Submission: 296

NSW National Parks and Wildlife Services-

Do you support an ADS-B mandate?
Yes
Why, why not • *The access to real time traffic information will increase situational awareness for ATC and pilots, which will improve safety.* • *There will also be greater ATC coverage, especially in remote areas.* • *Drones will also be included in the same operating environment as aircraft.* *These reasons will benefit all airspace users.*
If so, what airspace and/or aircraft types would you include in it?
As per Figure 1 and Figure 2.
Can you provide feedback on the potential model (Figure 1 and Figure 2)?
With the inclusion of drones in the mandate, there will be an increase in situational awareness. *For smaller RPA operating above 400 ft, where ADS-B Out is proposed:* *Figure 2as it requires updating? In the bottom corner from the paper it references exclusions such as "sheltered operations." This terminology relates to managing ground risk — e.g., people being sheltered inside a structure. For airspace risk, this should refer to shielded operations. Shielded operations is an activity that NSW DCCEEW and NPWS RPAS will utilise, such as terrain and cliff work, The sort of operations are approved by CASA as shielded operations (sometimes referred to as atypical airspace). These areas may be above 400 ft but are locations where the likelihood of crewed aircraft is extremely low due to the proximity of a structure.* ***ADS-B In (Drones)*** *Nearly all RPAS within the fleet already have this capability. While it's noted that all BVLOS operations will require ADS-B In. This space is growing rapidly. As operations move towards higher levels of automation (for example, one pilot overseeing 50 drones, and eventually fully autonomous operations where the Remote Pilot is removed from the loop), software will take on more of the tactical decision-making, particularly for detect-and-avoid functions.*

Given this trajectory, it's important to highlight the need for clearly defined pathways and standards for software assurance in RPAS. Strengthening this area will be essential to maintaining safety for crewed aircraft.

ADS-B Out (Drones)

Regarding the proposed ADS-B Out requirements: the current fleet of Medium Category RPA (the Agras series) does not have ADS-B Out, so units would need to be purchased. This is manageable and impacts only a small portion of the NSW DCCEEW and NPWS RPAS fleet.

Do you consider the model to be sensible and achievable? Why or why not?

Yes. It is a logical

What aspects of the model would you retain, alter, or discard? Why or why not?

Retain Figure 1 and Figure 2. They are logical and would increase operational safety.

What impact would the model have on your operations, if applicable?

NPWS Flight Operations are based in Bankstown Airport, Class D airspace. However, being in the close proximity to Western Sydney Airport (WSI) a large number of NPWS operations will be in Class C airspace. Therefore, post 2028, NPWS would be required to have ADS-B-IN equipment.

What are the estimated costs that you might incur in complying with this mandate?

The costs are hard to determine at this point in time. Also, there is the lead time for equipment to consider.

What are the potential benefits for your operation?

Increased situational awareness for operations, especially during fireground operations. In a fireground operation, there could be upwards of 5 aircraft operating in a small area, converging on the one point. That figure does not include drones that may be soon operating in this area.

Were the model adopted as government policy, when should all VFR aircraft in all airspace be fitted with approved ADS-B equipment (currently 'beyond 2033')?

Given the enhancement of safety that ADS-B provides, as soon as possible.

Are the proposed weight and height limits for drones, above which an ADS-B OUT mandate would apply, appropriate?

Yes

Are any of the alternate options outlined at Figure 1 a better way forward? Why or why not?
With Alternative 1/2/3 in figure 1, do not require ADS-B in Class G airspace until post 2033. Given that Class G airspace can be remote and isolated areas, where a number of NPWS operations are conducted, these areas would benefit from ADS-B. Therefore, the Alternates are not a better option
Noting the Government's ADS-B rebate program, have you fitted ADS-B to your aircraft? Why or why not?
NPWS aircraft are fitted with ADS-B-OUT equipment.