Press Release

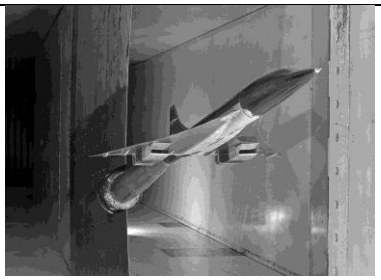
New Exhibition opens at The Farnborough Air Sciences Trust Museum (FAST) on RAE Bedford's Contribution to Royal Aircraft Establishment Research.

A new exhibition illustrating some of the world-class aeronautical research undertaken at the Bedford branch of the Royal Aircraft Establishment (RAE) opened to the public on Saturday 29 October in the Cody Pavilion at the FAST Museum in the Farnborough Road. It will be on display during normal Museum opening hours (Saturdays and Sundays 10 am – 4 pm). The exhibition has been curated by the Bedford 'wing' of FAST - The Bedford Aeronautical Heritage Group (BAHG).

While Farnborough was the headquarters of the Royal Aircraft Establishment (and its successor organisations), there were also several other sites, known as "outstations". The largest of these, at Bedford, made up about 20% of the whole RAE and was RAE's main location for experimental aerodynamic research and flight testing. Created after World War 2 as part of a government policy to foster the British aircraft industry, the Bedford establishment was initially conceived as an independent national centre for aeronautical research, but by the time of its official opening in 1957, was integrated into the full RAE. The Bedford establishment (which closed in 2001) consisted of a major flight research airfield and a wind tunnel site. The airfield was substantially re-built from a former US bomber base at Thurleigh, with new runways and other test facilities, including naval catapults. The wind tunnel site hosted five major tunnels of world-class, capable of operating up to five times the speed of sound (Mach 5). The largest, the 8ft supersonic tunnel, was used extensively in the Concorde programme, to devise the best wing shape for the supersonic airliner and to optimise the all-important engine intake configuration. RAE Bedford was at the forefront of research in many other fields, including operating jet aircraft from aircraft carriers, developing and demonstrating automatic landing systems to enable military and civil aircraft to operate in fog, the flying behaviour of vertical take off and landing aircraft, supersonic flight, the nature of air turbulence in storms and enhancing helicopter performance. RAE Bedford finally closed in 2001. The 8ft tunnel was demolished in 2002 (the 3x3 and HSST had already gone), leaving two working tunnels, the 13x9 low speed tunnel now owned by Red Bull (being used to develop Formula 1 racing cars) and the Vertical Spinning Tunnel used for sky-diving. The Aircraft Research Association (ARA) which is owned by the aircraft industry still operates with its own wind tunnel at Bedford.

Among the many "firsts" achieved at Bedford

- The first transition, on 6 Apr 1960, from 'wing- to jet-borne' flight and back, of the Short SC1 vertical take-off aircraft.
- The first conventional flight of the Hawker P1127 Harrier prototype on 13 March 1961.
- The first flight, on 17 Aug 1961, of the Handley Page HP115, the first ever flying example of the class of aircraft known as "slender wings" that led to Concorde.
- The first ever launch of a Harrier from a ski jump, on 5 Aug 1977. This successful demonstration led to RN Invincible-class ships having the ski jump installed, of vital importance during the Falklands conflict.

			
RAE's two-seat Harrier leaving the world's first experimental ski-jump, at Bedford, in 1977	Aerial view of the RAE Bedford Wind Tunnel site showing the 8ft x 8ft wind tunnel	Concorde Model in 8ft x 8ft wind tunnel	Retired RAE Scientists examine a model of the Bedford Supersonic Tunnel displayed at the Exhibition from left to right: Gerry Shanks (Bedford), Dr Graham Rood (Farnborough) Mike Iggelsden (Farnborough) and Barry Tomlinson (Bedford).

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Notes to Editors

The **Bedford Aeronautical Heritage Group** (www.bahg.org.uk), is the Bedford “wing” of FAST, and was formed in 2008 by retired research staff from RAE Bedford to preserve and publicise the aeronautical achievements and legacy of RAE Bedford. It manages an archive of more than 100,000 photographic negatives illustrating the research undertaken, plus 2,000 movie films and several hundred research reports and other documents. BAHG is concerned to ensure that this heritage is neither forgotten, nor lost to future generations. For more information, please contact Barry Tomlinson at the Bedford Aeronautical Heritage Group via email on bahg-bt@hotmail.co.uk or on 01234 358066.

The **Royal Aircraft Establishment Bedford** was established in 1950 after the UK government decided in 1944 that new national aeronautical research facilities were required. Bedford was chosen as the most appropriate site for reasons including the availability of electrical power to drive the new wind tunnels, easy access to supersonic flying areas, and the existence of a skilled work force. Five world-class wind tunnels were built, on the Twinwoods site just outside Bedford, to enable tests at low speeds and also at high Mach number.
Bedford’s Thurleigh airfield, a former USAAF bomber base, was also re-built with a new main runway and other specialised research facilities, including naval catapults. From 1952, when the first wind tunnel starting running, to 2001, when the government re-organised defence aeronautical research, RAE Bedford was at the forefront of research in many fields, including operating jet aircraft from carriers, automatic landing in fog, the flying behaviour of vertical take off and landing aircraft, and the best configuration for the Concorde supersonic transport. RAE Bedford was known world-wide as a centre of aeronautical excellence.