

CIVIL AVIATION
SAFETY AUTHORITY
AUSTRALIA

Ref: 98/1193

To: Technical Committee (TC3) Members
Project Team Members
Aerodrome Owners & Operators
Interested parties

Dear Sir/Madam,

**DISCUSSION PAPER - PROPOSED CHANGES TO
THE REGULATION OF AERODROMES IN AUSTRALIA**

Please find enclosed a copy of a discussion paper on proposed changes to the system of regulating Aerodromes in Australia for your consideration.

The discussion paper is the outcome of the Regulatory Framework Program Technical Committee 3 (Aerodromes) (TC3) deliberations and development of an appropriate regulatory framework for Australian aerodrome operators.

In developing the proposed changes to the system of aerodrome regulation, the intent is to remove distinctions between aerodrome standards based on whether passengers may be travelling either on a fare paying basis or as a charter participant on the same aircraft type. The intended outcome is to ensure passenger transport operations, whether in the nature of recurring, routine scheduled services or an occasional on-demand operation, enjoy the same level of aerodrome safety assurance *at the standard appropriate for the aircraft in use*.

This discussion paper is a working document enabling CASA to develop the Notice of Proposed Rule Making (NPRM) and final rules. All comments and suggestions received will be evaluated and assessed with a view to incorporating any necessary changes into the development of the NPRM and final rules.

Responses to this discussion paper should be forwarded by close of business on **Monday 18th May 1998** to CASA by one of the following means:

Post (no stamp required): Reply Paid 744, (DP9801RP), Regulatory Framework Program Office, GPO Box 2005, CANBERRA ACT 2601

Email: aerodromes_review@casa.gov.au

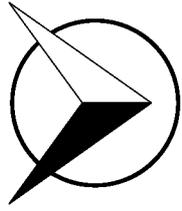
Fax (free call): 1800 653 897

This letter and the discussion paper can also be viewed on the CASA website (<http://www.casa.gov.au/review/>)

Thank you in advance for taking the time to respond to this proposal.

Grant Mazowita
General Manager
Regulatory Framework Program

20 April 1998



CIVIL AVIATION
SAFETY AUTHORITY
AUSTRALIA

Discussion Paper

Proposed changes to the Regulation of Aerodromes in Australia

**DISCUSSION PAPER ON
PROPOSED CHANGES TO THE REGULATION OF AERODROMES IN
AUSTRALIA**

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PROPOSED CHANGES TO THE REGULATION OF AERODROMES IN AUSTRALIA

AIM

The aim of this discussion paper is to:

- _ identify and discuss issues involved in changing the regulation of aerodromes in Australia; and
- _ seek comment on the joint aviation industry and CASA proposals in respect of changes to the regulation of aerodromes in Australia.

BACKGROUND

Why regulate aerodromes?

Regulation by CASA is a means used to require the adoption, and continued application, of certain procedures and items of equipment to a standard adequate to provide a minimum level of safety compliance. The outcome of aerodrome regulation is aerodromes which are appropriately equipped and which follow operating procedures designed to support safe aircraft operations.

An appropriate regulatory framework underpins and determines the minimum safety requirements for aerodromes and ensures consistent aerodrome design, construction, operation and maintenance specifications. It provides industry participants with high levels of confidence about published aerodrome information. By ensuring that reliable, valid and timely information related to aerodrome characteristics, facilities and serviceability status is available, the safety outcomes for aircraft operations (which include taxiing, take-off and landing) at aerodromes can be significantly improved.

Introduction

Australian aerodrome regulation has been in place for many years. Prior to 1992, aerodrome use was regulated by distinguishing between aircraft maximum take-off weight (MTOW), with 5700 kg MTOW as the determinant, and the type of operation, eg., Regular Public Transport (RPT), charter or private. Aerodromes were licensed for use according to compliance with specific standards (licensed aerodrome) for large aircraft operations, or authorised by general description (authorised landing area) for use by light aircraft.

Regulatory change in 1992 introduced, in Part IXA-Aerodromes of the Civil Aviation Regulations (CARs), the concept of requiring a licensed aerodrome operator at airports used for RPT operations by aircraft which have a maximum carrying capacity of more than 30 passenger seats; at other RPT aerodromes (except those used by aircraft with less than 10 passenger seats) the aerodrome operator is required to produce an annual safety inspection and report to confirm compliance with requisite standards.

Mandatory but graduated standards continue to be applicable to all aerodromes where RPT operations are conducted. For charter, aerial work or private operations, aerodrome operational suitability was determined by way of a general description of landing areas (known as authorised landing areas). In the 1992 legislative changes this system was withdrawn and, for non-RPT operations, the safe use of a place as an aerodrome became a pilot responsibility.

DISCUSSION

The Australian environment

While Australia, compared to much of the rest of the world, is considered to have a favourable environment for aviation, the environmental range of aerodrome locations is significant. The following factors are pertinent -

- _ Only 58% of Australian licensed aerodrome runways have an all weather surface.
- _ Runways at unlicensed aerodromes are usually gravelled or have a natural surface and are subject to physical degradation in wet conditions.
- _ Annual monsoon or cyclonic weather patterns which occur over the northern half of the continent often cause unsafe aerodrome conditions due to flooded or soft, wet runway surfaces.
- _ Many aerodromes are unattended and have insufficient traffic to support full time staff.
- _ Many rural towns, pastoral properties, minesites and remote communities are dependent on air transport, and hence a serviceable aerodrome, for practical, routine and emergency transport links.
- _ The ownership and operation of many Australian aerodromes, including some of our largest, rests with private corporations or municipal agencies (Councils, Port Authorities, Boards of elected officials and so on).
- _ Most aerodromes in Australia are not restricted to a particular operator; they are generally operated for public use by more than one airline and other aircraft operators.

Aerodrome accident records

Bureau of Air Safety Investigation (BASI) statistics for aircraft accidents on or near aerodromes since 1987 are shown in the following tables. Table 1 is for the period 1987 to 1991 and Table 2 is for the period 1992 to 1996.

The tables refer to 5 year periods pre- and post- the 1992 CAR Part IXA aerodrome regulations changes. No attempt has been made to analyse these statistics in detail or in comparison with accident records from other regulatory authorities. They are presented with a view to identifying trends only. The numbers of accidents are for events where the degree of damage associated with an accident is substantial or the aircraft was destroyed.

OPERATION AND LOCATION	DEGREE OF INJURY			NO. OF FATALITIES
	NIL /MINOR	SERIOUS	FATAL	
Airline operations				
- on aerodrome	3	2	0	0
Commuter & SAL*				
- on aerodrome	14	0	0	0
- within 5 kms	2	0	1	3
Charter				
- on aerodrome	100	0	0	0
- within 5 kms	16	0	7	24
All operations	135	2	8	27

Table 1 Accidents on or near Australian aerodromes, fixed wing aircraft passenger transport activity, 1987 - 91.
Source: BASI
SAL* = Supplemental Airline

OPERATION AND LOCATION	DEGREE OF INJURY				NO. OF FATALITIES
	NIL	MINOR	SERIOUS	FATAL	
High capacity RPT					
- on aerodrome	4	0	0	0	0
- within 5 kms	1	1	0	0	0
Low capacity RPT					
- on aerodrome	14	0	0	0	0
- within 5 kms	1	0	1	2	9
Charter operations					
- on aerodrome	114	3	2	0	0
- within 5 kms	12	4	4	4	12
All operations	146	8	7	6	21

Table 2 Accidents on or near Australian aerodromes, fixed wing aircraft passenger transport activity, 1992 - 96.
Source: BASI

While the information in the tables is not intended to serve as a means for detailed analysis of accident events (because causal factors for these accidents have not been identified), the comparison between on-aerodrome accident numbers for RPT and charter operations is of interest.

In 1992-96 there were 28.5 times more on-aerodrome accidents for charter operations than for high capacity RPT operations and 8 times more than for low capacity RPT operations. In the 1987-91 period the figures were 33.3 and 7 respectively. This indicates that the more formal regulatory regime applied at aerodromes serving RPT operations, compared to the non regulated nature of other aerodromes and landing areas, can contribute to establishing safer conditions for aircraft operations.

Also of interest, the figures indicate that in the period where regulations were changed to remove the authorisation of aerodromes by general description (post 1992), the number of on-aerodrome accidents in charter operations rose from 100 in the previous period to 114 in the later period. It was during the later period where aerodromes used for charter services were not subject to any aerodrome standards. The numbers of accidents on-aerodrome in the low capacity RPT group, where aerodrome standards continued to apply post 1992, remained relatively stable.

While it is accepted that many factors contribute to accidents, the indicative trend is that accidents to aircraft on-aerodrome can be reduced, and thus operations be made safer, when aerodromes are required to comply with regulatory requirements.

Current regulatory regime

An aerodrome operator may apply to CASA to be licensed. Once an aerodrome operator is licensed, the aerodrome is called a "licensed aerodrome", i.e. an aerodrome operated by a licensee. Technically the aerodrome itself is not licensed, but CASA issues a licence for a person to operate an aerodrome if the provided infrastructure (management and personnel), procedures and facilities are in compliance with CASA standards.

RPT operations using aircraft which carry more than 30 passengers must operate from a licensed aerodrome or the operation may not be conducted.

If RPT operations at an unlicensed aerodrome are conducted (low capacity RPT), the aircraft used must have a maximum capacity of 30 or less passenger seats, and the aircraft operator or pilot in command must ensure operations are not conducted unless the aerodrome meets standards as if it were a licensed aerodrome and a suitable reporting function is available.

Additionally if low capacity RPT operations are conducted in aircraft which have a maximum take-off weight not exceeding 5700kg, any aerodrome may be used which complies with the standards specified in Civil Aviation Order (CAO) 82.3 Appendix III or which the CASA has approved for an operator. At aerodromes used for low capacity RPT in accordance with the provisions of CAO 82.3, other significant activities associated with the use of such aerodromes (such as promulgation of aerodrome data, serviceability inspecting and reporting, passenger safety, control of unauthorised entry to the movement area and marking and lighting) are the responsibility of the aircraft operator.

For operations by aircraft of any size engaged in charter (including “closed charter”) or private operations, CASA has no mandatory aerodrome standards or requirements. Guidelines for aeroplane landing areas are available, but the use of such landing areas is not recommended for aircraft with a MTOW greater than 5700 kg.

There are no guidelines or minimum aerodrome standards specifically for charter operations by aircraft with a MTOW greater than 5700kg. Although the expectation is that “heavy” charter aircraft aerodromes would comply with licensed aerodrome standards, there is no obligation that this be so. Consequently the safety standards for unlicensed aerodromes used by aircraft on charter operations may be significantly lower than those which would be required if the same aircraft were to use the same aerodrome for an RPT operation.

Comparative regulation of aerodromes

The Australian system of aerodrome regulation differs from that adopted in other countries. See Attachment 1 for an overview of approaches taken by authorities in the United Kingdom (UK), the United States (US), Canada and New Zealand. While no two countries are identical in the approaches taken or methods adopted, the comparative analysis identifies common themes.

Note: The International Civil Aviation Organization (ICAO), through Annexes to the Convention, provides standards and recommended practices for aerodromes and facilities, but does not address how a regulatory regime for aerodromes should be considered by a State.

Primarily, aerodromes tend to be more stringently regulated when they are used to support passenger transport services.

The degree or extent of passenger carriage which requires a ‘licensed’ or ‘certified’ aerodrome varies significantly, ranging from:

- _ in the UK, most passenger transport operations;
- _ in Canada, scheduled airline transport services conducted in aircraft certificated to carry more than 20 passenger seats; (**Note:** this system of regulation is under review);
- _ in the US, all airline transport operations conducted in aircraft of more than 30 passenger seats; (**Note:** safety based studies by the National Transportation Safety Board have identified the need for, and recommended that aerodromes supporting airline services conducted by aircraft of more than 10 passenger seats, be certificated; to date the required legislation amendment process has not been finalised);
- _ in New Zealand, scheduled airline transport services conducted in aircraft of more than 30 passenger seats.

Classification of Operations Policy

In April 1997 the CASA Board and Minister for Transport and Regional Development approved a new *Classification of Operations policy* to govern the operation of civil aviation in Australia. The policy divides aircraft operations into three categories:

- _ *Passenger transport*, which amalgamates both regular passenger transport and charter passenger operations into a single category;
- _ *Aerial work*, encompassing aircraft “working” operations where only essential crew are carried; and
- _ *General aviation*, an amalgamation of other activities previously considered “private”, “recreational” or “sport”.

The Classification of Operations policy defines the category of operation and also sets out what the role is for CASA in respect of each category. In regard to passenger transport, CASA’s role is to act to protect passengers, crew, other airspace users and people and property on the ground. In regard to aerial work, the role is limited to protecting crew, other airspace users and people and property on the ground. In respect to general aviation activity, the functions for CASA are to protect other airspace users and people and property on the ground and to ensure that participants are adequately informed of any risks to which they are exposed through participation in such activities.

The system of aerodrome regulation will be more coherent and clearer if the overall regulatory regime is aligned with and satisfies the operational divisions identified in the classification of operations policy. To achieve this and so that CASA may prescribe operations to aerodromes which comply with relevant specified graduated standards, the system of aerodrome regulation requires amendment to align with the proposed regime. Overseas experience provides some guidance as to how such a realignment may be developed. The structure of regulation should provide most regulatory focus on aerodromes serving passenger transport operations; aerial work and general aviation aerodromes should need minimal regulatory provisions.

This paper proposes a means of aerodrome regulation for those aerodromes used for passenger transport operations. Any aerodrome obligations related to aerial work or general aviation operations will be addressed by the rules specifically applicable to those operations.

THE PROPOSAL

Proposed regulatory regime

Technical Committee 3 -Aerodromes (TC3) of the Regulatory Framework Program considered the question of an appropriate regulatory framework for Australian aerodrome operators but could not resolve the matter to finalisation pending resolution of details associated with the classification of operations policy.

Note : The reports of TC3 are available through several means:

- _ Call CASA’s Programs Office on 1800 687 342;
- _ send an e-mail to aerodromes_review@casa.gov.au; or
- _ fax your request to 1800 653 897.

More information on Technical Committee 3 and its activities is available at:

- _ CASA’s website page <http://www.casa.gov.au/review/frame/drome.htm>, or from
- _ CASA’s fax-on-request by calling 1800 657 990 and following the voice instructions.

The CASA Board and the Minister have confirmed the application of the classification of operations policy in Civil Aviation Safety Regulation (CASR) development. To promote clear

regulation, the rules in Part 139 (Aerodromes) of the CASRs will be supplemented by detailed CASA standards published in a manual of aerodrome standards. Advisory circulars will also be published to indicate a means of achieving compliance with the standards and thus satisfying the regulations.

Building from the work and the deliberations of TC3, CASA believes regulation should continue for aerodromes used in support of passenger services in all airline and air taxi operations. The standards to which regulation is applied are modified to some extent within all overseas systems according to whether a public passenger transport service is 'scheduled' or 'unscheduled' and, generally, the standard for an aerodrome with scheduled services is higher than for one which supports only unscheduled services.

Such a division has not been always been precise in providing a distinction between RPT and charter (in the scheduled/unscheduled sense) for Australian operations, and the proposed model of aerodrome regulation does not attempt to relate standards to a scheduled or unscheduled type of service. Instead it is proposed that the applicable standards will be graduated according to characteristics of the type and size of aircraft in use.

In developing the changes to our system of aerodrome regulation, the intent is to remove distinctions between aerodrome standards based on whether passengers may be travelling either on an individual fare paying basis or as a charter participant. The intended outcome is to ensure passenger transport operations, whether in the nature of recurring, routine scheduled services or an occasional on-demand operation, enjoy the same level of aerodrome safety assurance *at the standard appropriate for the aircraft in use*.

A multi-level integrated system of regulation is proposed, with associated requirements for aerodromes and published aerodrome data. CASRs, aerodrome standards and advisory material will be produced to support the model described below.

– **Level 1 aerodrome**, being an aerodrome which has:

- physical characteristics, facilities, equipment and obstacle limitation surfaces commensurate with the CASA standards associated with the aircraft intended to be used; and
- the aerodrome is one where the pilot is satisfied that in the circumstances (s)he will be able to land or take-off in safety.

A Level 1 aerodrome is to be used for air taxi operations by aircraft with a maximum carrying capacity of less than 10 passenger seats. A level 2 or 3 aerodrome may also be used for such operations.

– **Level 2 aerodrome**, being an aerodrome which has:

- physical characteristics, facilities, equipment and obstacle limitation surfaces commensurate with the CASA standards associated with the aircraft intended to be used; and
- a formal inspection and reporting service in accordance with CASA standards.

A level 2 aerodrome is to be used for airline operations by aircraft with a maximum carrying capacity from 10 to 30 (inclusive) passenger seats. A level 3 aerodrome may also be used for such operations.

– **Level 3 aerodrome**, being an aerodrome which has:

- physical characteristics, facilities, equipment and obstacle limitation surfaces commensurate with the CASA standards associated with the aircraft intended to be used; and
- a management system and formal operating procedures in accordance with CASA standards.

A level 1 aerodrome is to be used for airline operations by aircraft with a maximum carrying capacity of more than 30 passenger seats.

An aerodrome with a management system, including an aerodrome manual, will have in place proactive, as well as reactive, measures for aerodrome safety assurance. This means that, for example, potential obstacles in the vicinity of the aerodrome will be managed through monitoring proposals prior to commencement of construction whereas an aerodrome operator with only an inspection and reporting service will usually only identify and report after an object has become an obstacle or potential hazard to aviation. Similarly, preventative measures called up by aerodrome manual requirements for facilities such as runways, markings, lighting etc will ensure continuing operational serviceability whereas an aerodrome operator who provides only an inspection and reporting service will usually be able to initiate repair and maintenance action when a facility has been found to have fallen below limits.

AERODROME	STANDARDS	AVAILABILITY
LEVEL 1 aerodrome	standards suited to aircraft in use.	Air taxi provided aircraft requirements pilot responsible to assess if safe operation can be conducted. do not exceed the capabilities.
LEVEL 2	standards suited to aircraft in use. inspection and reporting system.	Any airline, provided aircraft used has 30 or less passenger seats, and the aircraft requirements do not exceed the aerodrome capabilities. Any air taxi.
LEVEL 3	standards suited to aircraft in use. management system. formal operation procedures.	Any airline or air taxi, provided aircraft requirements do not exceed aerodrome capabilities.

Table 3 Schema of Australian aerodrome regulatory requirements for passenger transport services

Aerodrome information.

Information about an aerodrome comprises of relatively stable data about the aerodrome physical characteristics and variable notifications associated with the current condition of the aerodrome and its facilities. Changes to both sets of data as aerodrome information can best be made available to industry users by the aerodrome operator. Additionally the aerodrome operator is best suited to provide, and be responsible for, the accuracy of information related to a particular aerodrome.

Any aerodrome operator may have aerodrome data (either full or limited information) published in AIP ERSA, provided the standards required by CASA for publication are satisfied. If operational information (full information) is published, the aerodrome operator will be required to provide an inspection and reporting system in accordance with CASA

standards and to use the NOTAM system so that variation to published operational data is promulgated to industry users by the most rapid possible means.

- . CASA standards will be produced which describe the verification needed before publication in AIP ERSA of individual items of aerodrome data as well as the permitted data variation which can be tolerated before notification is necessary.

Publication of full aerodrome information for level 2 and 3 aerodromes in AIP ERSA is proposed to be mandatory.

Publication of aerodrome information for level 1 aerodromes in AIP ERSA is optional. The extent of published information, eg full details, or limited information (perhaps only to the extent of aerodrome name and operator contact details), may be at the aerodrome operator discretion. Pilots of air taxi aircraft who are unable to ascertain whether an aerodrome meets the relevant CASA standards appropriate to the aircraft, and thus not be able to determine if the aerodrome is one where the pilot can be satisfied that in the circumstances (s)he will be able to land or take-off in safety, will need to obtain the information from alternative sources such as the AOPA or other commercial airport directories.

AERODROME TYPE	ERSA INFORMATION AND APPLICATION	INFORMATION STANDARDS
LEVEL 2 OR 3	FULL DATA PUBLICATION IN AIP ERSA IS MANDATORY variation.	CASA standards apply to data items and permitted range of Inspection/reporting to CASA standards is required. Access to NOTAM permitted
LEVEL 1	FULL DATA PUBLICATION OR LIMITED OR NIL DATA PUBLICATION	as for Level 2 or 3 publication of unverified operational data not permitted, but generic non-operational information may be. NOTAM access not available.

Table 4 Aerodrome information publication - aerodromes used for air transport services.

Regulation of Aerodromes

Aerodrome operator certification is the process adopted to enable CASA to effectively regulate aerodromes used in passenger air transport operations and assist with the provision of a network from which airline and air taxi aircraft operators can conduct operations with certainty and confidence that valid aerodrome information is available. In regulatory terms, certification is a tool to ensure compliance with CASA mandatory requirements and facilitate entry control to the aviation system. Certification, by way of CASR Part 139, for an aerodrome provided exclusively for use by aerial work or general aviation operations is not anticipated or provided for in this proposal.

To implement the proposed aerodrome regulatory model, the following processes should be adopted:

An *aerodrome operator certificate* will be granted to an aerodrome operator who has satisfied CASA as to

- conformity with CASA standards appropriate to aircraft intended to use the aerodrome; and
- production of an aerodrome manual to CASA standards; and
- publication of full aerodrome information in AIP ERSA.

An *aerodrome operator certificate* will be required if passenger transport operations are conducted by aircraft with a maximum carrying capacity of more than 30 passenger seats.

An *aerodrome operator certificate (restricted)* will be granted to an aerodrome operator who has satisfied CASA as to

- conformity with CASA standards appropriate to aircraft intended to use the aerodrome; and
- provision of an approved formal inspection and reporting system for aerodrome serviceability; and
- publication of full aerodrome information in AIP ERSA.

An *aerodrome operator certificate (restricted)* will be required if passenger transport operations are conducted by aircraft with a maximum carrying capacity of between 10 and 30 (inclusive) passenger seats.

An aerodrome operator certificate will not be required for aerodromes which do not support airline operations. However, at an aerodrome where a certificate has not been issued, air taxi operations (passenger transport conducted in aircraft with a maximum carrying capacity of less than 10 passenger seats) may be conducted if:

- the air taxi operator ensures that CASA aerodrome standards appropriate to the aircraft in use are satisfied; and
- the pilot can be satisfied that the aerodrome is in a safe condition for each operation.

At an aerodrome supporting air taxi operations, the aerodrome operator may choose to publish full, partial or nil information in AIP ERSA; however if ERSA information is published it is to be in accord with relevant CASA standards. The standards for publishing full or partial aerodrome information will require data verification and an approved formal aerodrome inspection and reporting service for aerodrome serviceability if full information is to be published.

IMPACT OF THE PROPOSAL

Adoption of the proposed regulatory regime for aerodromes will generate some changes as well as formalising some existing processes.

The significant impacts are shown below. Additionally and importantly, the regulatory changes will place responsibility in passenger transport airline activities for aerodrome operations **on the aerodrome operator**, who will have the requisite knowledge, systems and skilled personnel. Airline operators will be able to concentrate on airline, as opposed to aerodrome, operations.

1. **Licensed aerodromes**
currently 264 in Australia status quo is unchanged, no additional impositions are made on aerodrome or airline operators.

2. **Unlicensed aerodromes**

- | | |
|--|--|
| <p>(a) used for RPT by aircraft with from 10 to 30 seats
<i>currently 18 in Australia</i></p> | <p><i>Aerodrome operator certification (restricted)</i> will be required for operations to continue. Standards required under CAR 92A will continue but responsibility for serviceability reporting will be transferred from the airline to the aerodrome operator. Estimated costs per aerodrome may be reduced by 30% if full ERSA information exists.
Aerodrome operator will need to produce documented simple specific aerodrome procedures (CAAP required)</p> |
| <p>(b) used for charter by aircraft with more than 30 seats
<i>currently 8 in Australia</i></p> | <p><i>Aerodrome operator certification</i> will be required for services to continue.</p> |
| <p>(c) used for charter by aircraft with from 10 to 30 seats
<i>currently 24 in Australia</i></p> | <p><i>Aerodrome operator certification (restricted)</i> will be required for operations to continue. No aerodrome standards now exist, but will be required. Aerodrome operator will be responsible for a serviceability reporting service.</p> |
| <p>(d) used for charter or LCRPT by aircraft with MTOW below 5700kg
<i>currently 38 in Australia being used on LCRPT operations. Charter adds number possibly in the hundreds.</i></p> | <p>May be used for air taxi operations; <i>aerodrome operator certification</i> will not be required. Aerodrome physically to be in compliance with CASA standards associated with the critical aircraft type in use. Pilot may assess, or arrange for assessment of, aerodrome serviceability.</p> |

The proposed regime results in a flexible, economical and more streamlined approach. Passenger transport by air taxi operators at basic aerodromes is permitted as pilots may accept responsibility for safe operations by their own assessment of aerodrome conditions at the time of an operation. Airline crews on the other hand will have assurance of aerodrome information and facilities provided, as published in AIP ERSA, unless notified of changes to the aerodrome, its current condition current condition and/or facility serviceability status through the NOTAM system.

Costs and benefits

While costs for the 264 currently licensed aerodromes will not be affected, some unlicensed aerodrome operators will be faced with increased expenditures if services are to continue at the existing level.

It is estimated that to certificate an aerodrome for airline operations by aircraft of more than 30 passenger seats, a cost of \$3500 to \$6500 would be incurred. This would apply to the 8 aerodromes in item 2(b) above.

To certificate an aerodrome for airline operations by aircraft with from 10 to 30 passenger seats, a cost of \$1500 to \$3500 is anticipated.

This would apply to the 42 aerodromes in items 2(a) and 2(d). The approximate total cost (of a one off nature) to industry would be in the order of \$145,000.

For aerodromes supporting passenger transport operations by aircraft with more than 10 seats, some recurring costs would be incurred and should be considered. The operators of aerodromes in items 2(b) and 2(c) (32 locations) would incur costs associated with provision of an inspecting and

reporting service, including reporting officer training, and would need to provide an annual safety inspection. The operators of aerodromes in item 2(a) (18 locations) are now required to provide an annual safety inspection, but will incur costs to implement serviceability reporting. Approximate typical costs are

- _ \$1000 for an annual safety inspection, 32 locations affected
- _ Aerodrome serviceability costs will vary greatly depending on the frequency of operation. This estimate is based on an average 2 inspections per week, 1.5 hours per inspection, labour \$45 per hour = \$6750 per annum, 50 aerodromes affected (at 18 locations the inspections currently are the aircraft operator obligation and represent a transfer of cost within the industry).

The operators of aerodromes in item 2(d) (38 locations) do not have to have an annual safety inspection, and costs associated with provision of the inspecting and reporting service for each airline user will not be incurred as pilots may assess aerodrome serviceability. For these aerodromes savings of \$6750 per annum may be realised.

If the regulatory changes contributed to a reduced number of accidents, or prevented accidents increasing, the cost of regulatory changes would be significantly less than the benefits realised by the accident not occurring. As an example, the CASA SAPCOM project identified typical direct costs for aircraft accidents ranging from \$17,000 (minor collision with apron equipment) to \$1.9 million (aircraft excursion from the runway). Recurring costs associated with aerodrome operations are usually recovered from fees levied by the aerodrome operator. Due to the low introduction costs of aerodrome certification, the regulatory changes proposed should generate a positive benefit/cost

CONCLUSIONS

Adoption of the principles outlined in this paper is proposed so that aviation safety will be enhanced. Specifically for passenger transport operations, aerodromes will be subject to regulation to promote consistent application of CASA standards for the aerodrome, its operation and the information published about it.

The regulations will be designed with a focus on protecting passengers, crew, other airspace users and people and property on the ground by the proposed scope of application. They are intended to be systems based and non prescriptive in nature. For airline transport operations in aircraft with a maximum carrying capacity of 10 or more passenger seats, a graduated certification process for the aerodrome operator will be required.

For aerodromes used in air taxi operations the aerodrome standards are to be compatible with the requirements of the aircraft used, but the use of formal systems for aerodrome information publication and condition reporting are optional.

For passenger transport operations, aerodrome standards will reflect the demands of the most critical aircraft operated without differentiation on the basis of frequency of operations.

Attachment 1

Overview of approaches taken by Authorities in the UK, USA, NZ and Canada

UNITED STATES

An aerodrome operator may apply to the FAA for an airport, or limited airport, operating certificate to which there is an entitlement if all requirements are satisfied.

If scheduled passenger carrying operations are conducted at an aerodrome by an air carrier using aircraft with more than 30 passenger seats, the aerodrome operator must have an airport operating certificate.

If unscheduled passenger carrying operations are conducted at an aerodrome by an air carrier using aircraft with more than 30 passenger seats, the aerodrome operator must have a limited airport operating certificate.

(Safety-based studies in the US have generated a recommendation that aerodromes supporting services conducted by aircraft of 10 or more passenger seats be certificated; to date the required complementary legislation has not been enacted.)

RFFS may be waived for those aerodromes with an activity level of less than 0.25% of annual total air carrier passengers enplaned.

Commuter and on-demand operations may only be conducted at aerodromes adequate for the operation (including specified lighting for night operations)

NEW ZEALAND

An aerodrome operator may apply to the NZ CAA for an aerodrome operating certificate to which there is an entitlement if all requirements are satisfied. An aerodrome operating certificate may be issued for up to 5 years.

If regular air transport operations are conducted at an aerodrome by any aeroplane having a certified seating capacity of more than 30 passengers, the aerodrome operator must hold an aerodrome operating certificate.

Air transport aeroplanes certified for more than 30 passengers and engaged on a scheduled flight must use a certificated or licensed aerodrome. Other aerodromes may be used for air transport operations if among other things

- the aerodrome characteristics are commensurate with the aircraft in use;
- the place is suitable to use as an aerodrome; and
- the aircraft operator has a checking system to determine the condition of the aerodrome.

A person operating a fixed wing aircraft on other than air transport operations may use a place for landing and taking off that is suitable, clear of objects and obstructions and permits operations not in conflict with other aerodrome circuit area or instrument approach procedure traffic.

CANADA

Transport Canada may permit an aerodrome to be registered if the operator provides certain limited information. Registered aerodrome information is published.

Canada considers an aerodrome to be an 'airport' where the aerodrome operator has applied for and been issued with an Airport Certificate covering the operation of that airport.

Canadian airline scheduled air transport operations utilising an aircraft certified for 20 or more passengers are generally required to operate between airports.

An airport certificate must be held by the operator of an aerodrome that is within the built-up area of a city or town, is a land aerodrome used for scheduled passenger transport airline operations. An airport certificate for any other aerodrome may be required if in the public interest or to further the safe operation of the aerodrome, eg the main base for a flying training unit.

An airport certificate is generally not issued unless a requirement is established.

UNITED KINGDOM

Within the United Kingdom, the use of a licensed aerodrome is mandatory for any operation involving:

- aircraft with a MTOW greater than 2370 kg conducting passenger public transport;
- aircraft with a MTOW less than 2370 kg conducting public transport of passengers at night, scheduled public transport of passengers or public transport of passengers which begins and ends at the same airport; and
- flying training and flight testing.

How to submit comments on this Discussion Paper

Written comments should be forwarded by close of business on *Monday 18th May 1998* to CASA by one of the following means:

Post (no stamp required):	Reply Paid 744 Regulatory Framework Program Office GPO Box 2005 CANBERRA ACT 2601
E-mail:	aerodromes_review@casa.gov.au
Facsimile (free call):	1800 563 897

Inquiries can also be sent to the address above, or by telephoning 1800 687 342 (international +61 2 6217 1520), or by telephoning the Project Coordinator on (02) 6217 1244 direct during Australian east coast business hours.