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BY
CSMA

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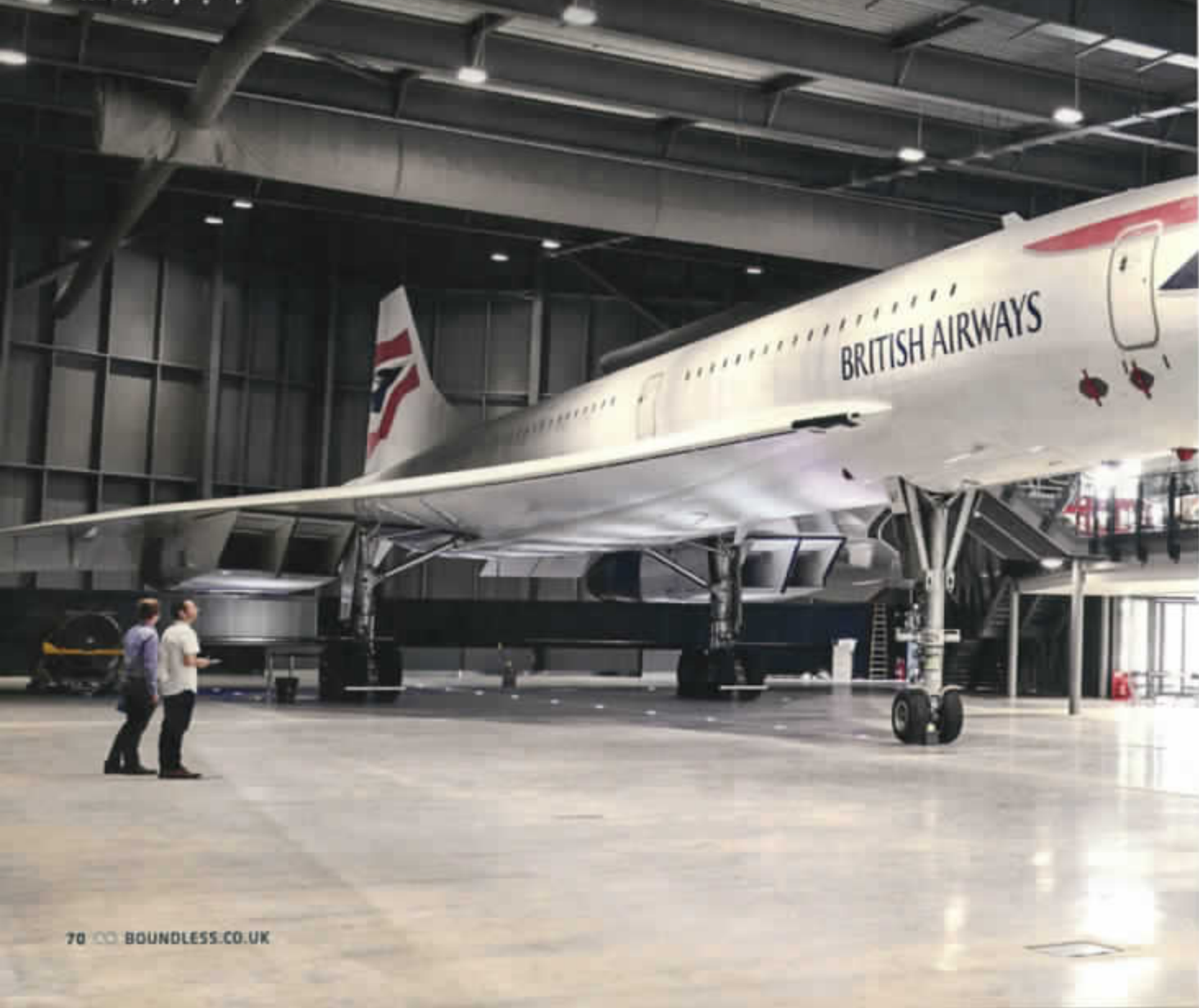
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The return of Concorde

The last-ever Concorde is at the heart of a new aviation museum in Bristol, where it was built 40 years ago.

Dan Linstead uncovers the story of a supersonic icon

Photography by Oliver Edwards



Growing up in west London in the early 1980s, I grew immune to the rumble of planes overhead, droning in and out of Heathrow. But there was one sound that always cut through, a more purposeful roar, demanding a pause in our games of garden cricket. So I'd look up on summer evenings and watch Concorde angling in over the suburban roofs, the flagbearer of a more exotic world.

Fast-forward to 2017, and I am standing below Concorde again, but this time by only a few feet. The last Concorde ever built, 216 G-BOAF (Alpha Foxtrot), to be precise. She (you can't help personifying so elegant a machine) rolled out of the construction hangar at Filton Airfield in Bristol for

her maiden flight in 1979, then spent 24 years in service, flying the British Airways insignia to New York and holding the transatlantic speed record (2:56:35) for five years from 1983. She returned to Filton in 2003 on the last-ever Concorde flight, watched by thousands of tearful well-wishers. And now she is finally back on show, the sleek centrepiece of a new museum celebrating Bristol's unique contribution to aviation.

Opening in September, Aerospace Bristol will house a plethora of vintage planes, helicopters, rockets and flying paraphernalia in a lovingly restored WWI-era hangar. From the wood-and-canvas days of the Bristol Boxkite to the military might of a Sea Harrier helicopter and Bloodhound





missile, the exhibition traces a century of innovation and engineering excellence in the Filton area.

But there's no denying the star attraction, the only exhibit to deserve (and frankly demand) its own purpose-built hangar next door: the supersonic icon built on this very spot.

What is it about Concorde? Fifteen years after its final flight, the plane still makes people misty-eyed. As I walked around Alpha Foxtrot's perfectly tapered dart of a body, I heard other visitors dredge up childhood memories like my own, or stories of wealthy uncles or friends-of-friends who'd made the run to New York in under three hours.

Partly it's the supremely aerodynamic design, coupled with that famous, dipping 'droopsnoot' nose, which enabled pilots to see the runway for takeoff and landing. Partly it's the whiff of luxury, the thought of being part of the jet set *Time* magazine described as 'diplomats and expense-account voyagers in cashmere and mink'. Partly it's the rarity – only 14 Concorde ever entered

Above 216 Alpha Foxtrot makes the last-ever Concorde flight in November 2003, soaring over Bristol before landing at Filton, where all the British Concorde were built

commercial service, half with BA and half with Air France. But mainly, surely, it's about the speed. Mach 2, twice the speed of sound. Faster than the planet spins. What does that feel like?

A man who knows better than most is Christopher Orlebar, 72, a Concorde pilot for over a decade and author of *The Concorde Story*. He joined the Concorde programme in the mid-1970s after flying Vickers VC10s – the fastest passenger jets of the pre-Concorde era – and still describes the jump to supersonic speeds with something approaching awe.

"When I was flying VC10s we used to respect the speed of sound and stay well clear of it, because strange things would happen: you'd get tipped forward, put into a dive, the wings failed to give lift, there's a lot of vibration. We explored speeds up to Mach 0.93, 93% of the speed of sound, but that was it. So when I first went supersonic, on Concorde, it almost felt *immortal*. It was territory that had been hitherto forbidden."



When I first went supersonic it almost felt immoral. It was territory hitherto forbidden

The engineering required for this kind of indecency was, of course, phenomenal. Stepping on board Alpha Foxtrot, you pass through the understated, almost bland passenger cabin, and walk up to the flight deck, which resembles the cockpit of the Millennium Falcon. Four cramped seats – captain, co-pilot, flight engineer and spare – are surrounded by endless banks of dials, switches and indicator lights, with labels like Nozzle Override and Air Bleed Control. The electronics cover every surface, including the ceiling.

Above A rare opportunity to sit in the captain's seat. The awe-inspiring electronics of the flight deck contrast with Concorde's sleek exterior and rather functional cabin

Much of the circuitry was to do with managing fuel and heat, explains Orlebar. "The flight engineer was the most important man on board. He moved the fuel around between 13 separate tanks, maintaining the plane's centre of gravity. And as well as pumping fuel about the place, he was keeping an eye on the air conditioning. Concorde heated up to 400°C during flight, and you had to cool that down to cabin temperature. The body got so hot the plane expanded by six or eight inches – we used to say we preferred supersonic flight because it gave passengers extra legroom!"

Infinitesimal space advantages aside, though, the experience of being a passenger on Concorde wouldn't have been particularly luxurious, especially by modern standards. The slimline, 2 x 2 seating formation and tiny windows give the cabin a functional air. Only a 1980s-style digital display would have informed passengers that they had broken the sound barrier and were climbing towards a cruising altitude of 60,000ft >



(the famous sonic boom, of course, doesn't affect those creating it).

But for those able to pay up to £8,700 return to New York, the Concorde experience was more about saving time – or even travelling backwards in it – than relaxing, says Orlebar. "In those days passengers could visit the flight deck, and I remember one time we'd taken off from Heathrow in the dark of a London evening, and I walked Paul McCartney. By now we were flying faster than the rotation of the earth, so, as we chatted, the sun started to rise again from the west. I suggested he should call his next album *Flying Into Yesterday*. Sadly he hasn't taken it up yet..."

The Concorde era ended with two disasters. First there was the tragic crash of an Air France Concorde shortly after takeoff in 2000 – a freak accident triggered by a small piece of metal on the runway, which put the whole Concorde programme on hold. Then there were the September 11 attacks of 2001, which decimated demand for transatlantic flights. Concorde might have survived one, but not both – and in April 2003 her retirement was announced, closing the supersonic story so boldly launched in 1969. Alpha Foxtrot made her final flight on 26 November 2003, soaring over Clifton Suspension Bridge in a memorable photo opportunity, before landing back at Filton.

Ever since, two questions have hung over that slender fuselage: will Concorde ever fly again, and is there a commercially viable future for supersonic flight? There is some hope on both fronts. The enthusiast group Club Concorde, run by

Above Concorde in production at Filton in 1974. The site is now home to the new Aerospace Bristol museum

The body got so hot the plane expanded by six or eight inches

ex-captains, has long harboured a dream of restoring a Concorde for private charters and airshows, and claim to have £120m funding to make it happen.

At the same time, at least two commercial projects are under way that could reintroduce supersonic travel to the schedules. Denver-based Boom Supersonic is building a scale prototype of a 55-seat passenger jet that it claims could reach Mach 2.2, and says test flights will begin in 2018. Richard Branson has given them his support. Meanwhile NASA and aerospace giant Lockheed Martin are hard at work on their Quiet Supersonic Technology (QueSST) programme. Their concept plane is designed to dampen the sonic boom that prevented Concorde flying over the US mainland, and thus made many long-haul routes unviable.

It remains to be seen whether either initiative comes to market, but the allure of supersonic travel is clearly as powerful as ever. Some day soon, other kids may gaze up from back gardens as ultrafast jets flit overhead. But until another contender takes to the skies, the original speed queen continues to hold court, in a hangar on an old airfield in Bristol. ■

Aerospace Bristol (aerospacebristol.org) is scheduled to open in late September 2017. Check website for ticket prices and opening times.



CELEBRATE THE SUPERSONIC STORY

£198 FOR TWO

Join Boundless for a unique event at Aerospace Bristol. Dine under the wings of the famous supersonic jet and step on board for a private viewing.

The highlight of the evening will be a Q&A with two former Concorde pilots and you'll also receive a signed copy of the official Concorde book *The Concorde Story*, written by one of the guest pilots for the evening, Christopher Orlebar. Visit boundless.co.uk/supersonic

