Submission: 268

Australian Association for Uncrewed Systems

AAUS Submission:

Potential Expansion of ADS-B Mandate in Australia

27 October 2025

Executive Summary

The Australian Association for Uncrewed Systems (AAUS) strongly supports the Government's intention to expand ADS-B adoption across Australian airspace and believes a **phased, risk-based mandate** is both essential and achievable.

Australia's airspace is experiencing significant change — with rapid growth in general aviation and the emergence of Remotely Piloted Aircraft Systems (RPAS) and Advanced Air Mobility (AAM). The current voluntary approach to electronic conspicuity (EC) leaves substantial gaps in situational awareness, particularly in Class G airspace where the risk of collision between airspace users is greatest.

A universal ADS-B framework will deliver transformative safety, regulatory, and efficiency benefits by:

Enhancing safety: Providing cooperative surveillance across all airspace classes, reducing collision risk and improving search-and-rescue responsiveness.

Enabling integration: Serving as a foundation for Beyond-Visual-Line-of-Sight (BVLOS) RPAS operations and future AAM ecosystems.

Supporting national policy: Directly enabling priorities identified in the *Aviation White Paper 2024*, *Australian Airspace Policy Statement 2025*, and CASA's *Broad Area BVLOS Framework*.

Improving affordability: Modern, low-power ADS-B solutions are now cost-effective; with continued or expanded government rebates, the financial barrier to equipage is minimal.

AAUS endorses the staged model outlined in the consultation paper for VFR, IFR, RPAS, and AAM operations. We view this as a **sensible, evidence-driven progression** that balances safety imperatives with technical and economic practicality.

A clear, early mandate for ADS-B IN/OUT will accelerate CASA's BVLOS approval efficiency, build trust between crewed and uncrewed communities, and underpin Australia's transition to a **digitally managed, unified, and equitable airspace system**.

AAUS urges Government to proceed decisively with the proposed model, expand the rebate program to include RPAS and AAM platforms, and commit to an implementation pathway that aligns with AAM commercial readiness by 2028.

Electronic visibility should be recognised as **the cornerstone of future airspace safety — not optional, but essential.**

1. The Case for a Universal ADS-B Mandate

ADS-B is no longer a niche capability for high-altitude or IFR operations — it is a foundational enabler for Australia's future aviation system. Its benefits extend far beyond ATC surveillance to include:

- Mid-air collision avoidance: ADS-B IN/OUT provides reliable "alerted see-and-avoid" capability, vastly improving situational awareness for all electronically equipped airspace users.
- Integration of drones and AAM: Detect-and-avoid and UTM systems depend on cooperative surveillance signals like ADS-B.
- Efficient search and rescue: ADS-B data shortens response times and saves lives.
- Accident investigation: Continuous broadcast data provides vital insight for the ATSB.
- Airspace capacity and equity: Common situational awareness enables shared use of airspace between crewed and uncrewed users.

Despite these clear benefits, uptake under the current voluntary model remains low. Australia risks falling behind international peers such as New Zealand, the United States, and Canada, all of which have introduced stronger ADS-B mandates that now underpin their uncrewed integration frameworks.

2. Alignment with National Policy Objectives

The 2024 *Aviation White Paper* and the 2025 *Australian Airspace Policy Statement* both highlight the need for surveillance reform, digital airspace management, and integration of emerging aviation technologies. Expanding ADS-B use directly supports these objectives by:

- Delivering a foundation for the UTM ecosystem, as defined in the *UTM Action Plan*.
- Enabling the Broad Area BVLOS Framework currently being implemented by CASA.
- Supporting AAM commercial operations targeted for 2028 and beyond, which require an electronically cooperative airspace environment.

Without decisive progress on ADS-B, these national initiatives will be significantly constrained.

3. AAUS Position on the Proposed Model

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

AAUS supports the proposed staged model outlined in the consultation paper for the following aircraft types:

a. Visual Flight Rules (VFR) Aircraft

AAUS supports

- the proposed staged model outlined in Figure 10 of the consultation paper for all aircraft operating under VFR.

b. IFR Aircraft

AAUS supports

- The proposed model as outlined in Figure 11 requiring ADS-B receivers in all capable IFR aircraft in all airspace by the end of 2033 complementing the existing requirement for approved ADS-B equipment in IFR aircraft.

c. Drones and RPAS

AAUS supports

- the proposed staged model outlined in Figure 12 of the consultation paper for all medium and large category RPAS and small RPAS operating above 400 ft.
- Proposed ADS-B IN receiver for all BVLOS operations.

d. Advanced Air Mobility (AAM)

AAUS supports

- The proposed model outlined in Figure 13 of the consultation paper that all AAM platforms should be equipped with both ADS-B IN and OUT capabilities from the end of 2028.

Do you consider the Model to be Sensible and Achievable?

AAUS believes that the model is sensible and achievable as it:

- It Directly Addresses a Proven Safety Gap

Class G airspace is currently the least electronically visible segment of the aviation system, yet the most congested with VFR and emerging RPAS traffic. A phased mandate provides the most practical way to raise safety performance without imposing immediate system shock.

- It Follows a Risk-Based, Evidence-Driven Progression

  Starting with controlled airspace ensures that:
  - Aircraft most exposed to mixed traffic and ATC interaction equip first.
  - Infrastructure (ground receivers, avionics certification, data management) scales in step with demand.

  This risk-based sequencing is consistent with the *Australian Airspace Policy Statement 2025* objective for "timely, evidence-based risk management."

- It Balances Safety with Affordability

  The inclusion of low-power ADS-B OUT options (and allowance for EC technologies) is a pragmatic recognition of general aviation cost sensitivities. Modern lightweight transceivers are already sub-$2 000 and certified, making the requirement financially achievable, particularly with extension of the government's rebate program.

  AAUS advocates for an expansion of the current ADS-B rebate program to include all airspace users including RPAS and AAM aircraft.

- It Enables UTM and RPAS/AAM Integration

  ADS-B and EC are essential for digital airspace management.
  By requiring low-power ADS-B OUT for VFR aircraft in Class G, the model ensures that both crewed and uncrewed platforms broadcast interoperable signals — a cornerstone for:
  - Beyond-Visual-Line-of-Sight (BVLOS) RPAS approvals;
  - Future Uncrewed Traffic Management (UTM) implementation; and
  - Safe integration of Advanced Air Mobility (AAM) operations from 2028 onward.

  This aligns squarely with the *UTM Action Plan* and the *Aviation White Paper* goal of unified, digitally managed airspace.

- It is technically feasible

  Off-the-shelf, CASA-accepted low-power ADS-B and EC units exist now.

- Regulatory pathways are being created

  CASA has established certification pathways for both 1090 MHz ES and UAT ADS-B devices. Airservices and CASA already have data management frameworks for ADS-B surveillance feeds.

Cost mitigation mechanisms are being considered

- The existing rebate program can be expanded to all airspace users including RPAS and AAM.
- Low-power ADS-B EC devices provides a cost-effective option for recreational and sport aviation sectors.

What impact would the model have on RPAS and AAM Operations?

Broad Benefit to RPAS Industry

The consultation paper does a good job in identifying challenges for the RPAS industry currently and AAUS agrees that drone operators will benefit significantly from broader fitment of ADS-B OUT, and paired with an ADS-B receiver, as this would enable them to detect and avoid other aircraft.

AAUS strongly supports the introduction of an ADS-B mandate as a critical enabler of safe and scalable RPAS operations. The availability of cooperative surveillance data through ADS-B IN and OUT significantly enhances situational awareness and reduces collision risk between all airspace users, meeting a key component of the detect-and-avoid requirement for Beyond Visual Line of Sight (BVLOS) operations.

Mandating ADS-B in line with the proposed model will allow CASA to assess air risk better, streamline BVLOS approvals, and facilitate integration of RPAS into shared airspace. Over time, ADS-B may underpin UTM systems and enable greater automation and airspace efficiency. With appropriate implementation, an ADS-B mandate will materially improve airspace safety while unlocking commercial and social benefits through wider BVLOS adoption.

While an ADS-B mandate will require some initial investment in equipment or infrastructure, it is expected to deliver significant long-term cost savings for the RPAS industry through improved efficiency, regulatory certainty, and operational scalability. By providing cooperative surveillance data, ADS-B enables CASA and operators to reduce the need for bespoke or complex detect-and-avoid demonstrations in BVLOS approvals. This directly lowers regulatory and engineering costs associated with risk assessments, safety cases, and recurring approval delays. As BVLOS operations become more routine under a standardised surveillance environment, operators will also benefit from economies of scale — shared infrastructure, repeatable approvals, and simplified integration into UTM systems. Furthermore, fewer airspace conflicts and incidents will reduce insurance premiums, downtime, and maintenance

costs. Over time, ADS-B will allow greater automation and centralised monitoring of multiple aircraft, further improve operational efficiency and reducing personnel overheads. In short, a well-implemented ADS-B mandate will lower the total cost of BVLOS compliance and accelerate commercial viability for RPAS operators.

Broad Benefit to AAM Industry

An ADS-B mandate will be fundamental to the safe and orderly introduction of Advanced Air Mobility (AAM) operations in Australia. Early AAM aircraft will initially operate within existing controlled and uncontrolled airspace alongside traditional aviation, relying on cooperative surveillance for separation assurance and integration. Universal equipage of ADS-B IN and OUT will provide essential situational awareness to both AAM operators and Air Traffic Services, supporting tactical deconfliction, emergency management, and integration with emerging Uncrewed Traffic Management (UTM) systems. As AAM operations scale beyond initial demonstration flights, ADS-B will form a cornerstone of digitally managed, networked airspace, enabling safe high-density operations. A clear, early mandate will also give manufacturers and investors' confidence to design to a known surveillance standard.

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')?

AAUS supports the current proposed timeline.

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

AAUS considers the proposed weight and height limits above which an ADS-B OUT mandate would apply to be generally appropriate, provided they are implemented within a risk-based and performance-driven framework. Limiting the requirement to medium and large RPAS—or smaller drones operating above 400 ft AGL or in shared or controlled airspace—appropriately focuses the mandate on operations that present the greatest potential for conflict with crewed aviation.

This ensures that ADS-B equipage delivers measurable safety benefit without imposing unnecessary cost or technical burden on low-risk operators conducting visual line-of-sight or shielded flights.

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

AAUS appreciates the consideration of different phased models for an ADS-B mandate but does not support limiting initial implementation to specific aerodromes or subsets of operations as proposed in Alternatives 1–3. While each alternative recognises legitimate risk contexts — particularly interactions between crewed and uncrewed aircraft at lower altitudes and around busy regional aerodromes — these models are too narrow to achieve meaningful, system-wide safety improvement or to deliver the foundational surveillance coverage needed for RPAS and AAM integration.

The Select Aerodrome and RPT/Certified Aerodrome models would reduce the likelihood of mid-air collisions in isolated hotspots but risk creating patchy or inconsistent airspace visibility across Australia. This patchwork approach introduces unnecessary operational complexity, confuses compliance boundaries for pilots and drone operators, and delays the broader benefits of a harmonised surveillance environment. It would also postpone ADS-B carriage in Class G airspace until beyond 2033, undermining national objectives for BVLOS enablement and early UTM integration.

AAUS maintains that the working group's primary model — a phased, risk-based mandate applied consistently across VFR operations in controlled airspace, with progressive expansion to Class G airspace and BVLOS RPAS — remains the most sensible and achievable way forward. This approach balances cost, safety and scalability while avoiding regulatory fragmentation.

4. About AAUS

Founded in 2009, AAUS is Australia's leading advocacy group for drones and AAM. Representing 4,800 members across industry, academia, and government, AAUS drives policy, regulation, and safety standards for the sector.

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