarked the aircraft with nil injuries.

What did we learn and what did we change?

Investigations are still underway at this stage. As you may be aware there have been questions asked about whether or not aircraft slides should have been deployed. We are in regular contact with the CFO at Changi who will keep us updated as more information becomes available.

Also earlier this month there was an aircraft incident at Dubai where an Emirates Boeing 777-300 crashed on the runway while attempting a go around.

We will also review this incident as more information becomes available as part of our ongoing efforts to ensure we are well prepared and ready to respond to and manage a major aircraft incident should one occur here in Australia.

As we can see from these incidents, aircraft fires can reach lethal intensity very quickly and a rapid response and effective intervention by the ARFF service is critical.

Time is also critical when responding to any fire on an airport, especially fires in or around buildings such as airport terminals.

Without immediate intervention by ARFF crews, building fires can rapidly spread causing the evacuation of occupants and interruption to both airport and airline operations.

Let's take a look at few local examples.

In May this year, a maxi taxi was fully engulfed in fire at the front of Brisbane Airport domestic terminal.

Flames billowing into the air from the vehicle presented a real threat to air traffic operations at the airport.

The ARFF response included a rapid response from the duty crew who were on the scene within five minutes 11 seconds of the call for assistance.

The efforts of our fire fighters saw the damage from the blaze confined to the vehicle only (no exposures were damaged).

This action saw traffic disruptions minimised as much as possible, which helped get people to and from the terminal and their flights efficiently.

Normal operations resumed once vehicle removed some 34 minutes after the incident.

Now I want to take you to a response we made inside the domestic terminal in June at Melbourne Airport. Here we were called to respond when a scissor lift caught on fire.

The rapid response from the ARFF crew saw them on the scene within five minutes 45 seconds.

Fortunately, again, our fire fighters were able to extinguish the fire in early stage of development.

The good news here for Melbourne Airport, airlines flying in and out of the airport that day and passengers was that our actions resulted in no smoke or fire damage to terminal building.

Ultimately the availability of our ARFF Service and our rapid response meant that there was no requirement for evacuation or interruption of services. And I don't need to tell any of you here today what that means for your business continuity.

In example three we find ARFF called out to a tug fire at Perth Airport. In this situation the tug was attached to an aircraft which at the time was leaking fuel.

This has all the ingredients for a serious incident.

Here we see another rapid response from the duty crew resulting in ARFFS being on the scene within two minutes 30 seconds of the call.

Our fire fighters were quickly able to isolate the fuel spill on the aircraft and extinguish the tug fire.

Damage in this instance was confined just to the tug and importantly there was no interruption to aircraft operations.

This on site availability, rapid response and effective intervention makes ARFF Services a vital safety service, often keeping the airport and airlines operating without interruption or delay.

We are also required to provide a first aid capability during emergency responses, that is, during a response to an aircraft emergency or fire on the airport.

However, we go well beyond this and also respond to requests to provide first aid assistance to passengers, the general public, airport and airline employees and other airport users who may be suffering from a variety of medical episodes or who have sustained an injury.

It's important to note here that although we provide this additional capability we provide it within existing resource levels.

This additional capability is a key element of the value of our service.

At Adelaide in June we were called to assist a female on board an aircraft. On arrival, our fire fighters found the passenger unconscious with aircraft crew performing Cardiopulmonary Resuscitation (CPR).

ARFF assumed control, took over the CPR, and connected a defibrillator.

Our firefighters delivered three shocks via the defibrillator and continued CPR for some time. Fortunately the passenger was resuscitated, removed from the aircraft and transported to hospital.

In September last year (2015) we were called to treat a 73 year old unconscious male in the domestic terminal at Brisbane Airport. Following a rapid response from the ARFF crew, on arrival they found an unconscious male receiving CPR from bystanders. Again ARFF assumed control, took over the CPR and connected a defibrillator. Six shocks were delivered via a defibrillator and CPR continued for some 40 minutes.

Again the outcome was positive for all involved with the passenger revived and transported to hospital.

As can be seen from these examples, in some of our responses the casualty had stopped breathing and direct and timely intervention of our fire fighters, resulted in successful resuscitation prior to handing the casualty to the ambulance service. These responses are recorded as a life saved.

Last year (2015) we responded to almost four thousand requests for first aid assistance, with almost all of these responses part of the additional first aid capability we provide above that required as part of our regulated functions.

Here again I need to make the point that having an ARFF Service at our major international and regional airports means we can make these vital responses in a matter of minutes.

Last financial year (2014/15) we saved nine lives.

Like our aircraft responses, this is a service that we take very seriously and while it may not get a lot of attention, for every passenger we treat, or airport we keep open through our prompt responses, our value to the industry is clearly reinforced.

Thank you