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30 January 2024

IN THE MATTER OF AN INQUEST TOUCHING UPON THE DEATHS OF JONATHAN NEAL GOLDSTEIN, HANNAH LOUISE GOLDSTEIN AND SASKIA LUCIA GOLDSTEIN

CIVIL AVIATION AUTHORITY RESPONSE TO A REPORT ON ACTION TO PREVENT OTHER DEATHS PURSUANT TO PARAGRAPH 7, SCHEDULE 5 OF THE CORONERS AND JUSTICE ACT 2009 AND REGULATIONS 28 AND 29 OF THE CORONERS (INVESTIGATIONS) REGULATIONS 2013

Introduction

The UK Civil Aviation Authority (“the CAA”) wishes to express its sincere condolences to the family and friends of the Goldstein family.

The CAA has carefully considered the Regulation 28 Report and the matters of concern raised by the Assistant Coroner.

Response

The CAA acknowledges that high mountain terrain can present particular meteorological conditions and challenges to the performance of a pilot and an aircraft.

The highest mountain in the UK is 1,343 metres, by contrast with an average height in the Alps of 2,500 metres. The UK does not have terrain that could provide an equivalent training environment to the Alps or other high mountain ranges. However, the holder of a Private Pilot License for Aeroplanes (“PPL(A)”) would, pursuant to the Convention on International Civil Aviation (“Chicago Convention”), be permitted to fly a UK-registered non-commercial aircraft under Visual Flight Rules (“VFR”) in any

state that is a signatory to the Chicago Convention, which may include over high mountain terrain of the sort not found within the UK.

In the circumstances, the CAA agrees that it would be appropriate and in the interests of the safety of General Aviation (“GA”) pilots and their passengers flying in such terrain outside the UK to publish additional guidance on the specific challenges associated with flying in high mountain terrain.

The CAA has therefore decided to create a webpage on its website dedicated to the risks of flying in high mountain terrain. The CAA considers that the most appropriate guidance is that produced by National Aviation Authorities (“NAAs”) of states which do have high mountain terrain because those states have the necessary expertise to provide such guidance. The CAA will therefore provide links to relevant international guidance given on mountain flying and publish it within the [Safety Topics section](#) of its GA webpages to ensure the information can be easily located. The links will be regularly checked and updated to ensure the guidance remains current and relevant. The guidance will also contain recommendations for pilots intending to fly in high mountain terrain, such as contacting the relevant NAA and consulting their Aeronautical Information Publication and any VFR manuals and instructions.

The CAA has also decided to develop a Safety Sense Leaflet on mountain flying. Safety Sense Leaflets are an additional form of information and guidance to pilots covering specific safety topics. For example, safety guidance and information from the CAA exists for UK GA pilots flying under VFR conditions in the form of the [Safety Sense Leaflet: Flight under VFR - Visual Flight Rules](#).¹

The webpage and guidance will be in addition to the [Skyway Code](#), the CAA’s primary guide and resource for the GA community and everyone who operates within it. The Skyway Code includes chapters on pre-flight preparation (such as flight plans and aircraft performance), safer flying (such as threat and error management and staying in control) and emergencies.

The CAA will use a number of platforms to share the new webpage and guidance widely among the GA stakeholder community, including [SkyWise](#), a free subscription service providing regular updates on items such as safety guidance, regulations and more to approximately 12,000 members of the UK GA community. The CAA will especially ensure that all Approved and Declared Training Organisations in the UK are made aware of the guidance. The CAA will also bring the new webpage and guidance to the attention of GA representative organisations (including, for example, members of the [General Aviation Partnership](#)) for them to promote among their members.

The new webpage and guidance, together with the requirements for private pilot licensing in the UK, mean that the CAA is satisfied PPL(A) holders will have access to the necessary knowledge, information and skills to safely operate an aircraft in a variety of environments, including planning and executing a safe transit along a VFR route in mountainous terrain in good weather. The CAA has summarised the requirements applicable to a PPL(A) below.

The UK PPL(A) theoretical knowledge syllabus and practical examination are wholly compliant with Annex 1 of the Chicago Convention and remain aligned with the European Union Aviation Safety Agency PPL(A) syllabus following the UK’s departure from the European Union.

The theoretical knowledge syllabus takes into account the principles of Threat and Error Management. This concept proposes that threats and errors are part of everyday aviation operations that must be managed by pilots, since both threats and errors carry the potential to generate undesired aircraft states. The principles of Threat and Error Management, including threat anticipation, threat

¹ The full list of the CAA’s Safety Sense Leaflets can be found [here](#).

recognition, error management and recovery to safe flight are applicable in all aviation contexts, including transits through high mountainous terrain.

The UK PPL(A) theoretical knowledge syllabus also contains specific topics which are relevant to the weather conditions to be found when mountain flying. The holder of a PPL(A) should therefore have appropriate knowledge of these meteorological conditions to be able safely to handle such conditions if they were to encounter them.

In addition, the syllabus includes topics relevant to mountain flying such as:

- human performance, including the integration of sensory inputs such as the forms, recognition and avoidance of spatial disorientation and illusions;
- principles of flight, including stall, the influence of altitude and wing loading on stall speed, stall warnings, power-on stalls and stall during climbing turns;
- performance of aeroplanes, including climb performance and the effect of density altitude; and
- flight planning and flight monitoring, including flight planning for visual flight rules, VFR flights, VFR navigation plans, routes, airfields, heights and altitudes from VFR charts, courses and distances from VFR charts, completion of navigation plans, completion of the flight plan and in-flight re-planning.

Candidates must pass a theoretical knowledge examination but may only do so when recommended by the training organisation responsible for their training following satisfactory completion of the theoretical knowledge syllabus.

In order to qualify for a PPL(A), a candidate must complete the theoretical knowledge requirements and then undertake at least 45 hours of flight instruction and perform a solo flight of at least 150 nautical miles. The flight instruction exercises cover navigation techniques which are relevant in flying in high mountain terrain. For example, flight planning and navigation problems at lower levels and in reduced visibility, including hazards, obstacles and terrain, difficulties of map reading and vertical situational awareness (avoidance of controlled flight into terrain).

Once qualified, PPL(A) holders have a responsibility under Articles 68 and 69 of the Air Navigation Order 2016 for the safe conduct of a flight, from pre-planning to completion.

Conclusions

The CAA will continue to review UK aviation safety data relevant to the concerns raised by the Assistant Coroner and will monitor any future developments in the international aviation context in this area. Where appropriate, the CAA will consider whether to implement a change to the regulatory framework to reflect those developments. Any decision to take mandatory action in respect of changes to the requirements associated with obtaining a PPL(A) must follow the CAA's aviation safety legislation and policy development process, including public stakeholder consultation and impact assessment, where necessary.

The CAA will ensure that relevant guidance and related material is published on its website and the stakeholder community is made aware of these resources by 31 July 2024. The CAA will publish the Safety Sense Leaflet on mountain flying by 31 December 2024. The CAA will continue to have regard to the concerns highlighted in the Assistant Coroner's Regulation 28 Report, and will be informed by analysis of UK aviation safety data and any work on these or related issues in the international context.

The Civil Aviation Authority

30 January 2024