

15 December 2016

## SUBMISSION

**Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems.**

### Rural and Regional Affairs and Transport References Committee

Dear Members of the Committee

Thank you for the opportunity to make a submission to the upcoming RPAS inquiry.

### Background

My name is Anthony Marsh and I am the Director of Aeroeye Pty Ltd, a commercial RPAS service provider based in Melbourne, Victoria. I am also the Chief RPAS and Maintenance Controller at Aeroeye, a qualified Aerospace Engineer and hold an unrestricted private pilot licence. I am a member of the Australian Certified UAV Operators Inc (ACUO) Management Committee and an industry member of the CASA Unmanned Aircraft Systems (UAS) Standards Sub-committee.

Aeroeye has conducted commercial RPAS operations using both fixed-wing and multi-rotor RPAs for approximately 2.5 years, across a range of industries and locations across Australia.

### ToR A - Current and Future Regulations

The Civil Aviation Safety Authority (CASA) amendments to Part 101 that came into effect on 29 Sep 16 introduced some key changes:

- the removal of the requirement for training and certification for commercial operations when operating an RPA up to and including 2kg in weight, the so called sub 2kg class;
- the addition of a new excluded category, which not only includes the sub 2kg class, but permits private landowners to operator RPAs up to 25kg in weight, without any training and certification for private purposes; and
- the removal of the requirement to operate beyond 3NM (5.5km) from a registered aerodrome, relaxing this requirement to now include only controlled aerodromes.

While the majority of attention has been steered towards the new sub 2kg class, I would like to take this opportunity to highlight my concerns with other key changes resulting from the recent amendments to Part 101.

#### *Private landowner excluded operation (up to 25kg)*

The Part 101 amendments introduced a new 'excluded operation' category, allowing landholder/leaseholder's to operate RPAs up to 25kg in weight on their land, so long as they follow the Standard Operating Conditions (SOCs) and notify CASA five business days before operations commence. Until these amendments came into effect, all commercial RPAS operations required a basic level of training, licensing and certification.

The introduction of the landowner 'excluded operation' category (up to 25kg) at a time when such disagreement and debate exists over the safety implications of 'deregulated' 2kg RPAS operations, appears to be a gross leap without sufficient consideration. I am not aware of any risk assessments or research that has been conducted by CASA to inform and support the view that operating a 25kg aircraft without any training, licensing, certification or insurance provides an acceptable level of safety (ALoS).

Much of the conversation around this change has been in respect to agricultural operations, and while there risks associated with operating a 25kg RPA on an agricultural property, the implications of this change are much broader. The landowner/leaseholder is a broad brush that could include golf courses, mines, quarries, resorts, schools, logistics/warehousing facilities, owner/builder sites and so on. This effectively relaxes (or arguably de-regulates) a much large portion of current and future RPAS operations for RPAs weighing up to 25kg, not the 2kg as often debated and discussed.

A recent study conducted by RMIT found that for 64% per cent of RPA accidents, technical problems/failures were the primary cause. When operating a 25kg RPA, at 400 feet (120 metres) above the ground and potentially at high velocity (as is the case for many applications), there is a real risk that if, or more likely when a technical problem occurs, the RPA will leave the landowner/leaseholders property with significant consequence, particularly given these properties could border public areas, major roadways and so on.

### ***Operation near registered but uncontrolled aerodromes***

As a commercial RPAS operator, I often fly within 3NM of registered aerodromes when conducting regional operations. In order to do this, Aeroeye's RPAS certification requires that we conduct a Job Safety Assessment, in addition to a risk assessment to address additional risks that may result from operations within close-proximity to an aerodrome.

The latest amendments have removed this requirement when operating within 3NM of uncontrolled (but registered) aerodromes. This, when combined with other changes, not only reduces the training and licensing of commercial operators, but also permits RPAs to be operated much closer to an aerodrome where active and low-level manned aviation operations are taking place.

As a private pilot that operates from a non-controlled aerodrome, I fail to see how it is considered safe or appropriate to allow RPAS operations (commercial or recreational) to take place within 3NM and up to the boundary of a registered aerodrome. Remote pilot error or manned aviation emergencies aside, a technical failure while operating at or near an active registered aerodrome could easily result in a catastrophic outcome, as this is where smaller manned aircraft (e.g. a Cessna 182) are most vulnerable.

## **ToR D - Education, Training and Enforcement**

### ***Education***

Regulation is important, but it needs to be supported with sufficient public education and enforcement. Recent educational material promulgated by CASA has contradicted the regulations, causing both public confusion and effectively an excuse for those who knowingly do the wrong thing. For example, in a number of marketing materials released by CASA, the following phrase was used:

*"If you are in controlled airspace, which covers most Australian cities, you must not fly higher than 400 feet (120 metres)"*

Ignoring the debate over how an untrained operator will know where controlled airspace is, the implication of this statement is that by flying an RPA outside of controlled airspace, you're free to fly as high as you like. This is of course inconsistent with the regulations both past and present, and could pose significant risk to manned aviation outside of controlled airspace, which often takes place between 500-1,000 feet above ground level.

### ***Training***

Like many, I support the reduction in training and licensing requirements to conduct commercial RPAS operations. I do not believe it is necessary (or appropriate) to charge a student thousands of dollars to achieve a level of understanding similar to that of a manned aviation pilot. That being said, I am of the view that all RPAS operators should demonstrate a basic level of training in the equipment and environment for which they intend to operate.

As a minimum, I would recommend a low-cost course and assessment (possibly administered online), similar to that required to obtain a boating licence or forklift ticket. The requirement for commercial RPAS operators to undertake a basic level of training (and subsequent issue of a licence) ensures that they have read and demonstrated a sufficient understanding of core concepts, issues and risks relating to RPAS operations; that they know how and where to access additional resources if required for safe operations; and importantly, that they have something to lose if they choose to operate outside of the rules.

### ***Enforcement***

When it comes to enforcement, it has been my experience that CASA has not enforced the regulations effectively, and thus the effectiveness of the regulations and associated penalties to deter those from doing the wrong thing has been greatly reduced.

In one case that I am aware of, a certified operator had blatantly breached multiple regulations (and the conditions of their UAV Operators Certificate) by flying within 175 metres of Sydney Airport's boundary while overflying a golf course. The video marketed on the company's website clearly showed their logo, the location, and an aircraft could be seen taking off from the airport in the background.

I submitted a safety breach report to CASA's RPAS office upon discovering this video, however when following up on the report, I was informed by CASA that they could not disclose the outcome of the investigation on privacy grounds. On review of CASA's RPAS Operator database, it was noted that the operator had their certification issued/renewed just 4 weeks after the submission of this report and they continue to hold their certification today.

#### **ToR G - Insurance**

No doubt many others will comment on this issue, so I will simply make the point that I believe third party liability cover should be considered as a minimum requirement for commercial activities. As a commercial operation, the economic reward of undertaking commercial activity is likely to lead commercial operators to take greater risks (even if within the rules), for which they should insure against.

#### **ToR I - Other matters**

From my many discussions with commercial operators, private users and non-users, the message of 'de-regulation' has lead to a perception that RPAs are harmless and that the skies are open. Regardless of the standard operating conditions and penalties for breaches, without sufficient/consistent public education and appropriate enforcement, the public will see the headline (relaxing of the rules), which when coupled with substantial growth / mass adoption, is highly likely to lead to more serious incidents. It is not sufficient to rely on regulations for prosecution after the fact, we should focus on education and prevention, which also requires a sufficient deterrent.

I am in full support of the appropriate adoption of RPAS technology and innovation in the industry. That being said, numerous businesses have managed to adopt RPAS technology safely under the previous regulatory framework, as demonstrated by the explosive growth in certified operators and businesses employing RPAS technology in their operations in recent years.

There has been a great deal of focus on reducing red tape. In my experience, I have found CASA's RPAS processes to be highly inefficient and am of the strong view that priority should be given to reviewing and optimising processes in the first instance, rather than trying to reduce red tape by way of deregulation.

I welcome any comments and look forward to the ongoing safe and appropriate adoption of RPAS technology in Australia.

Yours sincerely,

Anthony Marsh  
Director