



DISCUSSION PAPER
DP 1912SS

**Maximum take-off weight
limit for aeroplanes
managed by approved self-
administering aviation
organisations (ASAO)**

Date	August 2019
Project number	SS 99/05
File ref	D18/477202

Introduction

This Discussion Paper explores the policy proposition that an Approved Self Administering Aviation Organisation (ASAO) may administer aeroplanes with a MTOW greater than 600 kg up to a maximum of 760 kg, and that they conduct only recreational activities or flying training on the basis that the organisation demonstrates to CASA a capability of maintaining an acceptable level of aviation safety.

The premise for discussion is for a change to the MTOW limitations that currently apply to 3-axis aeroplanes. It would potentially amend the relevant regulations to permit 3-axis aeroplanes up to a maximum weight of 760 kg, regardless of whether the aircraft is equipped to land on water or not and to be included as aircraft that could be administered by an ASAO. Other limitations such as maximum stall speed would not be changed by this proposal.

The proposal is for the establishment of a new operating classification within an ASAO's safety system to manage operations of aircraft within the proposed higher MTOW and above the 600 kg limit which currently exists.

CASA previously considered a similar proposal in 2008 which did not result in changes. Given recent requests CASA wishes to get feedback from all parties on this topic using this discussion paper. We hope submissions will examine the proposed change and highlight any perceived pros, cons, effects of aviation safety as well as potential financial impacts. The provision of relevant data or practical examples would be very beneficial to our review.

Why are we consulting

CASA seeks input and welcomes feedback and relevant comment from all stakeholders in relation to proposed changes to the regulations. Importantly, this paper outlines a proposal that might result in a change to the regulations. This does not mean CASA has already decided to make such a change.

This Discussion Paper seeks to understand:

- the specific advantages of the proposed change
- the specific disadvantages of the proposed change
- real/perceived improvements or degradations in overall aviation safety
- other alternatives.

Prior to deciding to make any change, CASA is committed to considering the feedback relevant to this Discussion Paper to ensure we maintain and enhance aviation safety.

The purpose of this Discussion Paper is to seek feedback from the aviation community with regards to the relevance of the stated benefits, the identified risks and the industry impacts more broadly.

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1 Discussion

1.1 Background

Globally, there has been a significant increase in the operational and technical capability of sport and recreational aviation. The introduction of simpler light aircraft certification standards globally has led to an increasing range of categories with less obvious distinctions between them.

A review of the safety performance statistics associated with the particular operations under discussion suggests; (1) safety performance is presently of a comparable level; (2) safety performance has continued to improve since 2014.

The potential benefits for the aviation community (an estimated 10,000+ pilots) of an ASAO administering aeroplanes with an MTOW greater than 600 kg up to a maximum of 760 kg may include:

- increased aircraft utilisation - introducing the higher MTOW may provide an opportunity for greater utilisation of aircraft in the higher weight range
- increased maintenance activity - additional utilisation of aircraft with an MTOW between 601 kg to 760 kg may lead to an increase in maintenance organisation activity
- access to aircraft with a broader flight envelope may increase exposure to more capable aircraft and increased training opportunities.

1.2 The policy change under consideration

1.2.1 Why is this change being considered?

The proposal to increase the MTOW limit presently imposed by CAO 95.55 may align the simplified certification schemes to a known simplified operational scheme. The proposed amendment also facilitates access for almost 10,000 pilot certificate holders and student pilots to a larger variety of aircraft.

1.2.2 What regulations are related to this proposal?

The proposal is to amend MTOW values that are specified in CAO 95.55, Part 149, the Part 149 MOS, Part 103 and the Part 103 MOS. Details of proposed changes would be identified and consulted as a separate proposed rule change consultation following this discussion paper, should it occur.

1.3 Australian Civil Aviation Register overview

Based on only the certificated MTOW, analysis of aircraft on the Australian Civil Aviation Aircraft Register as at July 2019 shows¹:

- A total of 15,600 aircraft are listed on the Australian Civil Aviation Register (VH registered).

¹ Figures are approximate.

- 1,690 single-engine aeroplanes are registered with a MTOW not greater than 760 kg.
 - 440 single-engine aeroplanes are registered with a MTOW not greater than 600 kg.
 - 985 single-engine aeroplanes are registered with a MTOW between 601 kg and 750 kg.
 - 265 single-engine aeroplanes are registered with a MTOW between 751 kg and 760 kg.
- Most aircraft with a MTOW between 751 kg and 760 kg are types such as; XL-2 (Liberty), A152 (Cessna Aerobat), C152 (Cessna), PA-38 (Piper Tomahawk) and PA-22 (Piper Tri-pacer). Generally, aircraft types such as the PA-38 (Piper Tomahawk) and the PA-22 (Tri-Pacer) do not meet the requirements specified in clause 1 of CAO 95.55 relating to stall speeds and/or minimum useful loads.
- Most aircraft certificated in a category other than the normal category have a MTOW greater than 700 kg.

By comparison, there were approximately 3,325 aircraft registered with RAAus as of May 2019.

Approximately 440 aircraft are presently registered under Part 47 with a MTOW of not greater than 600 kg, any increase in the current MTOW limit would have no change on this cohort². With a total of 1,690 aircraft registered under Part 47 with a MTOW not greater than 760 kg, this leaves a current maximum of 1,250 aeroplanes that might fall within the scope of this proposal.

Not all of these aeroplanes would meet the additional requirements of clause 1 of CAO 95.55; such as maximum stall speeds (45 kts) and minimum useful load calculations. Therefore, the actual number of aircraft effected would likely be less. This number considers only MTOW to provide a measurable maximum limit of scope.

1.4 Potential aviation industry benefits

1.4.1 Is the proposal considered positive for the aviation industry?

There are potentially several benefits of this proposal that might include the following, but CASA is seeking comments on this and other industry suggestions:

Potential increased aircraft utilisation (601 kg to 760 kg MTOW)

- A higher MTOW for aircraft managed by ASAOs may provide access to a larger number of aircraft that may provide additional performance and training opportunities.
- Increased Maintenance Activity (CAR 30 and Part 145 Organisations).
- Additional utilisation of aircraft with an MTOW between 601 kg to 760 kg may lead to an increase in maintenance organisation activity.
- Is the proposal good for the sector?

As with any change, this proposal to modify the policy and regulatory framework can be complex and multi-faceted. A change that benefits one may not benefit another. The purpose of this Discussion Paper is to understand the extent to which the change might impact others

² A distinction between aeroplanes equipped to land on water and those not, was considered immaterial for the purpose of establishing a general understanding of the scope of those operations affected.

(negatively or positively).

1.5 Potential aviation safety outcomes

1.5.1 Is the proposal considered positive for aviation safety?

Any proposed change must maintain or improve the current level of safety in the sector. There are potential safety benefits from exposure to aircraft with more manoeuvre capability and increased training opportunities that may benefit those in every category of operations.

CASA is interested on your thoughts on these and other potential safety benefits, and the topics below.

Assessment of risk

Any application and approval to administer aircraft in the higher MTOW by an ASAO would need to be accompanied by a safety case and a risk management framework that support the change.

An ASAO authorised to administer aeroplanes between 601 kg and 760 kg would need to have a supporting administration system, approved by CASA, within their CASR Part 149 exposition. CASA would require an ASAO to have an appropriate system that manages the proposed aviation administration function.

The amendment would provide clarity of the definition of MTOW and Part 149 authorisations

The proposed amendment would include a clearer definition of MTOW. This definition would equate to a limitation on the published certificated limit (or its equivalent), not an operational take-off weight on a particular day. Specifically, a person could not register an aircraft with a higher certificated MTOW and then operate the aircraft under 760 kg by limiting usable loads and minimising the basic empty weight.

1.5.2 What requirements or conditions would not change?

Continuing airworthiness of aircraft

The proposed amendment to the MTOW limit would not change the continuing airworthiness requirements that would otherwise apply to aircraft between 601 kg and 760 kg. It is anticipated that CAO 95.55 and Part 103 MOS would require that aircraft (other than those referred to in the next paragraph) within this weight bracket would need to meet the continuing airworthiness and maintenance requirements currently specified in CAR and CASR.

Persons who have fabricated and assembled a relevant amateur-built aircraft (amateur-built, kit-built and light sport aircraft) and who are authorised by CASA under 42ZC (4) (e) of the CAR, may continue to perform maintenance on an amateur-built aeroplane they are approved to maintain.

Medical requirements

This proposal would apply the ASAO's current medical arrangements for pilots operating aircraft up to 600 kg, to 760 kg.

Eventually, Part 103 of CASR (Sport and Recreational Aviation Operations) will consolidate the rules for private recreational operations including these medical requirements. Until the proposed Part 103 commences, the medical standards for Part 103 aircraft pilots including instructors will be prescribed in the respective ASAO's operational manuals approved by CASA.

Access to controlled airspace

The proposed amendment to the MTOW limits would not change any airspace authorisation or restriction that currently exists. Specifically, operations will continue to be authorised to operate in the classes of airspace as they currently exist.

Ability to conduct advanced operational activities

The proposed amendment to the MTOW limits would not change any operational authorisation or restriction that currently exists. Specifically, operations that are currently limited to Day Visual Flight Rules (VFR) would continue to be limited.

The number of places (seats) fitted to the aircraft

The proposed amendment to the MTOW limits would not change the single-place or two-place restriction that presently applies. The two-place restriction refers to an aeroplane designed by the manufacturer (amateur-built or certificated) with no more than two seats. For those limited number of aircraft fitted with more than two seats and are certificated at or below 760 kg MTOW, the aeroplane will not be permitted to be modified to meet the two-seat limitation (e.g. removal of additional seats).

The number of engines and propellers

The proposed amendment to the MTOW limits would not change the requirement that the aircraft be a single engine aircraft fitted with a single propeller.

The types of operations able to be conducted

The proposed amendment to the MTOW limits would not change the types of operations that are able to be performed by aircraft administered by an ASAO. For example, a pilot is not currently able to perform aerial work or charter operations under the current or proposed ASAO scheme. The aircraft would not be available for training conducted under Parts 141 or 142 of CASR.

Stall speed and minimum useful load requirements

The proposed amendment to the MTOW limit would not change the limitations that presently apply to stall speeds or minimum useful load requirements.

2 Safety performance indicators

2.1.1 What do the safety performance indicators show?

Total accident rates – recreational aeroplanes

Figure 1 shows the accident rate for the last five years and how it has progressively declined between 2014-2018 towards a rate of 342.6 accidents per million flying hours.

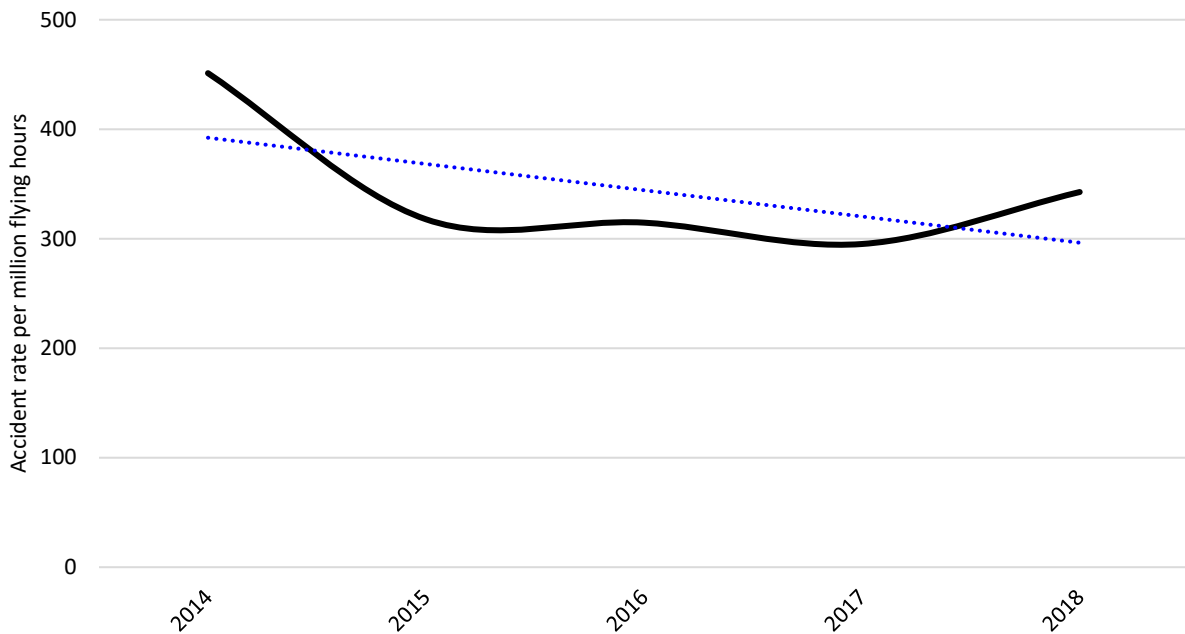


Figure 1: Total accident rates – Recreational aeroplanes 2014 – 2018

Note: Rates shown are per million flying hours. Data was provided by BITRE.

Number of fatal accidents – recreational aeroplanes

Figure 2 below, shows the annual number of fatal accidents for recreational aeroplanes between 2014 -2018. The data shows the number of fatal accidents over the last five years is trending downward.

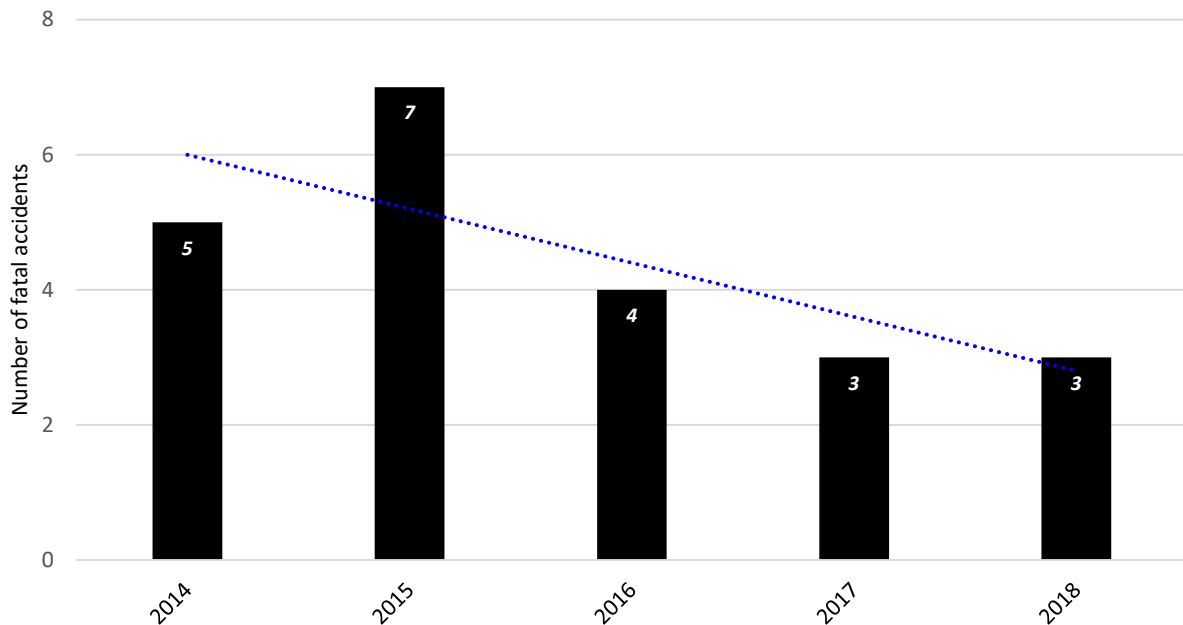


Figure 2: Number of Fatal Accidents – Recreational aeroplanes 2014 – 2018

Note: Data was taken from the ATSB's quality assured dataset (July 2019)³.

Safety performance comparison – fatal accident rates

Consideration should be given to a comparison between the fatal accident rates for recreational aeroplanes against those of aircraft operated in the private/sport category of the private flying sector up to 760 kg MTOW.

CASA considers the comparison in Figure 3 below, is for general information, as there is variability in practice between the groups. For example, the private/sport category includes operations of aircraft that are certificated differently, powered differently, operated under instrument flight rules etc. and cannot be dissected further. Specifically, Figure 3 compares light and simple operation recreational aeroplanes with the safety performance of aircraft and operations that are not equivalent.

The comparison shows declining trends of fatal accident rates of recreational aeroplanes and the private/sport category of the private flying sector over the past five years.

³ In February 2015 a mid-air collision occurred between two aircraft at Donnington Airpark (QLD). This data considered that accident as a single occurrence.

MAXIMUM TAKE-OFF WEIGHT LIMIT FOR AEROPLANES
MANAGED BY APPROVED SELF-ADMINISTERING AVIATION
ORGANISATIONS (ASAO)

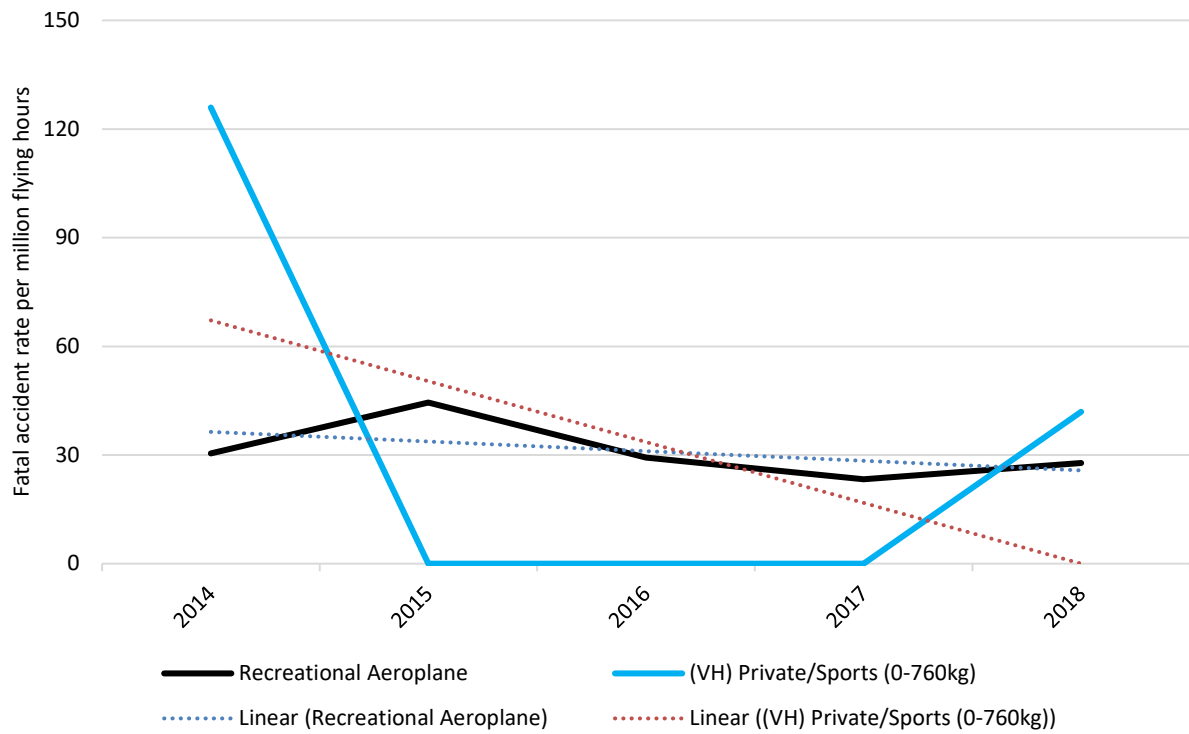


Figure 3: Fatal accident rates – Recreational Aeroplanes vs (VH) Private/Sports 2014 – 2018

3 Options for discussion

This Discussion Paper presents two initial options to begin the discussion on the proposal. However, when providing your feedback within the consultation feedback tool, CASA will seek the aviation community's views on any other options that CASA may reasonably consider, in addition to these specific options:

- Option 1 – Maintain the status quo and make no changes to the MTOW limit.
- Option 2 – Amend the MTOW limit in CAO 95.55, Part 149 MOS and develop the Part 103 MOS to provide an option for an ASAO, if authorised by CASA, to administer applicable aeroplanes with a MTOW of up to 760 kg.

3.1 Option 1 – Maintain the status quo and make no changes to MTOW limits

This option would result in no changes to CAO 95.55 and the Part 149 MOS to extend the range of aeroplanes that an ASAO may administer. That would mean that CASA administration of aeroplanes above 600 kg MTOW would continue.

3.2 Option 2 – Amend the MTOW limits and associated matters in CAO 95.55, Part 149 MOS and develop Part 103 and the Part 103 MOS to reflect these matters

This option would form the basis of CASA policy to accept light aircraft up to 760 kg MTOW that meet requirements to be administered by an ASAO.

The potential benefits to pilots and aircraft owners might include:

- a. Increased aircraft utilisation.
- b. Increased maintenance opportunities.
- c. Access to a larger number of aircraft with broader operating envelope.
- d. Choice to either register and operate their aeroplanes under an ASAO, or with CASA.
- e. Increased choice of holding a Part 61 licence and a pilot certificate.

4 Submitting your view and what next

You are encouraged to review the information and provide your feedback regarding the options that have been presented and any additional options or concerns not covered in this discussion paper.

The consultation hub feedback tool includes a series of questions that explore your views in relation to five key areas:

- The potential benefits to aviation safety – are they likely to be realised by implementing this proposal?
- The potential benefits to the aviation community – are they likely to be realised by implementing this proposal?
- The effect of the proposal on the aviation community – do you consider the proposal to be positive for private recreational aviation? Does it have a negative impact on aviation in general?
- The effect of the proposal on you as an individual – does the proposal affect you, and if so, how?
- The effect of the proposal on your aviation business (if applicable) – how does the proposal affect your aviation business?

Your feedback will make a valuable contribution to CASA's policy decision-making process and help to fully inform CASA of the perceived impacts (positive and negative) on the aviation community regarding the proposal.

Responses should be submitted using the online response form by 28 September 2019. The online response form is available at the [CASA Consultation Hub](#).

Appendix A

Key questions answered

Listed below are key questions and answers that CASA anticipates stakeholders may have.

A.1 Does this mean CASA is privatising the private flying sector?

No. Privatisation means the act of selling an industry, company or service that was owned and controlled by the government, so it becomes privately owned and controlled. CASA has not and does not intend to sell any section of the industry. A scheme of self-administration was introduced in Australia over 25 years ago, which as of 14 July 2019 has a new regulatory framework called Part 149.

CASA always retains the responsibility and ultimate oversight of the entire private flying sector including those that are managed by an ASAO.

A.2 Why does CASA have self-administering organisations?

This Discussion Paper does not discuss the regulatory framework and objectives associated with Part 149. For information regarding that regulation readers are encouraged to review the regulation and MOS available on the CASA website and the associated Explanatory Statement available on the Federal Register of Legislation website.

A.3 Does CASA retain responsibility for the operations?

Section 9 of the *Civil Aviation Act 1998 (the Act)* outlines the functions of CASA. These are the functions of CASA even when an industry-based organisation holds an approval under Part 149 as an ASAO. In other words, CASA approves such an organisation to administer certain aviation functions but retains the overarching responsibility for safety in the sector.

A.4 If I currently operate an aircraft between 601 kg and 760 kg, would I have to join the ASAO?

No. A pilot or registered operator could continue to operate within the CASA scheme. There would be no obligation for any person to join an ASAO.

It is worth noting that the CASA issued Recreational Pilot Licence (RPL) authorises a pilot to operate as pilot-in-command of a single engine, Part 47 registered aircraft up to 1500 kg MTOW, potentially with four persons on board. The RPL has greater privileges, and associated risks, than that of a person operating under a recreational self-administering scheme, who is restricted to a two-person operation and a significantly reduced MTOW (smaller aircraft). An RPL holder may elect to operate aircraft at a lower MTOW or less seating capacity; however, they are not restricted in doing so and are managed according to the extent of the privilege of the licence.

A.5 Has CASA already made a decision?

No. Prior to making a final decision, CASA will consider all responses submitted. For CASA to consider your feedback it must be submitted using the online CASA Consultation Hub. A link is provided in the next section of this Discussion Paper.