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AOPA UK

April/May 2026

The "Blown-Wing" Ultra-STOL

Fixed-wing speed, helicopter-like landings. Taking off in the Electra EL2 Goldfinch is an act of defiance. Mostly, it's gravity that's being defied.

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+ **AIR SPORTS**
Upcoming air racing and TOPNAV events
P.17

+ MOVING RUNWAY

Red Bull's latest stunt saw an Edge 540 land on a moving train. We reveal the story behind it P.38

+ UK'S OSHKOSH

Sleap Airfield in Shropshire is home to the greatest aviation party in the UK. We had to go and visit P.24

+ AFFAIRS

Martin Robinson is worried that as aviation is changing, GA is being squeezed P.07

THE DAYS ARE GETTING LONGER, IT'S TIME TO GO FLYING

WE'VE BEEN waiting for far to long. It seems like it's been the wettest winter on record and some airfields are suffering due to the weather, but even though the rain is hammering on the window as I write this, the weather is getting better and flying season is returning. I know I'm not talking to fair weather flyers here, so forgive me.

In this spring issue we have a diverse range of content covering everything from events and air sports you can take part in, to pilots at the top of their game, performing stunts with aircraft that you could only dream of. We also explore the future of STOL and things you can do if you just want to enjoy a beer in the sun and watch an airshow – I'm not going to judge you.

I'd also like to draw your attention to is Hangarchat. I dropped into Sleap Airfield, owned and managed by Shropshire Aero Club. The club celebrated its 70th anniversary last year and is a focal point of aviation in the middle of the countryside. I sat down with Bruce Buglass, the Airfield Manager, and discussed why his airfield is so popular. His answer was simple: "We want to make GA fun, like it should be." That's hard to argue with. I would highly recommend taking a flight to Sleap; the cafe is busy and there is always something exciting out on the apron. With 137 aircraft based there, it's constantly busy. The most exciting thing is the airfield's growing event, Sleapkosh, I won't spoil it here, but go read about it on page 24. I've got my tickets already!

"Aerobatic pilot and daredevil Dario Costa lands his Edge 540 on the back of a moving train, which is a sentence I never thought I'd write"

Elsewhere, Aerobatic pilot and daredevil Dario Costa lands his Edge 540 on the back of a moving train, which is a sentence I never thought I'd write.

The cover story looks at the future of STOL aircraft that could be an alternative to eVTOL aircraft. The EL2 Goldfinch has a 'blown wing' and might be an alternative to certain proposed air taxi concepts.

And not forgetting our regular content: news from around the world, the latest on regulations, *The Interview*, which is with Jason Hill of Hill Helicopters, *Your Hero* and so much more. Enjoy! ■

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WORDS Martin Robinson **IMAGES** Adobe

IS GENERAL AVIATION SLOWLY BEING SQUEEZED OUT OF THE UK'S SKIES?

The future of GA will largely be shaped by policy decisions taken by government and the CAA. These decisions will influence how GA operates and whether the sector is able to grow and adapt in the years ahead

IN THE United States, the Federal Aviation Administration is advancing a major regulatory initiative known as MOSAIC. With strong support from the FAA, MOSAIC aims to modernise certification and operational rules, enabling more flexible aircraft categories and supporting innovation within the GA sector.

This approach recognises the wider value of GA.

Adopting policies that enable innovation and sensible regulation will be essential to ensuring that General Aviation continues to thrive and contribute to future aviation growth.

A SECTOR UNDER PRESSURE

GA in the UK has always adapted to change. From regulatory evolution to technological advances and shifting economic realities, pilots and operators have learned to navigate uncertainty. Yet many within the community now share a growing concern: is GA being squeezed – not by one policy, but by a convergence of pressures acting on infrastructure, airspace, regulation, and cost?

The answer is nuanced. Activity figures may not yet show dramatic decline, but beneath the surface there are clear signs of structural stress. Aerodromes face increasing vulnerability, Class G airspace is under mounting pressure, and the regulatory environment is becoming more complex and costly. At the same time, emerging sectors are seeking access to the same finite airspace.

This article explores the themes shaping the future of UK GA and considers whether current policy trajectories risk reducing accessibility, flexibility, and resilience in the long term.

FOUNDATION UNDER THREAT

Aerodromes are the physical backbone of GA. They support training, maintenance, recreational flying, business aviation, emergency operations, and future professional pilots. Yet across the UK, aerodromes remain under continuous pressure.

One of the most persistent challenges comes from land-use policy. With government focus firmly set on housing delivery, aerodrome sites are increasingly viewed through the lens of development potential. Planning guidance such as PPG13 has historically advised planners to consider the needs of aviation, but in practice aviation often struggles to compete with housing priorities when local authorities face pressure to deliver homes.

This creates a difficult position for GA aerodromes. Even when operationally successful, they may be judged primarily on land value rather than strategic transport or skills contribution. The result is uncertainty that discourages investment, reduces long-term planning confidence, and weakens the resilience of the network.

Loss or downgrading of aerodromes has a multiplier effect. Training capacity shrinks, maintenance availability reduces, and regional accessibility declines. Importantly, these changes may not immediately show in national flying statistics – but the system's underlying capability is slowly eroded.

AIRSPACE MODERNISATION

Airspace modernisation is often presented as an efficiency and safety initiative. In principle, few in GA would disagree with that objective. However, the way modernisation interacts with government priorities – including noise reduction, emissions targets, and new aviation technologies – is creating growing pressure on Class G airspace.

Traditionally, Class G has provided the flexibility that allows GA to thrive. It supports visual flight operations, training activity, and recreational flying with minimal administrative burden. Yet several trends are converging:

- Proposed airspace changes linked to environmental policy
- Expansion of controlled or structured airspace around busy hubs
- Growing demand for defined areas supporting Beyond Visual Line of Sight (BVLOS) unmanned operations
- Increasing complexity in lower airspace management

Taken together, these changes raise a legitimate concern: is the volume of usable Class G gradually shrinking?

At the same time, safety indicators present a mixed picture. Reports suggest Airprox events are increasing, while airspace infringements remain around 1,000 per year. Meanwhile, overall activity levels have reduced compared with historical norms. This creates a paradox – less flying, yet persistent safety pressures – often used to justify additional airspace management measures.

For GA pilots, the practical result is increasing complexity. More boundaries, more procedures, and reduced flexibility can gradually change the character of everyday flying.

UAS INTEGRATION: PROMISE, PROGRESS, AND POLICY QUESTIONS

The CAA is moving decisively from policy development toward implementation of its UAS reform programme, including the Future of Flight BVLOS roadmap through

"This creates a difficult position for GA aerodromes. Even when operationally successful, they may be judged primarily on land value rather than strategic transport or skills contribution"

2027. This marks a significant shift: unmanned aircraft are transitioning from experimental trials toward routine integration in UK airspace.

The direction is clear: integration, accountability, and scalability.

However, not all UAS business cases are equally mature.

Applications such as surveying, infrastructure inspection, agriculture, environmental monitoring, and emergency response demonstrate strong economic and safety value. These activities typically occur in environments where integration challenges are manageable and the impact on other airspace users is limited.

Large-scale delivery models, by contrast, remain less economically proven. While trials demonstrate technical feasibility, they continue to face challenges.

This raises an important policy question for GA: should permanent or large-scale airspace redesign be driven by business models that are not yet proven at scale?

A proportionate, data-led approach would suggest caution. Enabling proven use cases makes sense; permanently restricting VFR access in anticipation of future demand may not.

BVLOS AND THE CHANGING NATURE OF AIRSPACE

As BVLOS (Beyond Visual Line Of Sight) operations expand, the concept of structured corridors or defined operational environments becomes more likely. From a systems perspective, these may offer safety and predictability. But from a GA perspective, they introduce several risks. There are also broader questions around accountability and liability as UTM (Unmanned Traffic Management) and digital airspace platforms become central to operations. Insurance frameworks, incident response, and data integrity all become part of the safety equation.

For GA, the key principle should be equitable access. Airspace is a shared national resource, and any redesign must balance innovation with preservation of existing freedoms that support training, safety, and participation.

CAA CHARGING CHANGES

Debate around CAA charges often focuses on affordability in the short term. Yet the deeper issue is strategic impact.

Charge increases rarely produce an immediate decline in activity statistics. Pilots continue flying, training pipelines keep moving, and organisations attempt to absorb costs temporarily. This can create a misleading impression that higher charges have limited impact.

Unlike airlines, GA cannot spread costs across millions of passengers. Even modest regulatory increases translate into noticeable impacts at the individual level.

ACCESSIBILITY: THE REAL STRATEGIC ISSUE

The most significant long-term risk is not immediate decline but reduced accessibility.

As regulatory costs rise, the entry price of flying increases. Trial lesson conversion rates fall. Students pause training for financial reasons. Licence completion rates decline.

These effects unfold slowly but carry strategic consequences. Fewer new pilots today means fewer instructors, owners, and advocates tomorrow. The aviation skills pipeline – including professional pilot development – weakens over time.

GA's contribution extends beyond recreation. It supports regional connectivity, engineering skills, innovation, and aviation culture. A reduction in accessibility ultimately affects the wider aviation ecosystem.

A BALANCED WAY FORWARD

For AOPA UK members, the task ahead is clear: continue to engage constructively, advocate for proportionate policy, and ensure that decision-makers understand the cumulative effects of incremental change.

AOPA UK works to protect your freedoms, access, and safety of GA across the country. If you are passionate about securing the future of GA, you can help strengthen that voice by encouraging fellow pilots and aircraft owners to join. Become an advocate for AOPA UK membership and help swell our numbers because a stronger membership means stronger representation ■

Martin Robinson
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CHANGING LANDSCAPE

GENERAL AVIATION SAFETY COUNCIL TO CONCLUDE OPERATIONS AFTER MORE THAN 60 YEARS

GASCo has announced that its board has taken the decision to wind up the organisation in an orderly manner, ending more than six decades of work in support of GA safety in the United Kingdom

THE DECISION follows a thorough review of the Council's financial position and long-term prospects. While the organisation has stabilised its finances in the short term and has continued to deliver safety activity with the support of many member organisations, the Board concluded that it no longer has a sufficiently secure and sustainable funding base to continue operating at a level consistent with its charitable purpose. Like many small safety charities, the Council has faced increasing financial pressures in recent years, and reductions in external funding have proved difficult to replace.

Founded in 1964 as the General Aviation Safety Committee and later reconstituted as the General Aviation Safety Council, GASCo has provided an independent forum, bringing together representative bodies from across the UK GA community. Its work has focused on improving safety through education, the sharing of information, analysis of accidents and incidents, and the promotion of good airmanship across all sectors of GA.

Over that period the Council has organised hundreds of safety evenings and seminars across the country, delivered Military-Civil Air Safety Days and other national safety initiatives, published safety material and analysis, and provided a long-standing Safety Information Exchange through its regular Council meetings. More recently, it has also undertaken research and safety promotion work in areas such as human factors and electronic conspicuity, and has supported the CAA's just culture approach through delivery of the Airspace Infringement Awareness Course.

Nils Jamieson, Chairman of GASCo, said: "After more than sixty years of service to the general aviation community, this has been a difficult decision for the Board. GASCo has played a unique role in bringing together the many parts of UK GA to share safety knowledge and experience. We are deeply grateful to all those organisations and individuals who have supported that work over many years. The Council has always believed that lasting improvements in safety come through education, understanding and cooperation – safety through knowledge – and we remain proud of what has been achieved."

> *"After more than sixty years of service to the general aviation community, this has been a difficult decision for the Board"*

The Board has emphasised that the organisation remains solvent and that the decision has been taken in order to allow an orderly wind-down and to preserve continuity where possible in areas of ongoing value to the aviation community. Work is underway with the Civil Aviation Authority and partner organisations to ensure that key activities currently delivered by GASCo, including the Airspace Infringement Awareness Course, can continue without interruption through appropriate successor arrangements. GASCo will now work with its member organisations, partners and stakeholders to manage the transition responsibly. Further information regarding timing and arrangements will be shared in due course. The Council has expressed its sincere thanks to the many volunteers, staff, tutors, member organisations and partners who have contributed to its work over more than six decades. ■

TAYSIDE AVIATION INVESTIGATION CLOSES

THE CAA has concluded its investigation into Tayside Aviation, which collapsed under a cloud of unpaid debt and criminal engineering negligence.

Former head engineer Stuart McPherson was convicted of faking log-book entries for planes used to train pilots at the Dundee flying school in November last year.

The forgeries were uncovered shortly after the air academy was bought by entrepreneur Tony Banks, whose team alerted the authorities after they came to light.

Based at Dundee Airport, Tayside Aviation fell into administration in April 2023, leaving millions unpaid to creditors and 22 people out of work.

The CAA has ended its investigation into the school, deciding no further action will be taken against any of its former bosses.

Mr Banks bought Tayside Aviation from James and Kathleen Watt in 2022.

Initially, Mr Watt intended to stay on to run the school, before he and Mr Banks fell out.

Mr Banks maintains he was misled and spent a large sum bringing the planes affected by the engineering falsehoods back to airworthiness. ■

BIZJETS AND PISTONS SELLING BEST

THE GENERAL Aviation Manufacturers Association (GAMA) has released the 2025 General Aviation Aircraft Shipment and Billing Report during its annual State of the Industry Press Conference.

Overall, when compared to 2024, the business jet and piston aeroplane segments saw increases in shipments and preliminary aircraft deliveries were valued at $35.7 billion, an increase of 14.6% year on year.

"The state of the general aviation manufacturing industry remains steadfast. We continue to see robust numbers of total aircraft delivered as well as annual billings eclipsing $35 billion, the highest it has ever been. While some segments are seeing marginal declines in deliveries, they are all still above 2019 levels.

As manufacturers work hard to meet the challenges and demand of today, they remain focused on advancing safety and innovation for the future of the entire aviation industry," said James Viola, GAMA President and CEO.

Aeroplane shipments in 2025, when compared to 2024, saw piston airplanes increase by ten units to 1,782, turboprops decline slightly by 5.1% with 594 units, and business jets increase 11.8% with 854 units.

The value of airplane deliveries for 2025 was $31.0 billion, an increase of 16.1%.■

MH370 still missing

A renewed deep-sea search for the wreckage of Malaysia Airlines Flight MH370 – which covered thousands of miles – has concluded without locating the aircraft, according to Malaysian authorities.

Urbanites more sensitive

A new NASA study, which surveyed 359 volunteers, surprisingly finds that urban residents report a higher level of annoyance from air taxi noise than suburban residents.

Piper museum expanding

The Piper Aviation Museum will reopen its doors for its 40th season, alongside newly announced plans for a 9,600-square-foot expansion at its facility in Pennsylvania.

EDUCATION

TEKEVER OPENS UAS TRAINING SCHOOL AT WEST WALES AIRPORT

THE BIG STORY

TEKEVER launches a UAS Training School at West Wales Airport, strengthening UK drone skills with advanced simulators, BVLOS training and defence-ready instruction

TEKEVER HAS launched a new Uncrewed Aircraft Systems (UAS) Training School at West Wales Airport, marking a further milestone in the company's expanding UK footprint and its long-term OVERMATCH investment programme.

Fully operational since January 2026, the facility has already welcomed its first internal and external trainee cohorts and is designed to deliver structured, high-quality training for both TEKEVER's own operations teams and customers across defence, security, and government markets. The company expects training throughput to exceed 120 students over the course of 2026, supported by the formal establishment of a permanent, dedicated training team.

The school will transfer operational expertise and raise training standards

A STANDARDISED APPROACH

From an industry perspective, the training school addresses a growing need for standardised, operationally grounded UAS training as uncrewed systems take on more complex and safety-critical roles. The facility combines classroom instruction with simulators, hands-on technical resources, and access to ground-based TEKEVER aircraft and components, enabling trainees to develop both theoretical understanding and practical competence.

A key differentiator is the school's location. West Wales Airport offers an established ecosystem for unmanned aviation, including access to segregated airspace that supports a wide range of mission profiles – from visual line-of-sight training to advanced beyond-visual-line-of-sight (BVLOS) operations. This environment allows training to closely mirror real-world operational demands, a factor increasingly valued by defence and government operators.

CAPABILITY

The training capability is underpinned by TEKEVER's acquisition of West Wales Airport, which the company is developing into a long-term UK hub for UAS training, testing, and evaluation. This aligns with broader UK efforts to build sovereign skills, infrastructure, and resilience in autonomous and uncrewed technologies.

"the opening of the TEKEVER UAS Training School signals a shift towards more mature, scalable training models"

Commenting on the launch, Stewart Pearce, Head of Regulations and Training at TEKEVER, said the school provides a consistent and repeatable way to transfer operational expertise, raise training standards, and fully leverage the unique airspace and facilities available in West Wales.

For the wider drone and defence industry, the opening of the TEKEVER UAS Training School signals a needed shift towards more mature, scalable training models – supporting not only platform deployment, but also the people and skills required to operate uncrewed aircraft systems safely and effectively at scale. ■

Love them or loathe them, drones are here to stay

NEW AIRCRAFT

CIRRUS UNVEILS NEWEST VISION JET: THE G3

Cirrus has announced the The Generation 3 Vision Jet: An evolutionary update to the world's first single-engine Personal Jet, featuring a reimagined interior, increased seating capacity and more safety innovations

CIRRUS TODAY introduced the next evolution of its jet product line with the new Generation 3 (G3) Vision Jet®. The G3 Vision Jet reveals a reimagined interior with premium materials and an expanded seating option for six adults, as well as ATC Datalink and over 30 refinements designed to create a new era of smart and safe Personal Aviation™.

The Vision Jet is recognised as the world's first single-engine Personal Jet and the best-selling jet in aviation. Known for its V-tail design, quiet and spacious cabin, safety systems and intuitive Perspective Touch+™ avionics, the Vision Jet was designed with the pilot and passengers in mind. Cirrus is now delivering the G3 Vision Jet.

"The G3 Vision Jet is a testament to our relentless innovation, continued investment in Personal Aviation and our owners who want to travel efficiently with award-winning safety features, the Cirrus Airframe Parachute System® (CAPS®) and Safe Return™ Emergency Autoland for peace of mind," said Zean Nielsen, Chief Executive Officer of Cirrus. "The G3 Vision Jet interior was engineered for excellence and comfort, now offering expanded seating for increased mission capability. The Cirrus Perspective Touch+ flight deck adds new features for reduced pilot workload, including ATC Datalink and Alerts-Linked Checklists, while new Cirrus Spectra™ wingtips illuminate the ramp."

A REIMAGINED CABIN

The G3 Vision Jet cabin supports expanded mission capability while prioritising pilot and passenger comfort. Now, the G3 can seat seven occupants (six adults, one child).

The cabin showcases newly designed seating, tray tables, personal device mount locations and interior aesthetic enhancements to create a flexible, productive and streamlined environment that adapts to every mission.

The cabin now features a sleek, comfortable and convenient third-row bench seat that elevates the passenger experience by increasing spaciousness for seven passengers.

Enhanced bolstered seats feature fine-tuned ergonomics, providing support to the headrest, armrests and knee area for a comfortable journey.

The pilot and co-pilot seats can now be adjusted to their full aft range with single-handed operation, while the middle and third-row seats remain modular and can be removed or installed to serve the pilot's mission.

All G3 seats feature a new hardshell back, hand-wrapped in Alcantara.

Personal device mounts are now positioned in front of each passenger seat behind a carbon fibre cover. Over 700 Vision Jets have been delivered worldwide, maturing to serve business owners, entrepreneurs and those who demand efficient and cost-effective travel. Owners enjoy a lifetime of concierge, streamlined aircraft ownership through the Cirrus ecosystem of services for aircraft sales and management, finance and insurance, flight training, service and more. ■

The new G3 Vision jet has a higher seating capacity and even more safety options

DAHER INTRODUCES ITS LATEST AIRCRAFT: TBM 980

DAHER unveiled the latest version of its TBM aircraft family – the 980 – which integrates Garmin's third-generation G3000 PRIME avionics for an unprecedented piloting experience and incorporates cabin enhancements that further increase passenger comfort.

The TBM 980 was introduced this evening at Daher Aircraft's TBM production facility in Tarbes, France, during an event attended by customers, partners, officials and company employees. The unveiling also was viewed by a worldwide audience via a live-streamed presentation.

"Our TBM 980's motto, 'Fly Differently,' is more than just a slogan, because this aircraft redefines the way that pilots – and their passengers – want to fly. The aircraft is more intuitive and easier to operate," explained Nicolas Chabbert, the CEO of Daher Aircraft. "Its touchscreen-controlled flight deck truly revolutionises the interface between pilots and the avionics." ■

PARTNERSHIP TO BUILD CAVORITE X7 WINGS

HORIZON AIRCRAFT has announced a partnership with North Aircraft Industries to manufacture and test the custom-engineered wings for the company's full-scale VTOL (Vertical Take-Off and Landing) aircraft, the Cavorite X7.

North Aircraft Industries is known for its expertise in composite engineering, manufacturing, and testing. Its engineering and production teams and technologies deliver lightweight, high-strength aircraft components. Further differentiated for its in-house structural testing capabilities, North Aircraft Industries will conduct wing structural testing upon manufacturing completion.

"The Cavorite X7's design represents a genuinely new approach to VTOL aircraft performance and operational flexibility," said Joost List, CEO of North Aircraft Industries. "It aligns perfectly with our strengths. We consider it a privilege to collaborate on a critical primary structure such as the wing, contributing our engineering, manufacturing, and testing expertise to help bring this groundbreaking aircraft closer to flight." ■

Laser strikes decline

US pilots reported 10,994 laser strikes to the Federal Aviation Administration in 2025, a 14% decrease from the previous year. Despite the drop, the agency said the number of incidents remains a concern.

Fake part seller imprisoned

The director of parts broker AOG Technics was sentenced after pleading guilty to fraud in the sale of engine components accompanied by falsified documentation.

Hangar is go-kart centre

The Grade II listed Hangar 137 at Bicester has undergone a £4m restoration. E-karting operator TeamSport has now been given the keys to the 31,000 sq ft (2,880 sq m) site.

Jason Hill

Founder, Chairman and Chief Engineer of Hill Helicopters

Jason Hill

As a child, when watching Airwolf on TV, Jason dreamed about flying an advanced supersonic aircraft – but when he realised that a helicopter with supercar styling didn't actually exist, Jason decided to go ahead and build something himself... and the HX50 was born.

Q: What started you on the journey to build the HX50?

A: I've always been fascinated by helicopters. I love the things that you can do with helicopters; the freedom that they give you and the access to the lifestyle that they give you. I'm at a time in my life now where I'm exactly the kind of person that should be buying a helicopter, but for me, there really is nothing out there that I would want to own. I can buy an old machine, but there's always the risk of a maintenance bill coming next year. Or I could buy something a bit newer that's going to depreciate to nothing over the course of the decade. There's nothing really out there that meets my needs, or the needs of people like me that want to fly recreationally and access this lifestyle. So that's why we're building HX50.

Q: How will the HX50 compare to other helicopters?

A: HX50 is a machine that's fundamentally designed for private pilots, many of whom have got limited experience or fly relatively infrequently. As such we've taken every opportunity to ensure that the machine fits that purpose. We have a high inertia three-bladed main rotor system that's easy to handle in turbulence and autorotation. We have an engine with large power reserves, so that irrespective of the loading of the helicopter – all the way up to gross weight – you'll have plenty of power to execute vertical takeoffs or confined area operations. We have a really simple digital cockpit that presents all of the flight information very clearly. We integrate very crisply with the iPad apps that you'll want to use for navigation.

On the commercial side the aircraft appreciates the fact that as a private pilot you're unlikely to fly more than 50 hours a year, so our whole aircraft has a 5,000 hour life on condition.

If you don't fly that many hours you haven't got to worry about the aircraft timing out after around a decade.

The value of your aircraft is going to be protected – it's purely down to the amount of hours you fly and how well you look after it.

The digital cockpit suite of the HX50

Q: Where are you in the process of bringing the HX50 to market?

A: Assembly of the first prototype engine is imminent, with critical thermal clearances and sealing systems fully resolved.

The first engine run is now targeted for April 2026.

The first HX50 composite main rotor blade has also been successfully cured in a "one-shot" moulding process, validating years of structural dynamics and manufacturing engineering.

The current timescale is for us to have our first test flight in December of this year, and for production to start in December 2027.

Q: What are your hopes for Hill Helicopters and the HX50

A: I want Hill Helicopters to be *the* name in General Aviation. I want to create a GA powerhouse.

We've already created a manufacturing platform that we can take and make lots of different types of aircraft. And I can see a fixed wing equivalent to the HX50, we're going to call it the AC60. A really high-speed, long-range, business jet with the same engine. It'll be a turboprop that's really got legs, a perfect companion to the HX50. I'd also like to go into areas of aviation that are really exciting.

So, the simple answer to that question is that I'd like for Hill Helicopters to be the pre-eminent force in General Aviation. I want us to make the best, coolest and most cost-effective aircraft in the industry. ■

Hill Helicopter's HX50

The DC ONE-X doesn't just invite comparison.

It demands it.

A head pad that keeps you cool? No sweat.

Utilizes Outlast® technology Micro-encapsulated Phase Change Materials (PCMs), which absorb excess heat from the top of the head when it gets too warm, then releases that heat back should the temperature cool down.

Clamping pressure? What clamping pressure?

Unique stirrup design with swivel hinge allows movement side-to-side and in-and-out to disperse clamping pressure evenly for a personalized, comfortable fit.

Crisp, clear communication? Roger that.

Advanced M-5B electret, noise-cancelling microphone ensures clear communication and voice transmission with ATC. Sporty's Pilot Shop calls this mic *"Second to None"* for clarity.

The DC ONE-X is designed with features not found on other premium ANR headsets. Its lightweight (just 12.3 ounces), yet rugged alloy suspension system provides a unique combination of comfort and durability. Excellent Hybrid ANR performance ensures quiet, fatigue-free flights. And the DC ONE-X is a great value, very competitively priced with other premium ANR headsets in its class.

For more information and to find your nearest dealer, visit **www.davidclark.com.**

David Clark

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Welcome to the COMMUNITY section of the magazine. Bringing you help, advice, and other insights from the world of AOPA, in an honest and up front way to help you stay flying. Something to say? Please contact us at ***editor@aopa.co.uk***

WORDS David Rawlings **IMAGES** Unsplash

IMPROVE YOUR FLYING SKILLS AND HAVE FUN WITH TOPNAV

Designed for every level of pilot, TopNav is a fun competition that tests and develops VFR skills – find out how you can take part this year

TOPNAV IS a nationwide event in which pilots and navigators plan and fly an eight-waypoint route, taking a photograph of each waypoint as they fly over. Competitors must remain within 0.5 nautical miles of track and reach each waypoint within one minute of their planned ETA. This is quite a tough test of precision, with little margin for error.

TOPNAV is a great way to improve your airmanship

WHO CAN TAKE PART IN TOPNAV?

Pilots and navigators can choose to compete in a fixed-wing, rotor-wing, microlight, or SLMG. There is a minimum crew of 2 with special arrangements for young navigators.

There will be a comprehensive brief before the event and RIN staff will be present to brief the Routes, GPS Trackers and Logs and to answer any last minute "nervous" questions. Historically this event has proved to be a day of fun with embedded learning and skill enhancement.

This year's competition is being held at Compton Abbas and Bodmin on 3rd May, Popham on 16th May and on 23rd May competitors can take part at both White Waltham and Peterborough Conington.

IS IT EXPENSIVE?

The cost to enter is just £38.50 for two. However, if you want an extra member, it'll be an extra £16.50 per person. There are discounts for RIN members, students and youth entries.
Entry fee includes landing fees and refreshments.
Winners will be invited to the RIN Annual Meeting and Reception to receive their prizes.

"This is quite a tough test of precision, with little margin for error."

With categories for every level of pilot, TopNav will challenge your VFR navigation skills regardless of your background – and you may be surprised at how much you improve. Whether you're a seasoned competitor or flying your first event, there is a place for you on the start line. ■

Register your interest via www.topnav.co.uk

AOPA's main goal is always to ensure you can fly

Changes in regulations may affect your ability to fly

WORDS Nick Wilcock **IMAGES** Sweder Breet

THE LATEST REGULATION UPDATES

Nick Wilcock runs through the latest on regulation changes from the CAA

THE CAA has been busy with regulatory consultations and updates. Of particular note is the recent consultation affecting privileges for holders of Pilot Medical Declarations (PMD) who wish to provide flight instruction. Although the CAA's decisions for the formal update to the current PMD system were announced in November 2023 under CAP 3059, these have been on hold ever since pending identification of a suitable IT system to enable the Authority to administer the changes. However, in the intervening years, it became apparent that an unintended consequence of other regulatory amendments had led to some instructors with National UK licences quite lawfully providing ab initio PPL instruction without holding Part-MED certificates. This consequence did not apply to Part-FCL licensed instructors, who were never entitled to provide such instruction without holding Part-MED certificates, despite what many might have assumed. So the CAA launched CAP 3218 in February 2026 to tidy up the confusion. The consultation ended on 9th March 2026, with amendments to both the Air Navigation Order and UK Aircrew Regulation expected to follow later in the year.

As stated in CAP 3218, the CAA has proposed that FI or CRI certificate holders with a PMD may provide instruction towards:

- The NPPL(A)
- Revalidation and renewal of existing class ratings
- Differences training associated with an existing rating.

In AOPA's response, we asked for the word 'class' to be deleted as this was unnecessarily restrictive and did not take into account instruction by suitably qualified instructors for other ratings which can be included in the NPPL(A), such as the IMC, aerobatic and night ratings. Neither did CAP 3218 include any reference to examiners with a PMD, so we have suggested suitable amendments to enable NPPL(A) Skill Tests and Proficiency Checks to be conducted by such examiners. It is hoped that the forthcoming update to CAP 3181, the interim NPPL(A) document, will include our proposals. This document is due to be released in 2026 and will also include the requirements for those FI(A) who wish to include IMCR instructional privileges in their licences. Unfortunately, it is not easy to establish the precise requirements from a single source, but these are:

- The instructor's FI(A) certificate must be valid and have no supervisory limitation;
- The instructor must hold a valid IR or IMCR;
- The applicant must have achieved 10 hrs of flight by sole reference to instruments;
- The applicant must complete a training course of at least 5 hrs of the IRI course, plus 10 hrs of technical training; and
- The applicant must pass an Assessment of Competence with a suitably qualified FIE.

On the subject of the IMCR, at the time of writing the new IMCR exams have been reviewed by subject matter experts and should by now have been printed and distributed to examiners. As the source material for the IMCR exams has not changed, as soon as the new exams have been released, the previous set will no longer be valid. However, IMCR applicants who have already passed the old exams will not be required to sit the new ones. The new exams will initially be available only in paper format; however, in the fullness of time, the IMCR exams will be uploaded to the e-Exam system subject to budgetary constraints.

The CAA's 'Wave 2' intentions, which include revised, simpler PPL exam validity periods, have yet to be released as an Opinion and Instruction Document (OID) for the DfT to take forward. It is unlikely that the 'Wave 2' regulatory amendments will come into effect soon. However, this delay should also allow the CAA sufficient time to provide a suitable administrative process for the PMD intentions of 2023. ■

WORDS David Rawlings **IMAGES** Various

5 THINGS YOU NEED TO KNOW THIS ISSUE

1 ANDREWSFIELD AVIATION HAS STOPPED FLYING OPERATIONS

As of February 18, 2026, the company confirmed that its office, clubhouse, and café are closed until further notice. Airfield management is currently exploring all options regarding the future of the site and is working with students and aircraft owners to identify alternative arrangements.

2 SPITFIRE TO TOUR UK

A wartime two-seat Spitfire will embark on a special circumnavigation of the United Kingdom in 2026 to mark the 90th anniversary of the aircraft's first flight.

3 GUIMBAL FINALLY ANNOUNCE NEW HELI

Guimbal is officially starting a helicopter family, confirming the development of the Grand Cabri G5. Speaking at a pre-Verticon media briefing, Hélicoptères Guimbal president and CEO Bruno Guimbal remained coy about the new addition.

4 AERO FRIEDRICHSHAFEN TO FOCUS ON INNOVATIONS IN SUSTAINABLE AVIATION

Aero Friedrichshafen, which is taking place in, Germany from 22–25 April 2026, will highlight advances in all things aviation, including: propulsion systems, alternative fuels, lighter materials and operational technologies designed to make aviation more efficient and environmentally friendly.

Organisers say the show will give visitors a clear view of how the aviation industry is responding to pressure to decarbonise while continuing to expand air transport and recreational flying.

5 AIR RACE SCHOOL IS BACK AT POPHAM

Taking place at Popham on the 18th and 19th April 2026, Air Race School's aim is to bring in new pilots and navigators who wish to compete in the series of handicapped air races run by The Royal Aeroclub Records, Rallying and Racing Association. Any willing participant can attend either day, learn about the rules, regulations and techniques involved in air racing. If a participant brings their own aircraft, they will have an opportunity to fly with an experienced race check pilot who will show them race techniques. The one-day event is free.

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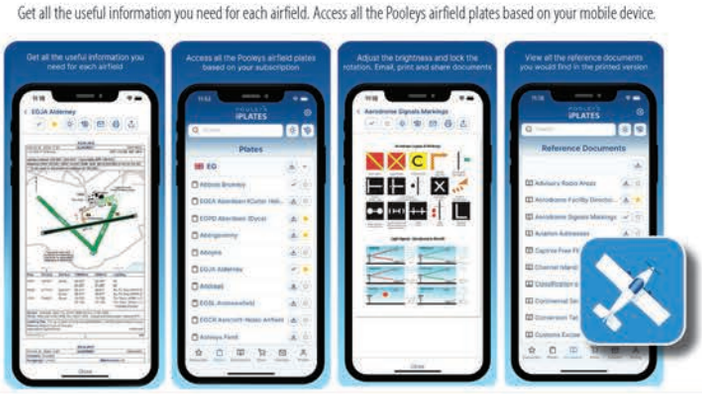

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FOR THIS HERO WE SHINE A LIGHT ON THE TECNAM P2008JC

IMAGES: Various

SURPRISINGLY THIS is the first Tecnam aircraft to be nominated as Your Hero. What makes the P2008 so popular?

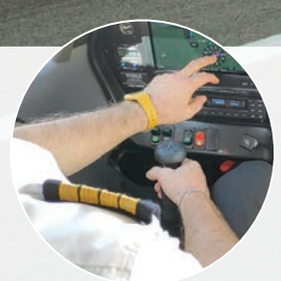
The P2008 is a modern two-seat aircraft highly regarded for its hybrid construction, which combines a carbon-fibre fuselage for aerodynamic efficiency and cabin width with metal wings for durability and ease of repair. It is a popular choice for both flight training and recreational touring due to its fuel efficiency, advanced glass cockpit, and forgiving flight characteristics.

The P2008 is designed to be a 'smart' aviation solution, offering high performance with low operating costs. It is powered by the Rotax 912 engine series, and consumes approximately 17 litres/hour (4.5 gal/h). The fuel-injected Rotax 912 iSc variant can further reduce consumption to just 14 litres/hour.

The P2008 reaches a maximum cruise speed of 116–128 knots with a range of up to 620–800 nautical miles, depending on the engine and configuration.

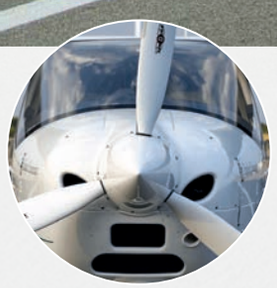
It's a good option for schools with impressive short field capability. According to Tecnam's data, it has a take-off run of approximately 699 feet (213 m) and a landing run of 568 feet (173 m). ■

Send Your Hero to **editor@aopa.co.uk.** It doesn't have to be your own aircraft... own it or admire it from afar, either way we want to know what's Your Hero and why. Just send us around 100 words, your top 6 'fast facts' and we'll do the rest to show off your favourite aircraft.



HANDLING

Pilots describe it as having well-harmonised pitch and roll controls that are responsive



VISIBILITY

Despite being a high-wing design, it offers excellent visibility, though some find the door pillar slightly obstructive

THIS MONTH'S HERO
TECNAM P2008JC

AVIONICS

Most modern units are equipped with the Garmin G3X Touch glass cockpit, providing superior situational awareness

SAFETY

For added peace of mind, an optional BRS ballistic parachute system is available

USEFUL LOAD

Limited, which can restrict passenger/ luggage capacity

NOISE

Known to have a noisy cabin

WORDS David Rawlings **IMAGES** Courtesy of Shropshire Aero Club

SLEAP AIRFIELD: FRIENDLY, FUN, CHEAP FUEL AND GREAT COFFEE. HOW EVERY AIRFIELD SHOULD BE

Nestled in the middle of the Shropshire countryside is Sleap Airfield, where a team of young aviation lovers are showing the world how to run an aerodrome

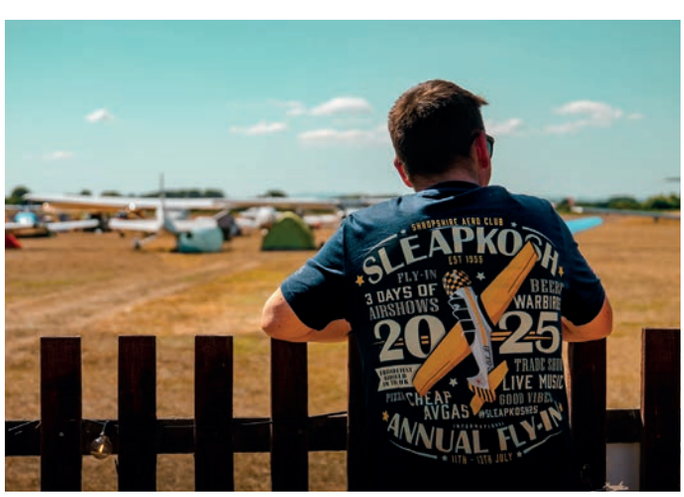
AS SOON as you walk into the café in Sleap Airfield (let's end the confusion here, it's pronounced 'Slape'), you're hit with the noise of people chatting, enjoying coffee and fresh cake. "This is quiet today," says Bruce Buglass the airfield manager. That came as quite a shock as there were motorcyclists there, visiting pilots and even a group celebrating a 70th birthday who had come for a bit of plane spotting. "It's because we like people here. We want people here. It's meant to be fun. Everyone seems to have forgotten that GA is meant to be fun," explains Bruce.

Despite being a WWII airfield, it feels very fresh and lively. That's mainly down to Bruce and his team. "I'm 25 now," says Bruce. "And I've been working here since I was 19. I'm one of the eldest team members here." This next gen's approach seems to be working well for the board at the Shropshire Aero Club (the company who run Sleap Airfield).

A SHAKE UP WAS NEEDED

Bruce says he basically lives at the airfield and that it's been part of his life for a

One of the warmest welcomes in aviation lies within



The event of the year, in Shropshire

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AIRFIELD INFO

Flying in to Sleap is easy and you will always find a friendly welcome for all types of GA traffic.

Sleap Air/Ground Radio on 122.455 is manned

Sleap is a very busy airfield with many types of GA flying, solo students, display flying, aerobatics, warbirds and MOD traffic most days so please read all the helpful information on the website.

OPENING TIMES

7 days a week
Summer: 8:30-18:00
Winter: 8:30-16:30

ARRIVALS PROCEDURE

Obtain PPR by telephone or on Sleap's website.

Sleap ATZ is inside the Shawbury MATZ. Inbound aircraft should contact Shawbury Zone 133.155. Obtain a service & MATZ penetration - they are very friendly and helpful and give an excellent traffic service .

At weekends Shawbury Zone 133.155 is not operational, but the ATZ is always active and gliding occurs.

If joining from the north, north west or north east join via the Ellesmere Lake VRP, then direct to Sleap.

If joining from the south or south west join via the Montford Bridge Disused Airfield VRP, then direct to Sleap.

Fixed wing aircraft to join using a 2000 ft QFE overhead join into the appropriate circuit pattern when busy, if not straight in, crosswind or a downwind approach may be used.

1000ft circuit fixed wing, 800ft gyro/slow moving circuit inside the fixed wing circuit.

When aerobatics is being conducted in the overhead (1500ft to 5000ft), aircraft should join directly into the

circuit from the North, East & South.

Sleap is often used by large and heavy Military Helicopters and produce Wake Turbulence. The wake turbulence requirements for light aircraft is an absolute minimum of a 4 mile separation. A Chinook CH47 produces more wake turbulence than a 747. The A/G team will advise if there is large Military traffic in the circuit.

You could visit everyday for a eyear and see something new at Sleap.

long time. He first flew there with his father's aircraft when he was young and has been hooked ever since. The airfield wasn't in great shape in 2019. The club was run down and some members were mainly talking about flying rather than going flying.

"We still had visitors, but not many," says Bruce. "So, there was a sort of 'shift' within the membership. The committee changed and the staff changed. The board then decided to give the airfield to young pilots and enthusiasts to see what they could do. It was a brave decision. They gave me the keys at the age of 20 –with plenty of oversight, it must be said – to see what would happen."

The gamble has paid off – members have grown from 450, to over 800. 121 students are currently in training, and the airfield has more than 30,000 movements per year. "We make it worthwhile for people to come here, and actually feel like we want them here, which we do. Our Avgas is pretty cheap so people fly in for that and there is always something fun to see on the apron. It's not a surprise people keep saying, if I didn't live so far away, I'd be based here in a heartbeat."

As if proving Bruce's point, a Bucker Jungman then flew in to fuel up.

There are a 137 aircraft based at the airfield, spread over 63 hangars – in fact, only two aircraft based at Sleap aren't hangared.

Everything from Cessna 152s and PA28s to King Airs and other turbo props. Active military aircraft such as Apaches and Chinooks can also be spotted at Sleap. "Lots of warbirds and other classic aircraft are often here too," he added. In my short visit I spotted an Avro Anson, a North American T-28 and at least three Yaks, to name but a few.

"150 aeroplanes turned up. And we were like, 'oh my god!' We were not prepared for 150 aeroplanes, so it was chaos, but it went well enough."

HISTORY

Sleap is a WWII airfield. Construction So Airfield started in 1941 and finished in 1943 and used mainly for Whitley bombers, as well as glider training for the raid on Arnhem. After the war, the RAF continued to use it for ATC training and Vampire flying.

In 1955 four chaps from Shropshire, who had bought an Auster, formed the Shropshire Flying Group, which has since morphed into the Shropshire Aeroclub, and celebrated its 70th anniversary last year.

TODAY AND THE FUTURE

"Fast forward 70 years, we now have over 800 members. And probably one of the biggest flying schools in the Northwest," said Bruce.

Although the airfield is owned by Heidelburg Group, and under the airfield lays a big reserve of gravel and sand, the club is in a very stable and secure place both with the landlord and financially.

THE BIG PARTY

Sleap is a great place to visit any time, because it's surrounded by nothing but fields, noise isn't a major issue and in recent years they have hosted an increasingly popular event called Sleapkosh. "If you've ever been to Oshkosh, there's that feeling of excitement when you walk through the gates, and that's what we wanted to create here. We wanted it to feel special. And again, we wanted GA to be fun," said Bruce.

Bruce and his friend Ben Gilmore, who have displayed aircraft together for years, decided to first host a fly-in and a small display at the airfield in 2021. "We just thought, We just thought, why not have a fly-in during the day, and have a few beers at night. So we set up our event for July," said Bruce.

"150 aeroplanes turned up. And we were like, 'oh my God!' We were not prepared for 150 aeroplanes, so it was a lot of fun and it went well enough. We did have some beers (after the flying was done, of course) and everyone had a good time."

Having enjoyed the fun and relaxed vibe, Bruce and Ben decided to do it all again. 2022 saw 200 aeroplanes turn up. "We put on a band and it just kept growing."

Bruce is heavily involved in the displaying world, so for 2023 he decided to host yet another airshow. It rained constantly so there were no displays, but people showed up and had a great time. "There was live music and beer and people were happy," explained Bruce.

"Then 2024 came along, that went a lot better again. The airshow actually happened, which was good. And it started to really grow. Again, the weather was okay, but the event still felt like it was in its infancy. And then last year we held Sleapkosh on the hottest day of the year. 33 degrees. We beefed everything up, we thought if we're going to do it, let's spend some money and do it properly," explained Bruce.

"It was a brave thing to do because we hadn't charged people in the past, but we had to ask for money up front due to the investment," he added. This was the year the event started to resemble Oshkosh. The exhibitor side was expanding, including Textron and Cirrus stands, and on the airshow side there were Hurricanes and other warbirds. "We had over 400 aeroplanes flying over the weekend and three and a half thousand people here. And the best statistic of the lot is we sold 6,500 pints in 48 hours."

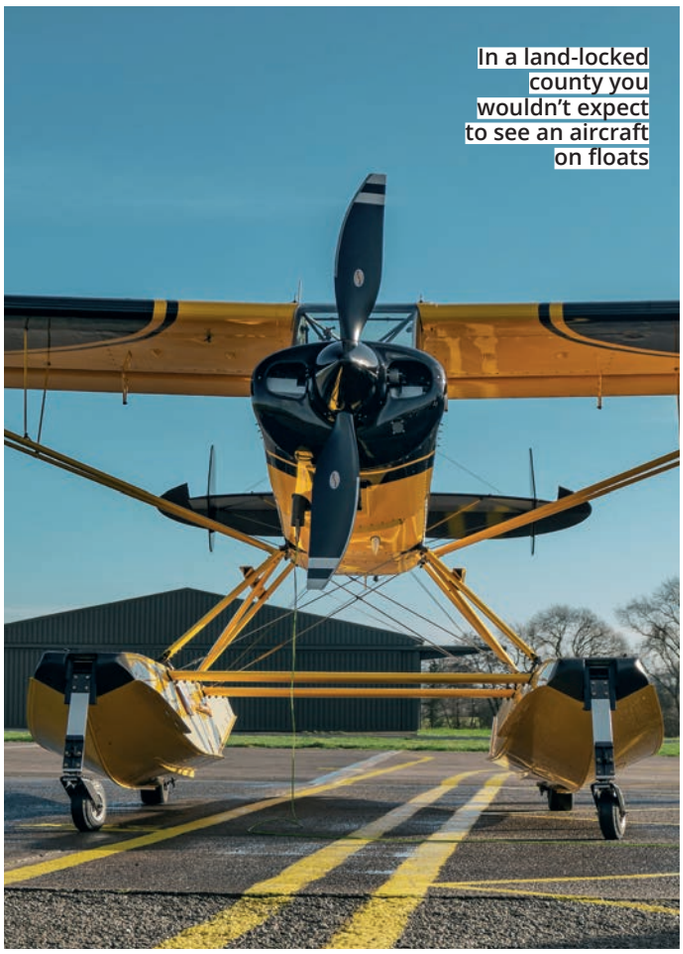
Bruce shared some details of the programming for Sleapkosh 2026, but for now it's all under wraps. What I can tell you though, is that it's set to blow any aviation fan's mind. So if you can make it, book your fly-in spot. You won't want to miss it.

AVIATION FOR ALL

There is a genuine buzz around Sleap Airfield and the Shropshire Aero Club and that's largely thanks to the staff, members and everything in between.

"We take it seriously. And we've got a tight operation. But, the purpose of doing this is for the enjoyment of flying. Not for making cash. There are so many places sucking the soul out of aviation, but we want to be the opposite of that," concluded Bruce.

And from what I saw, he and his team are doing a great job. If you're at a loose end and looking for somewhere to fly, take the time to visit this amazing airfield, you won't regret it. ■



There's always a warbird on hand

A section of the school's fleet, which are in excellent condition

Sun, aircraft, music and fun – what Sleap is all about

The museum is currently undergoing a restoration

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WORDS David Hirschman
IMAGES Chris Rose - Courtesy of AOPA US

The "Blown-Wing" Ultra-STOL

AOPA's **David Hirschman** was giving the opportunity to fly the Electra EL2 Goldfinch with test pilot Cody Allee. Who was he to say no to flying an aircraft that defies gravity

TAKING OFF in the Electra EL2 Goldfinch is an act of defiance. Mostly, it's gravity that's being defied.

At brake release, the proof-of-concept aeroplane's eight composite, fixed-pitch propellers spin up, dig in, and yank the 3,300-pound aircraft briskly forward. After an astonishingly short, 2.5-second, 100-foot ground roll, the test aircraft reaches its 27-knot rotation speed, and firm back-pressure on the yoke lifts its nosewheel smartly off the pavement.

Electra test pilot Cody Allee raises the pitch attitude to 30 degrees as the aeroplane climbs and accelerates to 55 knots. Then, at about 500 feet AGL, he lowers the nose to a more standard 10-degree climb, raises the flaps and flaperons, and accelerates to 80 knots as he sets up for an extreme short-field landing at Warrenton-Fauquier Airport (HWY), a nontowered strip about 10 miles from Electra's home base in Manassas, Virginia.

"Control inputs are intuitive and the aeroplane responds normally – even at stupidly high angles of attack," says Allee, a voluble former U.S. Marine test pilot who has flown many notable aircraft, including the NASA X–31, a vectored-thrust jet that explored AOA up to 70 degrees in fighter-type aircraft.

"One of the most impressive aspects of the EL2 is that there's really no change in handling qualities throughout its speed range. The ailerons remain effective at low speed and there's no reason to avoid using them at high angles of attack."

The bright yellow EL2 has performed more than 150 test flights since first taking to the air in late 2023 – and

FAST FACTS

8
FIXED-PITCH PROPS

1,100
RANGE (NM)

175
CRUISE SPEED (KTAS)

it's a remarkable aircraft in its own right. Yet it exists solely to prove the viability of Electra's first commercial aircraft, the far larger and sleeker EL9 "Ultra Short", which aims to combine extreme short-field performance with the cross-country speed and range of traditional fixed-wing aircraft.

"We'll be able to take people from where they are to very close to where they want to be – even if no airports exist there."

The first EL9, now under construction, will be a 12,000-pound, 11-seat aircraft roughly the size of a Cessna 208 Caravan or Pilatus PC–12. The big difference is that the EL9 is meant to take off and land on surfaces about as long as a soccer field, yet cruise at 175 knots on flights up to 1,000 nautical miles and altitudes as high as 20,000 feet.

The key to Electra Aero's short-field ambitions is a "blown wing."

Blasting the entire wing with accelerated air from eight electric motors tricks the wing into behaving as though the aeroplane were moving at a far faster airspeed than it really is. Flaps that extend up to 60 degrees and drooped flaperons redirect that accelerated air downward which also increases lift.

Electra's hybrid propulsion system is designed to increase range, endurance, and redundancy. The EL2 has an SBM SJ-190 turbine, a derivative of the Solar 62 turbine, attached to a SciMo generator in the nose. The turbine engine runs at its optimum speed all the time, and it gulps jet fuel from tanks in both wings. The generator converts that energy to electricity that's stored in a battery in the aircraft belly.

Eight electric motors placed ahead of the wings draw current from the battery, and the EL2 can fly for 15 minutes or more on battery power alone if the turbine engine fails. It also can fly on turbine power alone if the battery fails.

"One of the most impressive aspects of the EL2 is that there's really no change in handling qualities throughout its speed range"

"I regard the EL2 as the safest aircraft I've ever flown," Allee says. "It's got a turbine engine as well as battery power, and it can fly just fine on either one. Plus, it's got eight electric motors that are extremely reliable and have very few moving parts."

Manufacturer Electra was formed by John Langford, an aviation entrepreneur who founded and served as CEO of Aurora Flight Sciences, a pioneer in unmanned aircraft, and sold Aurora to Boeing in 2017.

Electra is focused on building commercial aircraft using research from Massachusetts Institute of Technology professors John Hansman and Mark Drela. Company officials say they're convinced that their blown wing, distributed hybrid power, and fly-by-wire EL9 will attract individual, corporate, and military buyers – and

1 Cody Allee, the EL2 Goldfinch's test pilot
2 The Goldfinch is essentially a proof of concept for the larger EL9
3 The Goldfinch runs off fly-by-wire controls

There will be no need for long runways with the EL2's 'blown wing'

that it has a straightforward pathway to FAA and European certification.

"We've got a clear path to regulatory certification and strong demand for the EL9 from existing markets," said James "J.P." Stewart, Electra senior vice president for product development.

"We'll be able to take people with high frequency, high reliability, and far lower operating costs than existing turboprops or helicopters."

Electra has partnered with Honeywell to supply flight control computers and actuators for the EL9, and Safran will supply turbogenerators. Electra is privately held and has about 100 employees at its Manassas facility. The company has a full-size mockup of the EL9 it plans to display at aviation events around the country.

Stewart says blown-wing designs are "scalable" to larger aircraft, and Electra plans to explore those options in the future.

"Our focus is building the EL9, certifying it, and bringing it to market," he said. "The combination of ultra-short-field takeoffs and landings with fixed-wing speed and low operating costs can definitely be scaled to a wide variety of aircraft sizes."

"Stewart says blown-wing designs are "scalable" to larger aircraft, and Electra plans to explore those options in the future"

Electra test pilot Cody Allee executes a maximum-performance takeoff in which he accelerates the EL2 to just 27 knots, rotates, and climbs steeply even though the aeroplane's indicated airspeed is well below its power-off stall speed. The blown wing makes this possible because accelerated air raises the critical angle of attack to more

The blown-wing designs are scalable to larger aircraft, which Electra plans to explore in future

than double its usual value.

ENERGY MANAGEMENT

My introduction to the EL2 takes place at Manassas Regional Airport (HEF). Test pilot Allee is pilot in command in the left seat, and I'm on the right side of the two-place aircraft.

The proof-of-concept aeroplane has a Garmin G3X as its primary flight display, a Garmin G5 backup instrument, and a Dynon multifunction display for engine information and system status. The EL2 uses manual controls – not fly-by-wire technology like its commercial successor—and yokes instead of side-stick controllers.

Many EL2 parts were lifted from single-engine Cessnas. The wings came from a 172 Skyhawk and were subsequently beefed up and given far larger flaps and flaperons. The EL2 landing gear was taken from a 206 Stationair, an aircraft of similar size and weight. The test article's austere interior has a great deal of exposed electrical conduit, control cables, and accessories that make the aeroplane quick and easy to modify.

"The wings came from a 172 Skyhawk and were subsequently beefed up and given far larger flaps and flaperons"

Flight conditions are ideal with unlimited visibility, calm winds, and a 3.3-degree centigrade air temperature that puts the density altitude at a performance-enhancing 500 feet below sea level.

Starting the SJ-190 is straightforward, and the whining turbine quickly and fully charges the main battery. There are three power levers on a centre pedestal: The middle lever controls four motors (the two inboards on each side), and the outer

The EL9 will seat 11 passengers

power levers each control the two outboard motors on each wing.

Taxi steering can be done with differential braking, splitting the throttles, or simply turning the control yoke like a car steering wheel (the airplane's computer logic adds power to the outside left engines when the yoke turns right, and vice versa). This is the first aeroplane I've flown with electric motors, and it's startling to see the props instantly stop at idle power on the ground.

We're soon ready for take-off, and Allee doesn't dawdle. From a standing start, he pushes the throttle levers forward, releases the brakes, and hauls the yoke nearly full aft at 27 knots. We're off the ground in about three aeroplane lengths – and that's less distance than a single white runway stripe. I resist the almost overwhelming urge to shove forward on the yoke as the nose rises steeply with less than 40 knots showing on the airspeed indicator.

"It takes a while to get used to the EL2 take-off profile and how quickly everything happens," Allee says. "It looks and feels alarming, but it's well within the airplane's capabilities. We're nowhere near an aerodynamic stall."

Allee transfers control to me and throttles back to a power setting that lets the battery recharge as we climb to 3,500 feet at 70 knots. The EL2 is neutrally stable and requires moderate control forces throughout our shallow climb. There's very little elevator trim change since so much of the lift comes from the electric motors.

"Flying this aeroplane is all about energy management," Allee says. "You can trade altitude for airspeed just like any other aircraft. But there's also fuel and battery power to consider."

Running the electric motors at high power depletes the batteries and running them at low power recharges the batteries. The turbine engine maintains a constant power setting and consumes jet fuel steadily.

"Running the electric motors at high power depletes the batteries and running them at low power recharges the batteries. The turbine engine maintains a constant power setting and consumes jet fuel steadily"

Allee powers up the electric motors to 80 percent and asks me to raise the nose until the AOA indicator shows 30 degrees. The pitch attitude is about 45 degrees – far too high to see over the nose – so I use the Garmin G5 standby instrument and peripheral vision for orientation.

The airspeed indicator shows about 30 knots, and Allee has me make shallow turns left and right despite the airplane's dramatically nose-high attitude. The ailerons remain crisp, and there's no perceptible reduction in roll rate. (Accelerated airflow stays attached to the wing at far higher angles of attack and raises the critical angle to more than double the EL2's power-off limit of about 18 degrees.)

"You'll notice there was no hint of an aerodynamic stall

1 The testing programme has seen more than 150 test flights since 2023
2 The modern and spacious cockpit of the EL2
3 The blown wing design will help reduce distances for landing and take-offs

even though the aeroplane was flying at less than the power-off stall speed," Allee says. "That's the blown wing in action."

Next, Allee shuts off the left outboard engine. A quick stab of right rudder and a slight reduction in AOA account for the slight but sudden power loss and asymmetric thrust.

Allee restarts the engine, then he takes the controls, slows to 45 knots, and performs steep, 60-degree-banked turns at 2 Gs. There's no hint of a stall even as the angle of attack in the turns exceeds 30 degrees – and our low airspeed makes the turn radius seem impossibly tight.

Allee demonstrates a series of short-field take-offs and landings. Each traffic pattern is flown conventionally until final approach, when the EL2 slows to about 35 KIAS. That's where the EL2 moves to the "back side" of the power curve, or the "region of reverse command" in which flying slower requires more engine power.

At 25 KIAS, Allee holds the pitch attitude at about 12 degrees nose up while increasing engine power to about 65 percent as the aircraft descends about 500 feet per minute.

We touch down firmly at about 20 KIAS and 70-percent power, and Allee yanks the power levers to idle while applying moderate braking. We stop in about 60 feet – or two-thirds the distance of a single runway stripe.

Electra Aero is vastly expanding the capabilities of fixed-wing aircraft by enabling helicopter-like take-offs and landings while maintaining the cross-country efficiency of fixed-wing aircraft.

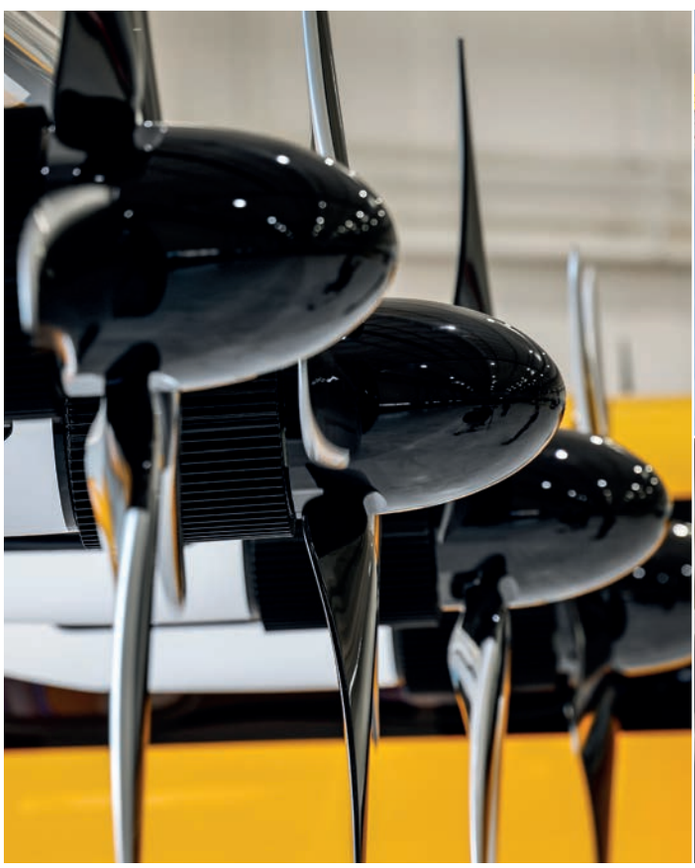
Unlike eVTOLs that must invent an urban air taxi industry and charging infrastructure from scratch using purely electric motors that tilt to transition to and from level flight, Electra's strategy has far fewer variables. There are countless challenges ahead in certification, production, and sales – but most of that is known territory.

"Electra Aero is vastly expanding the capabilities of fixed-wing aircraft by enabling helicopter-like take-offs and landings while maintaining the cross-country efficiency of fixed-wing aircraft."

For pilots, extreme STOL will require rethinking the way we fly, especially during approach and landing. Instead of approaching at 1.3 times the power-off stall speed, flying into ground effect, and flaring while decelerating as pilots have done for decades, a blown wing introduces new possibilities.

When combined with autothrottles and fly-by-wire systems, EL9 pilots will be able to precisely control speed, glideslope, touchdown point, and ground roll. That kind of consistency and accuracy can potentially open up large numbers of non-traditional areas for business, recreation, and adventure flying.

It's easy to imagine the future of STOL including big, multi-motor, highly automated hybrids flying between city and rugged and remote regions – and all they'll need is a flat patch of ground. ■



1 The eight electric propellers across the wings revolutionise the aircraft's ability
2 Moden technology meets old-fashioned aerodynamic testing
3 An old school yoke in the modern aircraft

The ability to execute steep turns is something to behold in the Goldfinch

WORDS & IMAGES Courtesy of Red Bull Content Pool

Landing on a moving train... and taking off again

Red Bull athlete and pilot **Dario Costa** touches down on a train at 120kmh and lifts off in a vertical pull take-off, completing a precision aviation milestone in Turkey.

Tte moment history was made

ITALIAN PILOT and daredevil Dario has made aviation history with a world-first dual manoeuvre in Afyonkarahisar, Türkiye, landing his race aircraft on a moving cargo train before lifting off again in a vertical pull from the same container.

The Italian pilot executed a blind landing on a 2.5km track in heavy turbulence and shifting airspeeds, with only centimetres of margin for error, and a 50-second window to make contact and take off.

The aircraft reduced to a near-stall airspeed of 87km/h (47knots) to match the train travelling at its maximum operational speed of120km/h (65 knots). Known as *Train Landing*, the project follows months of engineering analysis, simulation work, flight preparation, and safety protocols, combining synchronised speed matching, aerodynamic control, cognitive training, and millimetre-accurate timing.

ROUTE AND PERFORMANCE OVERVIEW

Approach Phase – The train, travelling at 120km/h (65knots), remained visible at a 45-degree angle until 200m before the final blind approach over the target container.

Landing – All three wheels made contact with the 9th cargo container; longitudinal and lateral alignment

KEY FACTS

PROJECT Train Landing – landing and taking off from a moving train
PILOT Dario Costa (Italy, 44) – Red Bull athlete
DATE 15 February 2026
LOCATION Afyonkarahisar, Turkey
LANDING SPEED 120km/h (65 knots) for approach, down to 87km/h (47 knots)
USUAL CRUISING SPEED 370km/h (200 knots)
USUAL LANDING SPEED 148km/h (80 knots)
WIND DIRECTION 5 km/h (3 knots) tailwind
TRACK LENGTH 2.5km
AIRCRAFT TYPE Zivko Edge 540 – race and stunt aircraft, mid-wing, single-seat, piston-engine, constructed from steel and carbon composite
PERFORMANCE 400-horsepower Lycoming engine
DIMENSIONS 7.5m wingspan, 7m length, landing gear width 1.70m
MODIFICATIONS No major modifications were made, but the aircraft setup was optimised for lower-speed flight using two custom strakes designed with Engineer Pietro Terzi and six (3+3) small vortex generators designed with Engineer Hartmut Siegmann ("Siggi")

maintained despite airflow turbulence and a drastic reduction in airspeed from 120km/h (65 knots) to 87km/h (47 knots).

Stabilisation – Continuous aerodynamic correction amid turbulence generated by the moving train, amid near-minimum airspeed.

Take-off – Controlled acceleration and lift-off into an immediate vertical climb from the same container, completing the world-first sequence.

TECHNICAL AND AERODYNAMIC COMPLEXITY

Landing on a moving runway requires exact speed parity. In this case, Costa aligned the Zivko Edge 540 with the 9th and final container of the cargo train travelling at its full operational speed of 120km/h (65 knots). Meanwhile, he reduced the aircraft to its minimum controllable airspeed of 87km/h (47 knots).

During the manoeuvre, the train created significant wake turbulence and unstable airflow over the container, resulting in continuous adjustments to maintain longitudinal and lateral control. This decreased the airspeed over the container by 33km/h (18 knots), increasing the complexity of the feat.

Approaching from south-east to north-west, the aircraft synchronised precisely with the train's direction and velocity. Even a minor mismatch of a few centimetres could have caused longitudinal or lateral overshoot from the narrow container surface.

Because of the aircraft's design, attitude (that is, the position of the aircraft's nose and wings with respect to the horizon – approximately 8-degree pitch-up), and the train's dimension, the platform remained outside Costa's field of vision throughout the approach. The pilot relied solely on cognitive training and skill to achieve alignment.

"Landing on a moving runway requires exact speed parity. In this case, Costa aligned the Zivko Edge 540 with the 9th and final container of the cargo train travelling at its full operational speed of 120km/h"

INNOVATIVE PREPARATION AND TESTING

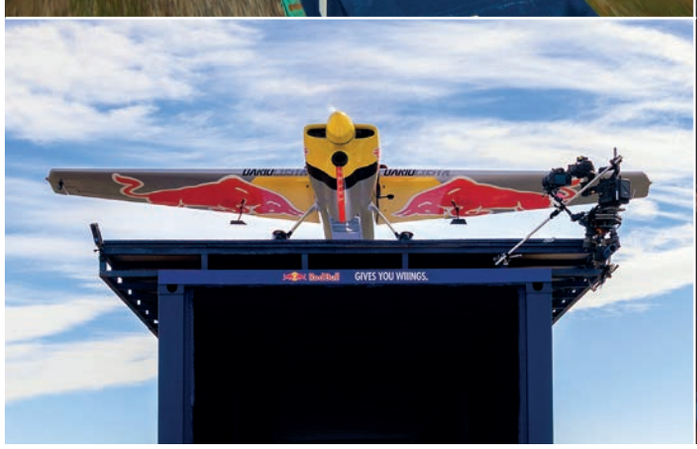
Ample aerodynamic studies were conducted to estimate the precise turbulence and airspeed reduction caused by the train.

Costa underwent cognitive preparation at the Red Bull Athlete Performance Centre in Thalgau, which included specialised "time – movement – anticipation" training, which proved critical to executing the blind landing.

Prior to the feat in Türkiye, a three-day moving-platform scenario was tested in Pula, Croatia, in collaboration with Rimac Automobili. Using their all-electric Nevera R hypercar as a precision-moving platform reference, Costa refined alignment and reaction timing.

INSPIRED BY TÜRKIYE: FROM TUNNEL PASS TO TRAIN LANDING

Following Costa's 2021 world-first project in Türkiye, Tunnel Pass - in which he flew



1. Touching down on a moving train is a feat of planning and precision
2. The leightweight Edge 540 is the perfect aircraft for such a stunt
3. Dario Costa, the pilot behind the stunt

ABOUT DARIO COSTA

Dario Costa is an Italian pilot and Red Bull athlete recognised for high-precision flying and technically complex aviation projects that combine engineering planning with elite pilot performance. Across his career, Costa has delivered more than 20 aviation world-firsts, including Tunnel Pass and the legendary Streif course preview, among others. He is the first and only Italian to qualify, compete and win in the Red Bull Air Race, and the first and only Italian - as well as the youngest ever recipient - to receive the prestigious Bob Hoover Freedom of Flight Award. He currently holds five Guinness World Records.

Costa made his first solo flight at the age of 16, having developed a fascination with flying as a child. He took his interest seriously enough to study physics at university, then graduated to a job as an apprentice in an aerospace engineering company. At the of age 21, he began teaching aerodynamics in his former high school, as well as pilot theory courses at Bologna's flying club, L'Aeroclub di Bologna.

In over 20 years of flying, Costa has clocked more than 5,000 flight hours in more than 60 different aeroplane models (check out his epic Formula One-inspired flight that featured in 2020's Drum the Bull).

As an aerobatic stunt pilot, Costa has pulled off an array of incredible feats over the years, including his 2021 Tunnel Pass and the legendary Streif course preview four years later.

through two highway tunnels outside Istanbul - the Italian pilot returned to the country to explore the feasibility of a new aviation concept. During that visit, he encountered a nostalgic passenger train in Kars, in the northeast of Türkiye, prompting him to consider unconventional landing concepts beyond static environments.

Extensive analyses and field studies ultimately identified Afyonkarahisar as the optimal location due to its railway infrastructure, operational conditions, and geographic characteristics, enabling the project to be executed in a controlled and secure environment.

"Train Landing was one of the most challenging and demanding projects of my career. There were so many variables to measure, but the greatest test was learning to land blind on a very small moving runway - relying only on cognitive and flying skills. Despite the difficulty, it was a great experience. For the first time, an aircraft successfully interacted with a moving train, bringing together the oldest motorised transportation with the newest. It was a complex project that required precision, teamwork, and trust - and I'm proud we executed it as planned," said Costa. Filippo Barbero, the stunt's aviation consultant, concluded by adding: "The most critical aspect was the alignment with the train, so precision had to be absolute, and he achieved that. Dario is a true magician."

WHY IT MATTERS

Executing a landing and take-off on a moving container represents a step change in applied aerodynamics and pilot skills. Completing the feat at full operational train speed and the lowest aircraft speed demonstrates how precision flying can expand boundaries of controlled flight in non-traditional environments.

The moment the challenge was completed by Costa and the team