

# Scrap TSR-2 and Concord at Britain's Peril!

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IT IS NO coincidence that the two major aircraft programmes currently being subjected to an intensive review by the British Government are also, in technological terms, the two most advanced. TSR-2 and Concord each represent a substantial step forward in their respective roles of manned weapons system and civil air transport, and assuming that flight trials confirm design estimates of performance, then both will be superior to any known aircraft now being produced anywhere in the world.

The introduction of two new aircraft of this calibre demands sweeping improvements in every facet of aeronautical engineering. It requires a huge programme of research and development to provide materials, equipment, electronics, systems and powerplants capable of reliable operation throughout the wide range of temperatures, pressures, vibration levels and stresses to which these aircraft will be subjected. This is inevitably a lengthy and expensive business and so when costs begin to rise, schedules begin to slip, and doubts are raised about the original *raison d'être* of such projects, it is necessary to accept the need for review. At a time when a new Government has just taken office and Britain faces serious economic difficulties, it is tempting indeed to effect "savings" by slashing these costly and technically advanced programmes.

To consider TSR-2 first, this integrated weapons system was designed as a tactical strike/reconnaissance vehicle capable of pursuing a variety of mission profiles in any weather, day or night, with a suitable compromise between speeds of the order of Mach 2 at altitude to avoid fighter interception and transonic speeds at low level to penetrate radar defences undetected. Add to this a substantial range and



the ability to operate from forward airfields and it becomes apparent that TSR-2 is a unique weapons system by any standards. But has the requirement for TSR-2 changed? Plainly, the answer must be in the negative.

Britain still has important defence commitments throughout the world. She still requires an aircraft such as TSR-2 with the inherent versatility to operate in: (i) the strategic nuclear role, whether alongside a purely national Polaris fleet or as part of a Western nuclear force; (ii) the tactical strike role in support of local military operations; and (iii) the reconnaissance role to provide information concerning the disposition of forces which constitute a threat to British territories or those of her allies.

The appearance of the latest Russian missile-equipped fighters in the hands of certain irresponsible elements in the Near and Far East would nullify the slight advantage held by Britain's ageing Canberra and Hunter strike/reconnaissance forces. In this context alone TSR-2 is indispensable. It is also worth recalling the important part which low- and high-level reconnaissance aircraft of the United States played in the Cuban confrontation and emphasising the need to guard against this type of threat in other parts of the world where Britain has specific commitments. TSR-2 with its exceptional performance, versatile weapons load and unique reconnaissance systems—including high definition cameras, Sideways Looking Radar, Line Scan and Moving Target Indicator—is an essential component of Britain's defence armoury.

## Concord

Turning now to Concord, this project began with the acceptance of the inevitability of supersonic travel. Extensive investigations by industry and Government research establishments, both here and in France, confirmed that a cruising speed of Mach 2.2 gave the best compromise in terms of aircraft performance while retaining a mainly light alloy airframe. The decision taken in 1962 to proceed with Concord provided the British and French industries with a particularly exacting technological challenge, but one which it was felt was realistic in terms of cost and timescale. The lead which this early and considered decision gave to the Anglo-

French team offered the chance of re-establishing a position of leadership in the long-range airliner field.

The subsonic long-range transport market has to date been dominated by the American companies and even though Britain has hopes of winning new customers with further developments of the Super VC10, it is being no more than realistic to anticipate that satisfied airlines will tend to reorder developments of the type which they are already operating rather than a new type with the attendant high cost of crew and engineer training, to say nothing of spares and maintenance equipment.

The sonic boom poses a serious problem for Concord but until flight trials have shown that the aircraft's overpressure is unacceptable to the world at large, there would seem to be little point in taking an unduly pessimistic view of this factor. Some of the world's airlines have shown considerable reticence about the prospect of ordering and operating Concord on the grounds that there is no requirement for supersonic travel. But the whole history of air transport is one of reduction in travelling times and this reduction has always been accompanied by improvements in operating costs. Five years ago many airlines regarded the subsonic jet transport as a curse but today its productivity is regarded as a blessing. So it will be with the supersonic transport—even if some airlines find progress thrust upon them.

To cancel Concord now would continue the "stop-go" policy which has bedevilled the British industry for twenty years; it would seriously prejudice the possibilities for future international co-operation with European countries which must be the pattern for the future; it could lead to Britain withdrawing from the long-range airliner field; it would weaken the industry in its continual struggle to remain abreast of the most modern engineering techniques; it would have a serious effect on aerospace exports over the next twenty years; it would deprive British airlines and R.A.F. Transport Command of the most up-to-date equipment; and it could lead to a widening in Britain's balance of payments gap if our airlines and the R.A.F. were forced to purchase supersonic transports from the United States.

Those who hazard the future of TSR-2 and Concord do so at the nation's peril.

