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## EDITORIAL

With Dave Calderwood

### OPINION

# A passion for flying

Blades, open-cockpit flying – and Oshkosh is upon us – now that ticks a multitude of General Aviation boxes!

27 July 2022

**T**here's a definite rotary influence in this issue, and that's thanks to Rachel Ramsay, who we welcome as a new columnist and as the writer of two articles: a flight in the **Curti Aerospace Zefhir** 600kg microlight helicopter and flying two former military helicopters, the **Westland Wasp and Scout**.

Rachel has written for *FLYER* before but now she's going to be contributing a **regular column** about her flying. It'll mostly be about rotary flying but may also cover fixed-wing – Rachel's a talented pilot who holds both PPL(H) and PPL(A).

Completely different is the **Flying Adventure** this issue, written by Bruce Buglass who, as well as managing Sleaf Airfield, also flies a single-seat open cockpit Taylor Monoplane.

Bruce and some mates flew from Sleaf up to the Glenforsa Fly-in at the end of May, taking a fairly long time in their 'not-quick' aeroplanes.

But as someone once said to me, 'why do you want to hurry when it's your passion?' Flying, that is.

Needless to say, Bruce and his mates had a great time – and numb rear-ends – and their zest for life and flying is well captured in this article.

I'm writing this a day after having arrived at the annual feast of aviation that is Oshkosh. It's the biggest event in the aviation world by far, held at Oshkosh, Wisconsin, USA and staged by the Experimental Aircraft Association (EAA). But it's far more than an event for homebuilts, even though they feature strongly.

It's a gathering of the General Aviation world, both industry and pilots.

Our full report will be in the next edition of *FLYER* but we will be publishing stories online on [flyer.co.uk](https://flyer.co.uk) and also videos on [FLYER TV](#). Come back to the website frequently to stay in touch.



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August 2022

## Features

### I Get Paid for This... Fred North

Flying at explosions – Hollywood's favourite helicopter action pilot Fred North can spend months prepping for a 40-second film sequence

### My First Solo Brian Wheeler

Aerobility trustee Brian Wheeler is Deputy General Manager at NATS, running its ATC ops

### Flight Test A microlight helicopter?

Curti Aerospace has been busy creating a special little helicopter combining 'Made in Italy' style with a new standard in safety and performance. Rachel Ramsay went to Bologna to fly it...

### Special feature A Tale of Two Westlands

Two iconic ex-military helicopters are teaching pilots a thing or two about British Army and Royal Navy flying. Rachel Ramsay tries her hand at flying Westland's Wasp and Scout

### Accident Analysis Take care of that canopy...

Safety editor Cat Burton looks at an equipment failure on something most of us take completely for granted... the canopy

### Flying Adventure The Maverick Six Pack

Planning open cockpit flying around the Sound of Mull is ambitious – especially when getting there is the obstacle. as Bruce Buglass, Airfield Manager at Sleep, and his pals discovered.

### Top Gear Sentry Plus

Ian Seager tests this new ForeFlight device

## Regulars

Editorial  
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Pilot Careers

Rachel Ramsey  
Mark Hales  
Ian Seager

## Free Landings

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## Curti Zephyr



## NEWS

# CAA launches consultation on 600kg microlight regs

18 July 2022



**A consultation on the proposed changes to BCAR Section S regs and mainly relating to 600kg Light Sport Microlights has been launched by the CAA.**

Rob Mott, Chief Inspector at the BMAA, explained, “There are a multitude of improvements allow you to fly heavier, faster and likely further than ever before, but without losing sight of our roots and heritage.

“BCAR Section S (Small Light Aeroplanes) is the main certification code for microlight aeroplanes in the UK and specifies the initial airworthiness requirements as well as acceptable means of compliance. The code’s technical requirements have been revised to reflect the increased maximum take-off mass and stall speed limits brought into UK law following the 2021 revision of the UK microlight aeroplane definition.”

## The changes to BCAR Section S

- Higher MTOW (600kg landplane, 650kg amphibian) and corresponding empty weights
- Regulated single-seaters for aircraft with a stall speed >35 knots or MTOW over 300kg up to the same MTOW limits as two-seaters
- Higher stall speed, now up to 45 knots
- Increased cockpit loadings. Designers should now work to at least 100kg per seat (was 86kg) and 200kg (from 172kg) total for two-seaters. Single-seaters for a pilot weight range of between 70kg and 110kg
- New minimum pilot weight not above 70kg, rather than 55kg. Designers can still opt for 55kg or lower of course
- Gust loading requirements for aircraft heavier than 475kg and Vd (Design Dive Speed) greater than 140 knots
- Firewalls now have to be fireproof: 1100°C for a minimum of 15 mins, previously 5 mins
- Spinning has changed and some new requirements for EASA CS-23 proposed
- Composite super factors now have a different AMC (Acceptable Means of Compliance) and are specifically listed in paragraph S619
- Ground loads (undercarriage) are now the same as EASA CS-VLA. Most manufacturers were using this rather than the previous Section S
- Fuel strainer requirements clarified (same as CS-VLA)
- Engine installation in the airframe should now also meet the engine manufacturer's requirements.

## To align with Czech (UL-2) and German (LTF-UL) regs:

- Minimum stick forces and gradient reduced
- Flap load factor reduced to 0G & +2G (limit load) 0G & +3G (ultimate load), previously this was normal range (-3G to +6G ultimate)
- Flutter prevention/damping can still be demonstrated by flight or analysis/ground testing, the latter common in Europe
- Airframe mounting points for BPRS (Ballistic Parachute Recovery System) or AMTPRS (Airframe Mounted Total Parachute Recovery System) installations must demonstrate sufficient strength to react to deployment loads. Falling attitude 'on the chute' must be assessed as suitable. Seat & harness shock loads – ensure the seat can cope with the deceleration
- The max error of Air Speed Indicator showing Indicated Air Speed (IAS) +/- 8km/h or +/- 5%, when compared to Calibrated Air Speed (CAS).

“A significant BMAA aim was to increase alignment with Czech (UL-2) and German (LTF-UL),” said Rob. “A key remaining area where the UK differs is spinning – neither of the mentioned European Microlight codes require spin testing.



“The BMAA thanks the CAA for collaborating with us on this project. It is paving the way for UK microlight expansion without impacting previous or current certifications and, at the same time, making future ones easier.

An example: BCAR Section S issue 8 also applies to weightshift aircraft, which is not within the scope of other European countries’ definition, most of whom have left them at 450/472.5kg, so the UK is now leading the way.”

The consultaion closes on 19 August 2022. There are two ways to respond. Either use the online form here OR email comments to [ga@caa.co.uk](mailto:ga@caa.co.uk) with ‘CAP 482 consultation response’ as the subject line. If you do that, please CC [technical.office@bmaa.org](mailto:technical.office@bmaa.org) so the BMAA can gather feedback.

**[Click here for the CAA consultation on BCAR Section S](#)**

## **What is a spin test?**

NEWS

# Piper PA-28 electric conversion kit on the way

19 July 2022



**Pilot training company CAE is working with Piper Aircraft to develop a electric propulsion conversion kit for in-service Piper Archer PA-28-181 aircraft.**

CAE expects to convert two-thirds of its Piper Archer training fleet under a Supplemental Type Certificate and develop a curriculum for new pilots to train on the operation of electric aircraft.

Swiss company H55, which is already flying an electric Bristell aircraft, will provide the battery system and French giant Safran will supply the ENGINEUSTM 100 electric smart motor, which develops 150kW at max power for take-off.

“Piper Aircraft has been a longstanding trusted partner for CAE’s flight training operations, and we are very pleased to have them join us, along with other

electric aviation leaders, in this leap forward for the sustainable future of aviation,” said Marc Parent, CAE’s President and CEO.

“The development of this technology is a first for CAE. As one of the largest Piper Archer operators, CAE is uniquely positioned to make electric-powered flight a reality at our flight schools and beyond,” added Parent.

**Piper Aircraft** President and CEO, John Calcagno, said, “Piper Aircraft is excited to support CAE’s development of an electric aircraft modification conversion kit for the Piper Archer.

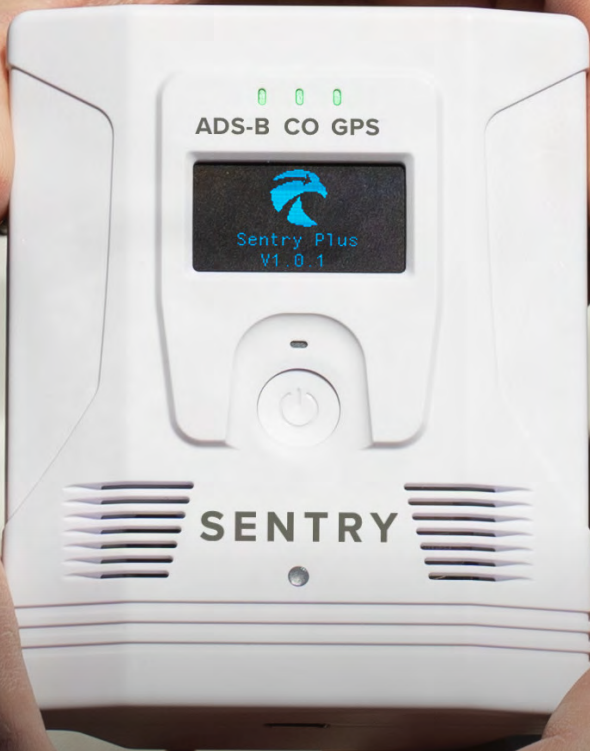
“With 28,000 aircraft in global service, the PA-28 is the ideal platform for real world flight training curriculums and professional pilot training programmes.”

### **Canada Quebec Aerospace Cluster**

The development of the electric conversion kit is part of Project Resilience through which CAE is investing C\$1 billion in innovation over five years in partnership with the Government of Canada and the Government of Quebec to develop aviation and cross-sectoral digital technologies of the future.

“Canada is leading the world when it comes to the innovation required for the low carbon economy, ” said the Honourable Francois-Philippe Champagne, Minister of Innovation, Science and Industry.

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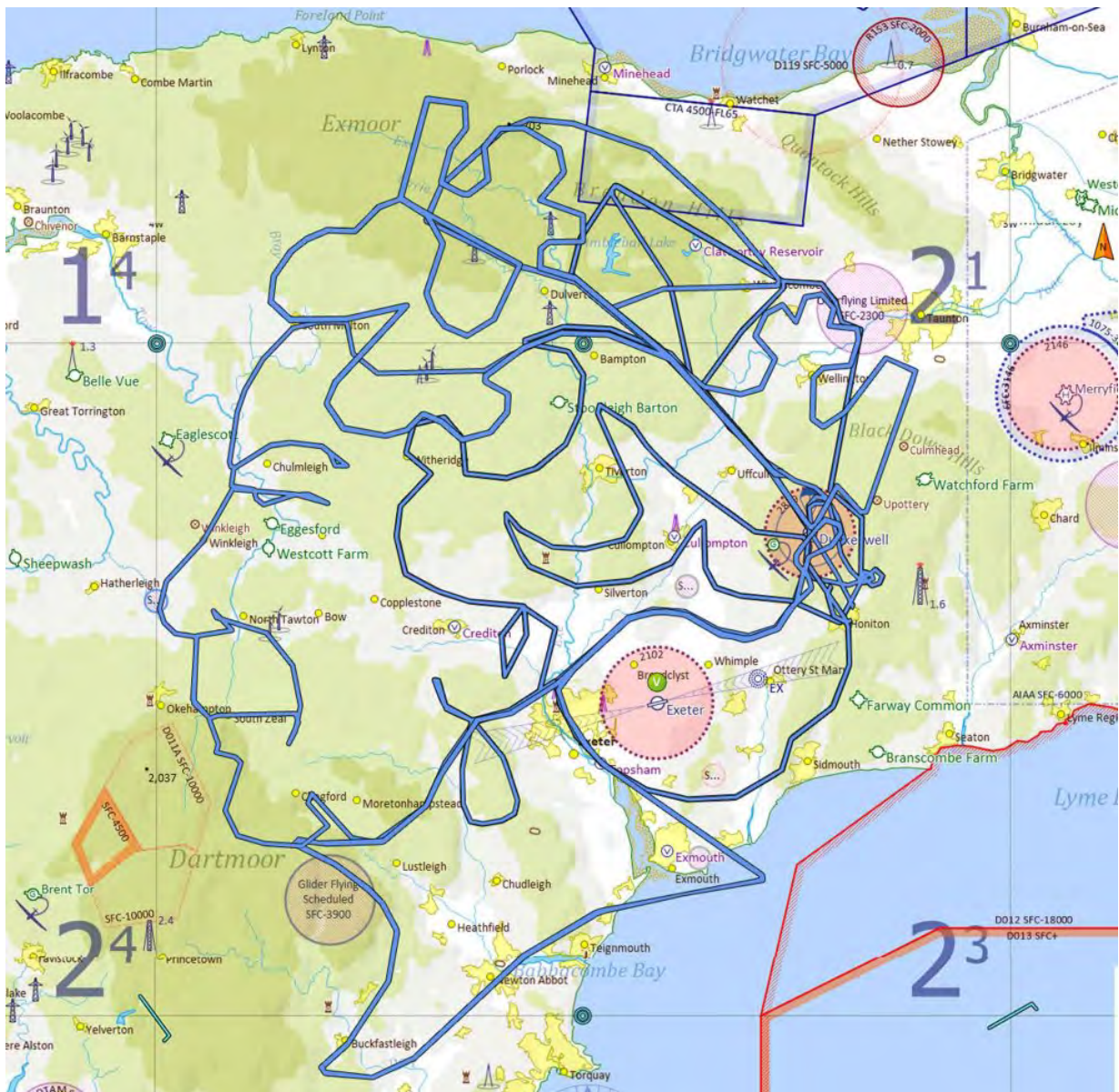
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# Somerset pilots create amazing Queen portrait in the air

13 July 2022



Six aircraft and 12 crew members from Henstridge, Somerset have completed a GPS portrait of Her Majesty the Queen in celebration of her Platinum Jubilee.

More than 365 separate headings and six sections were flown across the south-west of England by the team, code-named 'Art Force 1'.

The six individual club aircraft belong to the LAA Wessex Strut and 12 crew members were handed a secret GPS plotted path from team leader, Amy Whitewick.

"None of them had any idea what the final image would look like," said Amy. "Each team was given a small, unrecognisable chunk which, when flown, recorded on SkyDemon and sent back would be stitched together digitally to form the final image."

The computer-based planning took over ten hours to plot the full image of the Queen, carefully constructing it around surrounding airspace then cutting into six, manageable sections and assigning them to team members and their aircraft.

The full range of types including Zenair Zodiac, Just AirCraft SuperSTOL, Cessna 150 & 150 Aerobat, Vans RV6 and Beagle Pup.

The only rules for each flight were to take a passenger (pilot or non-pilot) as lookout due to the intense workload involved. The flight could be completed at the pilot's own leisure at a time and weather condition to suit them.

"I carefully picked and assigned routes that I felt reflected that particular team member's skills and experience," said Amy. "I completely underestimated what an incredible learning experience this would become for all of us.

"The six aircraft involved all had different traits, engines and characters. They included a high-powered Vans RV-6 which took a great deal of taming to get down to a low enough speed to corner sharply.

"The team members themselves had a wide range of experience, starting with one member who completed his aircraft licence barely weeks before.

"The other end of the scale included pilots who had flown military jets, commercial aircraft and vintage home-builds."

The portrait is believed to be the most complex GPS image ever drawn by air, as well as one of the first ever GPS images in aviation history to be drawn by multiple aircraft.

**Light Aircraft Association Wessex Strut**

**The Art Force 1 Team**

Amy Whitewick, Neil Wilson, Nick Long, Ken Rhodes, Caroline Rhodes, Mervyn White, John Cheesman, Chris Griffiths, Clive Davidson, Ruth Kelly, Ian Fraser and Patrick Caruth.



Chris Griffiths and Clive Davidson



Amy Whitewick and Nick Long



John Cheesman and Mervyn White



Ken and Caroline Rhodes





Neil Wilson



Patrick Caruth and Amy



Ruth Kelly and Ian Fraser

NEWS

# 165-mile 'drone superhighway' to be built in UK

18 July 2022



**The world's largest and longest network of drone superhighways is to be built in the UK, it was announced at the [Farnborough International Airshow](#) which starts today (18 July 2022).**

A consortium led by Reading based Altitude Angel has been given the go-ahead by the UK government for the project.

The drone superhighway will link cities and towns throughout the midlands to the southeast of the country, with the option to expand the corridor to any other locations in the country.

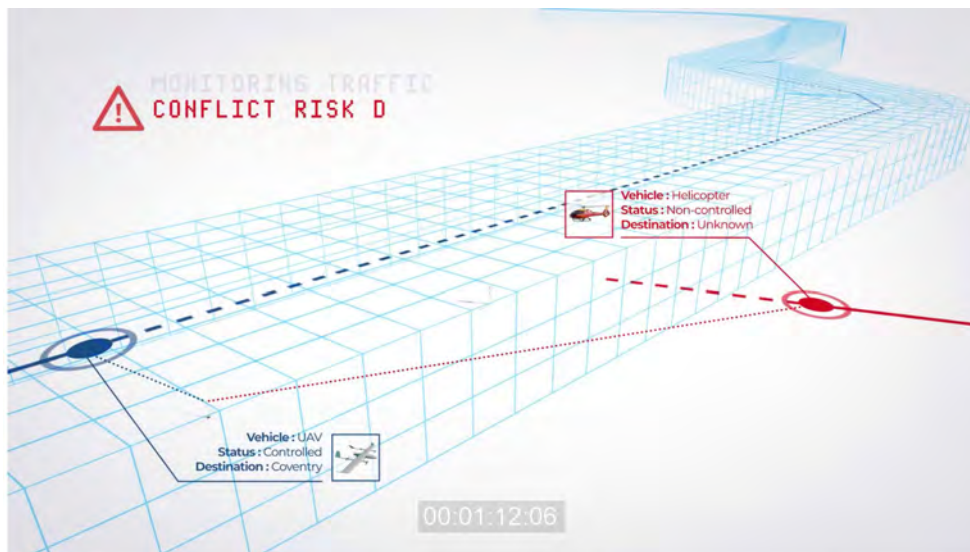
Altitude Angel, working with BT's mobile network EE and a number of UK tech start-ups, will build and develop 165 miles (265km) of 'drone superhighways' connecting airspace above Reading, Oxford, Milton Keynes, Cambridge, Coventry, and Rugby over the next two years.

The plans for the superhighway, called 'Project Skyway', were proposed as part of the Department for Business, Energy & Strategy (BEIS) InnovateUK programme which aims to support business growth through the development and commercialisation of new products, processes, and services.

"The capability we are deploying and proving through Skyway can revolutionise the way we transport goods and travel in a way not experienced since the advent of the railways did in the 18th century: the last 'transport revolution', said Richard Parker, CEO and founder of Altitude Angel.

"The ARROW® technology we are building here is transformative – it is the basis of Skyway and the only scalable, viable mechanism to start integration of drones into our everyday lives, safely and fairly, ensuring that airspace can remain open, and crewed and uncrewed aviation from any party can safely coexist.

"Skyway gives us not just the opportunity to 'level up' access to green transportation across Britain, but we can benefit first and export it globally. We are therefore thrilled to be flying the flag on the global stage for UK Plc."



The drone superhighway will work with other aircraft using a Detect And Avoid system

Dave Pankhurst, BT's Director of Drones, added, "The social and economic potential of drones is immense and requires close industry collaboration to fully unlock these opportunities in a safe and responsible way.

"Project Skyway will be crucial to showcase how the UK can not only lead the creation of new jobs and public services, but form the backbone of how we integrate drones into our daily lives."

Skyway will collaborate to deploy a ground-based, networked 'Detect And Avoid' solution, where possible on existing infrastructure, hooked up to Altitude Angel's global UTM system, which 'stitches' data from multiple sources together in real-time to create an ultra-high-resolution moving map of the low-altitude sky.

At present, drones cannot be flown without a human pilot. The consortium says Skyway will connect a drone's guidance and communication systems into a virtual superhighway system which takes care of guiding drones safely through 'corridors', onward to their destinations, using only a software integration.

The consortium:

- Altitude Angel
- Connected Places Catapult
- HeroTech8
- BT Group
- ARPAS-UK
- Reading Borough Council
- Oxfordshire County Council
- Coventry County Council
- Angorka
- Vizgard
- Skyfarer
- Skyports

### **Altitude Angel**



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NEWS

# Vintage World Aerobatic Championship gears up for August event

27 June 2022



**There's less than two months to go before this year's Vintage World Aerobatic Championship, which is being held at Brighton on 18-20 August, and preparations are hotting up.**

The organisers, the Real Aero Club at Brighton, said, "It's not just for vintage aircraft! There are three categories and gliders are welcome in addition to powered aircraft."

The categories are:

1. Vintage: Aircraft with a type certificate (or similar) before 1955 and at least 65 years old
2. Classic: Aircraft with a type certificate (or similar) between 1955 and 1975 and at least 45 years old
3. Replica: Replica or modified vintage or classic aircraft

“With less than two months to go until the fun starts and a limited number of places it is time to register to take part in this event, which balances sociable fun with a little competitive ambition,” said Charles Sunter, chairman of the club.

“The competition card is filling. We have so far four UK entries, three German entries, three Belgium entries, one Danish entry and one Austrian entry.”

Interested in taking part? Register here: [vintageaerobatic.com](http://vintageaerobatic.com)

“Bring your wives, husbands, partners along and make a long weekend of it,” continued Charles.

“There is plenty to do nearby for those that like to explore, shop or spa. The wonderful medieval city of York itself is worth a visit and, timed nicely with the VAWC event is the York Races Ebor Festival with Ladies day on the Friday.

“The Vintage Aerobatic World Championship (VAWC) unites the world of vintage & classic aviation with an exciting and fun event. Bringing together people for a few days of fun, laughter and competitive excitement.

“It is the first time the VAWC has come to the UK and we at Brighton are incredibly proud and thrilled to host it.

“Nestled in the corner of a WW11 heavy bomber base, with over 35 years of vintage aviation heritage and around 90 vintage/ classic aircraft within 13 hangars, we have a real synergy with the VAWC and look forward very much to making the Brighton event one that showcases vintage & classic aviation in the UK.”

## The Event Programme

**18 August:** Arrivals and practice day

**19 & 20 August:** August competition days

**21 August:** Departures

There’s evening social entertainment on the 18th, 19th and the famous Brighton Hangar Party on the 20th.

“We know how to host a thoroughly good party!” added Charles.

“If you would like to come along as a spectator, please note that Brighton Airfield is not open to the public and that this is not a public event. If you wish to spectate, please join the Real Aeroplane Club. Membership is available now and £20 will enable access to all events for the remainder of 2022. Please visit [realaero.com/club](http://realaero.com/club).”



## **Vintage World Aerobatic Championship**



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## INSTANT EXPERT

With Ed Bellamy

COLUMN

# Just how – and when – to report accidents

Ed Bellamy explains the procedure when it comes to filing an accident or an incident. Should it be AAIB or MOR ...

20 July 2022

**A**n aviation acquaintance recently gave me a ring to ask about incident and accident reporting requirements – a little mishap had happened at a local airfield and although there were no injuries, the aircraft was damaged.

The pilot was not sure whether it met the threshold of contacting the AAIB or whether an MOR (mandatory occurrence report) was required.

Listening to the description I was not sure either – I do not carry the exact ICAO accident and serious incident definitions around in my head and I suspect neither do most pilots.

Similarly, the list of incidents that warrant an MOR is long and sometimes subjective. Having looked through the little guide towards the back of the Skyway Code I suggested this was probably serious incident territory, and to therefore give the Branch a call and see what it said.

I did cover this subject a couple of years ago, but since it is rare that GA pilots need to give it much thought, a refresh may be welcome.

## Accidents and serious incidents

Accidents and serious incidents must be reported to the AAIB. It has a 24-hour number: currently 01252 512299. The full accident definition is quite long and if required, you should refer to the AAIB website for guidance. Essentially an

accident occurs when someone is on board an aircraft for the purpose of flight and in association with the operation of that aircraft:

- Someone is killed or seriously injured
- The aircraft sustains damage which adversely affects its structural strength, performance or flight characteristics, or
- The aircraft is missing.

Relating to damage, there are exclusions from the definition such as failure or damage to a single engine or propeller of the aircraft and minor damage to components such as wing tips, wheels, fairings or panels. Serious injury is also defined in more detail. As well as AAIB, the police should be informed of an accident.

'Serious incident' is more subjective – it is essentially an incident in which there was a high probability of an accident. The severity of the error or hazard involved can be the same, just without the accident outcome.

Clearly not every scenario can be specified in regulation, but the AAIB lists some examples on its website, which include gross failure to achieve normal aircraft performance or controlled flight into terrain only narrowly avoided. A runway excursion, for example, even without damage to the aircraft, would be a serious incident.

## **Mandatory occurrence reports**

Sitting below accidents and serious incidents (albeit with some overlap with the latter) is the 'mandatory occurrence report' (MOR). The UK still participates in the 'ECCAIRS 2' reporting system and this is used for filing MORs.

MORs go to the CAA rather than AAIB and guidance on this process is available at [caa.co.uk/cap382](http://caa.co.uk/cap382). CAP382 was the pre-ECCAIRS MOR guide and the CAA retained the number for user familiarity.

There is a GA section in the relevant regulation, which is more condensed than those applicable to larger aircraft. Some key occurrence types include (some paraphrased or omitted):

- \* Fire
- \* Loss of control
- \* Failure to achieve normal performance in take-off, climb or landing
- \* Runway incursion or excursion
- \* Collision or near collision on the ground or in the air
- \* Unintended entry to IMC
- \* Structural or flight control failure
- \* Engine or other severe mechanical failure
- \* Fluid leakage that hazards the aircraft
- \* Pilot incapacitation
- \* Severe turbulence that caused injuries or required a check for damage

- \* Lighting strike that caused damage
- \* Severe icing (including carb) that endangers the aircraft
- \* External interference such as from RPAS or lasers
- \* Airspace infringement
- \* Any incident that involved the declaration of an emergency

If the incident occurs while working or operating for an aviation organisation that has a formal reporting system, the report should be filed via the organisation, which in turn should process it correctly into the MOR system.

Note that any incident in which someone perceived an actual or potential hazard to aviation safety can be reported, regardless of whether it falls within the scope of MOR. A report outside the scope of MOR is known as a 'Voluntary Occurrence Report' (VOR) and the process of submitting one is the same.

There is some overlap with serious incidents and MORs, so if in doubt report to AAIB and submit an MOR as well. Occurrences that happen abroad should be reported in the same manner (the ECCAIRS form will take the relevant location information).

If you think it might be a serious incident or accident, the equivalent of the AAIB in the relevant state should also be contacted.

## **Why report?**

The UK CAA receives around 30,000 occurrence reports a year. I suspect many of these are from organisations involved in commercial aviation, which have a more prescriptive list of occurrences that need reporting.

Major airlines might process hundreds of reports a week. Reporting is encouraged and most organisations will have a 'Just Culture' policy ensuring that reported errors and omissions are treated fairly.

Organisations also have an interest in maintaining a reporting culture, since they are accountable for the actions of their employees or agents.

For GA pilots it's more subjective – while the MOR regulations are law, for occurrences in which there is no physical damage or injury, it is reliant on the good faith of the pilot to report.

The benefit to an individual of doing so might seem questionable – what difference will it make? This is hard to answer but one of the key arguments for the European MOR system was more evidence-based regulation and active safety analysis. It may be that the CAA does not do anything solely in relation to your report, but it goes into a wider picture of data.

Commercial aviation has learned over the years that trends towards certain occurrences are often precursors to more serious incidents in the future.

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*“MOR regulations are law, but where no physical damage or injury occurs, it is reliant on the good faith of the pilot to report”*

---

Looking at it from another angle, if there are any witnesses or other agents involved in the occurrence, then the motivation to report is clearer. Aviation is a small world and something that goes unreported may come to the attention of the regulator via other means.

Putting in an MOR as soon as possible gets your side of the story in the system, for example in the case of an airspace infringement.

## **Airprox**

Airproxes are a particular category of occurrence that have a specialist review board for investigation – the UK Airprox Board. An Airprox is defined by ICAO as ‘A situation in which, in the opinion of the pilot or a controller, the distance between aircraft, as well as their relative positions and speed, was such that the safety of the aircraft involved was, or may have been compromised’.

Clearly that is a potentially broad definition, but many GA pilots will instinctively know when they have been involved in an Airprox. Airprox reports are published in a deidentified manner and often make interesting reading.

## **Learning from others**

One of the developments from the European MOR regulations (that continue in UK law) was the restriction on publishing deidentified occurrence reports that have come through the MOR system. I can see arguments both ways on this issue, but I think the old CAA approach struck a reasonable balance.

It is still possible to apply for access to certain occurrence information, but it must be for purpose of flight safety – [caa.co.uk/cap382](http://caa.co.uk/cap382) gives more details.

CHIRP – the confidential human factors incident reporting programme is a good supplementary option for sharing incidents or observations relevant to aviation safety.

Unlike MORs, CHIRP does publish deidentified reports in a digest around four times a year with some commentary and trend analysis. I always find these interesting, so as well as submitting an occurrence report to the CAA, you may also wish to write to CHIRP with your story.

### **More info:**

- [AAIB: caa.co.uk/mor](http://caa.co.uk/mor) or [caa.co.uk/cap382](http://caa.co.uk/cap382)
- [Aviationreporting.eu](http://Aviationreporting.eu)
- [Chirp.co.uk](http://Chirp.co.uk)
- [Skyway Code \(p142\)](#)



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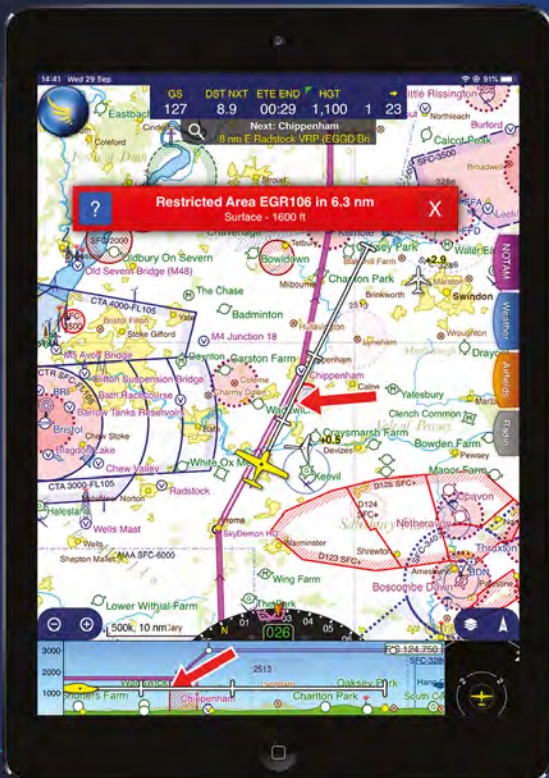
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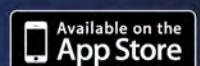
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# How determined Stephen won his ATPL scholarship

20 July 2022



FTEJerez CEO Oscar Sordo, congratulates Stephen Daly on winning the ATPL scholarship

**Having recently won a fully funded ATPL scholarship with FTEJerez, pilot Stephen Daly talks to Yayeri van Baarsen about when his interest in aviation started, and forward to his career ambitions...**

As a boy, Stephen was already more enthusiastic about the flight than the actual vacation. “When we arrived at the Algarve, I spent most of the holiday eagerly anticipating the moment we would board again. I’d intrusively stare into the flight-deck, dreaming one day it might be possible to operate such an amazing machine.”

Still, becoming a pilot wasn’t the logical career choice for the now 21-year-old. Growing up in Kilmallock, a small town in south-west Ireland, he was the

youngest of six siblings. Since no-one in his family was involved in aviation, finding someone to emulate was difficult.

At the age of 13, having finally saved up enough for his first flight experience, he realised no other profession would fulfil him the way flying could. From that moment, any income Stephen gained was measured in flying time: months of washing dishes and doing chores equalled to about 40 minutes of flying... At that time, becoming a pilot seemed unattainable.



First flying lesson for Stephen!

However, young Stephen continued to observe any piece of aviation-related information he could get his hands on. All his school projects consisted of some variation on an aviation theme, which eventually led to his decision to study Aeronautical Engineering. Getting into the industry was tough, though. Stephen recalls applying to 40 different companies, asking for work experience at the age of 15, just to get one step closer to the flight deck.

“I received a ‘No’ from all of them...” Eventually, in 2016, Jane Magill of the Shannon Aviation Museum took him under his wing. “I’m hugely indebted to Jane. Through her, I got to meet other amazing people in the industry.”

In 2017, Stephen found out about scholarships via an article in *FLYER*.

“I remember eating lunch at Cork Airport when reading about The Honourable Company Of Air Pilots’ Gliding Scholarships. I immediately bookmarked it!” He won this scholarship, as well as its PPL Scholarship, which allowed him to obtain his pilot licence in 2018.

Still, he's quick to point out that: "You only see other people's successes, not their failures nor the hours they've put in." Stephen remembers spending six months on another application, before receiving a rejection at the first selection phase. "It was disheartening, but I knew that if I'd stop, my chances of becoming a pilot were zero, whereas if I'd persist, there'd still be a chance."

Any scholarship secrets he can pass on? "Learn from your failures and try to be as detail-oriented as possible throughout the entire application process. Before pressing send, I always look back to see if there's anything I've omitted."

Currently, Stephen has 75 flying hours and just finished a work placement at MTU Maintenance Lease Services in Amsterdam, The Netherlands.

Stephen added, "When I'm not flying, I'm doing everything in my power to gain a broader view of the aviation industry."



Stephen was one of two scholarship winners. He's pictured here with the other winner, Fahim Ahmed, from Edinburgh, Scotland

Winning the fully funded ATPL scholarship with FTEJerez was a dream come true for the ambitious pilot.

"Having been uni-dimensionally focused on this goal for my whole life, it still seems surreal."

From being one of the 2,000 initial applicants in 2021, Stephen made it all the way through the final selection in June 2022. "The scholarship consumed the last seven months of my life. It was literally the first thing on my mind when I got up and the last thing I thought about before I went to sleep."

Although proud of his accomplishments, he quickly points out he couldn't have done it alone. "I'm so grateful to my family, friends and mentors, it's as much their success as it's mine."

To prepare for the interview stage, Stephen consulted friends who'd already been accepted as airline cadets. They'd ask him 'every single horrible question imaginable', while he focused on keeping his composure, and considering how his answers would relate to qualities needed on the flight deck.



Stephen will start his new life in Spain, training for the ATPL with FTEJerez, on 18 July

The ATPL course was due to start on 18 July, when Stephen starts his new life in Spain surrounded by aviation on the FTE campus. He chose FTEJerez because of its level of excellence.

He added, "It exceeds industry expectations, with its ATPL results being significantly higher than the global standard."

He is looking forward most to the multi-engine phase of training. "I imagine it being a step-up in terms of workload management from what I'm previously used to flying!"

Ideally, in two years, Stephen will have obtained his fATPL and be enrolled in a Type Rating Course with an airline. "Being aware of the highly competitive job market, I'd love to work with any operator. That said, nothing would fill me with more pride than flying the shamrock with Aer Lingus."

He plans to accumulate as many flying hours as possible, and in five years' time be well on the way to a command position. Stephen's ultimate career goal is becoming a long-haul line training captain, in order to 'give back what I've been so fortunate to receive' – as well as gaining a deeper understanding of how airlines operate beyond flying.

He encourages all aspiring pilots to become a member of The Honourable Company Of Air Pilots.

“Find mentors and ask airline pilots how they got into this position. Most will happily give you advice, but if you don’t ask, no-one knows you need help.”

Anyone starting in aviation, he adds, must have relentless determination, “If you get to the point in pursuing a goal where any rational person would stop, and you keep going, you know you’re on the right path.”

And, he says, don’t take rejection personally.

“If I stopped asking after hearing ‘No’ forty times, I wouldn’t have been where I am now!”

**FTEJerez**

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# L3Harris invests in Cranfield pilot training centre

20 July 2022



L3Harris is investing in its Cranfield centre with new simulators such as this Diamond DA42

## **L3Harris is expanding its professional pilot training centre at Cranfield Airport, UK.**

The improvements will include new classrooms and three new Diamond DA42 flight simulators to enhance the learning experience for trainee pilots, as well as increase capacity for safety repetitions via simulator training alongside airborne flight training.

“We are committed to providing the highest quality of training for aspiring pilots and airline partners,” said Dave Coward, general manager of L3Harris Training Services.

“The aviation industry is recovering quickly and the demand for well-trained pilots continues to grow. These investments answer those demands and reinforce that our Cranfield facilities are the pilot training centre of excellence in the U.K.”

The training centre is located at Cranfield University’s own airport. The L3Harris collaboration with the university enables trainee pilots to immerse themselves in campus life with on-site accommodation adjacent to the training, research and development facilities.



UK CAA has approved ATPL training at L3Harris' Florida base

## **UK CAA approves L3Harris Florida flight academy**

As well as boosting its UK centre, L3Harris has received approval from the UK CAA for its Integrated Air Transport Pilot Licence (ATPL) courses at its Sanford Flying Training Academy near Orlando, Florida.

An equivalent approval with the European Aviation Safety Agency [EASA] and other global regulators is expected in coming weeks.

The accreditation enables cadets training for ATPL licences to complete a basic 32-week flight training course at the Florida academy. The programme includes single-engine aircraft flights, skill tests and a first solo flight, as well as



navigation and night flying. Students then return to the UK to complete advanced multi-engine flight training.

The course is designed to take a cadet from little or no flying experience to a fully qualified airline pilot in approximately 72 weeks.

“Integrated ATPL cadets can now complete basic flight training at our US Academy, getting maximum use out of our fair weather flight academy in Orlando, Florida,” said Dave Coward.

“With roughly 300 flying days a year – and our ideal location – this approval sets us up to expand training to maximise our international Academy footprint and more efficiently use our world-class facilities and training aircraft.”

**L3Harris Airline Academy**

# FTA Fantasy Wings £10k bursary awarded – more promised

20 July 2022



Winner of the £10,000 bursary Jordan Smith, right, with FTA Global boss Sean Jacob

**Flight school FTA Global awarded a £10,000 bursary to one lucky winner at this year's Fantasy Wings Annual Conference and promised a further £30,000 worth of bursaries for next year's event.**

The £10,000 winner this year was Jordan Smith in recognition to his drive and determination to become a pilot.

The annual Fantasy Wings conference was held on Saturday 2 July in Central London to mark the end of the 2021–2022 cohort of Fantasy Wings participants.

Attendees were treated to a day of talks from industry leaders who shared their experiences with the attentive crowd including:

- Lisa Tremble, Director of Corporate Affairs and Sustainability at British Airways
- David Geer, Senior Vice President Operations at Virgin Atlantic
- Derek Haynes, Senior Captain Virgin Atlantic
- Chris Brown, Training Captain & Examiner EasyJet
- A host of inspirational captains, first officers and instructors.

FTA Global's Sean Jacob said, "We are a flight school open to all, providing opportunities to students of all nationalities, from a variety of backgrounds.

"We're delighted to award the FTA & Fantasy Wings Bursary to Jordan Smith for his drive and determination to become a pilot as well as our continued discount across our entire spectrum of training provision to all Fantasy Wings Participants.

"We hope this opens up even more opportunities for women and those in underrepresented communities to access more training and jobs in the commercial airline industry."

Jackson Smith, founder and managing director of Fantasy Wings, added, "Our partnership with FTA is a key step in the right direction when it comes to addressing a number of important barriers to diversity within the pilot/aviation industry.

"We provide young people with crucial insight and knowledge development that allows them to go off and have successful and satisfying careers within the industry.

"It is great that through our partnership with FTA, our young people will have some of the financial restraints of training eased which is a key step forward in making the industry more diverse and representative."

**Fantasy Wings**

**FTA Global**

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# Leading Edge Aviation graduates achieve dual UK CAA & EASA licences

20 July 2022



**Leading Edge Aviation is one of a handful of Approved Training Organisations (ATOs) who are offering students the opportunity to achieve a dual UK CAA and EASA licence – and their first students to take this option have now graduated and received their dual licences.**

For Leading Edge Aviation (LEAL) students who had already completed ground school before the end of 2020, achieving a dual licence was possible as their ATPL exams were sat while the UK was still part of the EU and therefore valid for both the UK CAA and EASA governing bodies.

Those students then went on to complete some additional flights, ensuring their

flight training and exams adhered to both UK CAA and EASA requirements.

Students looking to begin their training journey now, will have to complete two sets of ATPL exams. This entails the same study route, but students then sit both UK CAA and EASA exams (totalling 26 exams) before moving onto flight training that includes flights in both UK CAA and EASA airspace.

Chief Operating Officer Dave Alexander said, “We’re immensely proud of our first students who’ve achieved their dual licences.

“They’ve worked with us as we’ve developed a robust course and have also benefited from flying in both UK and EASA airspace.

“We’ve already noticed that a high proportion of students joining us are choosing this route and it’s a great decision to make.

“Airlines are telling us that graduates holding a dual licence are placing themselves in the strongest position for recruitment, as it affords the airline more flexibility when placing pilots throughout their network.”

This announcement follows recent news of airline placements for LEAL graduates as pilots with Aurigny, Loganair, Ryanair and Wizz Air.

**Leading Edge Aviation**

# CAE launches 2022 Women in Flight scholarship with easyJet

21 July 2022



CAE relaunched its Women in Flight scholarship at the Farnborough International Airshow with easyJet Chief Training Captain Mark Farquhar and three past scholarship winners, from left: Bisma Petafi, Alicia Hunt and Cindy Wong

**CAE has relaunched its Women in Flight scholarship to encourage young women to pursue a career as a commercial pilot.**

At the same time, easyJet pledged its support for Women in Flight as the first airline to sign on for the 2022 programme. easyJet will offer one candidate a job and CAE will fund pilot training for that successful candidate.

“The Women in Flight programme demonstrates to young women that being a pilot is achievable and a wonderful profession,” said CAE’s Nick Leontidis.

“Six women have already benefitted from the Women in Flight programme since it was inaugurated in 2019, and with easyJet’s continued support, the dreams of aspiring female pilots are one step closer to becoming reality.”

easyJet Chief Operating Officer David Morgan, added, “easyJet has long championed greater diversity across our business and the industry and we will continue to focus on challenging gendered stereotypes.

“Having doubled the number of female pilots flying with us in recent years, we are proud to have made progress, but we know there is still work to do. That’s why we are delighted to be part of CAE’s Women in Flight Scholarship once again.

“We’re pleased to see our first Women in Flight recipient, Georgina Thomas-Watson, currently completing her line training with us and look forward to another future easyJet pilot follow in her footsteps in 2022.”

CAE says the Women in Flight programme will build a network of ambassadors, including Women in Flight recipients to share their stories and experiences with other women at events, within their communities, and on social media. The programme will also create and share content about being a pilot that will allow the community to grow and reach girls who will one day fly aircraft.

#### **CAE Women in Flight scholarship**

Eligible female candidates who meet the requirements of the **Destination 225° programme** can submit their CAE Women in Flight scholarship application via CAE’s website at **[cae.com/womeninflight](https://www.cae.com/womeninflight)**.

Meet CAE at **Pilot Careers Live Madrid** on 17 September and at **Pilot Careers Live Dublin** on 22 October 2022



I GET PAID FOR THIS

# Hollywood's action man...

Flying at explosions and landing on moving trains – Hollywood's favourite helicopter stunt pilot Fred North can spend months prepping for a 40-second film sequence

Yayeri van Baarsen | 12 July 2022



Fred swoops low to get the shot, keeping clear of the rooster tail of sand kicked up by the 4x4

## How did you get into flying?

Born and raised in Senegal, I was eight years old and playing with my friends when a helicopter flew over.

Looking like an alien spaceship, it landed in the nearby stadium and made a gigantic dust cloud.

My geography teacher stepped out, asking if I wanted a ride. I sat in the back without doors or seatbelts, and with each turn thought I was going to die...

That ride planted the seed, and when I was working with helicopters in the army, I decided to become a pilot.

## **Tell us about your job?**

I'm a stunt film pilot, usually doing 10-15 films a year, worldwide. In the US, I use my H125.

It's extremely manoeuvrable, reliable, and powerful. Since its blades rotate clockwise, it likes to go to the left, so I've taken out the co-pilot seat for a better view.

Apart from flying, my job involves aerial coordination. I tell the studio if its ideas are feasible, and if yes, how much it'll cost.

When scheduling the aerial crew's movements, preparation is everything. If I need to fly underneath a bridge, I first look on Google Earth, then assess the situation in person, measuring height and width.

Does it fit with the action planned? Explosions or car chases, for example, leave less room to fly.

My amazing team helps me assess technical challenges and risks and make a final determination.

With big stunt sequences, I visit the location several times, seeing if maybe sidewalk signs or traffic lights should be removed, or trees cut down so we can fly safely.

Sometimes I spend months prepping for only 40 seconds of film. We're working on US\$ 100-300 million movies, which require high quality.

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***“You can't be complacent – one mistake and you're done. You want to kiss the red line, but never cross it”***

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The flying is very challenging. Often, I do things I've never done before, like landing on a moving train. I push the envelope in a safe way. In this business, safety isn't just a word, it's number one priority.

You can't be complacent – one mistake and you're done. You want to kiss the red

line, but never cross it.

It's not just a job, it's a lifestyle. I don't drink coffee or alcohol, get lots of sleep and exercise, and meditate to stay mentally strong. What do I love most? The feeling of accomplishment when seeing the movie afterwards. There aren't many jobs where you can see your work on screen forever.

## **What training did you have?**

After obtaining my helicopter licence in 1985, I organised tours in France, before moving onto photographing weddings, property, and golf courses from the helicopter.

In 1988, I did my first rally, Paris-Dakar, which led to filming car races for TV all over the world. Wanting to be more creatively involved, in 1995 I started as a film pilot.

Ever since then, I've put all my money, time, and effort into getting into the movie industry.



Getting in for a close-up shot

## **What's been your favourite flight?**

Shooting the movie *Tarzan* in Gabon, we spent two months in the middle of the jungle. One day the weather was bad and we landed in a tiny remote village.

The people there had nothing but a hard life, so we gave them everything we could, leaving with only our underwear and passports.

The head of the village, a very old man, said our visit made it the best day of his life.

### **And your favourite airfield?**

I once landed on one of the Grand Canyon's vertical rock formations, a place where no other human had ever set foot because it's impossible to reach any other way.

With no-one else around, I could hear the silence: a moment of mental peace and gratitude.

### **Do you get to fly much outside of work?**

No, I occasionally take up my family, but usually I go surfing in my spare time.

### **What is your most valuable career advice?**

Assess if your personality matches your dream profession.

Airline pilots, for example, need to be computers and protocols people who fly with their head. I'd make a terrible airline pilot, as I'm more of an instinct person, making decisions on the spot.

Both are flying, but there's a huge difference between an airline and a film pilot.

Once you've chosen a career, put all your effort into it. Also, the fastest way to achieve success and skills maturity, is to go slow.



## FLYING CV

French motion picture helicopter pilot Fred North has worked on 220 films, including Hollywood blockbusters such as *The Fast & The Furious* series, *Transformers* and *Bad Boys for Life*

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**WHIRLYBIRD**

*With Rachel Ramsay*

**COLUMN**

# Hot and cold helicopters

FLYER is spreading its wings – should that be blades? – with columnist Rachel Ramsay, who will be talking all things helicopter-related

*20 July 2022*

**W**hen I unwrapped a helicopter trial lesson voucher on Christmas Day 2016, I never imagined that it would eventually lead to my flying around the warm Italian countryside in an exciting new ultralight helicopter preparing for this month's article on the Curti Zefhir. What with that and the flying I've been doing in Cold War helicopters this month, it's safe to say that getting my PPL(H) has taken me on a journey I never expected.

Rewinding back to March and my first flight in the iconic Westland Wasp. This was a flight with personal significance for me, as my dad had been given a go at flying a Wasp from on board ship in the Royal Navy in the 1980s, and I remember him relating this story when I first started learning to fly helicopters. He died very suddenly on Christmas Eve 2020, so I sadly didn't get to share my own experiences of flying the Wasp with him. Instead, I'm sharing them with you... with some Scout flying for comparison.

I've never had to wear a flying suit for any of the flying I've done to date (notwithstanding the decidedly unflattering, Tellytubby-esque number I had to sport for the one flight I've done in a flexwing microlight), so donning one for flying the Wasp and Scout was an integral part of the experience.

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## *The windscreen wipers were amusingly frantic, while there was a steady drop-drop-drop of water coming into the aircraft from a point somewhere in the ceiling*

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Lots of people on social media asked why flying suits are worn and why, unlike my instructor, Mark Cowley, I wasn't wearing a flying helmet. Suits are worn because there's oil absolutely everywhere on a vintage helicopter, and for warmth in the absence of a heater. Flying helmets aren't a necessity, and in the end the practicalities of trying to get three headsets to work with each other in an old military helicopter meant we settled for whatever we could!

Three headsets, of course, because my friend Alex Bishop was with me for all the flying I did in the Wasp and Scout, and he went on to do the full type rating course (my budget, alas, not stretching that far at present). The great thing about having a flying friend is that not only do they take nice pictures of you flying, but you can enjoy a lot more time in the air than you would on your own.

Indeed, in addition to the half-hour apiece that I logged at the controls of the Wasp and Scout, I had a good two more hours sitting on the stretchers in the back while Alex had his turn – firstly for his half-hour in each, and then another hour sitting in on one of his type rating lessons (this being allowed because the Scout isn't a Part NCO aircraft).

The Scout's intercom currently only works between the two pilots, not in the back, so I wore ear defenders and simply imbibed the atmosphere, sounds and smells, responding to the occasional thumbs-up from Mark to check I was OK – and other inventive hand signals to inform me that autorotations were about to commence. Looking behind me, I could see the rotor head and tail rotor hard at work. I couldn't believe how lucky I was just to be sitting in the back of this evocative machine that so few get to experience.

On our second sortie, our first in the Scout, we were afflicted by unexpectedly poor weather, and from my vantage point in the back I got a good understanding of how the Scout handles rain. The windscreen wipers were amusingly frantic, while there was a steady drop-drop-drop of water coming into the aircraft from a point somewhere in the ceiling. Just like the oil everywhere, Mark didn't seem at all phased by this!

It was a very different story when I arrived in a hot and sunny Bologna for my flight in the immaculate new Zefhir. I'd had an arduous journey, with a 20-hour



flight delay pushing my Zefhir experience into mid-evening, and the entire Curti flight team had graciously stayed late to make sure I could fly. And when, completely exhausted after 27 hours in transit, I walked out to the beautiful little helicopter I had seen on the ground a few weeks previously at Nottingham Heliport, I had severe doubts that I would be able to engage my rotary brain sufficiently to (a) fly it and (b) make intelligent enough observations about it that I would be able to relay my experiences to *FLYER* readers.

It felt surreal to be in Italy flying something brand new, with a glass cockpit and that 'new aircraft' smell – an entirely different kettle of fish from the old military helicopters, which I actually found easier to fly. I'd flown one of the five extant flying Wasps back in the UK, but this was one of only three Zefhirs made in the world so far.

The situation I found myself in was all the more unusual in that I was to be the first female pilot to fly the Zefhir. On the drive to the airfield from Bologna Airport, Mirco – Curti's director of marketing – had told me that there are no female helicopter pilots in Italy. I can't be certain that's true, but it certainly made me feel something of a novelty. I also felt the pressure to do a decent job of flying it, so hopefully I didn't let the side down!

So, this month has been a tale of not two but three turbines, which isn't bad going considering that I don't yet hold a turbine type rating.

I've promised myself a Jet Ranger rating in a couple of years, as a treat to look forward to when my student loan repayments finally come to an end. In the meantime, it'll be back to the R44 – for all the turbine fun, still a no less exciting prospect than it was that Christmas Day six years ago.

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## UNUSUAL ATTITUDE

With Dave Hirschman

COLUMN

# 'Pointless' manoeuvres are vital...

Should student pilots be given training relating directly to the flying they expect to do in the future? The answer is 'no', says Dave Hirschman

20 July 2022

**S**ome of the manoeuvres that student pilots must learn during flight training seem pointless, to put it mildly.

Short-field and soft-field landings and turns around a point get lots of attention during primary training, and lazy eights, chandelles, and power-off spot landings get the spotlight during commercial training.

It's fair to ask what the point of these arcane manoeuvres really is, and whether they're even relevant once the student successfully completes a checkride.

When's the last time you saw an airline pilot perform a chandelle or lazy eight on the job? Or a power-off spot landing? Shouldn't the training student pilots receive be directly applicable to the flying they expect to do professionally or recreationally?

It's reasonable to ask, but frankly, the answer is no. The training shouldn't be job specific.

There are hidden benefits to mastering these esoteric manoeuvres, even though the reasons aren't obvious to students when they're struggling through them.

And I'm not just saying today's students should be forced to learn them simply because I had to suffer through them. There are practical advantages, and here's a real-world example.

I recently flew a Beechcraft Bonanza on a photo mission that required taking off and landing on a 2,500-foot gravel airstrip on a tiny island. The place was stunningly gorgeous and delightful – but challenging.

There was ocean at both ends of the airstrip, it was narrow, and a flag-snapping crosswind was gusting to 20kt or so.

Honestly, Bonanzas handle crosswinds like they just don't care, and getting one on or off the ground in 2,500ft at sea level, even when it's heavily loaded, is easily within its capabilities.

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*“The training shouldn't be job specific, there are hidden benefits to mastering esoteric manoeuvres”*

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But being proficient at short-field and crosswind landings helped ensure there was no drama... even at an unmarked airstrip hundreds of miles off the Florida coast.

Short-field take-offs and landings aren't just for backcountry flying or STOL contests, either. Corporate jet and airline pilots flying in and out of high-altitude airports, or tight places such as Chicago's Midway or New York's LaGuardia airports in windy, rainy, icy conditions utilise every bit of their short-field and crosswind skills.

And turns around a point? During the Bonanza photo flight to the island, I circled many points of interest because they made interesting photo backdrops.

Strong trade winds meant each circle had to account for wind drift, so my bank angle and ground speed varied throughout each manoeuvre – just as they do when you're in the practice area.

Also, when you think about it, every traffic pattern you'll ever fly is essentially a ground reference manoeuvre. You're turning the aeroplane to line up with the runway while using airspeed and bank angle to account for wind drift.

OK, but what about those frustratingly pointless lazy eights and chandelles? Well, the lazy eight is one of the first manoeuvres I perform in any new-to-me aeroplane because it quickly reveals the aeroplane's control harmony (or lack of it) through constantly changing combinations of pitch attitudes, bank angles, and airspeeds.

It's incredibly helpful for that purpose, even when I don't get the headings and altitudes just right.

And truthfully, the lazy eights I use to familiarise myself with a new aeroplane typically contain bank angles that are far steeper than the 30° the FAA uses for checkrides.

A chandelle shows how much rudder is required to counteract yaw as an aeroplane slows and its wing angle of attack increases at high engine power, and the differences in rudder and aileron pressure when making a climbing left turn compared to a climbing right turn.

A chandelle also can be a potentially life saving turnaround manoeuvre for pilots who mistakenly fly into canyons or regions of rising terrain and make a minimum-radius, 180-turn. (I had to do this once for real, but that's another story...).

The power-off spot landing is the most commonly failed manoeuvre on the commercial pilot practical test, yet it's also the most useful. Nailing it shows the pilot knows how to use varying amounts of pitch, bank angle, flaps, and rudder to precisely control descent – a critical skill in guiding an aeroplane with a failed engine to a survivable off-field landing.

There are many more examples, but the greatest benefit from mastering these manoeuvres is that it allows pilots to unlock the full potential of our aircraft whenever it's needed.

If you must land during a strong crosswind, bring your aeroplane to a stop on a short and/or a narrow runway, or glide to an emergency landing after an engine failure, you have the tools for a successful outcome – and that opens the doors to a lifetime of adventures.

On an epic flying journey to Greenland with Adrian Eichhorn, a Bonanza pilot who later flew his aeroplane around the world, and over the North Pole, he made a comment that stuck with me ever since.

“Could you even imagine when you were first learning short-field and soft-field landings that those skills would someday lead to places like this?” he asked.

I've got to admit that, during flight training, I never really thought any farther than the next checkride. I had no idea what the future held, and not a great deal of imagination, either.

But looking back with the perspective that decades of flying provides, those fundamental stick-and-rudder skills developed learning time-honoured manoeuvres were the keys to the kingdom.

Even if you see no benefit to learning them now, go ahead and throw yourself into it. The potential payoff is greater than you know.

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## SQUAWKS

With Ian Seager

### OPINION

# Stop inventing hurdles

All you need is love... Except, when it comes to flying, your devotion can be well and truly challenged...

26 July 2022

**G**od, I love flying. I love the way it messes with your head when you have breakfast in one country, lunch in another and dinner in a third.

I love the way it frees you from the tedium of the whole big airport / commercial passenger flying thing, and I love the freedom you get from (sort of) making things work on your own timetable rather than anyone else's.

But sometimes that love gets tested, and I don't mean by the avgas prices, even if they are pretty painful right now...

Having recently done a bunch of European flying, I'm happy to say that the advantages of private flying are still there in spades, but there are times when the perpetual army of rule makers and jobsworths do a great job of making it just a little less enjoyable.

I know it's a first world problem, and I know that individually these things aren't too difficult to deal with, but the hassle is cumulative.

Every little bit of pain moves people just that little bit further away from their ideal, and a little bit closer to their tipping point.

I should probably kick off with a rant about PPR for airfields and airports, but that's a wall I've banged my head against a few times now.

Rather than rinse and repeat old arguments, I'll just point out that an increasing number of online PPR systems (all of which are different) offer nothing in the way of benefit to the pilot, and while I'm all for making everyone's life easier, I



don't think that should be at the expense of making someone else's life materially more difficult.

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*“An increasing number of online PPR systems (all of which are different) offer nothing in the way of benefit to the pilot”*

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A good example would be a coastal airport in Northern France. The vast majority of airfields in France don't require any kind of PPR, but this one now asks for 24-hours notice.

Yes, it's only an email, but having to set arrival times, even if they are an estimate, a day before you intend to fly, kind of fixes your schedule and removes the flexibility you would have previously enjoyed.

In a similar, but perhaps more serious vein, is the whole Prior Notice Required (PNR) thing for customs in France. Although there are a couple where two hours will suffice – take a bow Calais and Le Touquet – many have moved to 12 or 24 hour PNR (or even more if you want to land on a Monday).

Again, this fixes your schedule ahead without you knowing the exact weather. That's going to make life very difficult if you encounter any kind of significant delay, hardly unheard of.

Some airfields, in the name of something or other, can make getting in or out a bit tricky, or at least a bit of a chore for those who are unfamiliar.

Locals or regular visitors may know that you need to find a certain gate before ringing the third bell down on the left to be let airside, but if it's your first visit it can be tricky.

Similarly, paying landing fees can present a bit of a challenge.

Over the last couple of months I've paid once in advance online, another by scanning a QR code and then paying via a website, another by calling someone to give them my email address so that they could send me an invoice, one by old-fashioned cash, and not paid another because the airfield decided that it cost more to collect than was raised, so got rid of landing fees altogether!

I realise that I might be sounding like a curmudgeonly old bloke sat in the corner of a flying club bar mumbling to anyone who'll listen, but my serious point is that the wonder of travel by General Aviation can so easily be tainted by the cumulative effect of a hundred small bumps.

Make it simple, make it easy – and make it so that people want to fly more, not less.



FLIGHT TEST

# A microlight helicopter?

In Italy's Motor Valley, the team at Curti Aerospace has been busy creating a very special little helicopter combining 'Made in Italy' style with a new standard in safety and performance. Rachel Ramsay went to Bologna to fly it...

Words: Rachel Ramsay Photography: Curti Aerospace | 7 July 2022

**I**t's 8pm on a Friday night, and in the golden evening light, under a cloudless Italian sky, I'm strapping myself into a very exciting helicopter indeed. The Zefhir is the first of its kind. A two-seat, ultralight helicopter with a turbine engine and a ballistic parachute. Developed and built by Curti Aerospace, it has the potential to revolutionise helicopter safety – and a whole lot more besides. Only three have been built so far, and I'm flying one of them with Curti's chief test pilot, Matteo Pozzoli.

**The story so far...**

In the moments leading up to the point that I get my hands on the controls of this beautiful little helicopter, I chat with Mirco Cantelli, Curti's delightful Chief Marketing and Business Development Officer, about the Zefhir's journey so far. Curti Aerospace, part of 70-year-old Curti Industries, is a family company based in Italy's renowned 'Motor Valley', an area also home to the likes of Ferrari, Lamborghini and Maserati. They've been making parts for Leonardo Helicopters (which now make the AgustaWestland 109, among others) for more than 40 years, and the owner – Mr Curti himself – is a big fan of helicopters.

Having decided he wanted to make his own, and having established that Leonardo wasn't interested in building a small helicopter, Mr Curti did some market research and hired, to supervise his engineers, someone who knew a thing or two about designing helicopters... none other than the (retired) Chief Product Engineer of the AW109.

“From the beginning, the Curti Zefhir was very unconventional, because first, we proposed to make a very beautiful external design,” says Mirco. “Three designers from the Bugatti team designed it. Then, we went inside and thought about how to make it very well stabilised and high performance. We also went to the Czech Republic to get the PBS TS100 turboshaft engine.”

The result is an elegant, meticulously designed turbine helicopter with a maximum take-off weight of 600kg (1,322lb), making it an ultralight – a category seen elsewhere in Europe but not, as yet, in the UK.

So, about that parachute.

“After researching helicopter accidents, we discovered that around 90% of fatal accidents were because for different reasons, the pilot was not able to make an autorotation,” Mirco explains. “So, we developed the idea of a parachute and finally, in 2018, we were the first in the world to test a helicopter with a parachute.”



Zefhir helicopter being tested with the whole aircraft ballistic parachute. Curti has moved the 'chute from on top of the main rotor to the fuselage

If you'd been, as I was, at the Zefhir's debut at Aero Friedrichshafen in 2018, you'd have noticed the parachute in a pod on top of the rotor head, but the helicopter in front of me now is missing this. That's because it created too much vibration, resulting in it being relocated into the airframe. When the parachute is deployed (minimum deployment altitude: 450ft), an impressively efficient brake halts the rotors in an astonishing 0.7 seconds, which stops the spin in the event of loss of tail rotor authority, and also makes the landing safer for both the occupants and anyone who happens to be nearby on the ground. A rocket then pushes the parachute out and the helicopter falls gracefully to the ground at 7.5 metres per second (the same descent rate, apparently, as a parachute worn by a human).

Mirco tells me that it's there to save the pilot's life, but not necessarily the airframe (which perhaps explains why the [sleek marketing video](#) showcasing the parachute demo cuts just as the helicopter is about to touch the ground).

If the engine fails and you can enter autorotation, you should. If you can't – for example due to panic, incapacitation, flight control failure, loss of manoeuvrability or in the event that there are no suitable landing sites – then the parachute is your 'get out of jail free' card.

"If you're a pilot flying 200 or more hours a year, you could enter autorotation blind," Mirco points out. "If you're a pilot who flies 40 hours a year, you could panic. This way, you save your life."

Still, I for one hoped I wouldn't be needing it.



Isn't she pretty? Bugatti-designed Zefhir is a real Italian looker

## Meeting the Zefhir

Looking over the helicopter with Curti engineer Brando Tuberosa before my flight, the quality of every component is immediately obvious. The airframe is made from carbon fibre, and Brando tells me that everything I can see in front of me, except the doors and engine cowlings, weighs just 72kg. Carbon fibre is also used for the main and tail rotor blades, along with fibreglass, and their profiles have been designed to minimise noise emissions.

Curti makes every part of the helicopter itself, with the exception of the engine (and the parachute, which is developed in collaboration with Junkers Profly).

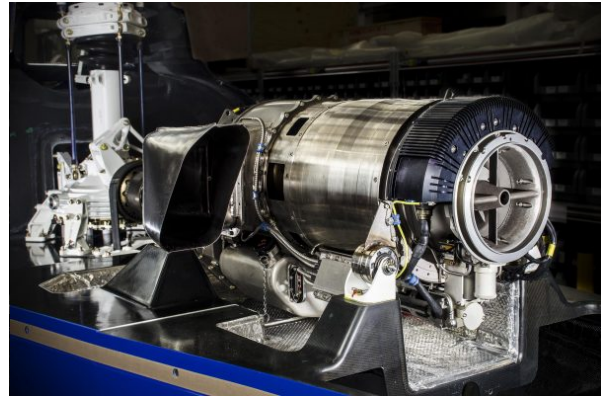
“In our factory we have a series of fatigue test benches where we test all critical groups, for example the main and tail rotor transmission,” Brando explains. “We have an electric engine that simulates the power and torque of the turbine, and we have reached more than 3,000 hours without simple maintenance like oil change and so on.”

Full Authority Digital Engine Control (FADEC) keeps the rotor rpm constant by itself, so there's no throttle on the collective, reducing the workload for the pilot.

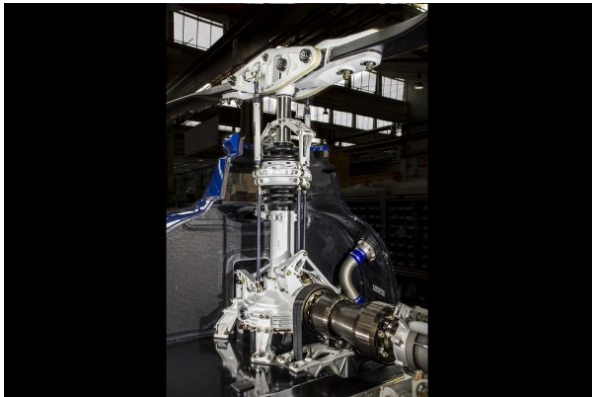
For planning purposes, it's a fuel burn of one litre a minute, so 60 litres an hour, with an endurance of 2hr 15min.



Visibility out of the Zefhir cockpit is excellent



Czech-made PBS TS100 turboshaft engine



Beautifully engineered transmission taking drive from the engine to the main rotor



Tail rotor assembly



Main rotor assembly, again beautifully engineered

## Taking to the skies

The helicopter's name comes from the word 'zephyr', which means 'a gentle breeze', and the motionless windsock reveals there isn't even one of those this evening, which is just as well. Clambering into the cockpit, watched by six members of the Curti team, I feel a certain sense of occasion; I am to be the first female pilot to fly the Zefhir.

Inside, it's spacious, with comfortable yet crashworthy seats, and the visibility is fantastic. The glass cockpit soon lights up in red, yellow and green as the turbine comes to life, a wonderful sound and smell that feels somewhat incongruous in such a small helicopter.

The FADEC means the start couldn't be quicker or simpler – at 20°C, you can be collective up in two minutes. You simply switch the avionics on, activate the fuel pump and turn the knob to 'Idle 1' for one minute. Then you switch it into flight mode for another minute, and that's it. You're ready to go!

It's not long, then, before Matteo lifts us into a hover and repositions us from the concrete to the grass, where, to my surprise, he immediately gives me control and free rein to do what I like with the Zefhir. Maintaining a steady hover is the first challenge. It feels as though every small control input puts me out of



balance, and initially I'm wallowing around like an ab initio student. Matteo puts it down to the teetering rotor head.



FLYER's Rachel Ramsay in the Zefhir with factory pilot Matteo



Hmmm. Nice shoes, Rachel. Power to weight ratio of the Zefhir impresses



Rachel with the Zefhir team

I decided to transition into forward flight and try some upper air work to get the hang of flying it away from the airfield (and cameras!) first. The marketing blurb describes the Zefhir as 'pure performance at your command', and I can immediately see what it means. It climbs effortlessly at 1,400ft per minute, with an incredible amount of power available. Indeed, its power-to-weight ratio is impressive; with a maximum power of 105 kW (141shp), there's plenty more than is necessary given how little it weighs. The engine's actual max power is 241shp

but, like many helicopter engines, it's derated to ensure reliability.

The cruise speed is a respectable 87kt, with a VNE of 102kt. Out of the hover it still feels a struggle to keep it in balance, the yaw string continually wandering off centre, but Matteo reassures me that it takes an hour or two to get used to flying it. With the sun already sinking towards the horizon, we don't have an hour or two to play with, but I'm keen to see what the helicopter is capable of in the hands of an experienced test pilot. I hand control back to him and ask him to show me what it can do.

First, he demonstrates an out of ground effect hover at 1,000ft, a manoeuvre that uses only around 70% of the available power (at the maximum take-off weight of 600kg, the OGE hover ceiling is 13,100ft). Next, Matteo shows me some tight turns and then an autorotation, which surprises me in that it seems to have a better glide performance than the Robinsons I'm used to flying.

A couple of exhilarating approaches into the airfield later, practically pirouetting along the deserted runway, Matteo lets me do a few approaches of my own. By the end of the flight I'm taxiing and hovering steadily enough to complete my first take-offs and landings, before handing it back to Matteo to position back on the helipad.

The shutdown procedure is as simple as the start was – essentially the same but in reverse. There's a cooling sequence down to 100°, and then the avionics can be turned off. There's no rotor brake (yet), so we wait for the blades to come to a stop before getting out.



Zefhir may be a small helicopter but it performs well

## Future of the Zefhir

As I mentioned, microlight helicopters are an established category elsewhere in Europe, but not yet in the UK – so will the Zefhir be the one to change that?

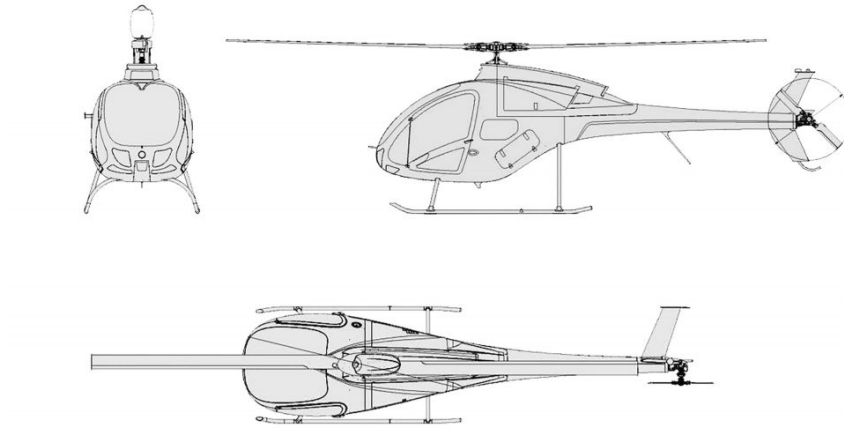
“The commitment from the beginning was to develop a helicopter that was 100% compliant with EASA CS-27, but at the same time it should be within the new ultralight European regulation 1139,” says Mirco. “That was very difficult to manage, and we are still on the limits. The result is that the helicopter is compliant with CS-27, and with tough attention to the weight, it can fit the ultralight classification. The Zefhir recently got the ultralight approval in Italy, so now we can fly and sell it as an ultralight. But each country in Europe has its own rules.”

Curti aims to start production this month, having already received interest from around the world, focusing initially on three markets: the US, the UK and Italy. While any two-seat helicopter is likely to be of interest to training organisations – this one especially, thanks to its turbine engine – it’s law enforcement and defence that Mirco identifies as key markets for the Zefhir. That’s because the potential cost savings per hour are significant, with operational running costs of €280 per hour compared with €1,300 for the H135/145 or €1,800 for the AW139/169.

Not only are the cost savings compelling, but the parachute doesn't just protect the pilot and people on the ground – it also has the potential to save all the expensive specialist equipment with which law enforcement and defence helicopters are fitted. The same benefit is true for another interesting potential use for the Zefhir: it can be operated unmanned to fill a gap in the UAV market, capable of taking a payload seven times that of commercially available drones and fitted with the same instruments as for law enforcement, or even with technology such as LIDAR.

Private owners will, of course, be another market – and they're sure to appreciate the 320 litres of luggage space in its rear bay. In terms of maintenance, the overhaul is at 2,500 hours, with the limit being the turbine rather than the helicopter itself. Once it's approved here, sales and maintenance will be via the UK dealer, Savback Helicopters at Nottingham Heliport, where those interested in a potential purchase can **register an interest**.

I thoroughly enjoyed my flight in the Zefhir and have been continually impressed, throughout my communications with Curti, with the obvious passion the team have for the fantastic little machine they've created. Once they've secured that coveted CAA approval, look out for a Zefhir coming to a hangar near you in the not-too-distant future – they're definitely going to be one to watch.



# Tech Spec

## Performance

MAX SPEED (VNE)	102kt
CRUISE SPEED	87kt
ENDURANCE	2hr 21min @42kt gives range of 98nm

## Weights & loadings

MAX TAKE-OFF	600kg
SEATS	2

## Spec

ENGINE	PBS TS100 turboshaft
MAX POWER	141shp
FUEL	Jet A, A-1, B

## Manufacturer

Curti Aerospace <https://zefhir.eu/>

## Contact

Savbak Helicopters <https://savback.com/>

## Price

tbc



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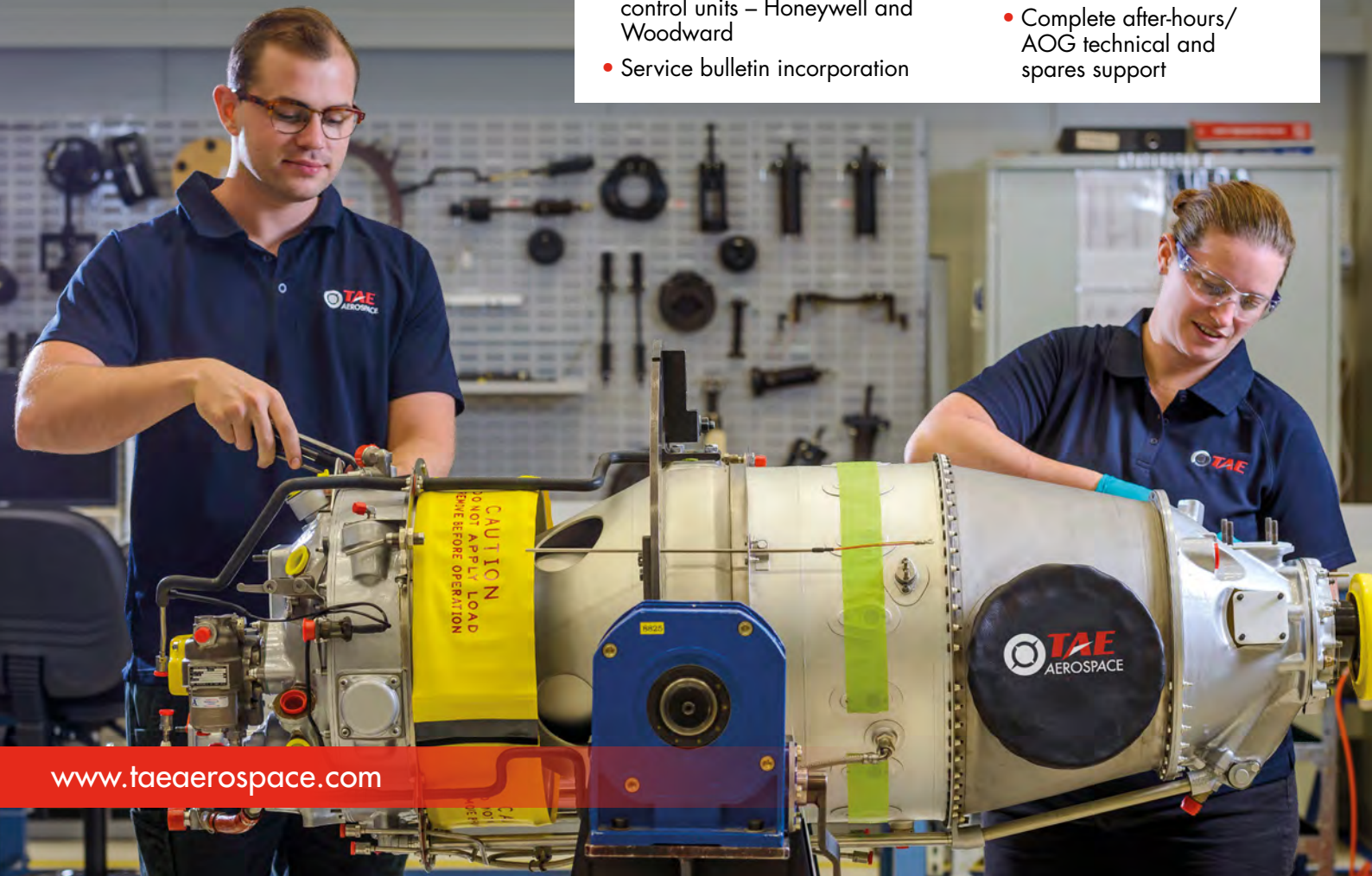
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FIRST SOLO

# Brian Wheeler

Motivational speaker and Aerobility trustee Brian Wheeler is Deputy General Manager at NATS, running their Air Traffic Control operations

Yayeri van Baarsen | 18 July 2022



Brian Wheeler, motivational speaker and Aerobility trustee

## How did you get into aviation?

It was my childhood dream to become a professional pilot. When I was doing my GCSEs, British Airways was offering a cadet scheme.

However, you needed A-levels in physics and mathematics, which I failed. After A-levels, I lived in Belgium with my family where I retook (and passed) maths – and learned to fly.

## How did your flight training go?



I did seven hours in a PA-38 at the Chièvres USAF base, with a Colonel who used to fly B-52 bombers.

Training went slowly, as it was always raining in Belgium, so in 1991, I booked a ticket to Florida.

PPL training there was massively intense: several flights a day and groundschool in the evenings. I'd just learned to drive a car and there I was, practising stalls over sea – I really enjoyed it. My first USA flight was on the 1 July – and on the 7th I soloed.

---

*“After being paralysed from the waist down in May 2018, I was told that I may never walk again. I soloed again in January 2022”*

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### **Were you nervous?**

I didn't have time to be nervous! There was so much going on – I didn't even have time to celebrate afterwards. Also, I was only 19 and knew no fear.

I remember finding it strange being by myself and throughout that flight I kept on talking out loud, as if the instructor was still in the aircraft.

I still do that nowadays, it helps to manage your workload in the cockpit and ensures you don't miss anything out. My solo was a memorable moment. Even more memorable, though, was someone else's first solo...

### **Tell us about it?**

Since I didn't get into British Airways, I became an ATC Officer in the RAF. During my first training session in tower at RAF Benson, in 1993, a young woman was sent solo in a Bulldog.

After calling downwind, she said: “Oh God, somebody help me.” I turned around to my instructor, who looked at her flying instructor.

He grabbed the headset and talked to her like he was next to her in the aircraft. After making her go-around to calm her down, he got her to focus, and made her realise she could do it. It was incredible to watch!

She got down safely, but then stopped on the runway, burst into tears, and never flew again...

## **Why the gaps in your own flying?**

In May 2018, overnight a disc in my back shattered into my spinal cord. I received emergency surgery but was paralysed from the waist down.

The surgeon said there was a chance that I'd never walk again. After spending months in a wheelchair and working very hard, I could walk with a stick.

Every year, I'd set myself new goals. One was seeing if I could get my PPL back. A medical flight test proved I had enough power in my legs to control the rudder and on 28 January 2022 I soloed again.



Despite being paralysed from the waist down in 2018, Brian went on to solo again in 2022

## **How did that differ from your first solo?**

I was older, wiser, and more scared! I said to myself: "Don't mess up!". However, flying is like riding a bike – despite the 20 year gap, it all came back.

As I fatigue easily, I didn't want to put any time pressures on myself. Recently, I passed my PPL.

## What's next?

Taking up friends and family, starting with my dad. I'm 50 now, so I'll never become a professional pilot, but perhaps I'll do a Night or IR rating.

Also, I want to continue raising awareness for Aerobility. It's such an amazing charity. Seeing the look on the faces of people with severe disabilities, who never thought they'd be in an aircraft, when they come back from a flight, is priceless.

There's a pilot who feels different on the ground, but in the air, he's just another voice on the radio.

Another is always in pain, apart from when he's flying. His body is concentrating so hard, the pain receptors shut off. Aerobility literally changes lives through flying.

## What do you love about flying most?

The freedom it brings, even if it's just doing circuits at your local airfield. I'm looking forward to going on little adventures, to the Channel Islands or Cornwall for a beach picnic and a swim.



With flying, there are so many opportunities, the world's your oyster.



### BRIAN WHEELER

Motivational speaker and Aerobility trustee Brian Wheeler is Deputy General Manager at NATS, running their Air Traffic Control operations. *Brian, left, when he first soloed in 1991*

WHEN	7 July 1991
WHERE	Naples Air Centre, Florida (USA)
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HOURS NOW	Approx. 118

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SPECIAL FEATURE

# A Tale of Two Westlands

On a beautiful farm in the Warwickshire countryside, two iconic ex-military helicopters are out to pasture teaching pilots a thing or two about British Army and Royal Navy flying. **Rachel Ramsay** went along to learn more and try her hand at flying Westland's Wasp and Scout

22 July 2022

**I**f you're the proud owner of a PPL(H) and looking for a new way to get your thrills, [Dragonfly Aviation](#) is a name you'll want to know about. This unique training organisation is the work of Mark Cowley, a helicopter instructor and examiner who, not long ago, swapped his R44 for a Westland Scout and Wasp.

For these legendary helicopters, the days of airlifting casualties out of conflict zones and attacking submarines in the high seas are a thing of the past. They're now being put to work in a new 'civvy' role, teaching helicopter pilots what

rotary flying was like in the military in days gone by.



Unmistakable shadow of the Wasp helicopter – the Scout has skids instead of wheels

## **Military to civilian**

The Scout and Wasp are a single type rating, with differences training – a reflection of their similarities, the Scout being the army version and the Wasp the Royal Navy version of what's essentially the same machine, pioneered on the same British development programme by Westland Helicopters.

It's worth starting by saying that getting rated on these iconic helicopters is no mean feat. The 10-hour course is twice the normal length for a helicopter type rating, as PPL(H) holders will know.

It's conducted on the Scout, with an additional hour of differences training to convert to the Wasp, and needless to say there's also a decent chunk of groundschool on top of that.

This rigorous training is warranted: with just five Wasps and eight or nine Scouts still flying in the UK, it's vital that those entrusted to fly them know what they're doing.

At Dragonfly Aviation, Mark has painstakingly put together a brand new CAA-approved Scout/Wasp type rating training manual, adapted from an original military one to be more suitable for civilian instructors.

Writing this formidable tome, he's had to ensure that the syllabus covers aspects civilian pilots won't be familiar with – such as the dangers of misinterpreting old military instrumentation.

Mark had previously told me that neither helicopter is particularly difficult to fly, but that they do 'have quirks that will cause an inexperienced pilot a problem unless you have some reasonable helicopter experience'.

I learn later that the Scout's descent rate in vortex ring is 6,000ft per minute, so I can see what he meant. The fact that hydraulic failure necessitates the assistance of a second pilot to get the collective down only adds to this impression.

It's unsurprising, then, that neither the Scout nor Wasp are suitable for ab initio training, and flying them is a privilege reserved for existing PPL(H) holders.

For those whose budget doesn't stretch to the full £9,800 type rating course, Mark also offers day-long type rating experience courses and taster flights for keen PPL(H) holders who just want to have a go (and make probably the coolest possible logbook entry of their flying careers).

It's these taster flights that bring me to Mark's farm one sunny spring morning, along with my good friend, and fellow helicopter pilot, Alex Bishop. We're both buzzing with excitement (no Wasp-related pun intended) as Mark briefs us ahead of the day's flying and we get into our flying suits.



Westland Scout as used by the British Army

## **A tale of two helicopters**

The day begins with a cup of tea and a chat about the background to the Scout and Wasp and the similarities and differences between them.

They were developed more or less alongside each other in the 1960s, entering service in the Army Air Corps in 1963 (Scout) and the Royal Navy in 1964 (Wasp).

Perched improbably on what look like shopping trolley wheels affixed to scaffolding, the Wasp is one of the most instantly recognisable helicopters in existence. Designed for the tight margins of frigate deck landings in the precarious conditions of ocean swell, the castoring wheels can be locked in place or released to swing the aircraft around into wind for take-off.

Like the Sea King, its blades and tail fold back for easier storage on board ship.



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*“Perched on what look like shopping trolley wheels affixed to scaffolding, the Wasp is one of the most recognisable helicopters”*

---

Used by Navies around the world – notably in the Falklands and First Gulf War by the Royal Navy – the Wasp was equipped with torpedoes to sink submarines.

It also carried WE177 nuclear depth charges (each one, terrifyingly, able to destroy submerged subs within a 20-mile radius), and the Nord AS12 air-to-surface nuclear missile.

With these weapons on board, there wasn't much room in the weight and balance for fuel, and that meant it typically flew short missions back and forth from its mothership.

No wonder the fuel gauge is so prominent on the instrument panel!



Royal Navy preferred wheels undercarriage for its Wasp, so it could be easily pushed around on board a ship

The Scout sits lower to the ground than the Wasp, with skids in place of the

wheels. It fulfilled a variety of tactical roles wherever the British Army was based, notably in the Falklands, the Far East and Northern Ireland.

It's a bit faster than the Wasp, and according to pilots who've flown both, smoother, thanks to the relative lack of drag in its less cumbersome undercarriage.

The Scout could comfortably hold six people and was also armoured to deal with ground snipers, as well as being equipped to carry SS11 missiles, rockets and flares.

Mark's Scout was part of the so-called 'Eagle Flight', the Northern Ireland detachment tasked with chasing down suspicious vehicles, flying low over them and landing on the road in front of them to deposit a helicopter full of troops on the unsuspecting target.

Evocatively, it still has an original placard in the right rear door headed 'Eagle Flight - self brief for troops', which includes such instructions as 'Muzzle away from windows, roof, rotor blades & controls' and 'NEVER, NEVER go behind the helicopter'.



Scout belonging to Mark was part of the Eagle Flight detachment in the Northern Ireland, tasked with chasing down suspicious vehicles – and still has the placard inside detailing specific instructions

Above all, both the Wasp and Scout are incredibly solid machines, built to

withstand the harsh conditions of the open ocean and the hazards of the battlefield respectively.

Both of Mark's aircraft have stretchers for back seats, the rear doors extended out to accommodate them – a reminder that one of the many other uses of these versatile machines was casualty evacuation.

Indeed, as I later learned in an informative [online lecture](#) given by the Army Flying Museum and Navy Wings, in the Falklands, the Scout was often flown with one of the rear doors off to facilitate fast casualty loading in the battlefield (the Wasp, meanwhile, often being flown with the doors off to facilitate an easy exit in the event of a sea ditching).

Mark adds that the Scout could also carry stretchers on the outside, in coffin-like pods resting on the skids – an ordeal, for the casualty, of such proportions that they required sedation to cope with it.

However, it must have worked, as in the Falklands every casualty airlifted out by an Army or Royal Marine Scout (and Gazelle) apparently survived.



Both aircraft have stretchers for back seats, with the rear doors extended out to accommodate them

## **First up, the Wasp**

It's the Wasp we're flying first, and as we walk out to the aircraft it's already a lot bigger than I expected, having only seen them in airshow displays.

Mark takes us through the check A, pointing out some of the idiosyncrasies one might expect from a vintage machine, such as the amount of oil everywhere.

What's striking about both aircraft is how exposed the engines are, neither the Scout nor the Wasp ever having had engine cowlings fitted throughout their long service history.

Easier to keep cool and quicker to fix! The Rolls-Royce Bristol Nimbus engines, Mark tells me, are interchangeable, although the original Royal Navy ones had an anti-corrosion paint on them for obvious reasons.

With the engine out in the open, there are no inspection hatches involved, something that comes as a surprise to a Robinson pilot like me.

Even with the Wasp's drooping rotor blades, there's a lot of craning our necks involved to inspect the main rotor head and tail rotor, which tower over us.



Rachel is suited and ready to fly the Wasp!



Rachel at the Wasp's controls



The Wasp has a distinctive tailplane on the starboard side of the tail rotor

Check A complete, it was time to clamber aboard. By the time I'm strapped in, I'm already grinning from ear to ear, and we haven't even started the machine yet.

The distinctive smell of oil and old leather is intoxicating, and quite unlike the Robinsons I'm used to flying. And there are interesting things to notice on the instrument panel that give clues to its nautical past: 'Flotation Manual Auto', 'Morse Downward Ident Light', and so on.



Pre-flight inspection is thorough



Rachel strapped in and taking control

Mark talks us through the start – an exciting process for those of us who haven't yet added a turbine to our licence. The aircraft shakes as it gets up to speed,

before Mark effortlessly lifts us up into the hover and we depart his beautiful farm.

Once we're on our way, he gives me the controls. He had warned us that the pitch axis is particularly sensitive in the Wasp, managed with a trim button on the cyclic.

I soon see what he means, but it's nevertheless a pleasure to fly, and surprisingly easy – easier than the Robbo, and certainly more stable.

The amount of power available is evident in how quickly and easily it climbs, our sunny excursion surely a walk in the park for a machine built for the extreme conditions of the open ocean.



An impressive piece of machinery!

After some general straight and level flying to get used to how the aircraft handles, we fly to a nearby grass airfield at Preston Capes – the sun casting the most magnificent Wasp shadow over the ground as we cross the airfield boundary – where I'm able to try my hand at take-offs and landings and some 360° spot turns to the left and right.

Hovering is no harder than it is in the R44, and again, probably easier; but it does feel high compared with what I'm used to, thanks to that dangling undercarriage.

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*“The Wasp is a pleasure to fly, and surprisingly easy – easier than the Robbo, and certainly more stable. It’s a machine built for the extreme conditions of the open ocean”*

---

Similarly, when landing, you have to anticipate making contact with the ground sooner than you would in a Robinson, letting the aircraft settle into its oleos as you lower the collective.

We return to the farm low-level over the fields, a thrilling experience that makes me contemplate what it must have been like for my late dad, when he had a go in a Wasp from on board ship in the Royal Navy in the 1980s.

### **Next, the Scout**

The Wasp’s delicate undercarriage renders it unsuitable for conducting autorotations to the ground, so Mark promises us that we can do some emergency procedures when we come back to fly the Scout.

It’s a rainier day when we return to the farm, and our sortie is cut short before I get to have a ‘proper’ go – though not before we get to see the Scout’s comically frantic windscreen wipers in action.

We arrange another day to meet at Turweston for my final sortie, the Scout sitting invitingly on the helipad as I taxi past it in the PA28 in which I’ve flown.





Rachel with the Scout

The Check A reveals oil splattered just about everywhere, but Mark assures me that this is normal.

An essential piece of equipment for carrying out the Scout's Check A is, he explains, an empty sack of sheep feed, which he puts on the ground to lie down on while he slides underneath the aircraft to check the fuel. There's a lot of dirt to get used to when you fly a vintage helicopter.

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*“With the Scout, the usual buttons and dials being joined by options few of us private pilots will have come across before: flares, slow falling flares, guns, rockets, missile jettison”*

---

The blades are oiled at the end of every flying day, and Mark also dons a pair of gloves and manually brings each rotor blade back onto its stop, which reduces the padding on start-up.

Strapped into the pilot's seat, the Scout's instrument panel certainly captures the

imagination, the usual buttons and dials being joined by options few of us private pilots will have come across before: flares, slow falling flares, guns, rockets, missile jettison. One would not have wanted to get on the wrong side of this machine in a war situation, that's for sure.



Inside the Scout...



This time Rachel takes control of the Scout...



The Scout's instrument panel has the usual buttons and dials, as well as options few private pilots will have come across before: flares, slow falling flares, guns, rockets, missile jettison

The start procedure is very similar to the Wasp, and before long we're departing Turweston and I'm handed control.

Somehow, the Scout feels to me a little more challenging to fly than the Wasp had done, and maintaining straight and level flight was tricky at first.

As with the Wasp, the cyclic trim helps manage the Scout's sensitive pitch axis, but takes a bit of getting used to.

It gets easier once we're back at Preston Capes and I have a couple of take-offs, landings and spot turns under my belt.



As promised, we get to experience some autorotations, which aren't too dramatic. The Scout is built for running landings, and it's capable of skidding along the ground at a rate of 35kt during an autorotation to the ground.

On contact, I'm amazed at how far the aircraft keeps going before finally coming to a stop, leaving telltale tracks behind us in the grass.

Of course, this ability also made it good for running take-offs, scraping through

translational lift with limited power – necessary when laden with more troops than it was really designed for in an evacuation scenario.

We do another autorotation back into Turweston, landing back near my rented PA28 and shutting down with a final pumping of the collective to return the hydraulic fluid back into the reservoir.

It's not without some reluctance that I hand the flying suit back to Mark for the final time – for now, at least. Those logbook entries are going to take some beating.



# **I flew Wasps and Scouts in the military: a conversation with John Beattie**

## **Distinguished display pilot John Beattie, who still flies and instructs on the Wasp, chats to Rachel about the two helicopter**

As Ex-Commanding Officer of the Royal Navy Historic Flight, John Beattie needs no introduction. Among his vast aviation experience, he has around 3,000 hours on the Scout and Wasp, with slightly more on the Wasp.

A distinguished display pilot in both the rotary and fixed-wing worlds (he holds the Honourable Company of Air Pilots' Hanna Trophy in recognition of more than 40 years of display flying), his first air displays, in 1973, were on the Scout while on detachment.

John tells me that he's never had any trouble from these reliable machines – the only problem tended to be the conditions.

“Flying at sea can be lovely, but the North Atlantic in the middle of winter is not necessarily the nicest place,” he remembers. “You’ve got to wait for the seventh wave for the ship to calm down a bit before you can land on it.”

“The Scout is nicer to fly, but they did different things,” he replies, when I ask which aircraft he prefers. “The Scout was anti-tank or utility – we carried four relatively short-range wire-guided missiles, SS11s, and we were down among the trees, climbing to get over power lines. On exercise we probably wouldn’t come above 200ft.”

“We used the Scout in Northern Ireland a lot for stop and search, too. In the ‘badlands’ down in South Armagh, we’d drop four blokes and they’d stop a car. And resupply – we’d send various supplies to places you couldn’t really

get to by road with any safety. We'd have a big net full of stuff."

"The Scout is faster, nimbler, has less vibration. The Wasp, however, had a bigger missile – an AS12 – with twice the range. We'd go booming across the waves at 50ft and then within 6,000 yards we'd pull up to a couple of hundred feet, loose off the missile, come back down again."

I ask his thoughts on civilian pilots flying ex-military helicopters. "You've got to do 10 hours, because of three accidents that occurred in the 1970s and early 1980s, all of which were down to lack of training. In the military, we had Rolls-Royce training, we did nothing but.

"We'd fly 30 hours a month and it would all be training. A civilian might not fly 30 hours in a year, so there is a different level of application. We were immersed in it, and did every aspect of it – instrument flying, night flying, formation, winching, all that sort of stuff that the civilian wouldn't do – day VFR only now."

"Civilians tend not to read the pilot's notes, but we'd sit for hours memorising checklists and limitations. It's a disciplined background that we were brought up with – if you were in a crew room with 20 blokes all doing the same thing, flying the same aircraft, there's a lot of cross-pollination and you pick up things from each other. For a civilian on his own, he doesn't have any of that."

Nevertheless, John believes that Scouts and Wasps are by no means beyond the realms of civilian private pilots.

"There's absolutely no reason why they shouldn't do it," he replies. "If someone's got a little bit of cash, the Wasp and the Scout are actually very cheap turbine helicopters. You'll pay less than £100,000. If you want to fly a JetRanger, you'll get a 1970s JetRanger for about a quarter of a million – two-and-a-half times the cost."



## I just got a Scout type rating!

**Alex Bishop is a PPL(H) holder who's lucky enough to have completed the Scout type rating course...**

With existing type ratings on the R22, R44, B206 and AS350, Alex's Scout course was a rather different kettle of fish from the training he'd done before.

"The Scout is unlike any of the other types I've rated on, and that's to be expected as it's a military machine," Alex says. "The Scout never had a civilian alternative!"

"The cyclic has a 'top-hat' trim switch, which allows the pilot to remove the stick forces in flight," he continues. "The power available is phenomenal. The Nimbus 105 has 1000shp and is derated to around 700shp. If there is a Free Turbine Governor failure the pilot can reduce the rotor rpm out of the governed range.

"The noise change is more noticeable than in other aircraft I've flown, so the rpm can be controlled, not just by looking at the gauge, but also by listening to the distinct sound of the turbine spooling up and down.

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*"The Scout is unlike any of the other types I've rated on, which is expected as it's a military machine"*

---

"I think 10 hours is a good amount of flying time to be ready for the skills test. However, the course requires you to already be a current helicopter pilot. This is important, as the 10 hours focus on flying and operating the Scout safely and relies on the pilot having a sufficient level of knowledge and experience of how to operate a helicopter safely in the first instance.

“Additionally, there were four intensive days of groundschool before the air exercises, focusing heavily on Threat and Error Management, TASE items and accident analysis, which means you’re fairly familiar with the Scout before you climb into the right hand seat. The professionalism of Captain Mark Cowley at Dragonfly Aviation is second to none, and every minute of every ground and air exercise you are learning or consolidating knowledge that builds towards operating the machine safely.

“I found the Scout and Wasp are sensitive in pitch, and at first I found controlling this the most challenging part of flying the machine. However, once used to using the cyclic trim as habit, the challenge goes away. It’s also important to remember, especially when considering Threat and Error Management, the proficient use of the vintage cockpit instruments.

“The altimeter hundreds hand is a circle and not a pointer, and there was no mark for a rate one turn, for example.

“As part of the course, it is mandatory to do half-an-hour of solo flight, something that doesn’t feature as part of other type ratings. The part of the course I enjoyed the most was flying that Scout, on the gin clear afternoon of the final day, looking out across the Northamptonshire countryside, realising with a fair level of certainty that I was probably the only person doing that, anywhere in the world at that moment.”

So what does Alex advise anyone thinking of doing a Scout type rating?

“Don’t hold back. These machines are a key piece of British history, from an engineering, aviation and conflict involvement perspective. The course is intensive, but you will be safe and proficient in operating the machine by the end of it and you’ll be a key part of keeping these precious helicopters flying for the years to come.”



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## ACCIDENT ANALYSIS

With Cat Burton

COLUMN

# Beware of a 'stressed' out canopy

Safety Editor Cat Burton looks at an equipment failure in flight – and it's something that most of us take completely for granted... the canopy

20 July 2022

**O**n 1 July 2020 Guimbal Cabri G2 HB-ZDQ was conducting a training flight in Switzerland when the helicopter's canopy shattered. Both student and instructor were injured to their faces, hands and legs.

The exercise was to demonstrate flight close to Vne and, at the time the canopy shattered, they were flying at 110kt (Vne is 119kt).

The plexiglass canopy suddenly burst and the 110kt relative wind blew shards into the cockpit, tearing off headsets and glasses of both crew members.

The instructor was able to reduce speed and don his spare glasses, which, fortunately, were in his trouser pocket. They landed as soon as possible.

The implosion was significant enough to trigger the ELT, and they landed on a football field about five minutes later.

The canopy was a single, large piece of plexiglass, 2mm thick and glued to the frame. It is designed to withstand the aerodynamic stresses of flight, which are obviously higher at high speed.

So, how come the canopy didn't withstand the stresses for which it was designed to cope?

In the centre of the windscreen, a suction cup mount had been installed for an action camera. The safety investigation concluded that this suction cup added

sufficient stress to a single point on the windscreen which, combined with flight close to Vne, exceeded the design loads of the canopy.

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*“The canopy suddenly burst and the 110kt relative wind blew shards into the cockpit, tearing off crew members’ headsets and glasses”*

---

Guimbal issued a service letter advising owners and operators NOT to mount anything to the windscreen with suction mounts.

It’s hard to imagine the sheer startle factor of this event. The instructor did very well to recover to slower flight and conduct a precautionary landing within five minutes, especially being able to don his spare prescription glasses.

We live in an age of suction cup-mounted devices, but how many of us have even considered them as a source of extra stress?

The most common mounts have a cam lock to secure them tightly to the window. I know I use one, for my SkyEcho2. I mount that on a side window, not the windscreen, which I presume is less highly stressed by aerodynamic loads than the windscreen.

I do carry my spare prescription glasses, but in the top compartment of my flight bag. Could I retrieve them if the windscreen failed so catastrophically? Almost certainly not.

I fly most often in Diamond DA-42 and DA-40 aircraft, both of which have single piece canopy/windcreens which I am sure are highly stressed without me adding more by attaching devices.

My own takeaways from this incident are to keep my spare pair more readily to hand and never to allow anything to be attached to the main canopy/windscreen. I will probably continue to attach devices to side windows.

And I very definitely offer a salute to the instructor on that flight.

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FLYING ADVENTURE

# The Maverick Six Pack

Planning open cockpit flying around the Sound of Mull is ambitious – especially when getting there is the obstacle, as Bruce Buglass, Airfield Manager at Sleep, and his pals discovered. But, six aircraft, 14 hours flying, 10 airfields – and a few ‘nervous’ encounters later, they succeeded...

Words by Bruce Buglass | 12 July 2022

**T**he plan almost went perfectly... right up until the weather decided to get involved. The Sleep group – George Bayliss (age 26), Andy Bancroft (26), Ben Gilmore (20), Max Metcalfe (20) and myself (21) – met early at Sleep International on Thursday 26 May ready to launch off to Eshott, the first overnight stop-off.

The weather was already dreadful (but ‘set to improve’ said local weather expert Ben Gilmore), so we busied ourselves packing all our gear and beer into the four aircraft. An efficient team set to work.

George started loading up all the gear into Max's ever-faithful Cessna 150, Andy installed go-pros on the SuperCub G-CLYI, Ben impressively stored his tent and clothes in the back of his Taylor Monoplane G-BMAO, I packed up my Mono G-BDAG with impressively little, and Max nervously started doing the weight and balance for his Cessna... sweating slightly.

We taxied up to Sleaf's tower that afternoon for some of the UK's cheapest fuel and had a group huddle around the weather receiver showing a solid 32kt north westerly. As much as we marvelled at the idea of the fastest ground speed ever recorded in a 55hp single-seat Taylor Mono, the idea of landing at the other end didn't seem so marvellous.

So instead, we elected to go watch the new *Top Gun* film and visit the pub.

Friday morning saw the formation of four lift off precisely at 0837 inbound to Sherburn-in-Elmet. The two Taylor Monos cruise happily at 70kt at 2,950rpm on the trusty 1,600cc beetle engine. They are quite slippery aircraft for their weight, and fly very precisely, if a little light.

The Cub, with its 3lin tyres and big wingspan, is a fantastic stable leader (even with George flying) and the supersonic 150 was keeping the rear safe.

Formation was tidy, groundspeed was good, the sun was shining and our rear ends had yet to become sore.

After a lovely landing at Sherburn on the smooth grass runway and a somewhat concerning PPR phone call for Fishburn ("...are you sure? it's very windy..."), we launched off and got a zone transit in formation over Teesside.

Once 1, 2, 3 and 4 all landed in a crosswind on Fishburn's rather epic hill we piled into the fantastic Aviator Café there and promptly ate enough to take the Monos out of W&B.



So, this is the plan lads... listen up

All fuelled up, the last and bumpy leg from Fishburn to Eshott took us nicely through Newcastle's overhead, and George (sitting in the back of the Cub) had never sounded so slick on the radio before.

Our good friends (and former owners of G-BDAG), Richard Pike and Sam Woodgate, were waiting, concerned, to watch our landings at Eshott.

The landing was somewhat eventful in the 20kt wind on the tarmac Runway 26, but when we were presented with beer upon touch down, it felt like a worthwhile landing.

A shiny Cessna 182, flown by Lewys Phillips, was next to arrive, along with Joe Watson. The first example of some excellent banter was Lewys donned in a full flight suit and a fast jet helmet in the left seat of the Cessna, coming all the way from Welshpool like that. Needless to say, he had also seen *Top Gun* the previous evening...

Ben Sluman was next to arrive in his very brown Piper Turbo Arrow. All the lads had arrived, ready to launch to Scotland in the morning.

Richard and Sam run Eshott Airfield and the fabulous heritage and smart brand-new café is a must visit.

With the tents constructed and a suitable amount of beer consumed, the 192 nautical miles open cockpit aviating soon caught up and we went to bed, trying our best to block out the foghorn of Max's snoring.

Conveniently we had parked and camped behind the avgas bowser to keep out the blowy wind, so refuelling next morning took a matter of minutes.

A pre-flight brief, bacon rolls in the café, and a good old fashioned hand swing (or 10) later we all taxied out to Runway 01 grass.

The weather today was perfect for it; calm winds, blue skies and an outside air temp high enough that Ben and I wouldn't freeze to death.



Getting fuelled up...



Parked up by a bowser



Six of the best in formation - on the ground



The first stop was Lempitlaw, 15nm SW of Berwick-Upon-Tweed. The fleet of six aircraft was joined by the two Eshott Chipmunks piloted by Sam and Richard and formed an eight-strong 'big wing' all the way up the Northumberland countryside.

With types ranging from the tiny Monos (pootering along as fast as they could), to the Piper Arrow (flaps down and dirty for 70kt) it must have made an interesting sight from below.

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*“Lempitlaw has probably the nicest grass runway in the UK. It’s long, wide and just butter smooth”*

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The two Chippies spectacularly broke off back to Eshott (they had a full day of pleasure flights to fulfill) and the hilariously nicknamed 'Pigeon' formation carried ever northward.

Eventually the 182 and Arrow got bored of the 67kt cruise and felt 130kt was more suitable. Can't blame them.

Lempitlaw has probably the nicest grass runway in the UK. It's long, wide and just butter smooth. The owner is super friendly and there are tea/coffee facilities. With a jerry can from the Tardis that is the Cessna 150, we refilled both Monos.

Ben's uses about 10/litres an hour, mine around 13 litres/hour, presumably because I'm somewhat heavier. We took off, and got on our merry way with Glenforsa looming ever closer.

The backside was now becoming sore (2.5 hours in) as we called up Edinburgh for a transit in formation. ATC was great and cleared us via Edinburgh centre, down the Royal Mile and then overhead the busy international airport at 1,000ft.

The Norwegian Air 737 was somewhat amused by the description of the 'light aircraft' passing right to left.



Landed at Lempitlaw, where the runway is 'butter smooth'



Spectacular scenery below



Bruce, in his Mono G-BDAG, and Ben in his Taylor Mono G-BMAO, over bright blue waters

An expensive and underwhelming Cumbernauld stop-off saw George and I swap places (George co-owns G-BDAG with me) and the 'pigeon' formation set off once again for Glenforsa.

Climbing over Lake Lomond and the Trossach mountains, up to 4,000ft in the two tiny Monos, was somewhat nerve-wracking, the experience later described by Ben and George on the ground.

(Unfortunately, the exact phraseology cannot be published, but it went something on the lines as 'rather scary'). Once over Oban we descended to a much more appropriate 500ft over bright blue waters.

We rounded the corner of the Sound of Mull and the busy Glenforsa radio (120.805) sparked into life with the flurry of activity at the 50th Glenforsa Fly-In.

After a run-and-break and a neat landing sequence we taxied in to look for a space in the 50+ aircraft present.

Thankfully, the ever-thoughtful hotel owner Brendan had kept us a small space clear for the Monos.

Glenforsa Airfield and hotel has been written about numerous times in a whole host of reviews, flying magazines and publications, but these simply do not bring

it justice.

Everything about it summarises the very best bits of GA flying in the UK, it is indeed iconic. If you haven't yet been, you must.



Ben impressively stored his tent and clothes in the back of his Taylor Mono G-BMAO



Andy gives the thumbs up by his SuperCub G-CLYI



Bruce and Ben fly over the winding river below

The time had come for the whole point of the four-day adventure – the local flight around Glenforsa. As we swung the props and the happy VW bubbled into life, myself and Ben couldn't keep the smiles off our faces. We gently slid into the

calm air and away from the airfield over the peaceful water of the Sound.

The sun was glowing a gorgeous orange, the formation was tight and smooth. We played around low level, enjoying the stunning scenery, and the joy that is open cockpit flying. It is certainly one of the best flights in my logbook.

Once on the ground, our thoughts quickly moved to beer. We spent the rest of the evening enjoying good beer, good views, and some top-notch banter.

As the sun rose and Max's snoring came to a stop, the scene when unzipping the tent was one to behold. The two little Monos looked expectantly at the sky. Little did they know they were about to fly almost seven hours home to Sleaford, and push the aircraft and their pilots to the max.

I'm yet to fly another aeroplane with such a distinct personality like G-BDAG, it's like a badly behaved Jack Russell... loveable nonetheless.

After a quick run up to the petrol station (thanks Brendan), I was back in the Mono wearing as many layers as I could fit. It is not a big aeroplane, and a jumper, flying suit and gloves is all I can wear to allow my shoulders to fit.

In left echelon to Ben, we took off in formation from Glenforsa and made after the Cub, climbing away in front. Looking back to Glenforsa, the rest of the squadron was about to, or already, taking off. It was an impressive sight.



Beer, banter and good views



Bruce likens the G-BDAG to a badly behaved Jack Russell... loveable non-the-less!



Always nice to have a stroll down to the shore's edge...

The Cessna 182 and Arrow unheroically decided to fly straight back to Sleep (wimps), which left the Cub and the two Monos inbound to Castle Kennedy.

The 150 had to go via Oban for fuel for itself and to yet again refill the Jerry can.

The flight there was spectacular. Sitting comfortably at 500ft, we dashed out of the Sound of Mull and over and about the scenery of the Inner Hebrides.

Beautiful bright blue sea and stunning beaches, tiny islands, rocks and pretty little villages past underneath and radio chatter was at an all-time low as we took it all in.

The flight took a slightly different turn in the second half as we passed out over the Sound of Bute for a 39nm sea crossing.

Hugging the coast would have taken us outside of a reserve fuel and there are very few airfields to go to.

We climbed to 1,000ft for vanity – glide clear was never going to be an option. At a very slow 67kt this leg seemed to last for hours and hours. The engine never seems to sound the same over water, does it?

Being quite familiar with the inner workings of the engine, my mind decided to

pass the time analysing all the parts of the engine that could break... such as the chain powering the two magnetos, or the tiny little carb, or any number of spark plugs to foul up.

This wasn't a very helpful thought process, so my solution was just to turn on my A20s... and play Kenny Loggins nice and loud. This helped tremendously, thanks Bose.



Despite going over in his mind all the things that could go wrong as he flew over the bright blue sea and dozens of rocky inlets... Bruce says he has yet to fly another aeroplane with such a distinct personality as the Mono G-BDAG

Passing the Ailsa Craig, we coasted in for what felt like four years, but was nearer 1hr 30min. Castle Kennedy has a smooth tarmac runway, but very little else. There is a small hut where landing fees are paid, and a friendly call for PPR.

Apparently, the gardens of the Castle itself are within walking distance and worth a visit, unfortunately we had the rest of the UK to navigate that day... We lay on the warm and very dry tarmac waiting for the 150 to catch us up with the fuel.

The plan went awry when calling Kirkbride, and we discovered that there was almost no fuel, and we wouldn't be able to take more than 30 litres.

The Cub and 150 didn't have enough to get to Kirkbride and then Blackpool, but the two Monos couldn't realistically go straight to Blackpool.



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*“After leaning in to adjust my radio, I pulled my arm back up and the throttle quadrant snagged on my jacket, reducing it from 3,000rpm to just 800rpm”*

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We split up – the 150 and Cub off in a straight line to Blackpool, and the two Monos to Kirkbride.

Another sea crossing, another scary moment. While passing over the Solway Firth, with Ben in the lead and me tucked away in line astern, I leaned in to adjust my radio, which is a fiddly affair.

Once finished, I pulled my arm back up and the throttle quadrant snagged on my jacket, reducing it from 3,000rpm to just 800rpm.

Thinking my engine had stopped 10nm out from shore was one of those heart dropping moments that forms a nasty feeling in your stomach.

In my haste, I moved my arm fully forward again which quickly then applied full power. For those of you who fly with VW engines, you'll know full power quickly added usually results in rich cut, so there was a spluttery sounding engine for a few seconds...

An hour later we landed at Kirkbride, and we sat on the grass outside the little tower at the lovely GA airfield and ate as much sugar as possible from the vending machine on site.

Flying so slowly in open cockpit in formation for such long periods of time does take it out of you, especially when you think you're about to get wet.



Ailsa Craig looms in the distance in the Firth of Clyde

The leg to Blackpool was flown in good spirits (amazing what numerous chocolate bars can do for you) and as we passed between Scafell Pike and Sellafield restricted area we found a sidecar motocross race just about to start.

We spent five minutes racing the bikes around the track from the air – obviously winning in our heads. Past Barrow Aerodrome (what a waste) and once again over the sea over Morecambe Bay.

Then it was on the radio to the helpful ATC in Blackpool and the nice woman in the tower who asked me to orbit twice, it must have been just because of the sheer speed of the Taylor Mono.

Tarmac landings are always a little tricky, even more so at a full ATC controlled airport with a huge runway. We sure felt a little out of place, but once we'd taxied in next to the cub and 150, at our good friends over in High-G Flight Training, we celebrated almost being home.

After finally getting a slot to leave we sat patiently at Echo 2, looking at the large black cloud forming overhead.

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*“Being back on our local stomping*

*ground felt brilliant. We had made it. It was such an epic way in our tiny aeroplanes, and at times left very little room for error”*

---

Once airborne, and a few drops of rain slapping my forehead, we turned south as a group, ready for our last zone transit in formation.

We were planning to transit via the city centre but due to a boisterous football win, there was a police helicopter overhead, so we went via the extended centreline of Liverpool, 4nm behind a Ryanair 737. It looked awfully big when sitting in a Mono...

Once clear, we all coasted back into Sleaf. Being back on our local stomping ground felt brilliant, and there was no need for SkyDemon to get us back.

We had made it. It was such an epic way in our tiny aeroplanes, and at times left very little room for error. A huge sense of achievement washed over all of us and there was some excellent banter while pushing the aeroplanes away.

Ben and I were bright red from wind burn, and thoroughly glad to be home. Needless to say, the Monos – and us – had a week or two off!

What an adventure with a great set of mates. As much as bashing up to Scotland in a shiny new RV in under two hours is appealing, the cheapskate, slow and slightly sketchier version gave us a huge amount of satisfaction.

We fly all three Monos from Sleaf almost daily in summer, so please do visit us if you do get a chance.

The plan next year is the South of France. Wish us luck!



What an adventure!

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TOP GEAR

# Sentry Plus from ForeFlight

To buy or not to buy? If you are running ForeFlight, then buy Sentry Plus. If you're not, then don't. Quandary sorted...

Ian Seager | 26 July 2022 | ★ ★ ★ ★ ☆

FROM \$799



The Sentry Plus is bigger than the SE2 from uAvionix, but the parentage is clear to see

**P**lanning and navigation apps have revolutionised the flying experience for most of us, but add an external receiver of some kind and the experience gets even better.

Sentry Plus from ForeFlight is the latest receiver to be released, and it brings with it a host of features, some of which benefit those of us flying in the UK and Europe.

To put the Sentry Plus (which looks very much like a bigger, but still very portable version of the SE2 from uAvionix) in context, a little over-simplified history might be useful.

In the US (actually the best place in the world for General Aviation), the FAA uplink a Flight Information Service Broadcast or FIS-B is for short.

It brings weather and dynamic airspace information into the cockpit, and although you have to pay for the receiver, the data is free, and for any kind of cross-country flight the information is invaluable.



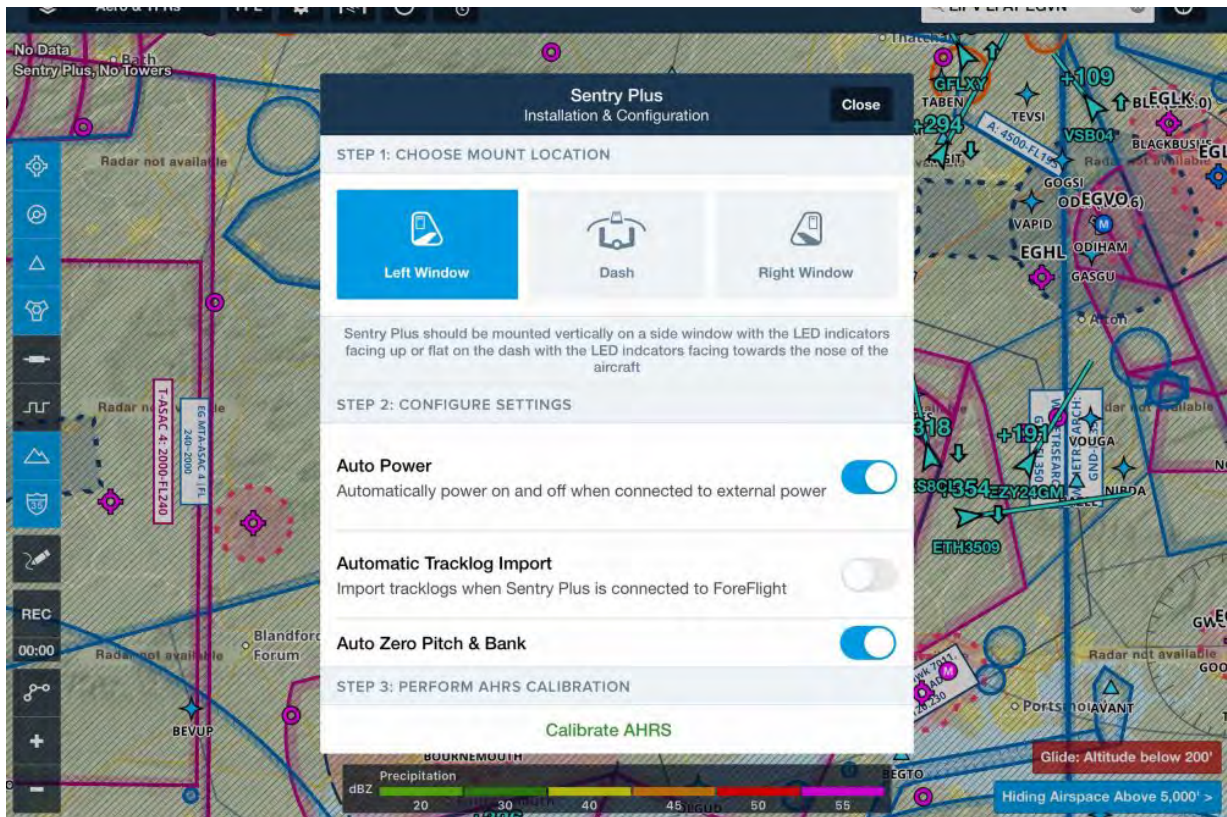
Data from the backup AHRS (also available in the smaller Sentry) can be displayed in split or full screen mode. Traffic information picked up from twin frequency ADS-B receivers is also displayed

In the UK, despite a few small scale trials and plenty of words promising bigger trials, we currently have pretty much nothing in the way of uplinked weather.

But it's not all bad. Those flying in the US got an ADS-B mandate, while in the UK we got CAP1391, which paved the way for lightweight low-cost electronic conspicuity devices, and a generous grant that brought us the SE2 from uAvionix, PilotAware and several other similar devices.

We're happily emitting and receiving a variety of Electronic Conspicuity (EC) protocols giving decent traffic information in the cockpit, but as I mentioned, we have no weather, at least not yet.

ForeFlight, the dominant app in the USA, has just released Sentry Plus, the latest receiver to bring data and other benefits to the cockpit. It's bigger than the uAvionix SE2 (and is indeed built by them), but still mounts easily via the supplied suction cup.



Setup is simple and quick, and the AHRS can be recalibrated in flight

Unlike the SE2 in the UK, it is a receiver only, so does not transmit a CAP1391 compliant ADS-B position, but it will receive FIS-B weather and both flavours of ADS-B (1090 and UAT).

It will also receive and decode FLARM, although like most other applications that requires an additional annual fee, in this case £25 + VAT.

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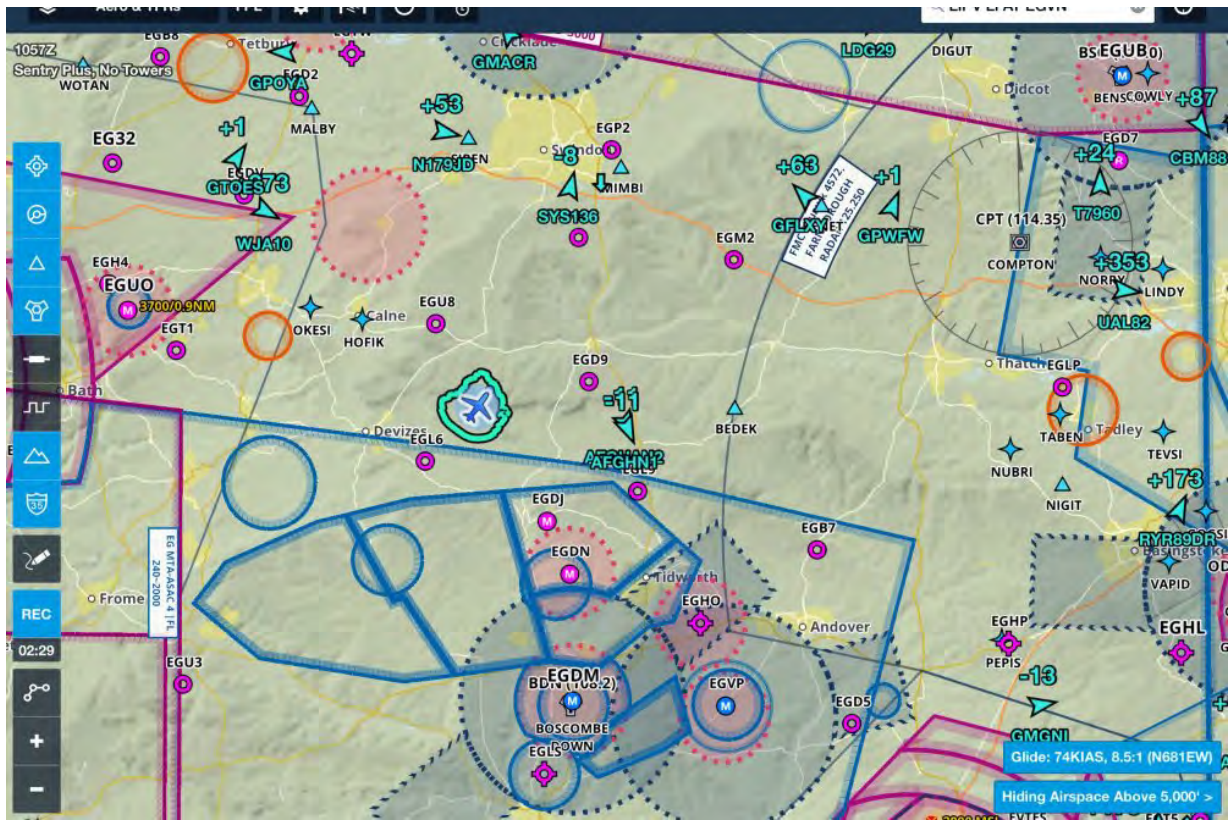
*“It contains a carbon monoxide (CO) monitor that will warn you of excessive levels of CO in the cockpit – before it’s too late...”*

---

Sentry Plus only works with ForeFlight, and in addition to providing the WAAS or SBAS position, it also has a backup AHRS which will provide both pitch and roll information for ForeFlight to display in case of an instrument panel failure.

Additionally it contains a carbon monoxide (CO) monitor that will warn you of excessive levels of CO in the cockpit before it’s too late! It comes with an 18-hour battery, a built-in G meter and, unlike the SE2, an external OLED screen for displaying things like g.





Obviously, in addition to the traffic information, Sentry Plus provides an SBAS GPS position

Sentry Plus is also a data capture unit so you can review your flight, and if you happen to be flying in an area with FIS-B data, it will also store that so that you can replay some of the graphical weather.

There are a couple of significant improvements, such as auto on and off (hands up if you have ever inadvertently left your SE2 or PAW running?), and although this won't apply to most of us, if you happen to have onboard WiFi, it has WiFi client support.

So, should you buy one? As mentioned above, Sentry Plus only works with ForeFlight, so if you aren't running that, the answer will be 'no' (30-day ForeFlight trials are available).

If you are running ForeFlight, the answer is 'yes' (on the assumption that you are already emitting some kind of EC).

The integration is smooth (firmware updates are elegantly handled from within ForeFlight), and the additional benefits of dual ADS-B plus Flarm, plus a standby AHRS and CO monitor coupled with the 18-hour battery life make it a great addition.

Now, let's keep asking the DfT and the CAA for those FIS-B trials, shall we...!

FLYER CLUB LATEST

# Just take a look at where FLYER Club members visited in July 2022!

It's been a month with some great weather (some might say too hot!), but members and readers have been busy flying all around. Check out some of your photos below.

26 July 2022



Slawomir Marchewka gliding at Andreas on the Isle of Man.



Steve Middleton getting strapped in for a Harvard flight.



Tim Cook flying over the Dams at sunset.



Steven Bakhtiari flying his XA41 over Southport Beach.



Paul Sengupta on his way to SleepKosh.



Nick Goude, Bruce Dean and Eman Al-Hillawi climbing out of Caernarfon Airfield seeking cool air on the hottest day of the year.



More Right Rudder passing Nottingham.



Matt Lanham transiting Edinburgh.





Matt Boddington taking the next generation flying in a Miles Messenger.



Martin Pengelly flying along the Devon coast after visiting the LAA Fly-in at Branscombe.



Maciej Kulaszewski in the TS-11 Spark jet trainer.



Kate Irvine on the way to Dornoch.



Graham Johnstone heading out to fly aerobatics in a Yak 52.



Derek Pake creating another RV grin over Perthshire.



David Leggett getting arty with his camera!



Chris Palmer transiting Gatwick.



Barbara Blythe – Czepulkowski flying an Extra 200.



Andy O'Dell heading home from SleafKosh.



Andy Archer making the most of free T&Gs at BAE Warton in our Eurostar.



Andy Archer crosswind at BAE Warton.





Afandi Darlington – Dent d'Herens on the Italian/Swiss border by glider.

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