

Nothing to do with luck

Concorde men: Brian Trubshaw (left), French test pilot André Turcat, and Sir George Edwards of Vickers.



From the 50s Valiant via the 60s VC-10 to the magnificent Concorde itself, Brian Trubshaw's test flying career spanned the jet age



“Word got out about this young, first-class pilot. Mutt Summers felt he was outstanding and said we should get him. Strings were pulled”

BRIAN TRUBSHAW WAS the pre-eminent British test pilot of his generation. His work was key to the successful development of the Valiant, the first British V-bomber; the VC-10, the finest of all British airliners; and of the Anglo-French Concorde. He also contributed to the success of many other types and flew countless different aircraft in a flying career that spanned four decades.

His name will always be associated with jet transports, although his career began alongside thousands of others with RAF flying training in the USA. After a spell on Wellingtons at a Canadian-run Operational Training Unit the RAF ‘caught up with him’ and he was posted to 46 Sqn and Stirling V transports. “The Stirling was a lovely aircraft to fly,” he later wrote, “with a phenomenal rate of roll for its time.” Here he flourished. Always good, average or above average in previous flying assessments, on leaving 46 Sqn Trubshaw was rated ‘exceptional’.

He was selected for the King’s Flight, flying the tubby, twin-engined Vickers Viking, and served two years before being posted in late 1948 to the Special Projects Squadron of the Empire Flying School.

This was his first taste of test flying and he was able to sample the Lancaster, Lancastrian and

Main picture: BAC 1-11 G-ASHD in a field on 28 August 1964 after the pilot neglected to jettison the anti-spin parachute. Above: the turboprop Vanguard. Right: VC-10 prototype G-ARTA, which performed some 2,300 spins with Trubshaw at the controls. Below: Abu Dhabi, 1975. Route proving to Bahrain required courtesy calls on other Gulf states.

Meteor for the first time while working on the development of all-weather flying techniques. Helicopter experience gained on the King’s Flight nearly sent him to the jungles of Malaya in 1949 when the RAF found it had only two qualified pilots, one of them Trubshaw. But his heart was set on test flying, and Vickers-Armstrongs came to the rescue.

Flying the Vikings meant that Trubshaw had already been noticed by the Vickers people, notably legendary Spitfire test pilot Mutt Summers, and chief designer George Edwards.

“Word got around about this young, clearly first-class performer,” Sir George recalls today. “He already had a reputation. Mutt Summers felt he was outstanding and said we should get him – so strings were pulled, as you could in those days, and he was ‘excused’ from the air force.

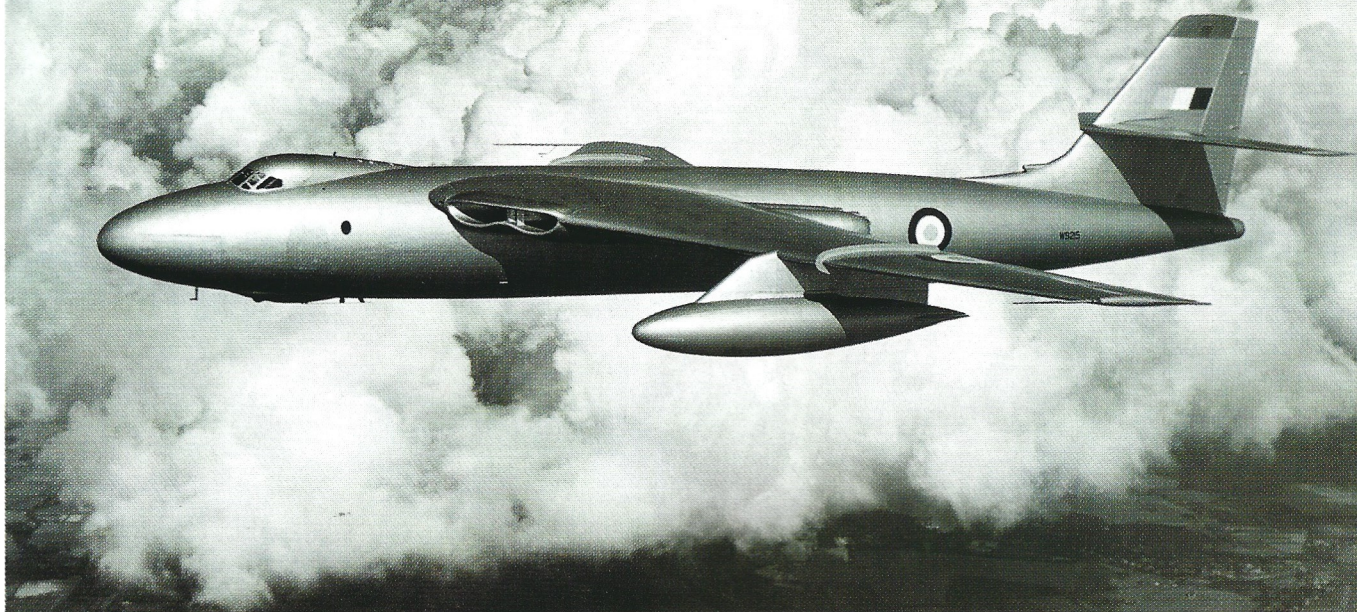
“If Mutt Summers said he was a good ‘un, then you knew he would be.”

Trubshaw had landed on his feet, at one of the world’s most progressive aeroplane companies. On his arrival in May 1950 at Vickers-Armstrongs in Wisley, with its 6,600ft grass runway, the world’s first four-turboprop aircraft, the Viscount, was on test. So was an experimental Viscount fitted with twin Tay turbojets. The Nene-powered Viking was there too, the world’s first jet transport, but it seldom flew because it tended to set fire to the runway and upset the groundsman. Vickers were advancing into the jet age, and one of the great projects of the decade was already well advanced: the Valiant.

This high-level nuclear bomber flew for the first time in June 1951, when the programme for its development was handed to Trubshaw, aged just 27, and his colleague Jock Bryce. A Valiant dropped Britain’s first hydrogen bomb in the Pacific in 1957: Trubshaw devised the tight-turning escape manoeuvre employed by the 49 Sqn pilot.

Trubshaw also made his mark with the turboprop Vanguard, refusing, in tropical trials, to fly the ‘unpleasant and very difficult’ seven- to eight-degree descent at idle which was deemed necessary to determine the shortest landing distance. It tended to wreck aircraft. Instead he





insisted on a more rational three to four degrees. "Gradually sense prevailed," he wrote, "and the Air Registration Board agreed to what became known as the 'rational landing technique'."

The Valiant led on to the V-1000, which could have succeeded where Comet failed. The elegant VC-10 followed. This high-tail design led to some of the most exhaustive test flying ever undertaken, and Trubshaw himself carried out some 2,300 stalls on the prototype, G-ARTA. His career nearly ended here on 31 December 1963 when, recovering from a stall at about 250 knots, the right inner elevator came adrift, shearing two fin bolts and causing the starboard engines to shift. Trubshaw declared a Mayday and fired the escape hatch, but in a great feat of airmanship recovered the aircraft.

The great fear in high-tailed designs was of the 'deep stall' or 'stable stall', where at high incidence the wing would blank the elevator, making recovery impossible. The BAC 1-11 prototype G-ASGH was lost with all its crew at Cratt Hill on 22 October 1963 after entering just such a condition.

By now Vickers was part of BAC and Trubshaw was chief test pilot of the Weybridge division. The BAC 1-11 was inherited by Weybridge and Trubshaw credits the diminutive twin-engined airliner with saving BAC after the TSR.2 was cancelled. The project had a difficult gestation. Another prototype was badly damaged in a heavy landing in March 1964 and in August a third came down in a field after the pilot had streamed the emergency tail parachute in a stalling test and not jettisoned it. This blunder might have cost the pilot his job but Trubshaw refused to sack him. "Good test pilots are hard to come by," Trubshaw wrote. "I did not believe that one mistake made under conditions of high risk and high stress should automatically constitute dismissal."

This was a typical Trubshaw response. "He was always getting the best for his team," recalls Jerry Lee. As a young test pilot with Boscombe Down's 'A' squadron Lee first encountered Trubshaw and his colleagues in the late Sixties at Fairford, where the Concorde programme was based. "Our average age was probably about 28 or 29. These chaps at

Above: Britain's first V-bomber, the Vickers Valiant. At the age of 27 Trubshaw was assigned to the programme soon after the first flight. The Mark II, optimised for low-level, was displayed by Trubshaw at 200ft and 500 knots at Farnborough in 1954.

Fairford seemed to be of an enormous age, with big laughs and red faces. They obviously enjoyed life. Brian was a charming man: very jolly."

A good friend of Lee's, Nick Warner, was approached to join Airbus and sought Trubshaw's advice. "Nick was with the CAA at the time," recalls Lee, a future BAe chief test pilot, "and Brian gave him some excellent advice: 'It's all very well being a check pilot and flying all these different types but it's far, far better and more fulfilling to be part of a programme, and become associated with a particular aircraft.'"

On 9 April 1969 Trubshaw flew Concorde 002 for the first time, having already flown 001 on its fifth flight three weeks earlier at the invitation of André Turcat, his French counterpart. The trials of the aircraft and their associated tribulations are well documented, not least by Trubshaw himself (*Concorde: The Inside Story*, 2000). Concorde was, and remains, one of the finest achievements in civil aviation and Trubshaw always regarded his work on the type as the pinnacle of his career.

"When there is a new aeroplane that needs testing you don't just toss a coin to choose a pilot," says Sir George Edwards. "You pay careful attention to the character and capabilities of the man. It's nothing to do with luck. He test flew those aeroplanes because he was the best at it." **JETS**

Ernest Brian Trubshaw

Born Llanelli, 29 January 1924; died Tetbury, 24 March 2001. Experimental test pilot, Vickers-Armstrongs (later BAC, BAe) 1950–53, deputy chief test pilot 1963–61, chief test pilot 1961–65, director of flight tests 1965–80, divisional director and general manager (Filton) Civil Aircraft Division 1980–86. Warden of the Guild of Air Pilots and Navigators 1958–61. Derry and Richards Memorial Medal (GAPAN)

1961 and 64. Richard Hansford Burroughs Trophy 1964. MBE 1964. Seagrave Trophy 1970. CBE 1970. Ivan Kincheloe Award, Harmon Aviation Trophy 1971. Bluebird Trophy 1973. French Aeronautical Medal 1976. Honorary doctorate, Bristol University. Fellow of the Society of Experimental Test Pilots. Fellow of the Royal Aeronautical Society. Married, 1972, Yvonne Edmondson (née Clapham).