The official magazine of the Aircraft Owner and Pilots Association www.aopa.co.uk

AOPA UK

Farewell to an unsung hero

The **Handley Page HP.137** *has been a presence in the* **skies of the UK for over 50 years**, *but that era is now coming to an end*

VISIT THE ORKNEYS
With travel being restricted, David Chambers still managed to go on a tour

REVALIDATION POLICY
Nick Wilcock explains how to keep current during the pandemic

DECISION-MAKING
Part two of Carol Cooper's feature on how to ensure one bad choice doesn't snowball

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GIVING THANKS TO ALL HEROES

EACH YEAR we, as a nation, commemorate the ultimate sacrifice made by the people who fought and supported the fight in various roles, during the Great and Second World Wars. This year we looked forward to the opportunities to celebrate the 75th anniversary of the end of the Second World War in Europe followed later in the year by that of the war in Japan and then, finally, the 80th anniversary of the turning point in our favour that was the Battle of Britain. The Great War saw the rapid evolution of powered manned flight for military purposes, which preceded the pioneering days of aviation during the inter-war period when intrepid aviators crossed oceans and continents. The Second World War brought about great strides in aviation and aerospace technology from which, until recently, we all benefitted. We were fortunate to be living in a peaceful and prosperous country, with the ability to fly to most places around the world. For that we continue to thank and remember those who established the foundations. I used to wonder how people had coped with having their lives completely taken out of their hands, being drafted not only to fight but to work in factories and other places to support the war effort, and for many being without the support of their loved ones. Well, now we all know.

Albeit, a different enemy and a different way of fighting it. I think we should be hopeful that the current situation will also bring about benefits. Those joining the fight this time include the scientists and technologists discovering new ways of bringing vaccines and tests to market, speedily and safely. We've all learnt new communication skills and also the importance of face-to-face communication. Everyone is adjusting to new ways of working where social well-being and health are priorities. This includes the transport sector and as a consequence the aviation industry. The response to the COVID-19 pandemic has once again challenged the normal and, as we have learnt previously, this necessitates new technologies, new ways of working and new behaviours, many of which can be used to good effect for our future recovery and growth. We've done it before.

As I write, this week saw the 54th Annual General Meeting of the British Light Aviation Company Limited which trades as the Aircraft Owners and Pilots Association. We started with a minute's silence to remember Ian Marshall who died unexpectedly recently. His obituary, which follows in this magazine, has been written by a long-time personal friend and flying buddy of Ian, Chris Royle. We also remembered long-time AOPA and Members' Working Group member, Richard Warriner, who died in a flying accident in early August. Our condolences go to their families and friends.

As is the way with AGMs, it's the opportunity for a change of faces on the board of directors. This year, after just over ten years as a director Chris Royle has stepped down. I can't tell you how long Chris has been a member of AOPA because it's lost in the pre-digital age; in addition to being a director he also served as chairman of the Members' Working Group for many years. We don't lose Chris's experience completely as he will continue to serve on the Executive Committee and represent AOPA on the Segrave Trophy nominations committee. Chris, thank you. ■

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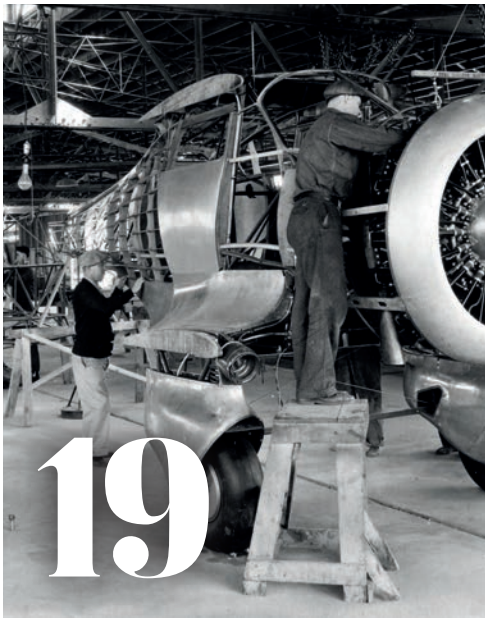

EDITOR'S MOMENT

There were periods earlier this year when time seemed to have been passing so slowly; yet as we approach the final months of a tumultuous year, doesn't time now seem to be flying by?

We've gone from lockdown with no flying, to being allowed to fly for an hour, to being able to fly around the UK and it's good to see.

This issue celebrates British flying, with Henry Simpson discussing the venerable Jetstream, David Chambers on his tour of the Orkneys and Carol Cooper explaining how to ensure you make good decisions – an essential read if you're feeling a little rusty before getting in an aircraft for the first time in a while! Elsewhere George Done explains how to ensure you're logging flight time correctly and Nick Wilcock goes into depth about the CAA's revalidation policy.

So there's plenty to read, something for everyone and hopefully, before the weather gets too bad, you get inspired to think about flying again.

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WHERE ARE WE HEADING?

I WOULD just like to start by making it clear that the government is responsible for aviation policy, not the CAA. The CAA is an independent regulator which is required by law to recover its costs from those it regulates and its primary role is regulating safety.

AOPA continues to engage with the DfT (government) and the CAA, both of which have worked hard to deliver a solution for GA in respect of the COVID pandemic. And GA has played its part in complying with the requirements put in place to protect the nation from the spread of the virus, although there have a been a few exceptions.

The next challenge is our exit from EASA, and whilst questions have been asked about the impact of this, the response is: prepare for the worst and hope for the best – which is no way for businesses to plan. Slowly we are losing our professional flight-training industry and from 1 Jan 2021 the CAA will no longer be able to issue EASA part-FCL licences. As it stands today there is no agreement on mutual recognition of licences with the EU/EASA and it seems that there is no solution forthcoming. I have asked the CAA to continue to pursue this option even when the transition period comes to an end, particularly as the course will remain in line with those that were established under EASA.

In future, the requirement will be that in order to fly a G-reg aircraft you will need a UK licence and whilst this doesn't hugely impact the PPL it has a major impact on the flight-training organisations that offer either modular training or the integrated course. The EU market, which in some cases accounts for 50 per cent of the flight-training business, will disappear where the applicant cannot obtain an EASA licence, which means that the ATO will have to find a way to survive on the UK market alone. Given the current surplus of professionally qualified pilots awaiting employment, the numbers of new entrants are likely to be severely curtailed;

"There is currently a hiatus as people rush to finish their EASA licences before the CAA can no longer issue them"

this has a domino effect throughout GA on aircraft movements, fuel sales, maintenance etc. and therefore it's possible PPL courses will be affected in terms of price. The PPL-training market relies on consumer confidence in the economy, so if unemployment continues to rise, we may see an impact on the numbers in 2021/22. There is currently a hiatus as people rush to finish their EASA licences before the CAA can no longer issue them. However, there is another issue which may have been overlooked, which is that on leaving the EU we are no longer EU citizens and with that goes the automatic right to live and work in other EU states. Whilst the training of pilots in the UK is world-class no one will seek a UK licence where you cannot exchange it with another state automatically.

Where the PPL is ICAO Annex 1 compliant you still have international flight privileges in an aircraft that meets the ICAO standards. Sub-ICAO licences or permit aircraft do not have those automatic rights, and what has been agreed in the past with ECAC may need to be readdressed next year. The issue that I have is that until the government completes its trade negotiations with the EU we are in a vacuum and it's as if the captain and the first officer are ignoring the GPWS and we will end up with a CFIT accident. The links throughout all of aviation are well recognised and if we do not act soon, we will have damaged our industry, which may take years to recover from. I can hear people saying, "So, where is the good news?" or "Why be so negative?" Well, I call it as it is because if you ignore the facts then you will make the wrong decisions.

This is also the case when it comes to issues around taxation and VAT: the reply from government is, "We will have to wait and see." And whilst the UK is saying they will not place additional requirements on our operations what we do not know is how Europe intends to treat UK operators. We are also seeking answers to questions in respect of border controls. We need to know what the rules will be as there is a need to educate those who are affected by what the changes may entail.

I have also raised with the CAA the issue of their charges and that we want to work with the authority to seek areas that can help to reduce their costs to our members. I appreciate that this is a difficult ask at this time, given the loss of income the CAA is suffering from as a result of the downturn in the airline industry but we have started a process.

The CAA is a good regulator – world-class in fact – but it's expensive and we need to address this issue if we are to grow GA in the UK in the years ahead.

I will end by saying that we have witnessed an increase in the number of airspace infringements and landing accidents; if you haven't flown for a while please seek out an instructor and get checked out. Also take a look at the GASCO website as it contains some good advice in relation to safety. I would encourage you, where possible, to send these two organisations a small donation as this will help them with resources and they will therefore be better placed to achieve results.

Finally, on the 80th anniversary of the Battle of Britain we should remember those who gave their lives so that we are able to enjoy the freedoms we have, including the freedom to fly.

Blue skies and safe landing always. ■

Martin Robinson
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HELPING YOU STAY FLYING

Welcome to the **AOPA COMMUNITY** section of the magazine, bringing you all the **NEWS AND INSIGHTS** from the world of AOPA...

WORDS AOPA

AOPA IS STAYING ABREAST OF THE SITUATION WITH THE CAA AND EASA

AOPA is promising to assist and help the CAA in anyway it needs when it comes to what's going to happen on 1 January 2021

The article below was recently posted on the CAA's website and AOPA has promised that it will keep on top of the situation and assist the CAA if needed.
As UK and EU negotiators prepare for their next crucial phase of discussions, Tim Johnson, Strategy and Policy Director, gives an update on CAA readiness for what the end of the 'transition period' will mean: Amid the continuing negotiations about the UK's future relationship with the EU, there is one thing we know for sure – the UK will no longer be part of the EU Aviation Safety Agency (EASA) system after 31 December this year.

That is just over three months away and we understand that some businesses want clarity over a future UK–EU aviation safety agreement and whether mutual recognition of licences, certificates and approvals will be included in it.

We don't yet know what the final outcome of the negotiations will be. What we do know is that we in the CAA and many stakeholders in industry have been working out what a 'non-negotiated outcome' would look like, and preparing for it, for the last four years.

Our aim has been to create as much stability as possible within the overall framework of the UK's relationship with the EU. That is why, in partnership with the DfT, the steps we have taken will mean that after 31 December:

- all current technical requirements will be retained in UK domestic regulation
- all type certificates and certificates of release to service for aeronautical products and parts issued on or before 31 December remain valid
- all other certificates, approvals and licences issued in accordance with EASA requirements that are in effect on 31 December will remain valid under UK law for two years unless they expire sooner
- the UK's existing safety arrangements with countries beyond the EU will continue; new CAA systems for approving aircraft parts and licensing overseas airlines will come into effect
- consumer protection for air travellers will be as strong as before
- aviation security standards will be maintained as rigorously as before.

The end of the transition period brings us new responsibilities too as we take on the design certification tasks previously undertaken by EASA. Our recruitment plans for a well-resourced design certification capability are well on the way to completion and necessary new processes have been tested and are in place. We have carried out a new assessment of the workload for the new function and are confident we will have the capacity to meet the challenge.

"It goes without saying that all CAA-issued design, product and maintenance documentation will continue to comply with ICAO standards"

It goes without saying that all CAA-issued design, product and maintenance documentation will continue to comply with ICAO standards and therefore should be recognised globally. We have kept ICAO fully informed of our preparations and gave them a fresh update last month.

Of course, businesses prefer to plan on the basis of certainty and therefore will be eagerly awaiting the outcome of the current UK–EU negotiations, particularly given the added challenge of the current Covid crisis. But that is no reason for businesses and licensed personnel not to take precautionary actions, if they haven't done so already. For example, a UK maintenance organisation wanting to continue to certify EU-registered aircraft would need to make a third-country application to EASA for an EASA Part 145 approval. We strongly advise businesses not to wait until the last moment for making the necessary applications either to the CAA or to EASA.

Whatever the next rounds of UK-EU negotiation bring, you can be reassured that the CAA remains committed to making the final stages of the Transition Period as smooth as possible for consumers and businesses in the aviation and aerospace industries. We will do what we can. Achieving the smoothest transition possible depends on businesses playing their role too. ■

WORDS Martin Robinson and Pauline Vahey

NEWS FROM THE 54TH AGM

An update of what's happening at your association from the AGM which took place in September

It might have been the 54th AGM of the British Light Aviation Centre Ltd (trading as AOPA) but this was the first ever AGM in the organisation's history that was conducted using an online platform.

As you are aware AGMs are a statutory requirement to ensure the good financial management and governance of an incorporated body. Pauline Vahey, Chairman of AOPA, guided the attendees through the agenda, which included a discussion with respect to the accounts (now available online www.aopa.co.uk); that was duly approved for submission to Companies House. Also the election and re-election of Directors to the Board. This year both the Chairman and the CEO, Pauline Vahey and Martin Robinson respectively, were up for re-election. Having agreed to stand they were both elected.

We said goodbye to Chris Royle as he stepped down, and thanked him for his contribution to AOPA for over ten years as a board member.

The AGM is also a chance for our members to scrutinise the board's management of the association. Following the formalities, we discussed the ongoing challenges facing the association, which include membership growth and retention.

We are fortunate to have a very loyal membership and we are grateful for their continued support. In return AOPA works hard to ensure we keep you flying. This has been challenging during the Covid pandemic but we are pleased to say that membership is holding on albeit slowly diminishing. It's important to note that not all of the association's income is from membership, as we have diversified on some of the activities that not only help to generate revenue for AOPA but benefit the wider UK GA community as a whole. Our aim is to keep the membership fees as low as practicable and as has been reported previously this principle has led us to look at relocating our HQ; more news on this will follow in due course.

The association is in good shape generally, given the current state of the economy; with continued good management through the Executive I'm delighted to report we have no serious concerns about the association's future although we also recognise that we are in a very fluid situation. Given this we also decided to continue to financially support the work of the GAAC and GASCO, to which we contribute non financially too.

Finally it just leaves me to thank you for your continued support.

If you have any questions please email me at chair@aopa.co.uk ■

AOPA FLYING INSTRUCTORS REFRESHER COURSES

For revalidation of an FI certificate, the holder shall fulfil two of the following three requirements:

1 At least 50 hours of flight instruction during certificate validity as FI, TRI, CTI, IRI, MI or Examiner;
2 Attend a Flight Instructor Refresher Seminar within the validity of the certificate; and
3 Pass an Assessment of Competence within the 12 months preceding the expiry of the certificate.

For at least each alternate subsequent revalidation, an assessment of competence must be undertaken. In the case of a renewal you should, within 12 months before renewal, attend a Flight Instructor Refresher Course and pass an assessment of competence.

NEXT DATES

The next dates for the course are

24-25 November 2020.

Approval has now been obtained from the CAA to run this Flight Instructor Refresher Course using Zoom on a one-off basis due to the current pandemic. It is therefore imperative that any candidate is up to speed on using Zoom prior to commencing the Course. Further information can be obtained from Course Administrator, John Pett, on 07754780335. Please book the Course online at www.aopa.co.uk

To register for a place on any of the seminars please call the AOPA office on 020 7834 5631 or join online at WWW.AOPA.CO.UK.
The seminars start at 1100 and end at 1800 each day to facilitate travel.

WORDS George Dunn **IMAGES** Various

WHO HAS THE RIGHT TIME?

The Maintenance Working Group has received a lot of questions about flight timings for logbooks, and here are the answers you've been looking for...

FILLING IN the journey log after a day's flying is a routine bit of paperwork, and provides a basic record of the details needed for the pilot's personal logbook, and at a later date, the aircraft, engine and propeller (if relevant) logbooks. Also, for cost estimation if the aircraft is owned by a group, flying club or school.

Exactly what flight timings should be entered into the aircraft and engine logbooks has been raised by owners, and has also been a topic of discussion in AOPA Maintenance Working Group meetings.

The details entered into the journey log or equivalent may derive from a multitude of sources. In deciding what to charge a pilot using a group-owned or club/school aircraft the use of 'chock to chock', 'brakes off to brakes on', or 'blocks' times is common, as is start to finish tacho or Hobbs meter readings.

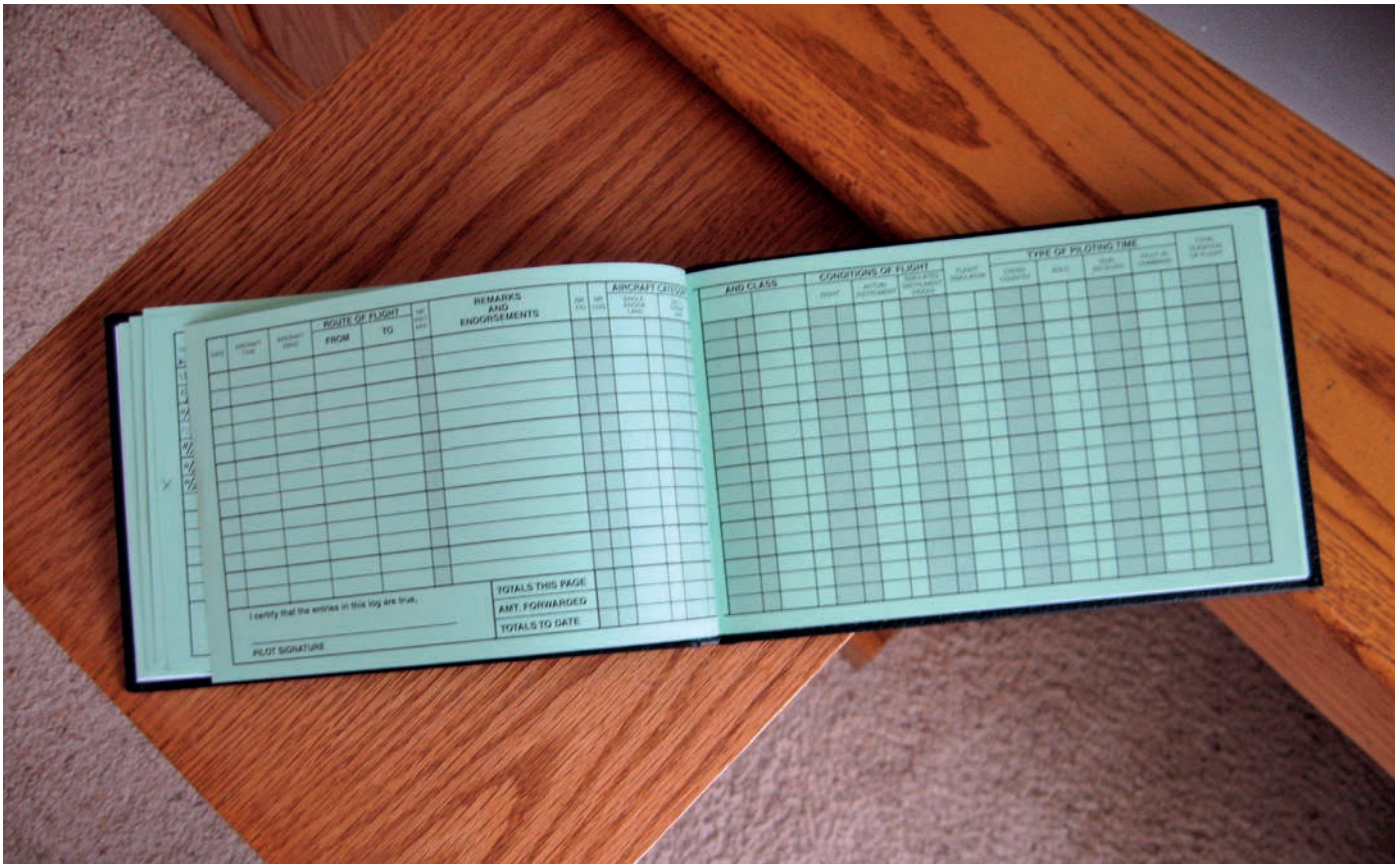
"The definition is universal and appears to have been unchanged for decades, except for military pilots"

The former is based on engine revolutions, and the latter starts to count hours (and tenths) when electrical power is switched on, or when oil pressure is detected. Neither is quite the same as blocks time but still a practical means for charging.

WHAT'S THE TIME?

What a pilot puts in their personal logbook is currently defined in EASA Part FCL under 'flight time' as "... from the moment an aircraft first moves to taking off until the moment it finally comes to rest at the end of the flight ..." for aeroplanes, touring motor gliders and powered-lift aircraft (i.e. blocks time). For helicopters, it's from rotor start to rotor stop. Bearing in mind the responsibility of the pilot for the safety of passengers and others on the ground it's a reasonable and pragmatic definition, even though the actual flying constitutes only part of the 'flight'.

The definition is universal and appears to have been unchanged for decades, except for military pilots who log from when wheels leave the ground to touch back down.



Ensure your logbook is filled out correctly

ON THE RECORD

Regarding the times to be entered into the aircraft, engine and propeller logbooks, the 'old' Air Navigation Order before it was changed in 2016 to align with EASA was quite unequivocal. The record was to provide the date and duration of each flight (or all flights that day if more than one) using the period between take-off and landing. This level of specification is missing from the EASA rules and regulations which now apply. Even so, it appears that the timings as per the old ANO are still commonly used, and it is the maintainer who normally takes on the task of transferring the details from the journey log into the aircraft and engine logbooks. Whatever timings are actually recorded, they are important as their purpose is to allow the establishment of a sensible maintenance programme (the Aircraft Maintenance Programme – AMP – see AOPA UK magazine August 2020) that minimises the risk of unwanted events, the most potentially dangerous being failure in flight of a key engine, propeller or aircraft structural component. Wear and tear, and to some extent corrosion, is continuous and the programme of regular and progressively deeper maintenance/engineering checks are the result.

Other factors, such as pattern of use and environmental conditions, also come into play, so the timings can provide no more than an approximate guide. However, if the term 'operational' or 'operating' in connection with 'hours' appears in an engine manual, it implies that it is the engine running time from start up to stop that should be logged. The timings entered into the aircraft and engine logbooks are fundamental to the AMP and if there are any discrepancies, issues or concerns these should be discussed with your regular maintainer. ■

TOP THREE
TIPS AND ADVICE

1 CLEAN PROP = BETTER PERFORMANCE

Maximise the ability of your propeller to provide thrust from engine power by keeping it clean and free from dead insects. There are plenty of aircraft-friendly products to ensure you won't cause any damage.

2 CHECK THAT PURCHASE

Before you buy that aircraft, get it checked over by a trusted licenced engineer. Pre-purchase inspections can save a lot of trouble later! It is unlikely any aircraft is perfect, some issues can be handled, but the big hidden issues are the ones that can bite!

3 TALK TO YOUR AIRCRAFT MAINTAINER

Have a good path of communication with your maintainer. Ask them for quotes and explanations on work before they start work. Just keep talking throughout the process (and choose one who agrees with the AOPA Code of Practice).

WORDS Carol Cooper **IMAGES** Various

MAKING THE BEST DECISIONS: PART 2

In this second part of the series on decision-making, CFI Carol Cooper continues her explanation of how to not let one bad choice lead to another

If you need to refresh your memory, part one can be found in the August 2020 issue. We left off just as Carol was explaining how acronyms can help. Next up, we start with another acronym – "DODAR"...

- **DIAGNOSE**
- **OPTIONS**
- **DECIDE**
- **ASSIGN TASKS**
- **REVIEW**

Let's take a look:

DIAGNOSE – this asks you to check and see if you know what is wrong. Knowing what is wrong will allow you to understand whether the aircraft is still flyable, if not it will also give you some idea of the time available because if you have time on your side it will keep your stress levels down and therefore the problem becomes more manageable.

OPTIONS – what are the available possibilities, for example diverting, picking a field to land in or continuing the flight? If a diversion is the best option, what airfield and what facilities are at that airfield, and how are you going to get there? GPS, line on the chart?

DECIDE – having thought through the options, you need to decide and, in this phase, you can also summarise: if you need to land in a field, have you selected a suitable one and how much of an emergency is it? Engine fire or rough-running engine where you can't maintain height – both will result in landing in a field, but one is an emergency requiring immediate actions, the other allows you a little more time.

If you have a passenger on board, make sure they know how to use your PLB

"In this phase, you can also summarise: if you need to land in a field, have you selected a suitable one and how much of an emergency is it?"

ASSIGN TASKS – in our environment we may not have another pilot on board or even a passenger. If you do have a passenger they can help with lookout and perhaps get the PLB or ELT (which they should have been briefed on, and asked to operate). If you do have another pilot with you, use them – they can read you the checklist and keep a lookout. If you are on your own think about prioritising tasks. Make sure you do the most important ones first.

REVIEW – This is where you look at the situation so far and question was it the best plan – how goes it? Have you forgotten anything, or missed it out, or is the situation developing in such a way that you need to make changes?

For the single-crew private pilot would this help you when the abnormal happens?

You might think 'you are a pilot and of course you can make decisions', but if you have never had any training it might not be the best decision.

Remember if you have a problem when you are flying, you will need to make a decision. At first you will experience what has become known as the startle factor. This is the time it will take you to realise something unexpected is happening. This is about seven seconds.

When you are training with your instructor or testing with an examiner you know that simulated problems are going to occur during your lesson or test. You have briefed for them or you have been advised that some system failure will be simulated. This means that the startle factor

is not present, and you have probably revised recently the checklist and emergency actions before flight. If you are practising systems failures and emergencies, before you do anything you wait seven seconds (it's longer than you think). Please make sure you do practice in a safe environment and with your instructor.

I am sure many of you watched the film *Sully*: he could have made it back to the runway if they took out startle factor, if he had turned back as soon as the geese flew into the engines, but that is not realistic.

If we need good judgement to make a good decision, how do we get the ability to make good judgements? It comes from training and experience, but as we are human, we also have things which can influence our judgement, acting against us. Stress which can manifest itself in many forms, our own ego (how many times should you have gone around from an approach, but you didn't), individual behaviour and temperament and attitudes.

What sort of temperament have you got, are you the sort of person who doesn't like being told what to do, or are you the one who does things without thinking? Perhaps you are the 'I can do it' type of person who thinks they can do it whether you can or you can't.

Do you do nothing? It's always the easiest course of action. You just resign yourself that there is nothing you can do about it.

Are you complacent about things? You have done something loads of times before, and it has always 'worked...' so why not this time?

Maybe you just think you will get away with it, you always have before.

Have a think to yourself which best describes you. None of us are perfect. If you know what you are like you can try and use that knowledge to improve your decision-making. We all need knowledge and judgement to make good decisions.

To apply good judgement to a developing situation, things that need to be considered are time, the aircraft, you – the pilot, and where you are, perhaps the weather.

"If we need good judgement to make a good decision, how do we get the ability to make good judgements?"

Let's consider an example:

You are on base leg, you put your flaps down on, let's say a Cessna (so they are electric); you didn't initially realise that they haven't gone down. You notice that your speed isn't reducing and (remember the startle factor another seven seconds to realise what has happened) then you have passed the centre line.

You realise your flaps have not gone down. Let's think about some options: you see you have gone through the centre line. You could do a hurried steep turn (what happens to your stalling speed in a turn? It goes up) to get back to the centre line. You try the flap lever again, you haven't got your speed under control and you are too fast. You are not looking out for other circuit traffic and are now too high. Are you cleared to land? You forget that with no flaps you will need more runway to stop.

If you have to land in a field, make sure it's a suitable one

You float down the runway because you are too fast, you land too long, the runway is wet, and I think you can see where this is going, off the end of the runway into the hedge!

That was not a good option, here is another. You go to the dead side to see if you can fix the problem –don't really know what you can do apart from moving the lever up and down as nothing happens, so you go round the circuit again to think: 'I have done a flapless landing, but not for ages. Can't really remember much about them. I think I need to come in faster, so I will add 10 knots to my speed.' If the runway is long enough you will be okay (do you know if it's long enough?) but if not, it could be the hedge again. Another bad option.

Another choice would be to go to the dead side and run the checklist. You look for your checklist; it doesn't mention anything about flapless apart from coming in faster. It's a legal requirement to carry the aircraft flight manual if you fly an EASA aeroplane – are you going to get that out? Perhaps you have an electronic copy? Can you open that and find what it says about landing without flaps and the electrical system? Probably not.

The first thing to consider is how much time you have. If your flaps have failed you have time on your side. It is not an emergency that requires immediate action, such as a cockpit fire. So – DIAGNOSE – we know the problem, the flaps have failed, but has the whole electrical system failed or just the flaps? Would you know how to tell the difference? Maybe you have recently practised a flapless with your instructor, but did you think about what might have caused the flaps to fail? Possibly not. Do you know which is the correct circuit breaker to check? What if the electrical system has failed – are you current on the checklist? You need knowledge to apply the best judgement. Let's say the flaps have failed not the electrical system. So you have made a diagnosis.

"What if the electrical system has failed – are you current on the checklist? You need knowledge to apply the best judgement"

OPTIONS – we need to land without flaps. If you are landing at your home airfield, is it long enough? You will need about 10–20 per cent more distance. Is the grass wet?

DECIDE – I can land safely, or am I going to divert to another airfield; where? How am I going to get there, GPS, line on the chart? Frequencies, where is controlled airspace? Get it wrong and you could be the next infringement.

ASSIGN TASKS – if you have a passenger you can ask them to help with the lookout and hold things, but we are single crew so we don't have another pilot to run ideas by, or assist with flight planning.

REVIEW – have you made the best decision? Maybe you need to change your plan, having reviewed the situation.

Whatever you do, don't forget about 'Aviate, Navigate, Communicate.'

Perhaps you could think of an acronym that might help you if you face a problem, enabling you to make the best choices. Try using the system with your instructor on your next check flight.

Making good decisions is something you should be trained to do; it is not necessarily something you are born with. ■

WORDS John Walker

THE LATEST NEWS ON UK AIRFIELDS

CHILTERN PARK

The site landowner has given notice to the lease holder and aerodrome operator, Chiltern Airsports, to vacate the site by 24 September 2020.

MANSTON

On 9 July 2020, the Secretary of State approved the granting of a Development Consent Order (DCO) to River Oak Strategic Partners (the site owner) for the aerodrome as a Nationally Significant Infrastructure Project. A claim for a Judicial Review challenging the Secretary's decision has been made to the High Court. On 9 July 2020 Thanet District Council adopted its 2031 Local Plan that safeguards the existing use of the site as an aerodrome.

RAF NORTH LUFFENHAM – 2022

The Rutland County Council draft 2036 Local Plan public consultation document includes a 2,215-home garden community for the MoD site.

The public consultation ends on 9 October 2020. The development has been accepted under the Government Garden Village programme.

WELLESBOURNE MOUNTFORD

Stratford-on-Avon District Council Core Strategy stated policy is to "retain and support the enhancement of the established flying functions and aviation related facilities at Wellesbourne Airfield". The Council has rescinded the owner's permitted development rights and has initiated negotiations for an agreed purchase of the site whilst also taking CPO action to acquire the site. £1.125 million has been set aside in the Council's 2019/2020 budget to fund the CPO action. Under an MoU dated 30 August 2019 between the Council and the site owners, the CPO action has been suspended for up to a year to allow the owners to propose limited development of the site whilst retaining the aviation facilities with some of the tenants being offered continued occupancy of the site to cover the period of the MoU. ■

Chiltern Park from the air

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The new HX50 is due to start flight testing in 2022

HILL REDEFINING HELICOPTER DESIGN

The new company promises an 'Elon Musk'-style disruption of the industry

by **AOPA News Team**

A NEW company, Hill Helicopters, recently unveiled its groundbreaking new helicopter, the HX50. The five-seat, turbine-powered, 500-horsepower rotorcraft is the world's first truly private, luxury helicopter crafted to deliver a whole new experience in safety, performance, adventure and comfort.

Designed by a team led by aeronautics engineer Dr. Jason Hill, PhD, the HX50 is a fusion of refined performance and elegance. Its composite structure and rotor system, optimised engine, reimagined avionics, and elevated interior design, together make the HX50 an exquisite, high tech and high-performance personal aircraft.

"The helicopter industry has long awaited an Elon Musk-style disruption that redefines the modern helicopter. "The wait is over," says Hill, founder and CEO of Hill Helicopters. "The only way to create something that is truly groundbreaking is to design from the ground up, giving equal focus to aerospace design, performance, and safety as well as to the artistic and experiential aspects. The HX50 brings all of this together to deliver a unique aircraft and experience."

The HX50 is currently in the advanced design phase, with three prototypes scheduled to begin flight testing in 2022.

"The first deliveries of the HX50 are anticipated to take place in 2023"

The first deliveries of the HX50 are anticipated to take place in 2023.

A 20-year helicopter pilot, Dr. Hill founded Hill Helicopters to design the ideal personal luxury helicopter that blends the latest safety and efficient performance technology with a truly luxurious and high-tech experience. Hill received his undergraduate degree in mechanical engineering from Aston University and a PhD in aeronautics from Cranfield University. After building helicopter-engineering experience at GKN Westland (now Leonardo) he founded Dynamiq Engineering, delivering engineering analysis, design, product and technology development to clients across the engineering industry. With hand-picked engineers from Dynamiq Engineering and beyond, Hill formed Hill Helicopters to build the world's first truly ground-up helicopter since the invention of rotorcraft flight. The company remains fully owned by Hill, allowing his team complete creative control to meet ambitious designs and timelines. ■

NATS ANNOUNCES DANGER AREAS IN CHANNEL

by **AOPA News Team**

NEW TEMPORARY Danger Areas in the English Channel have been in effect since the beginning of September.

The details, published by NATS, are also to be available in a Yellow AIC.

The complex of 11 areas is being established to facilitate transiting and search operations by a number of Remotely Piloted Aircraft Systems that will be operating, beyond visual line of sight, from Lydd.

The individual areas will be activated by NOTAM, usually with 22 hours' notice. Information will also be available from Lydd Approach (120.705 MHz) and London Information (124.6 MHz).

A number of VFR routes from either the LYD or DVR VORs to various airways points have been established to make life easier or at least less problematic for GA pilots heading to France, although certain levels may not be available when one or more of four Danger Areas are active.

The danger areas

It's not clear from the documents how the routes should be used, nor if any additional regulation applies to the Danger Areas. ■

FOUR INFRINGMENT HOTSPOTS IDENTIFIED IN LONDON AIRSPACE

by **AOPA News Team**

LONDONairspace comprises 24 different areas across a volume of airspace extending approximately 100 n.m. from west to east and, in some areas 90 n.m. from north to south. It encompasses the south-east of England from east of the Isle of Wight turning north just to the west of Dover, passing Southend to the northeast of Clacton before turning west, passing south of Cambridge towards Milton Keynes before turning south to the east of Oxford and back to the Isle of Wight.

In 2019 there were 279 reported infringements of the LTMA. An infringement of the TMA requires the ATCO to achieve 3 n.m. or 3,000 feet separation from the unknown infringing aircraft and invariably requires the issuing of 'safety intervention measures' such as avoiding action to known traffic to achieve separation. An infringement creates a significant safety risk to other pilots and disruption to traffic with the associated increase in workload of pilots and ATCOs due to the traffic density at the various airports. The chart of the area looks complicated but careful planning before the flight, including formulating a 'Plan B' option, can assist with reducing the workload during the flight and the chance of an airspace infringement from occurring. 'Plan B' should be an alternative route around controlled airspace when 'Plan A' is denied due to traffic density or when the weather requires a track diversion. We have already encountered several hot summer days with CBs bubbling away; flying through this thermic and turbulent air can quickly result in an infringement of the TMA or be a contributory factor to such an event. The 'Plan B' option is always a good 'error management' technique when identifying the risks of your planned route as part of your Threat & Error Management.

Four hotspots identified

More can be found at: airspacesafety.com ■

LOOK BACK... THIS MONTH 88 YEARS AGO

THE BEECH 17 STAGGERWING'S FIRST FLIGHT

The Model 17 was nicknamed the Staggerwing as short for negative stagger. Most biplanes have stagger, but have positive stagger with the upper wing forward of the lower. Negative stagger-wing biplanes dated back at least to the First World War, but were still unusual.

Following the first flight of the type on 4 November 1932, Beech built 785 of them. This was an exceptional number for such a high-end aircraft in the worst years of the American depression, and reflected its use by the narrow strata of society that were still wealthy: mainly top corporations and their chief executives. The plane also found success as a racer, and second-hand examples proved to be good utility and push aircraft. During World War II, the U.S. forces acquired about 400 Staggerwings, the British obtained 106, and several other countries obtained small handfuls. Military uses included high-speed VIP transport and air ambulance duties. The final Model 17 was built in 1949. The Staggerwing is prized by antique aviators as a beautiful 1930s classic. Dozens are still flying.

AOPA NEWS HIGHLIGHTS

HIGHWAY LANDING GETS POLICE ESCORT

It's not every day a pilot gets a police escort for take-off but an American Cessna 172 pilot had bikes and cars with lights blazing for its short hop back home. The pilot reportedly made a precautionary landing on I-640 because he was low on fuel. The authorities blocked 2,000 ft of freeway and the freshly fuelled aircraft lined up in the 'fast' lane and accelerated under an overpass before lifting off uneventfully.

ACCIDENT LIAR GETS PRISON TIME

A US pilot has been sentenced to a year in prison for lying to federal investigators following the 2014 crash of a Ryan Navion A during a sightseeing flight in Alaska. The instrument-rated commercial pilot, identified as Forest Kirst, and three passengers were seriously injured in the accident. One passenger died of his injuries 35 days after the crash.

AS2 TO START WIND TUNNEL TESTS

Aerion has announced that its AS2 supersonic business jet concept is beginning high-speed wind tunnel testing this month. The company also noted that it has completed computer modelling of the AS2 design using aerodynamic optimisation tools that provided thousands of data points to develop the shape to a high level of fidelity and detail. According to Aerion, there is no need for a demonstrator at this point.

Karen Taylor is leading the charge

JOBS BOOST FOR GLOUCESTERSHIRE AIRPORT

New business park will create space for 1,750 new jobs

by **AOPA News Team**

GLOUCESTERSHIRE Airport is matching the county's ambitions for economic growth during the recovery from COVID-19 by submitting a planning application for an expansion of its employment sites.

The new business park will create space for around 1,750 new jobs by developing a site between the existing Anson and Meteor business parks.

New offices and industrial units will comprise the bulk of the 35,000 sq m development at the Staverton site, which lies in an area of strategic economic growth. The rest of the site will be landscaped.

"We are excited to be able to talk about new jobs coming to the area at this crucial time for the recovery of the economy," said Gloucestershire Airport's Commercial Finance Director Karen Taylor. "The location is ideally placed for growth with connections by road and air, and we aim for the airport to be a gateway to growth for the many exciting developments happening in Cheltenham and Gloucester. It is an exciting time for the county and our proposal will allow more businesses to connect to the cyber centre of excellence at West Cheltenham, the significant ambition of Gloucester City and the wider region too."

"We are excited to be able to talk about new jobs coming to the area"

The new 8.5-hectare park will sit on land to the north of the Gloucestershire Airport site and replace the northern end of the north/south runway.

The proposals are supported by GFirst LEP, which has confirmed it will provide £1.885 million in 'Growth Deal' funding to support the infrastructure required to deliver the new development.

Tewkesbury Borough Council has recommended that the site is allocated for growth in its Local Plan, which is at an advanced stage and awaits approval from the Secretary of State.

"This is an important part of our growth strategy to deliver a sustainable business as part of our long-term vision," added Karen Taylor. "Connecting Cheltenham, Gloucester and the Golden Valley with new businesses and airports across Europe will form a crucial part of our success and that of the county."

Once the application is registered, people will be able to comment on the proposals via Tewkesbury Borough Council's website. ■

HELICENTRE AVIATION EXTENDS 2020 SCHOLARSHIPS DEADLINE

by **Robert Care**

HELICENTRE Aviation Academy has extended the deadline of its 2020 Professional Helicopter Pilot Scholarship Programme.

Applicants now have until 31 December 2020 to apply for the scholarships which include a fully-funded modular Commercial Pilot's Licence, a Flight Instructor Course, and a number of part-funded sponsorships worth over £150,000 in total. The programme is open to all Helicentre Aviation students who obtain their PPL(H) at the academy before the deadline.

The scholarship programme, which has been hugely successful in identifying standout future helicopter pilots, is now in its eighth year. It was originally designed to meet the company's ongoing requirement for suitably qualified flight crew, training and developing them in-house for Commercial Air Transport and Flight Training roles. Earlier this year Helicentre Aviation was delighted to announce the award of its 2019 scholarships.

Sam Wyss, a FI scholarship winner

"Applicants now have until 31 December to apply for the scholarships"

Tom Barnard from London received a fully-funded Commercial Pilot (CPL) Scholarship, and Sam Wyss from Lichfield was awarded a Flight Instructor (FI) scholarship. For the first time a brand new "Bristow" CPL(H) Scholarship was awarded to James Lee from Birmingham, strengthening the industry partnership that Helicentre Aviation and Bristow Helicopters formed last year. The scholarship will provide James with a fully-funded 35-hour modular CPL(H) course, whilst he is mentored by Bristow towards the Oil and Gas career pathway he strives to achieve in the future. Several part-funded scholarships were also awarded to finalists.

Applications are now open and prospective applicants can register their interest and download the application form at: www.helicopterscholarships.com. ■

AOPA GERMANY VISITS JERSEY

by **Richard Hawkin**

A GROUP of pilots, all members of the Pilot's Table Düsseldorf and AOPA Germany members, visited Jersey between 20 and 23 August.

The visit was organised by Düsseldorf-based instructor Michael Fröhling. Michael specialises in instrument training and has written a book on this subject. He also arranges social gatherings and flying trips for pilots from the Düsseldorf area under the banner "Pilot's Table" which was founded by fellow instructor and participant, Peter Pan.

The group celebrated the 10th anniversary of Pilot's Table Düsseldorf with a dinner at the Somerville Hotel in St Aubin.

This May should have seen a visit to the North Cape but the flight had to be cancelled because of the restrictions. But Jersey in August was a great success although coronavirus played a part in reducing 12 aircraft to five. Some of the other seven pilots had recently been in France which would have necessitated five days of self-isolation on arrival in Jersey. Those who made it were able to fly directly from Germany.

On arrival in Jersey, the group was handled by Gama Aviation, the Jersey Aero Club being closed,

There was a 10th anniversary celebration

and so was treated to the style of handling normally associated with business jets. The Covid test centre is almost next door to Gama and all arrivals to the island must be tested but are then free to enjoy their stay.

The group stayed in the island's capital, St Helier, so had a central location for their three-day visit before returning to Düsseldorf on the Sunday. ■

CAPT. IAN MARSHALL 10/11/1953–12/08/2020

Aviation has lost someone who loved flying so much that he inspired countless others to become pilots

by **Chris Royale**

THE UK aviation community has recently lost one of those rare individuals who possessed the gift of enthusing others with their passion, and making easy and achievable what had previously seemed difficult.

Ian Marshall was one such individual who touched many, many lives in both general and commercial aviation, with his boundless enthusiasm for flying.

I first met him some 30 years ago when a mutual friend suggested that I join Ian in providing commentary for the Biggin Hill Air Fair radio. This was enormous fun and was the start of a lifelong friendship.

Ian was a classic example of pilots known as "self-improvers". He obtained his PPL in early 1978 at Booker and quickly moved on to gain an instructor's rating and an instrument rating followed by a multi-engine rating, funded by Ian's work as a sound engineer and then as a radio producer with LBC Radio. Later in his airline career, and during one of the downturns in the aviation industry, Ian returned to part time radio production with Classic FM.

Ian's first full-time aviation work was as a demonstration pilot flying the Optica for Edgeley Aircraft, based at Old Sarum. At one stage this involved Ian checking out Neville Duke, one of his boyhood heroes, on the aircraft.

He built his flying hours making newspaper deliveries to Europe, after which he flew mainly BN Islanders on charter work.

Some flying film work ensued, in a film entitled *Sweet Dreams* in which Jessica Lange played the part of the country and western singer Patsy Cline. This at one time involved Ian being dressed in a blonde wig to double for Jessica Lange.

He then gained an ATPL, moving on to airline flying with London City Airways flying DHC Dash 7s, before moving to Monarch and then joining British Midland International (BMI).

This involved a step up to flying DC9s, Boeing 737s and Airbus A319/320 on European and Middle Eastern routes. As well as gaining his command, Ian took on the role of emergency response manager for BMI, becoming a founder member and then chair of the UK Aviation Emergency Planning Group, only standing down earlier this year, long after leaving BMI. During this time a number of people shared trips with Ian to that Mecca of aviation at Oshkosh, leaving wonderful lasting memories.

BMI was later absorbed by British Airways, and at this point Ian decided to leave the airline world to become a full-time flying instructor and to develop his part-time emergency response consultancy and training work that had started with BMI.

Consultancy work blossomed, with Ian being trained in Post-Crash Management by IATA, the RAF and British Police. He later went on to hold roles as a member of IATA Emergency Planners' Working group, the Star Alliance Energy Advisory Group and the UK Government Crisis Advisory Group.

Ian Marshall - 1953-2020

He also lectured on the subject at London City and Cranfield Universities and to airlines in Europe and the Middle and Far East.

He continued full-time instruction with West London Aero Club at White Waltham as Head of Training, at one time instituting multi-engine training. On several successive years, he organised and led hugely enjoyable touring trips with 8 to 10 aircraft to France and Lake Como in Italy. Latterly he took up instructing at Elstree.

Always a supporter of AOPA (UK), he somehow found the time to serve as Chairman of the AOPA (UK)'s Training Committee and for which he also wrote many practical and thought-provoking articles.

If Ian was not instructing, he would be flying one of the aircraft that he owned over the years. He was constantly, restlessly looking for "that perfect aircraft", owning shares in a Cub L4, a Cap10B (in which he gave many their first taste of aerobatics), a Decathlon, a Robin DR 400, a Cirrus SR20, a Piper Cherokee Six, and his last aircraft, a venerable Piper Apache, an aircraft affectionally remembered by many from its days with Hamble College of Air Training.

It was in this aircraft that he was looking forward to retirement and touring with his loving wife Sheila who had always supported and helped Ian in his career.

If all that were not enough, Ian also obtained his PPL(H) in a Hughes 300, and took up gliding, particularly during holidays in New Zealand, at one time owning a glider for a period.

For sheer fun, Ian enjoyed sailing in classic dinghies, initially learning at Blakeney, Norfolk. Later, he and his wife Sheila enjoyed bare-boating holidays in the Greek Islands.

Ian was a lifelong dog lover, owning a succession of Welsh border collies, each having distinctive personalities.

Despite significant medical challenges, Ian was always cheerful and positive in his views of the world.

In particular my family has cause to be thankful for Ian's help and support at a time of great personal tragedy. ■

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FLYING FEATURE

ISLAND HOPPING IN THE ORKNEYS

WORDS David Chambers **IMAGES** David Chambers

With most of Europe locked down there are not many options for a touring holiday in your aircraft. However David Chambers was still able to get away for a few days...

PANDEMIC restrictions having limited our flight opportunities into Europe, I thought I would explore more of what the UK and Ireland have to offer. I spent a couple of days in the Orkneys, briefly landing at several outlying islands and staying overnight on the main island.

MAIN ISLAND

It's about an hour's flight from Inverness up to Kirkwall where you are spoilt for choice with instrument approaches – NDB, ILS, RNP (formerly known as RNAV) and even a VOR. There's a steady trickle of commercial traffic, including Loganair which operates like a bus service between the nearby islands. We found ATC very accommodating for practice instrument approaches, with the crosswind runway useful for landing during strong southerly winds.

In front of the main terminal, there's a memorial to Captain Fresson OBE, who pioneered inter-island air services in 1932 and launched the UK's first air mail service in 1933.

The airport has AVGAS but it is much more pricey than further south. Hire cars are available at the terminal, as is an airport bus into town. At the time of writing, no airport shops were open and the café was only open in the morning.

The main alternative airfield for GA visitors is Lamb Holm. The main grass runway at 640 metres will accommodate many GA aircraft but the cross runway at 340 metres would be a bit short for some. The big advantage is the opening hours – it's open until official night, and daylight extends quite late into the evening this far north in the summer, while Kirkwall closes at 5:30 p.m. local. The only other listed GA airfield on the island with the slightly unfortunate name of Twatt is said to be no longer in use.

• The main island itself has a population of almost 20,000.

"The main alternative airfield for GA visitors is Lamb Holm

You'll need a hire car to get around and there are several sights worth seeing depending on your interests:

• The Ring of Brodgar, a ring of neolithic stones older than Stonehenge

• Skara Brae, a 5,000-year-old neolithic village, well preserved despite being older than the Egyptian Pyramids

• The Italian chapel, adapted from a Nissan hut by Italian PoWs during World War II

• Churchill barriers – concrete submarine barriers and causeways between several of the islands

• St Magnus Cathedral

• Wide open unspoilt beaches

• Bird and marine life.

What you won't find many of are trees, probably because it's just too windy.

It has become a popular destination for cruise ships and American tourists which were notable by their absence this year.

The islanders that we met were very welcoming and the

BELOW CLOCKWISE: Plenty of wide open space, North Ronaldsay Airport, and the Old Man of Hoy

hotels and guest houses would clearly like to attract more trade.

Several of the nearby islands are connected by causeways with others easily visited by ferry, with a car or on foot, although passenger ferry capacity has been radically reduced for social distancing. It's a short trip over to the Island of Hoy where you can walk up towards the Old Man – a 137 metre-high sandstone sea stack that's also clearly visible from the air.

"Six of the outlying islands boast their own airstrip. These are typically advertised as gravel rather than asphalt"

Eday Airport Terminal Building

ORKNEY ISLANDS

Six of the outlying islands boast their own airstrip. These are typically advertised as gravel rather than asphalt, each with a main runway with a TODA of at least 537 metres. All of the airfields looked well kept with clear signage, good surfaces and recently mown grass. The terminals each consist of a small building that would keep the few passengers out of the wind and rain but had limited facilities.

Each airfield has a local responsible person with central oversight from Highlands and Islands Airports Ltd (HIAL) in Inverness. GA pilots need to obtain permission from both for any visit and must avoid movements +/- 15 minutes of any commercial flight. Changes to your flight times must be checked with the local airfield and there's also a bit of paperwork to do in advance.

All traffic in the Orkneys remains on the same Kirkwall ATC frequency (tower and approach are combined), reporting when airborne and again on final before landing. There's not much high ground to affect flight, although an increasing number of wind turbines are appearing.

The weather is wet and windy more often than down south, and you have to be well prepared for that. Our planned stay overnight on one of the islands had to be cancelled because of 40+ knot winds forecast the following morning. The weather on the day was light rain with broken cloud enabling easy VFR navigation between the islands but not great for photography.

The outlying islands vary in size and population considerably. Westray is the largest with 600 and North Ronaldsay the smallest with 72. There are also some smaller islands (without an airfield) with fewer inhabitants, including one recording a solitary resident.

We managed to land on five of them, stopping briefly and only getting outside at two, with the remaining airfield off limits due to clashing with the commercial aircraft timetable. The airfields are easy to spot from the air and it's very much up to the pilot to decide which runway to use and self-position appropriately.

Eday airfield is also named after the adjacent beach. It is undoubtedly the most northern UK airport with London in its name. Clearly the locals have a sense of humour!

The Italian Church at Lamb Holm

THE WORLD'S SHORTEST COMMERCIAL FLIGHT

A unique experience in the Orkneys is the flight between Papa Westray and Westray, which is recorded as the shortest commercial passenger flight in the world, at two minutes. Sadly the wind wasn't blowing in our favour and we took four minutes to circle round to land.

You can see the windsock and terminal buildings across the water from each, but there isn't an easy alternative by sea. I doubt many passengers travel directly between the two and instead are en route to/from Kirkwall. For those who do fly commercially, it is one of the cheapest at £7.25 per flight. It's an essential lifeline for islanders in addition to facilitating tourism.

Perhaps this destination is one to consider for next year or earlier, subject to a good weather window and allowing plenty of time to fly there and back. Beware that daylight becomes much more restrictive in the winter months. ■

Positioning the aircraft downwind for Westray

Farewell to an unsung hero

The **Handley Page HP.137** has been a presence in the **skies of the UK for over 50 years**, but that era is now coming to an end.

WORDS Henry Simpson
IMAGES Andy Foster, Nick Blacow, Nick Lawson

THE Handley Page HP.137 Jetstream proveed to be the final act in the story of the illustrious company, but its design would not only outlive two of its manufacturers but would remain a presence in the skies of the UK for over 50 years. That era though is now coming to an end. I spoke to the chief test pilot of Cranfield Aerospace and former chief pilot of the Shuttleworth Collection, Dodge Bailey, about flying the UK's last Jetstream as it approaches retirement.

The Jetstream was conceived by Handley Page at a time when it faced significant government pressure to merge with either Hawker Siddeley or the British Aircraft Corporation (BAC). Handley Page resisted, but with no government contracts and dwindling finances, their new aircraft would have to be small. The resulting design was aimed at filling the niche for a short-range feederliner with the prototype first taking to the air on 18 August 1967. The first production model, the Jetstream 1, flew a year later but trouble with the

"Trouble with the type's Turbomeca Astazou 14 engines resulted in the swift development of the Jetstream 2"

type's Turbomeca Astazou 14 engines resulted in the swift development of the Jetstream 2 that debuted in 1969 with the more reliable Astazou 16 engines. Production delays and the engine trouble had taken its toll, and the cancellation of a USAF order for the Jetstream 3M, a military cargo variant powered by the Garrett TPE-331 turboprop, was soon followed by the liquidation of Handley Page. This though would not prove the end of the aircraft as, similarly to de Havilland's last aircraft, the earlier DH.125, (which would become the successful HS.125),

significant interest in the type remained, and production was taken over by Scottish Aviation, which marketed the Jetstream 2 as the 200 series. Scottish Aviation subsequently produced Jetstreams for perhaps its most famous operators, the RAF and Royal Navy, who used them as multi-engine and navigation trainers respectively, with the type finally obtaining the government-backed orders that had previously been denied to Handley Page.

Cranfield Aerospace acquired three Jetstreams from the receivers in 1971 after the collapse of Handley Page. These consisted of two Mk 1s and a single 200 series aircraft, to be used as flying laboratories. As the Mk 1's Astazou 14 engines had such short TBO (Time Between Overhaul) times they were exchanged for de-rated Astazou 16s.

It is here that Dodge Bailey enters the story. Upon leaving the RAF in late 1989, he joined Cranfield in early 1990 and converted onto the type by the former chief test pilot, Angus McVitie. Dodge describes the Jetstream as "a large aeroplane squashed small," he adds that Handley Page only really produced large aircraft up until the Jetstream, the name becoming synonymous with large aircraft after WW1. This large aeroplane thinking is evident in that it is "much more complex compared to US equivalents such as the King Air". The Mk 1 had both an AC and DC electrical system, something usually only found on larger aircraft, and Dodge also adds that "it had an APU (Auxiliary Power Unit) bay which, though not fitted, shows the large aircraft mindset." He recounts that the instruments were central in the cockpit like a larger two-pilot type, but it was certified as a 'light' single-pilot aircraft. Dodge believes this certification was born out of the dwindling finances at Handley Page and a desire to quickly certify the aircraft, however the resulting restrictions on the aircraft, primarily the weight limit of 12,500 lb, meant that with a full passenger load, limited fuel could be carried. This artificial constraint hindered the type's usage and despite making certification simpler and cheaper, Dodge believes it contributed to the manufacturer's downfall.

"The Mk 1 had both an AC and DC electrical system, something usually only found on larger aircraft"

Scottish Aviation continued to produce the aircraft until 1977 when financial pressure forced them to merge with several other manufacturers including BAC and Hawker Siddeley, to form British Aerospace (BAe). It was BAe who further developed the Jetstream design, fitting the Garrett TPE-331 as had been fitted originally by Handley Page on the fifth prototype for the planned USAF 3M model. The new variant, dubbed the Jetstream 31, first flew in 1980 and importantly corrected the certification limitations of the earlier models, being certified to a weight limit of 15,500 lb.

In terms of performance, Dodge describes the TPE-331 as a very conventional direct-drive turboprop, one in which the governor changes the pitch of the blades to maintain a set RPM as power is added or removed. This is in stark contrast to the Astazou. "The Astazou was really a helicopter engine, so it treated the propeller as a rotor," explained Dodge. This meant that the power lever directly controlled the pitch, and the governor the fuel so: "The power lever was actually a pitch leaver, so in a way it functioned as an auto throttle as the engine automatically added and reduced power." Dodge also added that "this made glide slopes a single control exercise, the same with steep turns."

In terms of general performance, the aircraft had a true airspeed of 230 knots and the Mk 1 was certified for 30,000 feet but as that altitude was rarely required, the Series 200 was only certified up to 25,000, though in reality Dodge comments they typically fly at 19,000 feet. With a full fuel load the aircraft has a range of about 1,000 miles, but that is reduced to between 200-300 miles with a full passenger load. The Mk 1 had a maximum speed of 215 knots whilst the 31 is capable of 230.

Cranfield's Jetstream 31

HANDLING

Dodge highlights that due to the requirement for six rows of passenger seats the aircraft needed a wide range of centre of gravity (CG). "The centre of gravity range is about 30 cm which is 20 per cent of the mean aerodynamic chord –

A historic photo from the aircraft's past

quite a large range," he said.

The result of this is that the aircraft is very stable at the front of the range and less stable to the aft. Dodge elaborates that in order to keep it legally stable: "They had to fudge it," with a spring in the tail pulling the elevator down. The effect of this is to make the plane feel more stable to the pilot, "... even when it isn't and that's allowable in the certification. So when in the aft of the CG range, the stick barely moves as the aeroplane has effectively no stability but that is masked by the effect of the spring." This fix gave the legally permissible, but undesirable characteristic of phugoid oscillation in pitch, about which Dodge comments: "If you let it get out of control the aircraft would eventually loop itself." He recalls that the RAF pilot's notes on the type state: "Control is marginal in landing in strong winds – which is a very strong statement about an aeroplane." The aircraft is fine in roll but in yaw, because of the type's speed range, they needed a large rudder for low speeds but deflection at high speeds could damage the aircraft. To address this, the rudder pedal is connected to a torque tube which twist as air loads increase, to give less deflection and protect the airframe. There is also a rudder-aileron inter connect. "This is primarily to aid the pilot if there is an engine out but it gets in the way a bit with crosswind landings as you have to overpower the desire for both to move in the same direction".

The Jetstream 31 continued to be produced by BAe until 1993, with the aircraft proving successful in its originally intended role as a commuter and feederliner with 381 examples built, mostly for the American market. The company then produced the larger Jetstream 41until 1997.

The Jeststream cuts a fine figure in the sunset

Dodge describes the 31 as physically the same as the earlier Mk 1 and 2 but with different engines and systems. "It's got a lot of clever stuff in terms of airflow control," he adds. "It's a great little commuter."

When asked which variant he preferred he has no doubts. "The Mk 2 (series 200) was the optimum aeroplane, it's the real GT version, at 12,500 lb but with the more powerful Astazou 16 engines it had better power to weight."

The series 200 at Cranfield served as a test bed for Racal electronics "... so it had fantastic avionics with radar and Doppler, all of this pre-GPS." Sadly, this example ran out of engine life in the 1990s and it was deemed uneconomical to replace them, but Dodge remembers it fondly. "It was a great aeroplane and we did some interesting work with it," he said.

Cranfield trials have included a military TCAS system, navy helicopter radars and air pollution measurements. "We would fly west of Ireland to sample clean air and then catch up with that air again the next day over the North Sea and see what the power stations had done to it." One interesting assignment Dodge remembers is being asked to formate on an ascending weather balloon, "An interesting piloting concept, balloon formating....we of course had to fly orbits around it until we could climb no more and it left us behind."

The last airworthy Jetstream in the UK, G-NFLA, is a 31 that first flew in 1984 and was acquired by Cranfield in the early 2000s.

The aircraft was acquired from BAe, which operated it for corporate travel; that made it a fairly low-houred airframe. "I always look for good homes for my aircraft" Dodge says, the original Mk 1s both now being ground instructional airframes

in technical colleges – one at Perth, the other in Paris – that 'big aeroplane thinking' making them ideal for the role as, despite being small in size, they have the more sophisticated systems in common with larger types. There was, until relatively recently, another flying Jetstream in the UK, also at Cranfield – G-BWWW – the BAE Systems flying test bed for automated flying tests. It was operated by Cranfield but is no longer in flying condition.

The Jetstream left RAF service in 2003 and the Royal Navy in 2011, both replacing it with the King Air; now after 50 years of operations at Cranfield, sadly the Jetstream is coming to its end. Dodge comments that availability of spares is becoming an issue, "We are having to hunt around for them as the type is dwindling." There are also the other problems associated with an ageing airframe, "... unanticipated symptoms of faults due to old wiring which take ages to find and fix. So it's proving harder to keep it serviceable." Cranfield though, will miss the Jetstream. "The actual airframe is perfect for its job, there is no equivalent aircraft, even the biggest King Air cannot match it." One major advantage of the Jetstream is that its large fuselage, in which it is possible to stand upright, provides ample space for equipment. A side observation in our conversation was that this is a selling point of the newly revealed Celera 500L laminar-flow design business aircraft, indicating that it remains an area of advantage over types such as the King Air.

Cranfield is moving to a Saab 340, "It's more aeroplane than they need, but the only thing for the job." The Jetstream was due to be retired this year but delays have bought the type another year – its retirement is now planned for late next summer. Dodge expects the aircraft, once grounded, to remain at Cranfield.

Dodge is however determined that the aircraft will not go out without a fanfare and chose to work up a display on the type due to its impending demise. Having performed some practices last year he had his display authorisation renewed on the type earlier this year, and it made an appearance at one of the Shuttleworth Collection's drive-in shows on 2 August. Dodge's display proved very popular and it was regarded as the highlight by those who reviewed the event. "It's a handy aeroplane," he says, "the G limit is just over 3 but it comfortably displays at just over the 2 G." He remarks that the legendary Neil Williams once did a full aerobatic display in it! Dodge's routine is a more sedate affair, but by no means slow. The routine does give a feel of the type's speed though, with flypasts at 220 kts which the aeroplane can comfortably do at less than full power. With the type now around for one final year it is hoped that it will be able to make more display appearances in 2021 so that people can enjoy what Dodge rightfully describes as an unsung hero of British aviation.

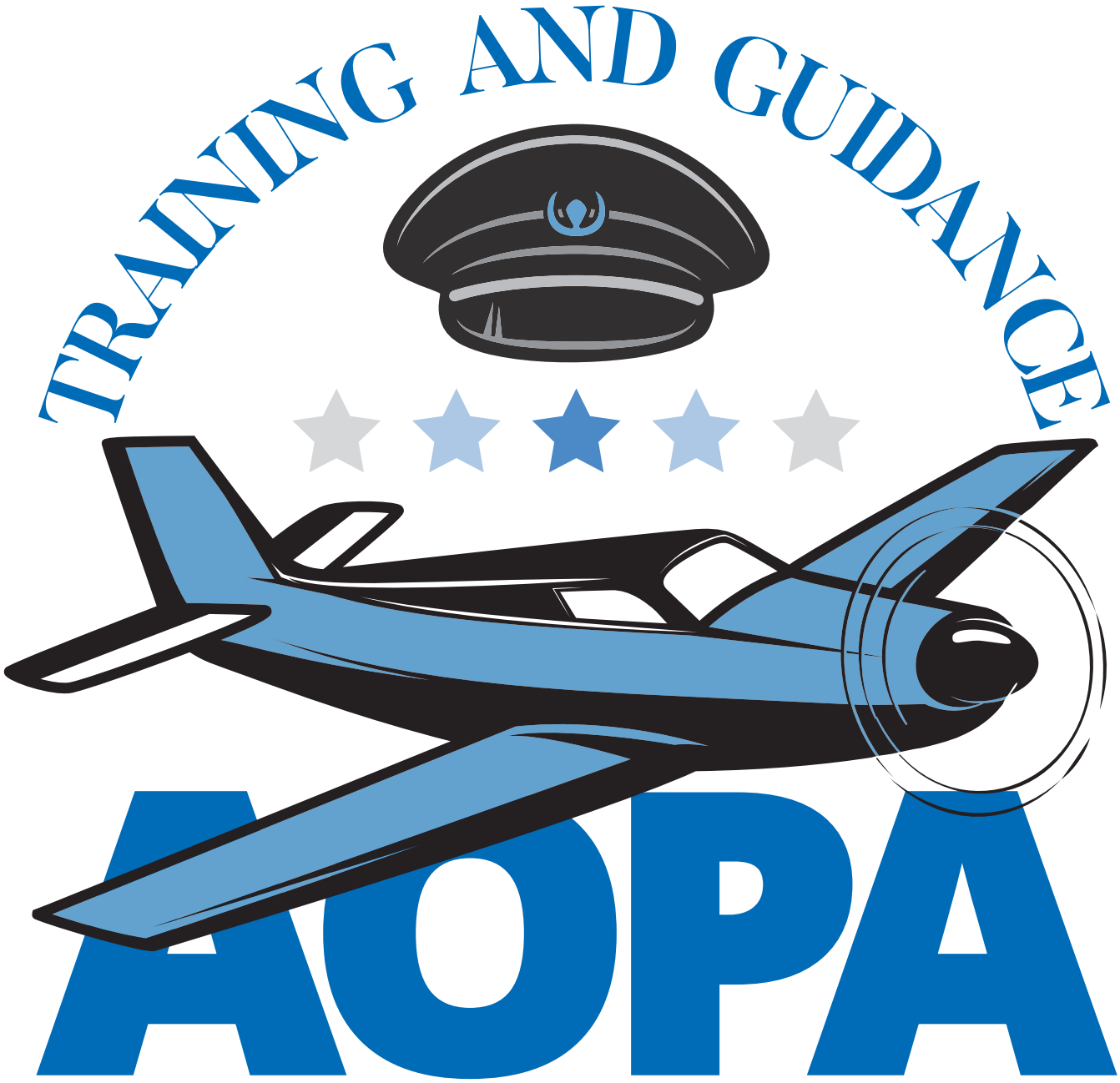
"Cranfield is moving to a Saab 340, "It's more aeroplane than they need, but the only thing for the job.""

His final reflections on the type are that it had a false start with the Mk 1 due to the restriction on weight, which he blames on the government's refusal to order the aircraft after Handley Page resisted attempts to pressure it into conglomeration. "If that hadn't been the case, had they come in with a 500-mile-range 18-seater, Handley Page may have survived." "Then again," he continues, "perhaps it would have been ahead of its time" – predating the 'hub and spoke system' that made the Jetstream 31 so popular. The decline of that system, coupled with what Dodge describes as airlines wanting the ramp presence of jets, led to the final demise of the type in production. The story of the Jetstream is one full of setbacks, from the rush to certify it, to the cancellation of the early USAF order. How the type and its original manufacturer would have fared had circumstances been different is a matter of conjecture, but overall it's a story of defiance is undoubtedly a British success story with over 400 produced.

The Jetstream, with over 50 years of operations under its belt, has proved the longest-lasting Handley Page design of them all, a testament to this unsung aircraft. And now that the UK's last airworthy example is in its final year of flight we can thank Dodge Bailey for bringing it in front of the crowds. ■

The Jetstream's lifecycle seems to be coming to an end

Inside the cockpit of the Jetstream



TRAINING FEATURE

REVALIDATION POLICY

WORDS Nick Wilcock **IMAGES** Nick Wilcock

The CAA has announced its revalidation policy which works around the pandemic

THE CAA is well aware that due to COVID-19 restrictions, many pilots would have experienced problems meeting normal requirements for revalidation by experience. Although pilots whose ratings were due to expire before 31 October 2020 were able to extend their validity until 22 November 2020 thanks to CAA alleviations, a policy was clearly needed to revalidate ratings thereafter.

The authority did not want pilots to lose credit for flying they had already achieved in their normal validity period before it was extended, neither did they want such pilots to be obliged to take a Proficiency Check or NPPL GST when the only reason they had not flown as much as they had expected was because of the restrictions.

But the CAA's chief remit is safety, so a pragmatic solution was necessary if pilots were to be tempted back into the skies again; this had to be safe but not overdemanding. AOPA was involved in discussions and a temporary solution has now been achieved, which will remain in place until 30 April 2021. Put simply, if a pilot has not been able to achieve the normal requirements for revalidation by experience then, depending on the flying they have actually achieved, any shortfall may be mitigated by additional take-off and landing requirements and in some circumstances, additional refresher flight time. These are summarised in the table on the following page.

If a pilot has achieved less than eight hours in the qualifying validity period, then revalidation may only be achieved by Proficiency Check or, for NPPL holders, a General Skill Test.

The 'qualifying validity period' for all licences except the NPPL and LAPL is the second 12 months of the two year validity period, in which at least six hours as PIC must be achieved within the total flight time. For NPPL holders, the qualifying validity period is 24 months, during which at least eight hours as PIC must be achieved within the total flight time.

"Once the relevant requirements for revalidation by experience have been met, the subsequent validity expiry date will be entered in the pilot's Certificate of Revalidation"

Due to the 'rolling validity' and recency requirements of the LAPL(A), no further alleviation extensions will apply after 22 November 2020 and the normal LAPL(A) 24-month recency requirements will then apply.

Once the relevant requirements for revalidation by experience have been met, the subsequent validity expiry date will be entered in the pilot's Certificate of Revalidation in the normal manner. Submission of normal revalidation forms to the CAA is also required; however, although not strictly required for the NPPL, the CAA would appreciate being notified in order to update their licensing records.

For those pilots who took advantage of validity extension to 22 November 2020 under

Make sure you you stay legal and able to fly during the current climate

REVALIDATION BY EXPERIENCE

TOTAL HOURS OF FLIGHT TIME ACHIEVED BY THE PILOT IN THE QUALIFYING VALIDITY PERIOD.	ADDITIONAL TAKE-OFF AND LANDING REQUIREMENTS, ASSUMING THAT 12/12 HAVE ALREADY BEEN ACHIEVED IN THE QUALIFYING VALIDITY PERIOD.	ADDITIONAL REFRESHER FLIGHT TIME REQUIREMENT WITH AN FI/CRI, ASSUMING THAT ONE HR HAS BEEN ACHIEVED IN THE QUALIFYING VALIDITY PERIOD.
12 or more	nil	nil
11	3/3	nil
10	4/4	nil
9	5/5	30 mins
8	6/6	30 mins

ORS4 No.1378/1385, the new validity expiry date will be 30 November 2022; for all others the date will be the normal 24 months after the previous expiry date.

To illustrate these requirements, consider the following two cases:

PILOT A

Took advantage of ORS4 No.1385, but considers that she will not be able to achieve more than nine hours flight time before her extended validity date although she has already flown one hour with her instructors. Provided that she flies another 30 min of refresher flight training and another five take-offs and landings before 22 November 2020, her Certificate of Revalidation may be signed with a new validity expiry date of 30 November 2022.

PILOT B

Has a validity expiry date of 31 January 2021. He has flown a total of 11:10 flight time including one hour with his instructors. Provided that he can achieve another three take-offs and landings before his expiry date, his Certificate of Revalidation may be signed with a new validity expiry date of 31 January 2023.

For full information, Part-FCL licence holders should refer to ORS4 No.1416; National licence holders should refer to ORS4 No.1418.

MEDICAL DECLARATIONS

Due to ongoing pressure on AMEs, the CAA has extended the General Exemption concerning the use of Pilot Medical Declarations for pilots holding Part-FCL licences wishing to fly EASA aircraft until 31 Mar 2021. Originally the exemption was due to expire on 8 Apr 2019, but was subsequently extended under ORS4 No.1283 until 8 Apr 2020; at the same time the restriction on introductory flights and cost-shared flights operated by PMD holders was deleted.

However, when the exemption was extended under ORS4 No.1370 until 8 Nov 2020 due to COVID-19 restrictions reducing the availability of AMEs, restrictions on introductory flights and cost-shared flights were reimposed. AOPA queried this with the CAA as it wasn't certain whether this was intentional or a simple drafting error. Nevertheless, when a further exemption extension under ORS4 No.1421 was introduced in August due to the lack of AME availability, the restrictions remained. However, ORS4 No.1421 was soon withdrawn as it contained an error concerning pilots who had converted from NPPL to LAPL without having held Part-MED medical certificates, implying that they could no longer use a PMD.

"During discussions with the CAA, AOPA proposed that cost-sharing flights should be permitted for PMD holders under the amended exemption"

During discussions with the CAA, AOPA proposed that cost-sharing flights should be permitted for PMD holders under the amended exemption. ORS4 No.1421 was corrected on 3 Sep 2020 and applies until 31 Mar 2021; there is no longer any requirement for a PMD to have been made before any specific date, but unfortunately the restriction on cost-sharing flights remains. ■

Make sure you check on current restrictions before flying

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This is in line with guidance from the CAA which states: "Since the development of the International Civil Aviation Organisation (ICAO) guidance (on dealing with an in-flight battery fire), new products designed for use in response to lithium battery thermal runaway events have become available.

"Products which provide both a cooling and containment capability are typically more aligned to the existing ICAO guidance.

"After knocking down flames it could conceivably take just a couple of seconds for a personal electronic device to be placed inside a containment bag, allowing it to be moved to a place of safety. Passengers could then return to their seats, mitigating potential unrelated safety hazards such as injury in the case of severe turbulence."

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OFFERING NEW INSIGHT INTO 'THE FEW'

A first-hand account of the Battle of Britain reworked to tell a fascinating story

Author John Shipman
From Pen and Sword

WITH THE 80th anniversary of the end of the Battle of Britain there are lots of books already out there, but *One of 'The Few'* by John Shipman tells the story of his father's efforts during WWII and is worth a read.

Ted 'Shippy' Shipman was one of 'The' Few who flew with 41 Squadron in the Battle of Britain. He left his father's farm in 1930 and enlisted in the RAF as a driver. He flew for thirteen years of his thirty years' service, achieved the highest grade of flying instructor and retired as a Wing Commander. This book is based on the copious notes that Shippy wrote in the 1970s and brings a first-hand insight into the life of an RAF Spitfire pilot during the early war years and then his remaining wartime and post-war service until 1959. His career as a senior instructor included No 8 Service Flying Training School, Montrose and the Central Flying School at Upavon. He then went on to teach at the Flying Instructors' School at Hullavington in 1942 and the Rhodesian Air Training Group between 1943 and 1945. After the war he did tours in Germany and Cyprus. He was Commanding Officer at RAF Sopley, Hampshire and RAF Boulmer in Northumberland until his retirement in 1959. During retirement he actively supported the Air Training Corps, Battle of Britain Fighter Association and the RAF Benevolent Fund. One review has stated: "The story of Ted Shipman, one of 'The Few', provides a most interesting insight into the life of an airman during that most critical period of our island's history – The Battle of Britain. There are many books that tell of the daring deeds of those that took part in the battle. However, this work gives a much more softer and balanced account of that time, an ordinary view of extraordinary events. This book serves as a useful source to scholars of the war of 1939–45, but it is also both a fascinating read and account of the activities of a Spitfire pilot. The book contains many unique photographs, many from Mr. Shipman's personal collection. The author, John Shipman, is to be commended on bringing this work to a wider audience – a good read." ■

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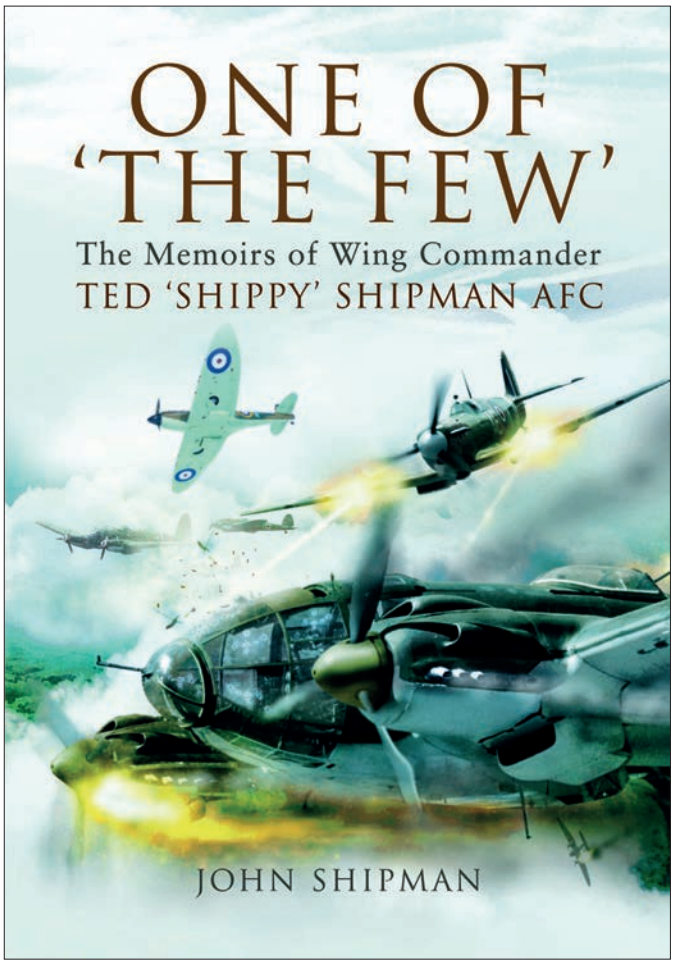

THE OTHER SIDE

Author Chris Gross
From Air World

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Bose A20 Headset

The Bose® A20 aviation headset is our most advanced pilot headset yet. Its breakthrough innovations reduce more noise and provide even greater comfort than previous models, without compromising the clear audio you expect from Bose. Now includes auxiliary audio input and Bluetooth phone connectivity.

David Clark DC ONE-X

The DC ONE-X headset provides advanced comfort and technology features in a sleek, low-profile design. You'll have the sound performance and durability you need, with the comfort you demand.

Avmap Ultra EFIS

Designed for light-sport, ultra light and experimental aircraft, the AvMap Ultra EFIS contains solid-state gyros, accelerometers, magnetic field sensors, air data sensors and UAV Navigation motion processor. Compact, light and easy to install, providing reliable and advanced ADAHRS.

Dynon D3 Pocket Panel

Portable Touchscreen EFIS with Synthetic Vision

Featuring improved brightness, a new intuitive touchscreen interface, new synthetic vision display, and an even lower price point, the D3 is the most advanced portable safety device Dynon has ever made.

Garmin G5 Electronic Flight Instrument for Certificated Aircraft

Boasting a bright, 3.5 inch sunlight readable liquid crystal display (LCD), the G5 is approved as a primary source for aircraft attitude or turn coordination information and secondary source for altitude, airspeed and vertical speed in a single instrument.

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