

Submission: 270

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Thank you for the opportunity to respond to the Department's consultation on the proposed expansion of the ADS-B mandate.

Whilst I fully support the broader goals of improving aviation safety and integrating emerging technologies. I must express my **strong objection to the proposed mandate in its current form.**

The proposal does not adequately consider the operational realities of Hang Gliders or Paragliders or the limitations in terms of equipment, infrastructure, and flying environments. These concerns are not theoretical, they are practical.

Attached is the same information, being submitted via email as the webpage submission is not facilitating uploaded documents.

Specific Questions from the survey;

Do you support an ADS-B mandate? Why or why not?

- No, Whilst ADS-B or Electronic Conspicuity (EC) devices have a role in aviation safety, the mandate does not adequately understand the complexity of all aircrafts operational capacity, especially Hang Gliders & Paragliders.

If so, what airspace and/or aircraft types would you include in it?

- See below and attached.

Can you provide feedback on the potential model (Figure 10, Figure 11, Figure 12, and Figure 13)?

- Figure 10 Potential model for VFR aircraft

Requires Operational Lower Level Floor, especially in Class G airspace. Many unpowered aircraft such as Hang Gliders & Paragliders operate at low level only and should not require carriage of ADS-B or EC Devices at these levels, and, BVLOS operations should not be permitted.

ADS-B or EC devices should not be required below 1000' AGL for unpowered aircraft

- Figure 11 Potential model for IFR aircraft

Agree

- Figure 12 Potential model for drones

Agree, with the addition that there should be no BVLOS below 1000' AGL

- Figure 13 Potential model for AAM aircraft

AAM in conflict with low flying unpowered aircraft create a danger for crewed aircraft and the responsibility and burden should be placed on AAM.

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

Whilst the idea is sensible, again, it is not achievable for many unpowered aircraft in it's current proposed format. See below and attached.

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

Requirement for unpowered aircraft for carriage below 1000' AGL, and addition of the requirement for RPA and AAM to have the responsibility for avoidance, also restriction of BLVOS and AAM below 1000' AGL

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

Due to the limited nature of equipment, currently only one approved EC device with unsuitable mounting requirements, it would be unfeasible for carriage of any EC device, and, potentially curtail all operations.

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

Approximately \$1000, plus installation and fabrication of appropriate mounting, if possible. Noting that the current Grant Scheme excludes Hang Gliders and Paragliders.

☐ **What are the potential benefits for your operation?**

If able to configure the carriage of the devices the additional visibility to

• **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’)?**

ADS-B in should be mandated for all Capable Aircraft VFR aircraft if any aircraft are to be mandated to carry ADS-B out. The low level coverage of ADS-B negates any benefits of carrying ADS-B out unless ADS-B in is mandated for all capable aircraft.

• **Are any of the alternate options outlined at Figure 14 a better way forward? Why or why not?**

VFR Alternatives 2 & 3 provide a more realistic version outside of class G, or at aerodromes only. VFR Alternative 1, Offers more realistic carriage requirements, however, 400ft should be more realistic at 1000ft.

- **Noting the Government’s ADS-B rebate program, have you fitted ADS-B to your aircraft? Why or why not?** 8.1 Next step

No, as, the ADS-B rebate program is not available to Hang Gliders or Paragliders, or the powered variants. The disparity in Fairness, Safety and Sustainability is clear.

Key Objections to the Mandate Proposal

1. Insufficient Consultation Time

We have not been given sufficient time to adequately research the proposal of this scale. The timeline outlined in the consultation paper does not reflect the diversity and complexity of operations, especially in Hang Gliders & Paragliders

2. Poorly Defined Terms

The term “capable aircraft” is vague and does not reflect the physical, electrical, and operational limitations of our aircraft. Similarly, the definition of ADS-B “IN” is unclear—does it require visual displays, audible alerts, or both? These ambiguities must be resolved before any mandate is considered.

3. Coverage Limitations at Low Altitudes

Airservices Australia acknowledges that ADS-B coverage at 3,000 ft is minimal, with reliable reception only within 20 nautical miles of a ground station. Mandating ADS-B OUT or EC devices without a defined operational floor is impractical. I recommend a floor of 1,000 ft AGL, below which VFR “see and avoid” principles should apply, and no BVLOS RPA operations should be permitted.

4. Drone Responsibility for Avoidance

The proposed model places undue burden on crewed aircraft to be electronically visible to drones. Hang Gliders and Paragliders are relatively slow moving aircraft with limited ability for avoidance. I believe drones or Remotely Piloted Aircraft (RPAs) and other fast moving aircraft must bear the primary responsibility for avoidance, especially in shared low-level airspace.

5. Equity in Mandate Requirements

If Hang Gliders & Paragliders are required to carry ADS-B OUT or EC devices, then all capable aircraft should be mandated to carry both ADS-B OUT and IN. Furthermore, ADS-B IN must include a visual representation of surrounding traffic and warnings—not just passive reception.

6. Mounting Limitations and Equipment Availability

The only approved EC device (Skyecho2) is expensive and difficult to mount safely on Hang Gliders, Paragliders, powered paragliders, and other ultralight aircraft. These limitations make compliance infeasible for most of these aircraft. Most of these aircraft do not have electrical systems or cockpit space to mount ADS-B equipment.

7. Instrument Interference Due to Limited Space

Hang Gliders & Paragliders operate with minimal cockpit space, and the close proximity of multiple electronic devices can result in interference between critical instruments, including altimeters, VHF airband radios, and ADS-B or EC units. This poses a safety risk and further complicates the feasibility of mandated equipment installation.

8. Exclusion from ADS-B Rebate Program

The previous ADS-B rebate grant, with total funding of \$8.4 million, excluded the majority of SAFA aircraft. This exclusion highlights a significant disparity with the

Aviation White Paper's stated goals of fairness and inclusivity. The rebate was limited to VH-registered and listed recreational aircraft, leaving out most SAFA aircraft due to:

- Lack of formal registry inclusion
- Absence of electrical systems required for ADS-B device operation
- Impractical or unsafe mounting options for approved EC devices

This exclusion not only undermines equitable access to safety-enhancing technology but also places an unfair financial burden on our members who are now expected to comply with a mandate without having been eligible for prior support.

Inconsistencies with the Aviation White Paper

The 2024 Aviation White Paper outlines a vision for a "safe, competitive, productive, sustainable and fair" aviation sector. However, the proposed ADS-B mandate contradicts this vision in several ways:

- **Fairness:** The mandate disproportionately affects sport and recreational aviation without offering equitable access to rebates or infrastructure.
- **Safety:** Mandating equipment that cannot be safely mounted undermines safety rather than enhancing it.
- **Sustainability:** The financial burden and technical impracticality of compliance will accelerate the decline of certain aircraft classes, notably weight-shift microlights.
- **Consultation:** The White Paper commits to genuine engagement with affected communities. We have not seen this commitment reflected in the current process.

Recommendations

- Define "capable aircraft" to reflect actual mounting and operational capability.
- Remove the requirement for Hang Gliders, Paragliders and the powered variants to carry ADS-B or EC devices Operated at SAFA/CASA approved sites in line with " Model aircraft when operated at CASA-approved sites."
- Introduce a minimum altitude threshold (e.g. 1,000 ft AGL) for ADS-B OUT/EC requirements for unpowered aircraft.
- Mandate ADS-B IN with visual display for all capable aircraft required to carry ADS-B OUT.

- Require drones to detect and avoid crewed aircraft, not vice versa.
 - Expand the ADS-B rebate program to include unlisted recreational aircraft.
 - Recognise that mounting constraints make compliance impossible for many aircraft types.
 - Account for instrument interference risks due to limited space in Hang Gliders & Paragliders and similar aircraft.
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Conclusion

While I support voluntary adoption of ADS-B where feasible, I strongly oppose a blanket mandate that disregards the realities of Hang Glider and Paraglider operations. I urge the Department to reconsider the proposed model and engage meaningfully with the sport aviation sector before proceeding further.

Regards,