

The principal objectives of the review are to investigate:

- the structures, effectiveness and processes of all agencies involved in aviation safety;
- the relationship and interaction of those agencies with each other, as well as with the Department of Infrastructure and Regional Development (Infrastructure);
- the outcomes and direction of the regulatory reform process being undertaken by the Civil Aviation Safety Authority (CASA);
- the suitability of Australia's aviation safety related regulations when benchmarked against comparable overseas jurisdictions; and
- any other safety related matters.

This author will address these objectives with regard to private and sport aviation.

## Private Aviation

### Pilot Licencing

CASA has just delayed the implementation of Part 61 Flight Crew Licencing.

The regulation seems unnecessarily verbose, complicated and sometimes internally contradictory.

*I suggest it be torn up and the US FAA regulation FAR 61 substituted for private operations. Alternatively the Canadian or NZ regulation should be adopted. CASA is clearly unable to produce a simple, clear and concise document. After all they have only had 19 years to do so.*

## Medical Standards

There are at least 3 major studies, covering many years and thousands of pilots, undertaken in the US over the last 30 years or so which indicate NO benefit to safety from having a formal aviation medical for private pilots. The formal medical is clearly an unnecessary expense and should be eliminated. The current CASA "Driver's Licence Medical" is a sham if it is examined carefully. The only concession is that the examiner is a GP (if you are able to find a willing one), the medical standard is such that if you pass this examination you will pass a Class 2 for a PPL, in return for which there are a lot of restrictions on use such as only one other person in the aircraft, below 10,000 feet only ONE engine (why that?) and a weight restriction on the aircraft.

*Recreational Aviation Australia (RAAus) has a true Driver's Licence medical – possession of a State driver's licence for passenger cars with no medical restrictions. This should be adopted in Australia for day VFR private aviation in VH registered private aircraft.*

There is currently an effort underway in the USA to adopt this medical standard for private day VFR aviation.

I do not believe the private pilot population is still considered as a military "ready reserve", the likely origin of the formal medical requirement. We will not be defending Perth with Spitfires flown by former private pilots quickly inducted into the Air Force.

Anyone wishing to use the Australian PPL overseas can of course then get a Class 2 medical to conform to ICAO practice at least until common sense and evidence based regulation prevails world wide.

Maintenance of private aircraft for private use

The current CASA regulations are too complicated and long winded.

*I suggest Australia adopts the relevant FAA regulations for maintenance of private aircraft*

*The Canadian regulations may also serve as a useful template.*

In Canada, simple aircraft, gliders and motorgliders may get a special Certificate of Airworthiness for Owner Maintenance. This should be adopted in Australia. Especially in light of the current CASA war on maintenance organisations (Attempted safety by Hyper-regulation) and LAMEs which eventually will result in a shortage of maintainers. I have had my aircraft grounded for several days by CASA by Registered Letter over an extremely minor issue that could have been resolved by a simple phone call. There was nothing physically wrong with the aircraft and all required maintenance had been done.

Recreational Aviation

Background

In Australia recreational aviation is in the hands of 9 different private bodies who may have delegations from CASA to perform certain operational and airworthiness functions and may have exemptions from various Civil Aviation Regulations given to them by CASA.

YET WE ALL FLY IN THE SAME AIRSPACE

Some of the bodies are more successful than others. RAAus has been growing strongly in recent years while the GFA has shrunk to half its maximum size since 1983.

These bodies all have different exemptions from the various regulations which they jealously guard but, as shown by the recent on going aircraft registration fiasco at RAAus and the difficulties of the GFA with airworthiness paperwork, are mostly incompetent (at least according to CASA). Their accident rates, mainly caused by poor pilot training, at least in the GFA, aren't exactly exemplary. The GFA record in recent years of instructor rated pilots killing and injuring their students and passengers is shameful.

The first body was the Gliding Federation of Australia (GFA) formed in 1949 which was used as a template for other bodies as recreational aviation developed.

The other bodies include the Parachute Federation (PFA), Hang Gliding Federation(HGFA), Sport Rotorcraft Association (gyrocopters), Australian Warbirds Association, Recreational Aviation Australia (RAAus) (ultralights), Australian Balloon federation, Sports Aircraft Association (SAAA)(amateur built aircraft sometimes known as Experimental or homebuilt) and the Model Aircraft Association of Australia.

The GFA members operate VH registered gliders but without pilot licences and with self declaration medicals. The gliders may launch themselves with auxiliary power units, winches or be towed by a VH registered aircraft flown by a private pilot or CPL/ATPL holder or an RAAus aircraft flown by an RAAus Pilot Certificate holder.

Glider pilots may fly in controlled airspace despite not having a PPL or higher or an aviation medical, only a GFA controlled airspace logbook endorsement is required.

Maintenance is by holders of CASA maintenance authorities issued by GFA under delegation.

*I see no reason why holders of a PPL or higher licence with gliding experience, who hold a glider maintenance authority, should not operate a motorglider in the same way they operate a GA or VH Experimental aircraft, without being forced to be members of the GFA. It seems difficult to identify any safety problem associated with this.*

PFA members jump from mostly standard VH registered aircraft flown by private, commercial or ATPL licence holders and are maintained by CASA licenced LAMEs.

AWA members fly ex military aircraft on CASA licenses, maintained by LAMEs with appropriate training.

SAAA members fly Amateur built aircraft on CASA PPL, CPL or ATPLs. Maintenance is by the owners or LAMEs. Amateur built aircraft may also be operated by owners/builders who are not SAAA members but who hold CASA pilot licences who have the aircraft maintained by CASA licenced LAMEs.

It was Coalition party policy in 1996 to adopt US style Experimental regulations. This was achieved in 1998 despite opposition within CASA and some sporting bodies like the GFA. There seems to have been an effort within CASA to roll back the spirit of these regulations despite the unleashing of Australian creativity in design as a result. The previous Amateur Built regulations (101.28) were a shameful example of cultural cringe where Australians were judged incapable of designing amateur built aircraft but could build aircraft designed in the US with a “safe history of operation”.

RAAus members have RAAus Pilot Certificates (roughly equivalent to an outside controlled airspace PPL) and largely do owner maintenance except for aircraft used for training which require inspection and maintenance by holders of a Level 2 maintenance authority. The aircraft range from amateur built to factory built with retractable landing gear and controllable pitch propellers.

RAAus pilots cannot fly in controlled airspace unless they hold a PPL or higher.

RAAus aircraft have an arbitrary weight limit. This results in aircraft that are relatively fragile and not as robust as heavier aircraft used for similar purposes. I suspect in the coming years there will be many fatigue issues on these airframes as they age.

Balloons may be flown privately and administered by the ABF but commercial ballooning is directly regulated by CASA.

MAAA members (about 10,000 to 11,000 people) comprise something like 25% or less of those people flying radio controlled model aircraft in Australia according to industry sources. Trying to compel these people to join MAAA might be interesting.

Weightshift powered aircraft (trikes) may be administered under RAAus or HGFA. I'm sure it is regarded as not in accordance with the rules for a RAAus pilot with a weightshift rating to fly a HGFA registered trike. They may be the same type of aircraft. Bizarre!

The other participants in recreational aviation suffer from various degrees of compulsion and coercion by CASA to join the respective organisations, despite the fact that many of them may already have private, commercial or air transport pilot licences and they may have personal objections to the way these bodies conduct themselves.

For another example a PPL holder can use his PPL to fly a VH registered Jabiru aircraft but cannot fly the same type of identical aircraft with RAAus registration unless he joins RAAus and does a 5 hour “conversion” course. However he is then REQUIRED to have a PPL to fly in controlled airspace.

This does not seem in any way sensible or logical nor does it contribute in any way to aviation safety.

This system is full of inconsistent standards and anomalies.

CASA now considers gliders to be unable to be maintained by LAMEs despite that they are generally simpler than many of other aircraft LAMEs work on or in the case of complex motorgliders LAME maintenance may be preferred by the owner due to the difficulty of finding the volunteer maintainers in the Gliding Federation who are skilled, knowledgeable enough and willing to do the task.

There is the ludicrous example in the proposed and delayed Part 61 where CASA will issue a Private Pilot Licence (Glider) FOR USE OVERSEAS ONLY. Why any overseas authority would honour this is inexplicable to me. This and the maintenance example above are simply designed to entrench the GFA monopoly as a result of collusion between GFA executive and CASA officers.

There are many different design and certification standards in recreational aviation. This seems unnecessary, administratively complex and expensive.

Then there are the aircraft types that “fall between the cracks” like retractable engined ultralight motorgliders. The GFA really doesn't want these and the RAAus refuse to deal with them. I know of one fatality with these where I believe the compartmentalisation of recreational aviation may have contributed.

#### Consultation

When CASA changes some rules or regulations regarding recreational aviation it claims its consultation obligations have been met because it consulted with the few people controlling the organisation in question. This is clearly not so where the SAAA or MAAA are concerned where there are many people operating these aircraft outside the claimed “representative body” and also ignores the interests of other airspace users or the public on the ground.

*CASA has a well known and robust consultation process and the CASA Discussion Paper, NPRM, FNRM process should be followed by CASA to allow full public discussion of any rule changes in any branch of aviation.*

There is also the question of how “representative” these bodies truly are of their membership. The GFA certainly isn't as members never get a vote on who is on the board. Other bodies appear to be more representative.

*If CASA is to delegate anything it should ensure that the body is truly representative and complies with the democratic norms and expectations of Australian society before doing so.*

All of the above leads to my conclusion that the above situation is a regulatory shambles, causes unnecessary expense and difficulty, particularly to those participants in more than one recreational aviation activity and is open to corruption and cronyism in the recreational aviation bodies which may leak back into CASA. In some cases the CASA officers overseeing sport aviation are members of one or more of these bodies. This is a clear conflict of interest.

*I believe the original 2002 discussion paper by CASA into Recreational Pilot licences should be re-activated. At the time two GFA executives and one from the RAAus went to the Minister, John Anderson and had consideration of the proposal for gliding and ultralight aviation, killed.*

They did not consult their memberships despite the fact that that proposal allowed for their organisations to continue as before but that this RPL would be an option if pilots wanted it.

I know more than few GFA members were in favour of it as having a government issued licence would make their wives and friends happier and would ease the attainment of ratings to fly other kinds of aircraft as the basic ground school and aeronautical knowledge would already have been done.

*I believe the RPL should be resurrected and a common aeronautical ground school and written exam be required. Specific modules would be added for particular types of aircraft.*

*Flight testing for issue of the licence or ratings by directly CASA delegated examiners (not via the sport aviation bodies).*

*There should be the ability to get a “recreational aircraft maintenance authority” to allow an owner to maintain and sign the maintenance release of his own aircraft if he so desires. Aircraft used for training would require maintenance by holders of a higher qualification. Any LAME should be able to do maintenance on any recreational aircraft. Again directly CASA delegated examiners to issue the authorities after some appropriate training.*

The bodies “representing” the various types of recreational aviation can then get on with their proper tasks of promoting their activities, regulating any sporting aspects of it and educating their members in doing it in a better and safer manner.

*There should be no compulsion to join any of them. The GFA requires membership not only of the GFA but of a gliding club and a State Gliding Association. How is this possible under the Trade Practices Act? This has no place in 21<sup>st</sup> Century Australia. People should be free to vote with their feet or wallets. This will likely improve the quality of the organisations and the people elected to run them.*

#### Recreational aircraft accident investigation

It is internationally recognised that aircraft accident investigation and dissemination of the reports is one important leg of aviation safety.

Certainly under the GFA “top down” investigation and dissemination of information model experienced individuals are precluded from contributing to gliding accident investigation. There is little dissemination of reports and I have seen one report on a midair (only because one of the participants gave it to me) done by GFA where the data analyst made a couple of very basic mistakes which invalidated the conclusion. This could have been avoided by allowing public comment on a draft report.

*If the ATSB won't investigate (unlike the NTSB in the United States) then a Sport Aviation Accident Investigation body needs to be created. It can be staffed by volunteers but they will need some legislative legal shield.*

The various branches of Recreational Aviation may in fact learn something from each others unfortunate accidents. This may result in an overall safety improvement.

Michael Alfred Borgelt

I have been involved in gliding since 1957 when I accompanied my father to the local gliding club (The Gliding club of Western Australia) at Caversham near Perth. I had my first glider ride in a Slingsby T31b not long afterwards when I was 9 years old.

I began taking glider flying lessons in late 1966 and soloed in 1967 at Easter.

After studying engineering and physics at the University of Western Australia I graduated in 1970 with a degree in physics then trained as a meteorologist with the Commonwealth Bureau of Meteorology and spent 3 years on secondment to the Royal Australian Air force as a civilian meteorologist at RAAF Pearce where I was part of the ground staff of 2 FTS (Number 2 Flying Training School) teaching the meteorology syllabus to RAAF and RAN trainee pilots. I also fortunately managed nearly 20 hours back seat time in the Macchi MB326H as the "met man was encouraged to fly" and, knowing I was a glider pilot, the instructors gave me some unique and valuable flight instruction unavailable to most civilians.

During that time I acquired my first sailplane, an H101 Salto and began investigating electronic sailplane instruments (variometers) before spending two years on staff in the atmospheric science department of an Australian university which was developing airborne instrumentation for atmospheric sampling and investigating UAVs for the same purpose.

In 1978 my wife, Carol and I moved to South Australia and started Borgelt Instruments to manufacture electronic variometer systems for sailplanes, which continues today in Toowoomba, Queensland.

We have delivered thousands of performance instruments for sailplanes over the last 36 years to at least 33 different countries. In addition we have designed and manufactured specialist instrumentation for wineries, apple coolstores, the Civil Aviation Authority, RAAF Aircraft Research and Development Unit, the Reserve Bank Note Printing Branch and Defence Science and Technology Organisation and others.

I was Australian 15 meter Class Gliding Champion in 1981 in my Mini Nimbus and won the South Australian State contest in 1985 in my ASW 20B which led to a trip to Uvalde, Texas to fly in the US 15 meter Class Nationals in 1986.

Subsequently I became interested in self launching sailplanes and put a Fischer TOP power unit on my Ventus C 17.6 and for 3 years owned a Nimbus 3DM self launching motor glider.

Currently I am working on a jet self launch adaptation of the Ventus using two small turbines in the hope of making gliding safer, more convenient and continuing the tradition of gliding as a continuing developmental part of aviation.

After gaining a Private Pilot Licence in 1994 we bought a homebuilt Bede BD4 which is used for transport to various gliding sites and other places. My wife holds a GFPT after learning to fly in 1995.

I have 2700 hours in gliders and self launch gliders and 950 hours in powered aircraft.

Mike Borgelt

Borgelt Instruments

