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Aviation Rescue and Fire Fighting Services Regulatory Policy Review

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Public Consultation

The public submission process will close on Friday 12 February 2016. A public comments portal is available on the Department's website at <https://infrastructure.gov.au/aviation/arffs/submission.aspx>

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Executive Summary

In response to the Aviation Safety Regulation Review, the Australian Government asked the Department of Infrastructure and Regional Development to provide policy advice on a range of potential improvements to the efficiency and clarity of Aviation Rescue and Fire Fighting Service (ARFFS) requirements including the use of risk assessments.

To provide this advice, the Department of Infrastructure and Regional Development in consultation with other aviation agencies, has examined the regulatory policy settings for determining when ARFFS are required at Australian civil airports and considered whether there are improvements that can be made to the efficiency and clarity of ARFFS regulatory requirements.

The role of ARFFS is to optimise the chances of survival of passengers and crew in the event of an aircraft accident. The current regulatory settings that determine when an ARFFS must be established at an airport in Australia are set out in the *Civil Aviation Safety Regulations 1998* (CASR) Regulation 139.H and the associated Manual of Standards (MOS) which operates so that ARFFS must be provided at:

- an aerodrome from, or to which an international passenger air service operates; and
- any other aerodrome through which more than 350,000 passengers passed on air transport flights during the previous financial year.

Given significant changes to the aviation industry in Australia and the current and forecast volume of activity in the sector, there is a need to consider what regulatory settings are now most appropriate for determining when ARFFS should be provided at an airport.

Arrangements for Establishment/Disestablishment of ARFFS

A number of possible measures of airport activity that could be adopted for determining the establishment/disestablishment of ARFFS at an airport were considered by the review, including:

- the receipt of scheduled international passenger air services;
- annual airport passenger numbers;
- percentage of overall passenger numbers at Australian airports; and
- the number of aircraft movements and the types of aircraft using an airport.

The review considered that retaining the scheduled international passenger services criteria would be consistent with Australia's commitment to adopt International Civil Aviation Organization (ICAO) standards and recommended practices and with international expectations that international airports have an ARFFS.

A measure based on passenger numbers at an airport is most directly aligned with the nature of the risk being addressed by ARFFS, as the greatest risk to the safety of people is at locations where there are more passengers and a greater volume of activity at the airport in general.

The percentage of overall passenger numbers (for a benchmark of 90 per cent or 95 per cent of passengers in transport flights at all Australian airports) was discounted as a viable measure on the basis that such an arbitrary method of determination could likely result in some airports with similar risk profiles required to have an ARFFS where others may not.



In the ARFFS context, a measure based on the number of aircraft movements and the type of aircraft activity over a 12 month period was considered less relevant from passenger safety perspective compared to passenger numbers. This position reflects that a range of aircraft operating as cargo or training flights, private business, general and sport and recreational aviation will have few passengers on board but may generate significant numbers of aircraft movements.

Importantly, the review found that generic measures of airport activity, such as those outlined above, while a useful indicator of the possible need for ARFFS, should be supplemented by looking at other risk factors at individual airports.

Therefore rather than using a particular single measure of airport activity alone as a hard trigger for the provision of ARFFS, there is a strong case for a risk assessment process to be established to determine whether ARFFS should be required or withdrawn at particular airport locations.

Such an approach would consider the operational environment of each airport, as opposed to a 'one size fits all' approach. It would also be consistent with the outcomes-based approach to regulation increasingly being adopted by best practice international regulatory systems.

Preferred approach to ARFFS Establishment/Disestablishment

The preferred approach to determining when ARFFS should be required to be provided at an airport involves the use of a trigger to require the Civil Aviation Safety Authority (CASA) to conduct a risk assessment for the particular location. The outcome of this assessment would then ultimately determine whether ARFFS is required to be provided at the location and the level of ARFFS categorisation. This would be consistent with CASA's risk review role in other areas, such as airspace classification.

Such a risk review would consider a range of airport activity, air navigation and geographical considerations, examples of which are included in this report.

It is proposed that two measures be used as the trigger for the requirement for a risk review by CASA - the receipt of scheduled international air services and the number of passengers passing through the airport during a 12 month period.

Unlike the current arrangements, where the receipt of scheduled international air services acts as a hard trigger for the provision of ARFFS, undertaking a risk review would provide flexibility to potentially determine that at certain locations (for example those with low passenger numbers and very few international movements) an ARFFS is not required.

In relation to passenger numbers, it is proposed that the trigger be set at a threshold of reaching 500,000 passenger movements over a rolling 12 month period. This proposed increase in the threshold from the current 350,000 passenger level reflects the fact that overall activity and passenger numbers have increased significantly since the existing passenger threshold was adopted.

Based on 2014-15 passenger movement data, airports with 500,000 or more passengers would cover approximately 94 per cent of the travelling public, higher than the 90 per cent passenger coverage adopted when the current regulatory framework was established in 2002.

It is proposed that disestablishment of an ARFFS at a location be considered when passenger numbers fall below 400,000 and remain below this level for a 12 month period, through the preparation and consideration of a risk review by CASA.

This approach would provide a sufficient buffer between the threshold levels to prevent a cycle of establishment, disestablishment and establishment, due to seasonal or relatively small fluctuations in total passenger numbers over a 12 month period.

Regulatory Role at Non ARFFS Airports

It is proposed that the regulatory framework be updated to provide that where a “fire fighting related service” is provided at an airport that is not required to have an ARFFS, that service is not considered an “ARFFS” within the meaning of the CASR. Therefore this service will not be subject to the regulatory framework or regulation by CASA.

This would ensure the boundaries of CASA’s regulatory role are well defined while at the same time creating greater flexibility for the provision of “fire fighting related services” at airports that are not required to have a regulated ARFFS.

ARFFS Roles and Responsibilities

It is also proposed that roles and responsibilities of the ARFFS provider, state and territory fire brigades and the airport operator be clarified. This would entail:

- aligning ARFFS to areas or facilities at an airport which are used or intended to be used for aviation activities and/or for activities closely connected with aviation activities;
- specifying that state and territory fire authorities are not required to hold separate CASA approval to assist Airservices Australia (Airservices) in the provision of ARFFS where they are providing the service under an agreement with Airservices; and
- clarifying the role of the airport operator in facilitating the provision of ARFFS.

Removing Red Tape

The CASR Subpart 139.H and the associated MOS are very prescriptive. A number of possible amendments to the CASR have been identified, replacing prescriptive requirements relating to training and equipment provisions with a more systems and outcome based approach supported by the regulatory requirement for the ARFFS provider to establish a safety management system (SMS) which is approved and audited by CASA.

Summary of Key Proposals

- The use of risk reviews to determine the future establishment or disestablishment of ARFFS at Australian airports using the requirement for scheduled international passenger air services and total number of passenger movements as trigger criteria for the reviews.
- The ARFFS regulatory framework be updated to provide for:
 - (a) fire fighting related services at airports which are not required to have ARFFS not being subject to the regulatory framework;
 - (b) clarification of what areas and facilities at an airport are covered by ARFFS;
 - (c) specification that state and territory fire authorities are not required to hold separate CASA approvals to assist Airservices in the provision of ARFFS;
 - (d) clarification of the role of airport operators in relation to ARFFS; and
 - (e) replacement of prescriptive requirements in the current regulations with a more systems and outcome based approach supported by a SMS approved and audited by CASA.

1. Purpose of this Paper

The primary objective of this review is to examine regulatory policy settings for determining when Aviation Rescue and Fire Fighting Services (ARFFS) are required at Australian civil airports and consider whether there are opportunities to improve these settings by the adoption of modern, risk assessment approaches and the more effective allocation of resources.

In its response to the Aviation Safety Regulation Review, the Australian Government asked the Department of Infrastructure and Regional Development to provide policy advice on a range of potential improvements to the efficiency and clarity of ARFFS requirements, including the use of risk assessments.

This paper considers a range of possible changes to ARFFS arrangements, including the circumstances in which it would be appropriate to require the provision of ARFFS at Australia's international and major domestic airports, as well as regulatory improvements aimed at enhancing efficiency in the delivery of ARFFS.

Specifically, advice is to be provided to Government on:

- the appropriateness of current passenger traffic levels and data for the establishment and disestablishment criteria of ARFFS which currently determine whether ARFFS is required (or not required) at Australia's major airports;
- the appropriateness of requiring ARFFS at international airports where passenger traffic levels are below establishment criteria levels;
- the future use of the establishment criteria as triggers for a risk assessment of the proposed need for, or discontinuation of, the provision of ARFFS, rather than being a trigger for an automatic ARFFS requirement and what risk factors should be included as part of such a risk assessment;
- other regulatory improvements to increase ARFFS efficiency and provide potential cost savings to industry while maintaining appropriate safety standards; and
- the roles and legal responsibilities of an ARFFS provider and the state and territory fire authorities on and off airports.

2. Background

The provision of ARFFS at airports is intended to optimise the chances of survival of passengers and crew in the event of an accident. In general, the function of ARFFS is to rescue people from an aircraft that has crashed or caught fire during landing or take-off and to control and extinguish fires relating to aviation activities on the airport.

Australian aviation has an excellent safety record with no fatalities involving high capacity regular passenger transport aircraft¹ in almost 40 years. But there is a continuing need for vigilance to ensure we adopt optimal safety arrangements that make the most effective use of available resources.

¹ An aircraft that is certified as having maximum capacity seating exceeding 38 seats, or having a maximum payload capacity that exceeds 4,200kg

International Obligations

Australia is committed to adopting International Civil Aviation Organization (ICAO) standards and recommended practices including the provision of aviation safety services. This is consistent with Australia's membership of ICAO but also reflects the importance of aviation to the Australian economy, trade and tourism industries.

As a signatory to the *International Convention on Civil Aviation 1944* (Chicago Convention), Australia generally adopts ICAO Standards and Recommended Practices (SARPs) including those for rescue and fire fighting as set out in Chapter 9 of Annex 14 to the Chicago Convention. In circumstances where Australia does not adopt ICAO standards, Australia formally lodges a difference with ICAO.

Implementation of ARFFS in Australia

The current regulatory framework governing ARFFS is contained in the CASR Subpart 139.H and the associated Manual of Standards (MOS) and was established in 2002.

Under the CASR, the purpose of ARFFS is to rescue persons and property from aircraft that have crashed or caught fire at or near an aerodrome. ARFFS are also expected to respond to other fires (not just aircraft fires) at the aerodrome.

The CASR and the associated MOS operate so that ARFFS must be provided at aerodromes:

- from or to which an international passenger air service operates; and
- any other aerodrome where the number of passenger movements has reached 350,000 in the previous financial year.

While the CASR broadly aligns with ICAO requirements, in practice there are some differences in terms of how ARFFS is delivered in Australia, notably with respect of ICAO's standard that ARFFS be provided at all aerodromes.

In this regard, Australia has lodged a difference with ICAO stating that ARFFS, in compliance with Annex Standards, is not provided at all alternate international aerodromes and outlines the establishment criteria adopted by Australia. However, this is not currently reflected in the CASR and is a matter that will be addressed during this review.

Australia, like some other leading aviation countries, has adopted ARFFS establishment criteria or a threshold, in Australia's case a level of 350,000 passengers, to determine when ARFFS should be established at an aerodrome.

The 350,000 passenger number threshold was based on a policy decision in 2001 that ARFFS continue to be provided at airports that cumulatively managed 90 per cent of passengers at that time.

The disestablishment of ARFFS may also be considered when the annual passenger numbers for an airport falls below 300,000² and remains below this level for a 12 month period. In such circumstances, the ARFFS provider must provide the regulator with a safety case to justify the closure of the ARFFS.

² A buffer of 50,000 passengers between establishment and disestablishment was introduced to reduce the cycle of establishment/disestablishment/establishment due to fluctuations in passenger numbers.

Airservices and CASA monitor passenger numbers at airports through figures provided by the Bureau of Infrastructure and Regional Economics (BITRE).

Under the current framework ARFFS is provided at 28 airports in Australia, with Airservices the provider at 26 airports³; the Norfolk Island Administration the provider at Norfolk Island International Airport and the Department of Defence (Defence) the provider at RAAF Base Williamtown (also operating as Newcastle Airport).

In the main, the majority of ARFFS responses at an airport are to runway, apron, hangar areas and the terminal. Airservices also provides other services when it has the capacity to do so, such as: monitoring of fire alarms; first aid; and “non-aviation” rescue and firefighting. In 2014-15 Airservices ARFFS made more than 6,600 responses nationally which included performing these other services. Over 95 per cent of these responses were at international airports.

Arrangements in Comparable Countries

Whilst most countries are ICAO signatories, many countries have specific legislation that differs to the ICAO Standards and Recommended Practices (SARPs) and have adopted different ARFFS establishment criteria. It is up to each ICAO member states to determine how they implement the SARPs and there is no common approach adopted overseas in the provision of ARFFS.

A summary of regulations pertaining to the provision of ARFFS in the USA, UK, New Zealand and Canada is at [Attachment A](#). In these countries, airport operators are required to provide and finance ARFFS as part of their licensing arrangements.

In Australia, Airservices provides ARFFS on a cost recovery basis, recovered from the airlines directly, with prices determined through a long term pricing agreement finalised after consideration by the Australian Competition and Consumer Commission.

In the US, the provision of ARFFS is linked to scheduled flights in aircraft with particular seating capacity (more than nine seats for scheduled flights and more than 30 seats for unscheduled flights). If Australia adopted this approach, the number of regional airports requiring an ARFFS would increase significantly.

In the UK, the provision of ARFFS is linked to aircraft maximum total weight (more than 2,730kg) or aircraft training activities.

If Australia adopted this approach, all airports at which regular passenger transport or charter services were undertaken or where a training school operated, would require an ARFFS. Again, this would significantly increase the number of airports requiring an ARFFS.

Canada requires the provision of ARFFS at airports based on the number of passengers that are emplaned and deplaned per year (180,000). If this trigger was adopted for Australia, an additional 14 airports in Australia would be required to have an ARFFS.

³ Sydney, Canberra, Melbourne, Hobart, Adelaide, Perth, Darwin, Brisbane, Townsville, Cairns, Rockhampton, Mackay, Gold Coast (Coolangatta), Sunshine Coast, Launceston, Alice Springs, Ayers Rock, Avalon, Hamilton Island, Broome, Karratha, Port Hedland, Gladstone, Newman, Coffs Harbour and Ballina.

In New Zealand ARFFS is linked to passenger capacity of aircraft (30 if the aeroplane is a turbo jet engaged in regular passenger transport and if non-turbo jet aeroplane engaged in regular passenger transport operations with more than 700 movements in busiest consecutive three month period). Like the US model, the adoption of this trigger would significantly increase the number of airports in Australia requiring an ARFFS.

3. Measures of airport activity

The current criteria that determine when an ARFFS must be established at an airport in Australia are set out in Chapter 2 of the Part 139H MOS which operates so that ARFFS must be provided at:

- an aerodrome from, or to which an international passenger air service operates; and
- any other aerodrome through which more than 350,000 passengers passed on air transport flights during the previous financial year.

Initially, ARFFS were provided in Australia at domestic airports (those with passenger-carrying aircraft operations) when annual passenger numbers exceeded 150,000, and at general aviation (GA) capital city secondary airports (such as Jandakot, Moorabbin, Bankstown and Archerfield airports) when annual aircraft movements exceeded 175,000. This at one stage resulted in ARFFS provision at 50 Australian airports.

ARFFS were removed from the smaller domestic airports and GA capital city secondary airports in 1991 at the request of aerodrome operators and the GA sector, following industry consultation and the development of a safety case justifying the removal.

From that point until 2002, Airservices provided ARFFS at airports (counted in descending order by traffic volume) that cumulatively accounted for approximately 90 per cent of all domestic passengers travelling on scheduled passenger services in Australia over a year.

The 90 per cent passenger coverage criteria resulted from the application of the principle that the total number of passengers effectively covered by ARFFS should be maximised to the extent of available financial and human resources. In effect, the coverage represented what was possible at that time within an acceptable level of available resources.

When ARFFS regulations were introduced into the CASR in 2002, there was no change made to these arrangements. Hence, because 90 per cent coverage equated to a criteria of approximately 350,000 passengers per year at an individual airport, using 2000-01 financial year data, 350,000 passengers per year was adopted as the trigger for requiring the establishment of an ARFFS.

However since 2002, the Australian aviation industry has changed considerably.

Domestic aircraft and passenger movements have increased significantly, with growth driven by the introduction of low cost carriers and fly-in, fly-out (FIFO) operations associated with regional resource sector activities. FIFO activity has also led to considerable variability at certain locations as the number of passengers fluctuates over time, coinciding with resource sector life cycles of construction and production.



Analysis of annual passenger movements (international and domestic regular public transport) between 2001-02 and 2014-15 shows that total passenger movements has increased by 97 per cent and aircraft movements by 33 per cent⁴. The entry of larger aircraft (Airbus A380) operations, along with the increased utilisation of larger aircraft, has been directly attributable to this growth in passengers. For the same time period, the number of airport locations with more than 350,000 regular public transport passengers passing through them annually has grown from 14 to 26.

In relation to future growth, BITRE modelling⁵ (2012) suggests annual passenger movements through all Australian airports will continue to grow at a steady rate i.e. growth of 3.7 per year from 135.1 million in 2010-11 to 279.2 million in 2030-31.

Recent moderation in FIFO operations may lessen future growth forecasts in the charter aviation industry at some locations serving the resources sector.

It is not just traffic levels that have changed. The increased use of modern, safer aircraft and extension of larger aircraft to regional centres with more safety redundancies can reduce the likelihood of an aircraft accident that would require an ARFFS.

Given significant changes to the aviation industry in Australia and the current and forecast volume of activity in the sector, there is a need to consider what regulatory settings are now most appropriate for determining when ARFFS should be provided at an airport.

Noting that the role of ARFFS is to optimise the chances of survival of passengers and crew in the event of an accident, it is timely to review the basis of determining where ARFFS should be provided at Australian airports and the potential introduction of a risk assessment approach.

A key risk factor relating to accidents at airports is the level and/or nature of aviation activity.

Consequently, it is necessary to determine the appropriate measure of airport activity that could be used to determine the requirement for the provision of an ARFFS noting a range of risk mitigations that are applied more broadly in aviation to reduce risk (e.g. air traffic control, use of more advanced aircraft) before the provision of an ARFFS is required.

4. Potential Measures

A number of possible measures of aviation activity are discussed in this section, including the receipt of scheduled international passenger air services, the total number of passengers, the number of aircraft movements and the types of aircraft using an airport.

⁴ BITRE, Airport Traffic Data 1985–86 to 2014–15, http://bitre.gov.au/publications/ongoing/airport_traffic_data.aspx

⁵ BITRE, 2012, Air passenger movements through capital and non-capital city airports to 2030-31

Measure 1: Receipt of Scheduled International Passenger Air Services

The international expectation that an ARFFS be provided at all international passenger air service airports raises specific issues for Australia as the low volume and frequency of flights at some of our airports is not conducive to providing a cost effective and permanent ARFFS capability at the airport.

For international airports, a good example is Norfolk Island which is required under the regulations to have an ARFFS as it receives “international” services although these occur generally only once a week. For the 2014-15 financial year, only around 61,000 passengers passed through the airport.⁶

Some other restricted use or alternate designated international airports with low volumes of passengers where ARFFS is not provided include Learmonth, Lord Howe Island, Kalgoorlie, Horn Island, Christmas Island and Cocos (Keeling Island).

Australia has lodged a difference with ICAO that ARFFS are not available at these international alternate airports. Additionally for some locations CASA has granted exemptions from certain operational requirements that would normally apply.

Under the current legislative settings, aerodromes that receive an international flight, but have passenger numbers less than the 350,000, are required to have an ARFFS. This requirement, if continued would lead to a significant cost with a fairly minimal impact on the total number of passengers that travel from/to airports that have an ARFFS.

The capital outlay involved in setting up a service at a location is over \$10 million and ongoing operational and maintenance costs (including depreciation) for a new ARFFS are over \$4.5 million.

The review proposes that available and ultimately finite ARFFS resources should be targeted at locations with higher passenger traffic volumes.

The review has also considered whether Australia should retain a link between ARFFS provision and the receipt of scheduled international passenger services.

A number of possible alternative options in relation to this measure include:

- completely removing the receipt of any international air passenger service as an automatic trigger for an ARFFS and relying on the use of a passenger number trigger;
- require ARFFS at international airports where the number of scheduled international passenger transport flights exceed a specific number; or
- make the formal agreement between an airline and airport operator to commence scheduled international air passenger services at an airport currently without an ARFFS, a trigger for a risk assessment to determine whether an ARFFS is required.

Under any of these options the practical outcome would generally be consistent with international expectations of ARFFS being provided at international airports.

This is because international airports in Australia (except Norfolk Island at the current time), are by their nature also usually the busiest in terms of passenger numbers and aircraft movements.

⁶ BITRE Airport Traffic Data 1985-86 to 2014-15

Internationally, New Zealand and Canada have also lodged a difference with ICAO using different criteria, not international flights, in determining whether an ARFFS is required.

As noted earlier, New Zealand requires ARFFS at certified aerodromes during regular air transport operations by aeroplanes having certified seating capacity of more than 30 passengers. Canada requires the provision of ARFFS at a designated airport, which is defined as being an airport where the total of the number of passengers that are emplaned and the number of passengers that are deplaned is more than 180,000 per year.

Assessment

As a measure of airport activity, the receipt of scheduled international passenger air services at some Australian airports is not, in itself, an effective measure of the number of passengers that would potentially benefit from the provision of an ARFFS.

Under existing arrangements, removing this measure as a trigger would only mean that ARFFS is not required to be provided at one airport, Norfolk Island.

The review notes that this could provide some reduction in cost to airlines that operate services to the island.

It also does not rule out the Norfolk Island airport operator and airlines serving the island reaching their own agreement on the provision of rescue and fire fighting services.

However removing the scheduled international passenger air services criteria completely would, in a strict sense, be inconsistent with Australia's commitment to adopt ICAO SARPs and with international expectations that generally international airports have an ARFFS.

The review notes it is easier to justify not adopting an ARFFS at an international airport on a cost/benefit and risk basis where it has a low volume of annual passenger traffic. However it is less easy to justify not having an ARFFS at an airport that has international air services which, for example, has passenger levels just below an agreed passenger traffic threshold that would normally trigger an ARFFS.

Measure 2: Annual airport passenger numbers

Under this approach annual passenger throughput at airports would continue to be used to determine the provision of ARFFS.

The use of passenger numbers is consistent with the principle objective of an ARFFS outlined by ICAO which is to save lives in the event of an aircraft accident or incident occurring at or in the vicinity of an aerodrome.

Therefore, there is a strong argument for basing the establishment criteria on the number of passengers, and hence lives, that could be saved if there was an incident.

The passenger number thresholds adopted impact on the number of airports requiring an ARFFS and the overall percentage of passengers covered. These are outlined in Table 1.

Table 1: Passenger Number Thresholds

| Passenger number threshold | Number of airports requiring an ARFFS | Approximate number of passengers covered (%) | Approximate number of passengers covered (million) |
|----------------------------|---------------------------------------|--|--|
| 1,200,000 | 12 | 90 | 133 |
| 1,000,000 | 13 | 91 | 135 |
| 700,000 | 15 | 92 | 136 |
| 500,000 | 19 | 94 | 139 |
| 400,000 | 23 | 95 | 141 |
| 350,000 | 25 | 96 | 141 |
| 300,000 | 27 | 96 | 142 |
| 250,000 | 28 | 96 | 142 |
| 200,000 | 37 | 98 | 144 |

Note: Based on BITRE 2014-15 financial year passenger movement data.

A lower level of passenger numbers (i.e. lower than the existing 350,000) as a trigger for consideration of ARFFS has not been considered further in this review as available ARFFS resources should be targeted to the major passenger airports.

In addition lowering the passenger threshold, for example to 250,000, would only marginally improve ARFFS coverage across the system (as there would be a relatively small increase in the total percentage of passengers covered) but would impose significant costs on regional airlines and potentially adversely affect the level of airline services to regional airports.

Assessment

The benefit of using this measure is that it directly links the allocation of resources with the ARFFS objective, to save lives. The measure is also aligned to the level of risk, on the basis that the greatest risk to the safety of people is at locations where there are more passengers and therefore a greater volume of activity at the airport in general.

This review proposes that consideration should also be given to higher passenger thresholds than the current 350,000 passengers.

It is acknowledged that a higher threshold could lead to a reduction in the number of locations at which ARFFS is required to be provided than at present.

However whether an ARFFS should be disestablished would require a range of considerations. For example if an airport's current level of passenger traffic was just under a higher passenger threshold but the airport was forecasting future growth, then it would be sensible to retain an existing ARFFS.

These issues are discussed later in this paper.

There would be a cost saving to the aviation industry in terms of reduced ongoing operating and maintenance costs from a reduction in the number of locations where ARFFS is provided. However if an ARFFS has only been recently established and was suddenly withdrawn, Airservices would be faced with costs associated with stranded assets. These issues would need to be taken into consideration in any future ARFFS pricing proposals.

If annual passenger numbers were solely adopted as the measure of when ARFFS should be established or examined, this would make Australia's approach inconsistent with the international expectation that ARFFS be provided at airports that receive international air services. Australia may need to lodge a difference with ICAO, an approach adopted by many other countries.

Data Issues

The CASR (Part 139.755) nominates the Departmental published statistics, currently collected by the Bureau of Infrastructure, Transport and Regional Economics (BITRE), as the basis for calculating passenger numbers to determine the need for ARFFS at individual locations.

The BITRE passenger data used to determine the need for ARFFS at individual locations consists of regular public air transport services within Australia (Domestic) and to/from Australia (International). The data on charter passengers which can be quite high at some airports, especially those with significant FIFO operations in Western Australia, is improving and BITRE is currently liaising with airlines to further improve data collection in relation to charter operations.

Passenger numbers for regular public transport (RPT) services should be supplemented as appropriate by information on passenger charter operations. This will provide a better indication of total passenger numbers that pass through an airport.

Measure 3: Percentage of overall passenger numbers

One measure which can be used to determine where ARFFS needs to be provided is through establishing a certain total percentage of the travelling public that will be covered by ARFFS. For example a benchmark of 90 per cent or 95 per cent of total passengers could be selected and ARFFS subsequently provided at the busiest airports which together comprise this benchmark figure.

If the 90 per cent methodology was to be applied to the latest available passenger movement data set (2014-15), this would mean that only airports exceeding 1.2 million passengers per annum would require an ARFFS in Australia. The existing 350,000 passenger figure would represent ARFFS coverage for closer to 96 per cent of all passenger movements.

As outlined in Table 1, an analysis of 2014-15 passenger data indicates that a 90 per cent threshold would provide ARFFS coverage at 12 airports. If a 95 per cent threshold was adopted, the result would be ARFFS coverage at 23 airports.

Assessment

This measure does not result in effective use of ARFFS resources because the allocation of resources depends on an arbitrary cut off point and not on the basis of a safety risk assessment.

An individual airport could move in and out of the 90 per cent passenger range due to passenger numbers fluctuating at other airports, meaning the potential for constant shifting of regulatory requirements at some airport locations.

These fluctuations in regulatory requirements would create significant uncertainties and potential unnecessary costs for ARFFS planning, implementation and operations.

Under this approach there may also be multiple airports with similar risk profiles (for example on passenger numbers, aircraft movements, type of aircraft, traffic mix etc.) but the application of the percentage of passenger cut off point means that some are required to have ARFFS, or to be considered for ARFFS deployment, while others may not. Such determinations of the need for an ARFFS could therefore be artificially the result of passenger growth at other airports, rather than that at the individual airport location.

This measure is considered the least effective for determining at which airports ARFFS should be provided.

Measure 4: Aircraft movements

A final measure that could be adopted is based on the number of aircraft movements (with take-off or landing constituting a movement) and the type of aircraft activity over a 12 month period at an airport.

A number of options to give effect to this measure could be considered including:

1. aircraft movements by aircraft above a certain size;
2. the number of regular public transport aircraft movements;
3. the number of passenger transport operations (including passenger charter operations); or
4. total annual aircraft movements (including cargo, general, sport and recreational aviation).

Under the first option, an airport would be required to have an ARFFS if aircraft movements by aircraft over a certain size (determined by seats, weight, or length) exceeded a specified number over a 12 month period.

This approach is adopted in some other countries.

If the arrangement was based on the frequency of movements of the longest aircraft using an airport over a 12 month period, the length of aircraft could be categorised on the basis of the categories in Chapter 3, paragraph 3.1.1.4 of the Subpart 139.H MOS that are used to determine the category of ARFFS required at an airport. The larger the aircraft the more lives that are potentially at risk if there is an incident.

Options 2, 3 and 4 relate to the category of aircraft service.



Measures of aircraft movements have been adopted in the Australian Airspace Policy Statement 2015 (AAPS), made under the *Airspace Act 2007* in July 2015. The AAPS includes two aircraft activity measures to trigger an aeronautical risk review (i.e. 15,000 passenger transport operation aircraft movements and 80,000 annual aircraft movements) to examine airspace classification and air traffic service requirements at an airport.

Assessment

In the ARFFS context, targeting aircraft size and movements is not as relevant from a risk perspective as using passenger numbers.

This position reflects that a range of other aircraft operating as cargo or training flights, private, business, general, sport or recreational aviation will have few passengers on board but may generate significant numbers of aircraft movements.

In relation to option 4, using aircraft movement thresholds potentially could trigger ARFFS at a number of capital city secondary airports such as Archerfield, Bankstown, Jandakot, Moorabbin and Parafield most of which have no scheduled passenger services.

As the main ARFFS objective is to rescue people, there is greater value in investing ARFFS resources in locations where there is the greatest number of people likely to be affected by a fire at an airport. Passenger movements rather than aircraft movements will better align with this objective and in determining where an ARFFS should be considered.

5. Risk Assessment

Fixed thresholds or triggers can be a blunt instrument for regulating in complex and dynamic environments like aviation.

Generic measures of airport activity, while a useful indicator of the possible need for ARFFS, should be supplemented by looking at other risk factors at individual airports.

Therefore rather than using a particular measure of airport activity alone as a hard trigger for the provision of ARFFS, there is a strong case for a risk assessment process to be established to determine whether ARFFS should be required or withdrawn at particular airport locations.

Under this approach, a measure of airport activity would be used as a trigger for a risk review.

Such an approach would consider the operational environment of each airport, as opposed to a 'one size fits all' approach. It would also be consistent with an outcomes-based approach to regulation increasingly being adopted by best practice international regulatory systems.

The risk assessment process would allow for the consideration of a broad range of information such as forecast future traffic levels and any significant risk mitigation measures already in place, or planned, for the location, as well as public, industry and agency views, before a final decision regarding the need for the establishment of an ARFFS is made.



Such an approach would be similar to that which is established under the AAPS, which uses air traffic services criteria to help determine whether different airspace classifications and air traffic services might be required at different airports. An aeronautical risk review is undertaken as the result of criteria being reached on a location by location basis.

Under this approach, a risk assessment would be required to be undertaken to determine whether an ARFFS is appropriate to the specific airport operating environment. Details on what the risk review may entail are set out in the following section of this review paper.

6. Preferred approach to ARFFS Establishment/Disestablishment

The preferred future approach to determining when an ARFFS should or should not be provided at an airport would involve the use of a trigger, such as annual passenger levels at an airport or receipt of scheduled international passenger air services, to require CASA to conduct a risk assessment for the particular location.

The assessment would also determine the appropriate level of ARFFS categorisation which generally reflect the types of aircraft serviced by the airport.

CASA would undertake the assessment in close consultation with the ARFFS provider and in consultation with other Government agencies and industry.

Policy and risk context

An enduring bi-partisan position of consecutive Australian Governments is that the safety of passenger transport services is given the highest priority in aviation safety regulation.

That principle is applied in various areas of the aviation safety system for determining the allocation of resources, such as aviation safety investigations and the review considers that is an appropriate policy principle in determining where ARFFS should be provided in Australia.

As the key objective of providing ARFFS is to save lives in the event of an aircraft accident or incident occurring at an airport, it follows that ARFFS resources should be deployed at locations where the safety of the most people is at risk.

Also, it needs to be recognised that there are other infrastructure, technology and service measures that in the first instance can be used to reduce the very low likelihood of an aviation accident before an ARFFS is required.

These measures may include the establishment and enhancement of airspace management and air traffic control services and the availability of local fire services.

There also continues to be improvements in modern aircraft safety, including better fire protection in the design of aircraft and changes in traffic levels which need to be taken into account.



While there are a range of factors which potentially reduce the level of risk, the risk assessment process will also need to take into account any factors that might increase risk (e.g. operation of larger aircraft resulting in higher numbers of passengers per aircraft, the location of refueling facilities or runway or related safety incident rates at an airport).

All of these policy and risk-related factors could be considered in the assessment process for determining the need for an ARFFS.

Best measure and trigger level to examine establishment of ARFFS

It is proposed that two measures be used as the trigger for the requirement for a risk review by CASA - the receipt of scheduled international air services and the number of passengers passing through the airport during a 12 month period.

Australia generally adopts ICAO standards and recommended practices to foster and support international air transport. The nation benefits socially and economically from participation in international aviation markets through compliance with ICAO requirements.

As such, it is proposed that the receipt of scheduled international passenger air services be used as a trigger for a risk review rather than the immediate implementation of ARFFS.

Unlike the current arrangements, where the receipt of scheduled international air services acts as a hard trigger for the provision of ARFFS, undertaking a risk review would provide flexibility to potentially determine that at certain locations (for example those with low passenger numbers and very few international movements) ARFFS is not required.

In relation to passenger numbers, it is proposed that the trigger be set at a threshold of reaching 500,000 passenger movements over a rolling 12 month period.

This proposed increase in the threshold from the current 350,000 passenger level reflects the fact that overall activity and passenger numbers have increased significantly since the existing passenger threshold was adopted as has the safety of modern aircraft and air traffic control operations.

The adoption of a 500,000 passenger threshold would also provide some relief from the need for additional ARFFS having to be provided at regional airports for the next ten years based on current growth rates.

Along with the disestablishment passenger threshold outlined below, this new threshold would initially require risk assessments of the continuing need for ARFFS at only a few locations. This position also has regard to the need to the maintenance of existing and in some cases very recent significant capital and personnel investment in the ARFFS network. It also has regard to the fact that at some of the locations, such as Ballina which has recently received an ARFFS, future growth is likely to bring airport passenger numbers up to the 500,000 passenger threshold level.

Current regulatory settings use the financial year as the relevant period over which passenger number data is assessed. However, because data is available monthly on passenger figures the relevant 12 month period need not be confined to a calendar or financial year period.

The overall passenger percentage approach and the aircraft movements measure do not provide as strong a link between resource allocation and safety risk – that is, they are not good indicators of where there is the greatest risk to the greatest number of people.



Whilst it is noted that aircraft movements and different types of aircraft create complexity at the airport which could impact on safety risk, this factor would be taken into account in the risk assessment process.

Furthermore, it is proposed that the passenger number trigger for an ARFFS risk review reflect the position of ARFFS within a hierarchy of aviation safety measures which includes better airspace management and air traffic control (ATC) services.

Australia adopts an emergency management framework that includes the categories of prevention, preparedness, response and recovery, with greater emphasis being placed on prevention.

In accordance with this framework the classification of airspace and establishment of controlled airspace and enhanced air traffic control services, which aims to prevent aircraft accidents, should receive more emphasis before the establishment of ARFFS which is often a post incident response measure aimed at minimising injury and loss of life after an accident has occurred.

Recognising that the existence of ATC services at an airport is an important preventative measure which should be taken into account when assessing the need for ARFFS at the same location, the trigger for an ARFFS risk review should occur at a higher passenger threshold than the trigger for an aeronautical risk review looking at airspace and air traffic control services.

Currently, the level which triggers the need for an aeronautical risk review to examine airspace classification including the need for controlled airspace and air traffic control (ATC) services at a particular airport location is set at 350,000 passengers. This ATC threshold level further supports the adoption of a higher passenger level of 500,000 passengers as the trigger for an ARFFS risk review.

The proposed higher ARFFS trigger level would provide a sufficient window between the establishment of ATC services at a location and the consideration of the need for ARFFS at the location, to ensure that the operation and effect of the ATC services as a safety mitigator in the prevention of aircraft accidents and incidents can be properly considered in the ARFFS risk assessment process.

As outlined previously, it should also be noted that based on 2014-15 passenger movement data, a passenger number of 500,000 would cover approximately 94 per cent of the travelling public, which is higher than the 90 per cent passenger coverage adopted when the current regulatory framework was established in 2002. In addition, in 2014-15, over 91 per cent of Airservices ARFFS responses were at aerodromes with passenger traffic greater than 500,000 passengers.

Trigger level to examine disestablishment of ARFFS

It is proposed that disestablishment of an ARFFS at a location be considered when passenger numbers fall below 400,000 and remain below this level for a 12 month period, through the preparation and consideration of a risk review by CASA.

This would provide a sufficient buffer between the threshold levels to prevent a cycle of establishment, disestablishment and establishment, due to seasonal or relatively small fluctuations in total passenger numbers over a 12 month period.

Risk Assessment Process

Under the preferred approach, either reaching the relevant level of annual passenger activity at a particular location or the receipt of scheduled international air passenger services would trigger the need for a risk assessment to be undertaken about whether ARFFS should be required at the particular location.

It is proposed that the risk review be undertaken by CASA, in consultation with Airservices, the public, industry (aircraft and airport operators) and other government authorities.

This approach is consistent with CASA's risk review role in other areas, such as airspace classification. CASA would then make a determination on whether the provision of ARFFS is required at the airport location and the required category of ARFFS which reflects international standards depending on the type of aircraft that operate to the airport.

Once passenger levels fall below the relevant disestablishment trigger (i.e. 400,000), CASA would complete a risk review to determine whether the ARFFS should remain at the location.

Under the proposed approach, where CASA has completed a risk review it may choose to update that existing review if an aerodrome were to meet or fall below the passenger number levels, or where there is some other significant change at the aerodrome that warrants a further consideration of risk at the location.

The risk assessment would be conducted in accordance with the International Organization for Standardization (ISO) 31000:2009, *Risk management – Principles and guidelines*, and could take into account a range of factors including:

- passenger numbers;
- number of aircraft movements;
- aircraft size/type;
- traffic mix/density;
- types of aviation activity;
- seasonal variation in aviation activity;
- forecast future aviation activity;
- presence of air traffic control;
- proximity of a metropolitan fire service to the airport;
- availability of local town resources/response times;
- history of incidents/safety occurrences;
- obstacles or hazards at/near airport;
- aircraft movement areas;
- airport facilities/characteristics;
- geographical and topographical conditions;
- meteorological conditions;
- whether or not a curfew is in place;
- operation of cargo freighters or freighters carrying dangerous goods near residential areas;
- bird/animal hazards; and
- geographical location.

Timing for risk assessment

It is necessary to consider what timeframes should be applied to risk assessment activity once trigger events have occurred in order to ensure that the regulatory framework is reasonably responsive to relevant changes in the sector.

When it is determined that a trigger event has occurred in relation to an individual airport in a particular year (e.g. the number of passengers has met or exceeded the relevant level or an airport receives scheduled international passenger flights), then CASA should be required to complete a risk assessment for the location.

In relation to the introduction of the receipt of scheduled international passenger flights at an Australian airport, CASA would be required to complete a risk review within six months of receiving advice from an airport or airline operator that international services are to be provided in the future to an airport which currently does not have an ARFFS.

In relation to meeting passenger threshold numbers, BITRE currently publicly releases monthly aviation data. CASA could be required to complete a risk review within six months of BITRE making data available confirming the passenger number trigger of 500,000 passengers has been met at an airport.

Risk assessment outcome and implementation

Where the outcome of the risk assessment is a decision that ARFFS is not required at a location, CASA should monitor traffic levels at the location to determine whether a further risk assessment is required.

Where the outcome of the risk assessment is a decision that ARFFS is required at a location, CASA should determine, in consultation with Airservices, the national civil ARFFS provider, by when the ARFFS should be established.

Recognising the difficulties in establishing a full ARFFS service at a new location in a short time frame, the CASA regulations could permit some kind of graduated service arrangements to be in place prior to the establishment of full operations. A graduated service could include the initial provision of ARFFS at a category lower than the final ARFFS category of services required.

Alternatively, other measures to enhance safety could be adopted in the first 12-18 months including the training of the local fire brigade, and the provision of some personnel and firefighting equipment at the airport.

Disestablishment of ARFFS

The review proposes that ARFFS should continue to be provided at current airports with disestablishment to be considered where passenger numbers are recorded as below 400,000 over a 12 month period.



The decision on whether ARFFS should no longer be provided at an airport would only occur after the preparation and consideration of a risk review by CASA in consultation with the ARFFS provider and a public and industry consultation process.

An annual review should also be undertaken by CASA for airports that continue to meet a disestablishment trigger threshold but still have ARFFS.

On the basis of passenger number data for the financial year ending 30 June 2015, the adoption of a 400,000 disestablishment trigger would support CASA undertaking risk reviews at five locations that currently have an ARFFS - Ayers Rock, Broome, Coffs Harbour, Newman and Norfolk Island.

However it is proposed that CASA would not undertake a risk review of Ayers Rock, Broome, Coffs Harbour and Newman for at least three years while monitoring passenger traffic levels at these locations. Three of these locations, Broome, Coffs Harbour and Newman have only recently had an ARFFS established and passenger numbers at these locations may reach 400,000 over the next few years.

7. Regulatory Role at Non-ARFFS Airports

The existing regulatory footprint provides for a possible regulatory role for CASA in oversighting the provision of ARFFS at airports that are not required by the current passenger threshold of 350,000 passengers to have an ARFFS. These requirements are outlined in the current MOS as Level 2 ARFFS coverage.

The arrangements for Level 2 ARFFS coverage have never been activated because ARFFS has not been sought to be provided at an airport at which it is not required. This lack of activation likely reflects both the lower risk profile at airports which are below the passenger number thresholds that trigger an ARFFS and that there is no demand by aircraft operators for an ARFFS especially when it comes at a cost to those operators.

It is proposed that the regulations be updated to provide that where a “fire related service” is provided at an airport that is not required to have an ARFFS, that service is not an ‘ARFFS’ within the meaning of the civil aviation safety regulations and therefore not subject to the regulatory framework or regulation by CASA.

This would ensure the boundaries of CASA’s regulatory role are well defined while at the same time creating greater flexibility for the provision of “fire related services” at airports that are not required to have a regulated ARFFS. These services could be at a lower categorisation and cost to industry.

8. ARFFS Roles and Responsibilities

Nature and division of responsibilities at airports

Airservices has traditionally provided, in combination with its ARFFS role, “other” services at airports in related areas of expertise when it has the capacity to do so. Such “other” services can include monitoring of fire alarms, first aid, and “non-aviation” rescue and firefighting.

While section 8(1)(j) of the *Air Services Act 1995* permits Airservices to perform other services (e.g. first aid, fire alarm monitoring, building design certification, assisting with bush fires); these services should not impede on Airservices’ capacity to perform its core aerodrome-related rescue and firefighting services function.

The increasing amount of non-aviation development on airport land over the last decade (e.g. stand-alone retail outlets away from airport terminals, business parks) challenges the notion of what should be considered the ‘aerodrome’ in determining the exact role of the ARFFS.

The provision of non-aviation activities presents challenges for Airservices’ capacity, as the primary ARFFS provider, to continue to provide services to these non-aviation areas at an aerodrome, while maintaining the required ARFFS category of service to respond at any time to aircraft and aviation-related incidents.

The current regulations need to be updated to better reflect what activities constitute core ARFFS aviation-related activities at an airport.

The updated regulations should address the confusion created by the current use of different terms to describe where ARFFS can be carried out i.e. at an “airport”, “aerodrome” or “airside”. Aerodromes are normally divided into airside (protected) and landside (public) areas. However, the ARFFS role is currently designated by the definition of an “aerodrome” under the Australia aviation safety regulatory framework.

As defined under Section 3 of the *Civil Aviation Act 1988*, an aerodrome is “an area of land or water (including any buildings, installations and equipment), the use of which as an aerodrome is authorised under the regulations, being such an area intended for use wholly or in part for the arrival, departure or movement of aircraft”.

However, there is no clear indication of what 'area' is to be selected for the purpose of applying the definition of 'aerodrome' and how the boundaries of the relevant area are to be identified with various interpretations suggested.

A broad interpretation would see the aerodrome area aligning with the outer boundaries of the airport while a narrower interpretation would see the aerodrome constituting some area of land of lesser size than the airport, within the airport boundaries, principally the area related to aviation activity including airport terminals from which aircraft arrive or depart.

This review supports regulatory policy change to determine exactly what the ARFFS function covers at an airport and in so doing determine what is not an ARFFS function.



These changes would also enhance the ability of Airservices and state and territory fire authorities to settle operational agreements that delineate their respective roles and responsibilities at airports which require an ARFFS.

It is proposed that an “activity-based” concept in relation to ARFFS be introduced that moves away from reliance on the term “aerodrome”.

Under such an approach, ARFFS could be aligned to areas or facilities at an airport which are used or intended to be used for aviation activities and/or for activities closely connected with aviation activities.

Such aviation-related infrastructure would include:

- taxiways, runways, aprons, airside roads, airside grounds and aircraft parking areas;
- airside freight handling and staging areas;
- air traffic control towers;
- airport terminals; and
- aircraft hangars and on-airport maintenance facilities.

The regulations could also provide that aviation-related infrastructure may also include infrastructure that is identified as such in an agreement (Memorandum of Agreement) between an ARFFS provider and a state and territory fire authority, in relation to the provision of rescue and fire services at an airport.

Such an approach need not preclude the provision of services by an ARFFS to non-aviation related infrastructure areas on an airport. For example Airservices and a state or territory fire authority may wish to make an agreement for such an arrangement at a particular airport and the regulations could make provision for this kind of arrangement.

Settling the ambiguity between ARFFS roles and those non-aviation fire fighting roles that would normally be performed by state and territory fire brigades (e.g. fires at a dedicated retail centre or business park) will provide a firm basis for agreements between these brigades and Airservices to be properly negotiated and clarify the legislative foundations upon which those agreements are made.

Approval of State and Territory fire authorities as an ARFFS provider

Under Regulation 4.05 of the Airservices Regulations, Airservices is authorised to make an arrangement with a state or territory for the use of the local fire brigade for the purposes of “an operation under this Division”. Hence, Airservices has the power to make arrangements under which state or territory fire authorities perform or assist in performing Airservices ARFFS functions.

The current regulations can be improved by providing greater clarity as to whether state and territory fire authorities, in responding to a call for assistance from Airservices or providing services within a leased airport, would be considered to be performing an ARFFS function and therefore require approval by CASA under the CASR.



CASR 139.711 states it is an offence for a person to provide ARFFS at an aerodrome unless the person is approved under Division 5 of CASR as an ARFFS provider. It is implicit in the arrangements for the provision of ARFFS in the current regulatory framework, that it was never the intention that the state and territory fire authorities provide a full ARFFS service, but rather they assist the ARFFS provider.

Hence, there is some ambiguity under the current arrangements as to whether state and territory fire authorities may need approval from CASA to assist Airservices in providing ARFFS services. If an approval is required, consideration would need to be given to what should constitute the approval and who obtains the approval.

It is proposed that the CASR make clear that state and territory fire authorities are not required to hold separate CASA approval to assist Airservices in the provision of ARFFS where they are providing the service under an agreement with Airservices. In such circumstances state and territory fire authorities would be providing the services as an agent of Airservices, with Airservices retaining ultimate responsibility.

This approach could then be reflected in an updated agreement between Airservices and the state or territory fire authority, agreements which already exist in various forms.

Clarifying the role of airport operators

The role of the airport operator in facilitating the provision of ARFFS should be improved in the current regulations. It is important that airport operators facilitate the provision of ARFFS because Airservices requires access to airport land and associated infrastructure and equipment to properly perform and meet the ARFFS regulatory requirements.

For example, the current regulation (CASR Part 139.772) requires Airservices to ensure that necessary buildings and facilities are available on the aerodrome, including appropriate emergency roads and facilities for replenishing water supply. However, the airport operator is responsible for roads and likely to be responsible for facilities for “replenishing water supply”.

Therefore airport operator responsibilities in the CASR should include ensuring that:

- there are adequate facilities for rapidly replenishing water supply for fire vehicles;
- there are appropriate emergency roads, including sealed roads capable of supporting immediate response of ARFFS vehicles that provide direct access from the fire station to the movement area;
- there are crash gates for off airside that enable immediate response by ARFFS vehicles;
- suitable arrangements are in place for regular communication with the ARFFS provider about the provision of services at the airport, and
- the ARFFS provider has access to a reasonable area on the airport for storage, training other ARFFS related uses.

9. Removing Red Tape

The CASR Subpart 139.H and the associated MOS are very prescriptive and include a large amount of detail that must be learned, understood, demonstrated, promulgated and monitored.

While some prescription is required to reflect standards articulated by ICAO, opportunities for greater innovation and improvements to service delivery can be facilitated by a more systems and outcome based approach to regulation.

This approach would focus on the standards to be delivered and provide an opportunity for efficiency and productivity gains in the delivery of ARFFS without compromising safety.

This approach is in line with CASA's preferred systems-based model for regulation and is consistent with better practice regulation principles.

A number of possible amendments to the CASR have been initially identified including replacing prescriptive requirements relating to training and equipment provisions with the overarching regulatory requirement for the ARFFS provider to establish a safety management system (SMS) approved by CASA. CASA would then monitor and audit compliance by the ARFFS provider with the provisions of the SMS.

Some opportunities to remove or amend cumbersome and inefficient current requirements and replace them with a more outcome and performance based approach could include changes in the following areas:

- administrative requirements in relation to ARFFS personnel;
- qualifications and competencies required to perform duties;
- requirements associated with training programs, competency/skills maintenance and training providers;
- enabling routine changes to the Operations Manual without a regulatory process;
- approvals for commissioning vehicles and equipment;
- the provision of protective clothing and equipment;
- facilities and equipment required to support ARFFS ; and
- provision of training grounds.

10. Review

Consistent with best regulatory practice, it is recommended that CASA would undertake a post implementation review of the agreed changes to the ARFFS regulatory arrangements after 12 months of implementation of the new arrangements.

Attachment A: Overseas Practice

| Country | Legislation | Requirements |
|--|---|--|
| United States of America | Federal Aviation Regulations Part 139 Airport Certification | <p>Operators of Part 139 Airports must provide aircraft rescue and firefighting services during air carrier operations that require a Part 139 certificate.</p> <p>Part 139 requires FAA to issue airport operating certificates to airports that:</p> <ul style="list-style-type: none"> • serve scheduled and unscheduled air carrier aircraft with more than 30 seats; and • serve scheduled air carrier operations in aircraft with more than 9 seats. <p>This Part does not apply to airports at which air carrier passenger operations are conducted only because the airport has been designated as an alternate.</p> |
| United Kingdom – UK Civil Aviation Authority | <p>Civil Aviation Publication (CAP) 168 - Licensing of Aerodromes</p> <p>Article 208 of the Civil Aviation Publication (CAP) 393 Air Navigation</p> | <p><u>Chapter 8 Rescue and Fire Fighting Service</u></p> <p>Condition 2 in the Public Use and Ordinary aerodrome licences makes it mandatory for licence holders to provide a Rescue and Fire Fighting Service (RFFS) appropriate to their aerodrome and as detailed in this Chapter.</p> <p>Regulation requires flights in the UK by aircraft whose maximum total weight authorised exceed 2,730kg for the purpose of:</p> <ul style="list-style-type: none"> • the commercial air transport of passengers or public transport of passengers; • instruction in flying or the inclusion of an aircraft rating, night rating or a night qualification in a licence; • carrying out flying tests in respect of the grant of a pilot's license or the inclusion of a night rating; <p>to take place at and aerodrome licensed under the Air Navigation Order for</p> |

| | | |
|-------------|---|---|
| | | the take-off and landing of such aircraft or an European Aviation Safety Agency (EASA) certified aerodrome or government aerodrome. |
| Canada | Civil Aviation Regulations Part III- Aerodromes, Airports and Heliports, Subpart 3 | <p>The airport operator shall provide the aircraft fire fighting vehicles and the personnel required under Subpart 3 to respond to an aircraft emergency at the airport.</p> <p>A designated airport for ARFFS services is one which according to statistics, the total number of passengers that are emplaned and deplaned is more than 180,000 per year.</p> <p>Operator provide service 12 months after the statistics show that the airport meets the criteria for a designated airport.</p> |
| New Zealand | New Zealand Civil Aviation Authority, Part 139 Aerodromes- Certification, Operation and Use | <p>An applicant for the grant of an aerodrome operating certificate for a domestic aerodrome shall provide rescue and firefighting services where it services:</p> <ul style="list-style-type: none"> • a turbojet aeroplane with a seating capacity of more than 30 passengers engaged in regular transport operations, or • any non-turbojet aeroplane with a seating capacity of more than 30 passengers engaged in regular air transport operators and has more than 700 aeroplane movements in the busiest consecutive three months of the year. |