



VERTICAL AEROSPACE MAKES AVIATION HISTORY WITH PILOTED EVTOL FLIGHT IN OPEN AIRSPACE

News / Manufacturer



Vertical Aerospace has made European aviation history with the first-ever piloted wingborne flight of a winged eVTOL aircraft in open airspace. The landmark flight of the VX4 prototype, piloted by Chief Test Pilot Simon Davies, saw the aircraft take-off, fly and land like a conventional aircraft, with lift generated by the wing. Soaring across the UK countryside from Cotswold Airport, the VX4 prototype demonstrated controlled wingborne flight in open airspace for the first time, marking a critical step toward commercial deployment as part of Vertical's [Flightpath 2030 strategy](#).

The UK Civil Aviation Authority approved the flight through open airspace at Cotswold Airport, the UK's largest private airport, by extending Vertical's Permit to Fly. This followed a rigorous review of tens of thousands of pages of safety and technical documentation.

Chief Test Pilot, Simon Davies, commented: "Taking the aircraft beyond the airfield and cruising over the Cotswolds for the first time was truly special and a career highlight for me. Our performance predictions were absolutely spot on, and the aircraft took off as a natural extension of

all the ground tests and preparation we've done. There are aircraft which are safe and capable but not always enjoyable to fly. The VX4 was not only safe but was an absolute pleasure. It is responsive, smooth, simple to operate and the sound level from the propellers is quiet and pleasant in the cockpit. An honour to fly, and a real testament to the incredible team behind it."

Vertical is currently the only company globally flying a piloted winged eVTOL prototype that's been developed under a Design Organisation Approval (DOA) from the CAA – a DOA is required to hold a Type Certificate, required for commercial passenger operations. The CAA is working closely with EASA for their concurrent validation and certifying the VX4 to the highest safety standards required for commercial use.

Stuart Simpson, CEO, Vertical Aerospace, said: "Achieving piloted wingborne flight in open airspace under the oversight of the UK CAA is an important moment in our certification journey. Operating under the UK's rigorous regulatory framework means we share the burden of safety with our regulator - every step must be approved, and that's by design. It amounts to a mini certification of our prototype and gives us a clearer, faster path to type certification. Our decision to put a pilot into the VX4 early was deliberate - real-world piloted flight delivers insights no simulation can. This milestone proves the capability of the aircraft and the maturity of our programme as we move toward commercial operations."

This achievement has also been supported by early UK government investment through programmes including the Aerospace Technology Institute and the Future Flight Challenge. These initiatives have contributed to the development of Vertical's technology and flight test campaign, and form part of wider efforts to advance the UK's net zero and aerospace ambitions.

UK Secretary of State for Business and Trade, Jonathan Reynolds, said: "This is a fantastic milestone for Vertical and for the UK's world-class aerospace sector. Breakthroughs like this show how government and business can work together to keep the UK at the cutting edge of innovation. Our modern Industrial Strategy will double down on this success by giving investors the confidence they need to back UK advanced manufacturing for the long term, bringing good, green jobs and growth across the UK as part of our Plan for Change."

In Phase 3 of testing – wingborne flight – the VX4 operates like a conventional aircraft using lift generated by its wings, rather than relying solely on rotor thrust. This low-power, quiet, and range-efficient mode of flight is key to making electric air travel practical, scalable, and economically viable.

Jim Currier, President and CEO, Honeywell Aerospace Technologies, said: "This significant achievement underscores the ability of our partnership to unlock new and innovative modes of transport, and we are proud Honeywell Anthem avionics and flight control computers and software could play a key role in supporting such a defining moment for the industry."

David Stepanek, EVP & CTO, Bristow Group, said: "The VX4's successful demonstration of wingborne flight marks a significant step towards commercial readiness. As the global leader in innovative and sustainable vertical lift, we look forward to continuing to partner with Vertical to unleash the disruptive advantages of this aircraft."

Jill Blickstein, Vice President of Sustainability, at American Airlines, said: "This milestone is a key step toward safely scaling electric aviation, which we believe will play a key role in the future of our industry. We're proud of Vertical's progress toward sustainable travel."

By achieving stable and controlled wingborne flight, Vertical has taken a significant step toward the

next major milestone: a full piloted transition flight, expected in the second half of 2025. This will demonstrate the VX4's ability to shift seamlessly between vertical lift and forward cruise – the operating mode it will use in passenger service.

During the wingborne flight phase, the VX4 will reach speeds of up to 150 mph (120 knots) and altitudes close to 2,000 ft under real-world conditions. Engineers captured more than 30,000 in-flight data parameters, confirming the aircraft performed exceptionally across stability, control, and energy usage.

To prepare for piloted wingborne flights, Vertical completed thousands of hours of lab, simulation, and high speed ground testing, including:

- 7.2 million fatigue cycles on each propeller blade to simulate lifespan loads over the flight test campaign
- 15.2 metre battery pack drop test, comparable to fuel-tank testing in traditional rotorcraft
- Full-scale thermal runaway propagation test on a VX4 sub-pack, indicating safe flight and landing is possible even in the event of a battery fire
- Over 3,000 hours of component and integration testing on flight control computers to ensure system reliability and performance

27 MAY 2025

ARTICLE LINK:

<https://50skyshades.com/news/manufacturer/vertical-aerospace-makes-aviation-history-with-piloted-evtol-flight-in-open-airspace>