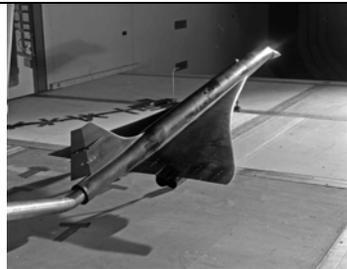




*Concorde G-B SST visit to Thurleigh,
25 Jan 1972*



Concorde model in 13x9 wind tunnel, June 1965

With this issue we welcome another group of former RAE employees, from the tunnel site. Ken Moreton is acting as “agent” between BAHG and tunnel site personnel. We are building up our “community” and this newsletter is now reaching more than 150 people.

Early Days – but How Early?

The Royal Aircraft Establishment at Bedford, initially called the National Aeronautical Establishment, began its working life in the early 1950s. It is difficult, however, to establish a real “start date”. This is of interest because we are approaching a 60th anniversary and we wonder when to celebrate this. Construction began in 1946 or thereabouts but when did the first “RAE” person walk through the gate? In October 1950, RAE News published an editorial “Pioneers Needed for Bedford”. RAE News also noted (July 1952) that the NAE Technical Society had been formed in February and membership was already 140. The first wind tunnel to operate, the 3x3, began calibration runs in May 1952 and there is a major “Group” photo from Feb 1952. The Minister of Supply, Mr Duncan Sandys, visited NAE for the first time on 13 June 1952. Thurleigh airfield began later, with Lt Cdr Shaw acting (RAE News Jan 1955) as the officer in charge of flying at NAE from 14 June 1954 when Naval Air Department moved in. We are trying to piece together this early history and would welcome all contributions (with specific dates and sources).

New Home An important issue for BAHG is to find a home for the archive with security of tenure. We are actively exploring some potential locations. Suggestions and offers welcome.

Other News Thanks to Cliff Spavins and Ron McConnell for suggesting names of test pilots in the informal (ie caps off!) photo in the last issue of test pilots with the HP115 in the snow. We now think they are (L to R) Bernard Holland, Paul Millett, Angus McVitie, Jack Henderson and Ian Keppie.

The book “Wings Over Thurleigh”, first published in 2001, and re-issued in a third edition in November 2010, has now sold out. We are examining whether a further print run is feasible.

BLEU – Blind Landing Experimental Unit

Readers may be interested to know that the Royal Aeronautical Society has started to publish a Journal of Aeronautical History. The first paper is by Sir John Charnley, on “The RAE Contribution to All-Weather Landing”, a worthwhile read. It includes mention of the early work at Martlesham Heath from Aug 1945, and of course the work of BLEU at Bedford. The paper, only available electronically, can be found at

http://www.aerosociety.com/Assets/Docs/Publications/The%20Journal%20of%20Aeronautical%20History/2011-01Allweathe%20landing_Charnley.pdf

Talks We are “spreading our wings” in giving talks about RAE Bedford. In February, Barry Tomlinson has given a talk to the South Hants Historical Aviation Society, in Romsey (1 Feb) and to the Cardiff Branch of the Royal Aeronautical Society (9 Feb). Later in the month (23 Feb) Mike Dobson will talk to the Stevington Local History Group. Another talk of possible interest to our readers is on 14 March 2012, when Sir Donald Spiers will give a lecture to the Bedford Branch of the RAeS on “The Kestrel Evaluation Squadron (and a few other things)”, at the ARA, Bedford, 1900 for 1930.

Contact Us For any queries, or indeed, news, please email Barry Tomlinson (bahg-bt@hotmail.co.uk).

BAC 1-11 XX105 (by Reg Harlow)

The days before Christmas saw this renowned aircraft sawn up and removed from Boscombe Down in skips; a sad end to a long and highly productive career as a flying laboratory operated at RAE Bedford from 26 March 1973 until 1994, and then at Boscombe Down until 2003.

The fourth aircraft off the production line (as G-ASJD), it survived a crash-landing on Salisbury Plain (20 Aug 1964) while investigating deep-stall problems. After being rebuilt, it entered airline service with British United Airways in 1964. Purchased from British Caledonian for the Blind Landing Experimental Unit, it became XX105 on the military register. XX105 was modified to allow the spoilers to be used for direct lift control, fitted with a Smiths SEP5 autopilot for autoland research and fully equipped as a flying laboratory to replace the two Comet aircraft previously operated by BLEU. XX105 took on a new red, yellow and white colour scheme which became well-recognised by aviation enthusiasts throughout much of the world, and by devious means this unique livery was retained in spite of much pressure to change to the official RAE colours.

For 30 years XX105 was at the forefront of avionics research, being involved in a vast number of projects and achieving a remarkable number of “world firsts”.

Highlights included: Steep and Two-segment approaches for noise reduction, Direct Lift Control, Relaxed Static Stability, Energy-based Control Laws, Area Navigation and Flight Management System development, Direct Voice Input, 4D Time-Slot Following, integrated air/ground Air Traffic Management, Mode-S, UHF, VHF and HF Data Link communication systems, MLS curved approaches, Satellite and integrated Navigation systems, Electronic Flight Instrument System (EFIS) and Integrated Cockpit development. The 1-11 programme was supported by the Department of Industry, the Civil Aviation Authority and MoD, and undertaken in close collaboration with many UK avionics companies and also with Eurocontrol and the European Commission.



Flight demonstrations were an essential part of the work, and the 1-11 was renowned for always being serviceable at the specified time, even if the pilots and scientists sometimes had to hide problems with the experimental systems.

Flight trials were required in a wide range of conditions and geographic locations. These included hot and cold weather, involving detachments to the Mediterranean, Greenland and Svalbard (flying as near to the North pole as the fuel load permitted). Navigation and Flight Management System development required operation throughout most of Europe, as did demonstration of the EFIS system, which also required a month's tour of the USA in 1981, with an intensive schedule of demonstrations to aircraft manufacturers, airlines and aviation regulators. Much of the basic work on advanced cockpit displays can now be seen in today's airliners. The aircraft's legacy will continue for decades with the expected world-wide introduction of 4D Air Traffic Management systems. XX105 was rightly recognised as the most capable, flexible and reliable flying laboratory in Europe, and probably second to none in the world.

She will be remembered with great affection by all pilots and scientists who flew in her, and by all the engineers who looked after her with such care and dedication. RIP.

Notes Please note that, in Issue 2, the author of the brief note about the HP115 anniversary was Barry Tomlinson and the item about Harrier 175 was by Gerry Shanks. We are happy to receive brief contributions from our readers.