Stakeholder Consultation:

Option to exempt certain light aircraft below 600kg MTOM from EU regulations

Executive Summary

Aircraft referred to in Annex I 1(e) of the EU Basic Regulation are regulated by the Irish Aviation Authority through national legislation. The Authority recognises that the current MTOMs listed in Annex I 1(e) of Regulation (EU) 2018/1139 may restrict factory-built light aeroplanes and serve to limit payload, fuel carriage, aircraft range and/or aircraft occupancy.

It is recognised that some factory-built aircraft may be capable of operating up to 600kg MTOM. Accordingly, the Authority is giving consideration to exercising an exemption contained in Article 2(8) of Regulation (EU) 2018/1139 to extend its national legislation to certain light aircraft. Aircraft capable of operating to a MTOM higher than the MTOM limitations in Annex 1(e) and compliant with certain conditions specified by the IAA may be issued with a Flight Permit indicating a MTOM to a maximum of 600kg.

In this document the Authority addresses the current regulatory framework, reasons to consider the exemption, the impact of the exemption on the existing national regulatory framework and the risks and mitigations associated with the proposed exemption.

Through this document the IAA wishes to receive the views on the planned exemption of parties who operate or are otherwise associated with these aircraft.

Table of Contents

Chapter 1: Introduction

The European Civil Aviation Regulation on common rules in the field of civil aviation (Regulation (EU) 2018/1139, hereafter 'EASA Basic Regulation) contains a provision in Article 2(8) allowing EU member states to voluntarily extend their national legislation to certain light aircraft. These member states are in effect 'opting out' a set of specific aircraft categories from the requirement for EASA certification.

> ***Article 2 Scope***
> *8. A Member State may decide to exempt from this Regulation the design, production, maintenance and operation activities in respect of one or more of the following categories of aircraft:*
> *(a) aeroplanes, other than unmanned aeroplanes, which have no more than two seats, measurable stall speed or minimum steady flight speed in landing configuration not exceeding 45 knots[1] calibrated air speed and a maximum take-off mass (MTOM), as recorded by the Member State, of no more than 600 kg for aeroplanes not intended to be operated on water or 650 kg for aeroplanes intended to be operated on water;*
> *(b) helicopters, other than unmanned helicopters, which have no more than two seats and a MTOM, as recorded by the Member State, of no more than 600 kg for helicopters not intended to be operated on water or 650 kg for helicopters intended to be operated on water;*
> (c) *sailplanes, other than unmanned sailplanes, and powered sailplanes, other than unmanned powered sailplanes, which have no more than two seats and a MTOM, as recorded by the Member State, of no more than 600 kg.*

Other EU member states have adopted or are considering this exemption[2]. The IAA now wishes to get stakeholder opinion on whether Ireland should also avail of the exemption provision.

This document provides an overview of the current regulatory framework for light aircraft, the impact this exemption would have on this regulatory framework and the benefits and risks of choosing to exercise the exemption.

At this time the IAA is focussing on an exemption for aeroplanes which have no more than two seats, measurable stall speed or minimum steady flight speed in landing configuration not exceeding 45 knots calibrated air speed and a maximum take-off mass (MTOM) of no more than 600 kg, or 650kg for aeroplanes intended to be operated on water.

Current Regulatory Framework for Aircraft

EASA currently certifies most European factory-built aircraft. These aircraft are type certified and are issued with a certificate of airworthiness, having demonstrated compliance with initial and continuing airworthiness requirements in EU regulation.

Certain specific categories listed in Annex I 1(e) of the EASA Basic Regulation such as homebuilt, historic, experimental, research, ex-military, and the following categories of light aircraft are outside the scope of EU aviation regulations:

Category	Single-seater	Two-seater
Aeroplanes* Helicopters Powered parachutes Powered sailplanes	300kg Maximum Take-Off Mass (MTOM)	450kg MTOM

[1] 45 knots CAS stall speed refers to 650 kg MTOM, the highest MTOM permitted by the opt-out
[2] For information on States who have availed of this exemption out please visit the EASA website at: https://www.easa.europa.eu/opt-out-article-28-211#group-easa-downloads

Additional weight allowance for amphibians/floats for aeroplanes and helicopters	30kg	45kg
Additional weight allowance for an Airframe Mounted Total Recovery Parachute System for aeroplanes	15kg	25kg
Sailplanes	250kg MTOM	400kg MTOM

** Aeroplanes: must have a measurable stalling speed or minimum steady flight speed in landing configuration of not more than 35 knots[3] CAS*

Aircraft falling outside the scope of the EASA Basic regulation are regulated at a national level. Currently, there are over 300 light aircraft on the Irish register that fall into this category (most operating on a national Flight Permit).

In Europe, there is an active market of aircraft manufacturers building light aircraft to supply to EU, US and other global markets. In many cases the aircraft are designed and built to a 600kg MTOM but are subsequently limited to 450kg in EU Member States as a consequence of EASA regulations.

The EASA GA Roadmap[4] recognises the current certification constraints. It acknowledges that the design and production of GA aircraft is mostly subject to the same regulatory requirements ('Part 21') as large commercially operated aircraft. It summarises that the EASA regulatory system for design and manufacturing is currently perceived as being too complex for the lower end of GA, which results in a barrier for manufacturers wishing to enter in the wider European market.

To address this issue, EASA intends to simplify the airworthiness regulatory system, covering small aircraft and low risk operations, by developing simplified entry levels into the EASA system, which will be known as 'Part 21 Light'. EASA is committed to proposing a new regulatory framework that fully corresponds with and is proportionate to the nature, risk and needs of sports and recreational aircraft stakeholders, while ensuring appropriate levels of safety. The Agency will consider recognising common standards (not regulations) as a basis for certifying aircraft. This change will take into account industry experience and allow for the introduction of new technologies. Detailed information on this development is available on a dedicated EASA Part 21 Light webpage:

https://www.easa.europa.eu/domains/general-aviation/general-aviation-road-map/part-21-light-making-design-manufacturing-easier

Manufacturers can still elect to have their aircraft of no more than 600kg MTOM type certified by EASA, regardless of any national decision to exempt certain aircraft of no more than 600kg. These type certified aircraft will be treated in the current manner and will be provided with a full EASA certificate of airworthiness.

[3] 35 knots CAS stall speed refers to 475 kg MTOM, the highest MTOM permitted by Annex I 1(e)

[4] https://www.easa.europa.eu/document-library/general-publications/ga-roadmap-2020-update-making-ga-safer-and-cheaper

Chapter 2: Reasons to Consider the Exemption

The primary reasons presented by interested parties to exercise the exemption are:

- It would reduce cost of aircraft purchase and ownership
- It would allow more payload/fuel to be carried
- It would increase choice of aircraft available
- It would better reflect technical innovations
- It will align us with our nearest neighbours in Northern Ireland and UK for light aircraft.

These primary reasons are aligned with the objectives set in the EASA General Aviation Roadmap[5] to support this sector, including the provision of 'Simpler, Better and Cheaper Rules for Aircraft Maintenance' and 'Simplified Entry Levels for Small Low Risk Aircraft',

The New Basic Regulation paved the way by allowing for more flexibility related to General Aviation. Based on this revision, EASA is developing the concept for a drastically simplified airworthiness system will be developed in cooperation with stakeholders.

Under the EASA General Aviation Roadmap there is a move towards increased maintenance being undertaken by owners of certain light aircraft, where the review of maintenance programmes by national regulators would not be required. This exemption would be aligned with the direction EASA is pursuing in terms of General Aviation.

As highlighted by the UK CAA in their review of the exemption[6] in 2019, the exemption being considered would remove the current MTOM boundary separating factory-built light aeroplanes within the scope of national regulations from those under EASA regulation. The current MTOM may serve to effectively limit payload, fuel carriage, aircraft range and/or aircraft occupancy.

By exercising the exemption, Ireland could increase the MTOM limit on certain new, nationally regulated, factory-built aeroplane designs from 450kg to a MTOM of 600kg for land planes or 650kg for seaplanes.

This would improve the availability to the Irish market of many modern light two-seat single-engine aeroplanes that are currently restricted to 450kg MTOM but may be capable of operating up to 600kg MTOM. This change of regulation should enhance the aeroplane market, and the benefits may include a more environmentally friendly, modernised aeroplane fleet for pilots, operators and businesses.

Importantly, exercising this exemption may serve as an opportunity for the Authority to support this important sector of the Irish aviation industry, while further contributing to enhanced levels of safety.

---

[5] EASA GA Roadmap 2.0 [2019], available at https://www.easa.europa.eu/sites/default/files/dfu/220931_EASA_GA_ROADMAP_2019_EN.pdf

[6] https://publicapps.caa.co.uk/docs/33/CAP1920_450-600kg_Response.pdf

Chapter 3: Impact of exercising the Exemption on the Existing National Regulatory Framework

The inclusion in national regulation of aeroplanes which have no more than two seats, measurable stall speed or minimum steady flight speed in landing configuration not exceeding 45 knots calibrated air speed and a MTOM of no more than 600 kg for aeroplanes will have an impact on the existing national regulatory framework.

Registration and Initial Certification Requirements

There will be no change to the registration process as a result of the exemption.

It is important to note that aircraft already on the Irish aircraft register and limited to 450kg MTOM will continue to be limited at that MTOM. The registered owners may apply to the IAA for the adjustment of the aircraft to the higher MTOM, however this will have to be supported by technical data[7] from the manufacturer verifying the aircraft was designed and manufactured to the higher MTOM, and that no modifications or repairs have occurred that may impact the aircraft airworthiness at the higher MTOM.

Continuing Airworthiness Requirements

The continuing airworthiness requirements will be determined following a review of a number of factors including in the first case, the certification or standards accepted for the aircraft by certification and registration. It is envisaged that the majority of aircraft qualifying under this exemption will be similar in design (and production) to aircraft registered here in accordance with Annex I 1(e) of the EASA Basic Regulation, these aircraft are commonly referred to as microlights.

The new category of 600kg aeroplanes, will not be Annex I 1(e) aircraft and will not be EASA aircraft. They will be regulated in accordance with national law. The Airworthiness of Aircraft Order, S.I.324 of 1996 (as amended) provides us with some flexibility in this regard. The aircraft would (most likely) be operated on a Flight Permit issued by the IAA following a recommendation made by an approved national maintenance organisation, following the completion of an annual maintenance inspection. The authorised inspectors, in such organisations are required to demonstrate a level of competence, i.e. knowledge, skills and experience. The details of the competency requirements of inspectors may need to be reviewed with respect to the technological complexity of the aircraft which will be subject to the new 600kg category.

Operation of Aircraft and Rules of the Air

The Rules of the Air in Ireland are set out in Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air which are equally applicable to all general air traffic. The adoption of the exemption in Article 2(8) of the EASA Basic Regulation would not affect these requirements.

The operational rules for aircraft in Ireland operating under National regulations are set out in S.I.61/2006. This is the same regulatory requirement as the current fleet of nationally regulated aircraft which are outside the scope of the EASA Basic Regulation.

[7] A revision to the POH/AFM may be required to reflect the new MTOM and include the technical data from the manufacturer verifying that the aircraft was designed and manufactured to the higher MTOM.

The IAA has already made provisions for pilots holding a suitable EU pilot licence or an Irish national pilot licence to fly aircraft listed on Annex I 1(e) to the EASA Basic Regulation. These provisions could be easily adapted to accommodate aircraft which may be subject to the possible exemption from the EASA Basic Regulation.

Pilot Licensing and Training

If the option to bring light aircraft between 450-600kg under national regulation is adopted, new rules for the licensing of flight crew for this new sector will be required.

It is envisaged that an amendment to Aeronautical Notice P 26 - Issue of National PPL(A) with or without restricted privileges and non-ICAO National FI(A) with restricted privileges[8], will be the preferred direction. Utilisation of this licensing standard provides for greater recognition of the training standards applied and opportunity for a pilot to develop toward the Part-FCL licensing system at a future date if desired. The ICAO Annex I 1(e) standard for the unrestricted National PPL(A) also provides for ready recognition of the licence outside the State.

Amendments to additional Aeronautical Notices such as AN P21 - Acceptance of Flight Crew Licences[9], AN P24 - Exemption from National Requirements for EU Part-FCL licensed pilots operating aircraft referred to in Annex I 1(e) of Regulation (EU) No. 2018/1139[10] will also be required to extend licence recognition to this area.

Current legislation related to language proficiency should continue to be applicable to this new sector.

AMC1 FCL.140.A; FCL.140.S; FCL.740.A(b)(1)(ii) Recency and revalidation requirement[11] recognises that all hours flown on aeroplanes or sailplanes that are subject to a decision as per Article 2(8) of the EASA Basic Regulation or that are specified in Annex I 1(e) to the EASA Basic Regulation should count in full towards fulfilling the hourly requirements of points FCL.140.A, FCL.140.S, and FCL.740.A(b)(1)(ii) under the following conditions:

(a) the aircraft matches the definition and criteria of the respective Part-FCL aircraft category, class, and type ratings; and
(b) the aircraft that is used for training flights with an instructor is an Annex I 1(e) aircraft of type (a), (b), (c), or (d) that is subject to an authorisation specified in points ORA.ATO.135 or DTO.GEN.240.

Clarification will be needed to confirm that an aircraft subject to a decision as per Article 2(8) of the EASA Basic Regulation may be used for training flights with an instructor as the above appears to preclude same.

---

[8] https://www.iaa.ie/publications/docs/default-source/publications/aeronautical-notices/p---personnel-licensing/issue-of-national-ppl(a)-with-or-without-restricted-privileges-and-non-icao-national-fi(a)-with-restricted-privileges

[9] https://www.iaa.ie/publications/docs/default-source/publications/aeronautical-notices/p---personnel-licensing/acceptance-of-flight-crew-licences

[10] https://www.iaa.ie/publications/docs/default-source/publications/aeronautical-notices/p---personnel-licensing/licensing-requirements-for-easa-part-fcl-licensed-pilots-operating-certain-aircraft-which-are-not-subject-to-regulation-ec-no-2162008-as-amended

[11] AMC and GM to Part-FCL — Issue 1, Amendment 9 | EASA (europa.eu)

Fees

If the option to bring light aircraft between 450-600kg under national regulation is adopted, the increased oversight requirements may result in higher annual fees for the 600 kg aircraft than for 450 kg aircraft. It may also be necessary to introduce a fee for any oversight work required to review an application for adjusting an aircraft's MTOM.

Chapter 4: Risk Assessment of the Exemption

In considering any regulatory change, the IAA must assess the impact of the change on aviation safety.

Table 1 presents a list of risks associated with applying the exemption and how these risks may be mitigated. Table 2 provides a list of existing risks that may benefit from the application of the exemption.

Table 1: Risks identified in exercising the Exemption

Risk Description	Potential Mitigating Actions
Aircraft are not certified to a recognised EASA CS standard	Such aeroplanes shall comply with the airworthiness standard requirements adopted by the Authority.
Legal risks in moving to national framework for licencing, training and continued airworthiness.	Ensure the applicable national legislation is reviewed and republished where necessary to ensure it is fit for purpose.
Aircraft in this category may be more complex than current aircraft and will require competent personnel to maintain them.	Review of qualification/experience standards required for maintenance personnel for aircraft in this new category.
The Flight Permit inspection may not be sufficient for these aircraft.	Align Flight Permit inspection with Minimum Inspection Programme published by EASA for light aeroplanes.
Operators of 450kg MTOM aircraft could believe their aircraft may be legally operated to 600kg MTOM.	MTOM for each aircraft is printed on the Flight Permit. Possible information campaign through the maintenance organisations.
At present the aircraft concerned may be operating to performance levels substantially below the flight envelope and performance characteristics of the aircraft. This may lead to certain levels of … If such aircraft are certified to performance calculations with new MTOM closer to the flight envelope then pilots will have to ensure the aircraft is operated within the authorised aircraft performance limitations.	Any adjustments to aircraft performance limitations should be supported with reissued and certified performance data and charts from the aircraft manufacturer.

Table 2: Existing Risks that may mitigated to some extent by the Exemption

Risk Description
Aircraft currently limited to 450KG MTOM have limited fuel capacity due to mass restriction. These aircraft will be able to carry more reserve fuel, reducing risk of fuel starvation and flight endurance (ability to reach alternate airports, etc)
The existing 450KG MTOM, taking account of two adults and fuel, can limit the duration of individual training flights
Older aircraft have fewer safety features (e.g. single harness safety belts). Access to more modern aircraft with improved safety features (ballistic parachutes, etc) can improve overall survivability of incidents.

Chapter 5: Consultation

The IAA wishes to receive your views on the option of exercising the exemption, please fill out the online questionnaire available here: https://forms.office.com/r/WYbvcrJ0tt

The views of stakeholders will be considered by the Authority in terms of any decision to exempt such aircraft from the EU Regulations and if so, the means by which they will be regulated under national legislation.