

The Formation of the British Aircraft Corporation (BAC) 1957-61

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Summary

This paper traces the history of the merger between Vickers, English Electric and Bristol that produced the British Aircraft Corporation (BAC). It follows the development of government policy to rationalise the aircraft industry, and the lengthy negotiations between various parts of the industry. For several months, serious efforts were made to agree a merger between Vickers, English Electric and de Havilland, which failed for a number of reasons, most important the effect of the VC-11 on future sales of Trident, the effect of a merger on sales of other existing de Havilland aircraft and a preference for independence, urged strongly by the de Havilland Company Secretary, C B White. Inclusion of Bristol in BAC was only considered late in the process of merging Vickers and English Electric, encouraged by the Minister of Aviation, Duncan Sandys.

1. Introduction

In his authoritative history of the British Aircraft Company, BAC, Charles Gardner provides only a brief account of the negotiations that led to its formation (reference 1). There is a little more in Richard Gardner's biography of Sir George Edwards (reference 2) as well as in Peter King's history of the industry's pioneers (reference 3). In the first two studies, the main focus is on the negotiations between Vickers and English Electric, centring on the TSR-2 programme, and the financial settlement that established BAC in 1961. The formation of BAC was also one element in a much broader upheaval in the UK aircraft industry. The mergers of 1957-61 were a long time coming, and contained several interrelated stories of industrial politics and government engagement in the industry. There were a number of victims – or at least casualties of the process, including Handley Page and the BOAC Board. But this wider dimension will not be considered in detail (end note 1). However, it does for the first time detail the negotiations between Vickers, English Electric and de Havilland, which came close to forming an “alternative” BAC, an event that might have profoundly altered the subsequent history of the British aircraft industry. The article also underlines the active part played by the Minister of Aviation, Duncan Sandys, in the merger negotiations (end note 2).

2. Background – the merger policy is announced

At the end of the Second World War, the Labour government played a direct role in shaping demand and re-establishing a civil aircraft capability. This had mixed results. With the return of a Conservative government in 1951, there was a move away from directly funding civil programmes. Firms were encouraged to develop aircraft as private ventures, albeit usually supported by launch orders from the nationalised airlines, BEA and BOAC. However, much

of the industry's workload was still underpinned by defence contracts and support for R&D (references 4, 5 and 6).

Despite a boom brought by the Korean War, the early 1950s were not a happy time for many companies. With a few exceptions, civil programmes were commercially disappointing. Military exports were in decline and there were already signs of serious cost escalation in defence programmes generally (references 7, 8 and 9). More seriously for the pattern of future demand, the government was looking to nuclear weapons as a substitute for conventional forces. In short, there would be too many companies chasing a declining domestic market, and few had the potential to take on the American competition.

While some natural selection had occurred - the top six companies accounted for over 80% of output, but there were still too many quasi-independent design centres and too many factories (reference 6, page 96). The average size of UK aircraft companies was already well below the more important US firms. During the planning exercise that started in 1944, ministry officials had considered rationalisation. However, it suited the post-war Labour government to retain a degree of "surge capacity" in the industry to cope with emergencies and to maintain some degree of competition, at least in terms of design and technical ideas.

In 1950, Ministry of Supply officials examined ways of encouraging rationalisation, but internal discussions were discontinued with the outbreak of the Korean War (reference 5, page 51). But by 1956, the Ministry was again more or less openly considering how it might encourage the growth of "larger technical teams" and referred to weaker firms with a record of poor performance as "candidates for relegation". This might be achieved through a "selective allocation of contracts" (reference 10).

Up to this point, the government had still been reluctant to press rationalisation on industry. The catalyst for change was Defence White Paper of 1957 (reference 13 and end note 3). Forever associated with the Minister of Defence, Duncan Sandys, this spelled out a defence future dominated by nuclear-armed missiles, declaring that no more manned combat aircraft would be needed beyond the current generation. Several new projects were cancelled including the Avro supersonic bomber and a successor to the Hunter. The main survivor was the multi-role Canberra replacement, OR309, which would in time become the TSR-2.

The government also wanted generally to reduce the cost of aeronautical R&D, but without crippling an industry that could benefit from a rapidly expanding civil market. There would be support for a supersonic transport and a few other promising designs. But with the UK Armed Services accounting for 70% of the industry's workload, unless corrective measures were taken, the Sandys' White Paper would bring a major contraction in the UK aircraft industry. In short, it was even more urgent to bring about a major reform in industrial structure (end note 4). If the civil sector was to expand, "the units of the industry while fewer in number must also be made individually more powerful, financially, in their technical and production resources, and in their sales and servicing organisations overseas. Government influence should therefore be brought to bear to hasten the formation of suitable groupings". This would be accomplished through "persuasion" and the selective allocation of government contracts (reference 12).

This was exactly what the Ministry had proposed in 1956 and was formally announced by the Minister of Supply, Aubrey Jones in May 1958. He described the process as “something intermediate between full government authority and complete laissez-faire. What we need is a combination of impulse from above compelling the assumption of responsibility on the part of industry itself.” (end note 5 and reference 4, pages 30-31). This policy had already been partially implemented with the formation of Airco - a de Havilland led consortium including Fairey and Hunting that had won BEA’s contract for a new jet airliner - the DH 121 (Trident). The Ministry of Supply had preferred a financially stronger coalition of Bristol and Hawker Siddeley, but BEA, backed by the Ministry of Transport, held firm to its choice. However, the most direct instrument at hand to force rationalisation was Operational Requirement OR339, the Canberra replacement.

3. OR 339 and the Vickers-English Electric coalition

The manoeuvring to secure OR339 was the first step in the process that led to the formation of BAC. The competition began officially on 16th September 1957, when the Permanent Secretary at the Ministry of Supply told senior representatives of eleven UK aircraft companies that OR339 would “only be awarded to a group of companies” (reference 13, page 504). The idea was that this would lead to a formal merger and amalgamation of the winning “group”. As the only team with experience of producing a supersonic fighter, English Electric’s P.17 proposal was from the outset recognised by Air Ministry officials as one of the strongest contenders (reference 14). English Electric also joined forces with Shorts, based on a partnership established during the Canberra programme.

Despite the quality of their proposal, neither English Electric nor Shorts had much civil design and development capability and a “balanced” civil-military business was one of the Ministry’s criteria for rationalisation. In 1958, Lord Nelson, Chairman of English Electric Co, received a call from an English Electric director reporting a chance conversation on the Queen Mary with Vickers Group Managing Director Sir Charles Dunphie. Both thought closer cooperation between their respective aircraft and missile divisions would be desirable, and Viscount Caldecote, then a director of English Electric Co and from 1960, managing director of English Electric Aviation, was urged not to commit too much in its collaboration with Shorts. Lord Nelson was known to be interested in the potential of the civil airliner business (ref 1 page 30). The Chief Executive and former Chief Engineer of English Electric Aviation Ltd., Freddie Page, was “strongly in favour” especially given Vickers’ strength in the civil and large military aircraft field which would “fit well” with English Electric’s expertise (reference 15 page 73). However, if the industrial logic of rationalisation was incontrovertible, Page felt that the use of OR339 as the mechanism to force the pace was less desirable (reference 15 page 74). In the event, both parties were unwilling to commit themselves to a full merger until they had “got to know each other better” (end note 6).

In February 1958, the Air Ministry noted that the companies had accepted the principle of rationalisation and that they were “prepared to strengthen their individual design and production facilities by working together on OR339” (reference 13). The Vickers - English Electric combination was singled out (reference 13, page 505). By June 1958, the Ministry of Supply had whittled down the evaluation to four serious contenders. The preferred solution

was a combination of the Warton and Vickers designs. Key elements of the collaborative design work with Shorts were abandoned and Shorts dumped from the nascent grouping. English Electric Aviation Ltd.'s Warton design office was at this point the preferred team leader, but by July Vickers had won leadership in a classic piece of Whitehall manoeuvring (reference 13 page 507).

The decision to award project leadership to Vickers was "unexpected", and Sir George Edwards was "tickled pink" to win the contract as he had been told that the Ministry insisted on English Electric's involvement because of its superior supersonic experience (reference 2 pages 148-9). However, Sir George Edwards, a formidable "Whitehall Warrior", got wind of the initial preference for English Electric, and had worked hard during the summer of 1958 to secure leadership for Vickers.

The Vickers Weybridge team certainly had a superb reputation built up during the Valiant programme and had an outstanding commercial success with the Viscount airliner. The Air Staff were impressed by "their track record of production management and on time delivery ... and the Air Staff ... insisted on Vickers being in the saddle" (reference 1 page 31; reference 15 page 75). Handel Davies, then a senior Ministry of Supply official, said that while they thought English Electric had produced the best design, "the project demanded a leader of the stature of Sir George Edwards" and the decision was made "for reasons of exploiting Sir George's very special capabilities". He was also a renowned engineer in his own right and it was felt that he had the ability to lead the design team (end note 7).

English Electric Warton was unhappy with the outcome. Freddie Page contended that Edwards had exploited well-known problems that existed between his design team and the production facilities at English Electric. Page felt that Vickers' shortage of future military work as well as the limited success of the Vanguard encouraged the ministry to afford Weybridge some degree of protection. English Electric, conversely, was in good shape with the Canberras still selling and the Lightning moving into production, "had the TSR-2 contract gone to English Electric, it would have seemed that far too high a proportion of the RAF's major combat aircraft were in one company's hands" (reference 15 page 76; end note 8).

The project's existence was publicly revealed in December in January 1959 along with details of the partnership. Vickers would lead a 50/50 collaboration with English Electric - with a joint design team to be established at Weybridge (reference 13 pages 510-511; end note 9). Despite Warton's misgivings about the initial working level relationship with Weybridge, the English Electric Board had little doubt that in the fullness of time, the link would lead to a full merger of their respective company's aircraft interests. It was agreed that "a long term association between the two companies in the aircraft field would be of the greatest possible value and would provide a group of great financial and technical strength able to compete with any other aircraft company in the world". The ultimate objective would be to form a joint aircraft company owned equally by Vickers and English Electric, which would "own all the assets of the two parent companies which are employed on aircraft". However, in January 1958, the companies agreed that, given the immediate difficulties involved in reaching an agreement on a more complex solution, initial steps towards a merger would be confined to collaboration on OR339, and to "offer mutual assistance on other projects as may be agreed" (end note 10).

4. The Vickers, English Electric and de Havilland merger negotiations

By early 1959, Vickers' growing financial problems forced it to increase the pace of merger talks. These stemmed from a major underestimation of development costs on both the Vanguard and the VC10 programmes, combined with poor sales beyond the launch orders from the two nationalised airlines. In June 1959, Vickers warned that it would be in difficulties without government aid. In particular, Vickers wanted to develop a larger, more competitive version of the VC10 - the Super VC10, and a new medium haul jet larger than the DH121, the VC11, both with some degree of state assistance.

Speaking at the Vickers AGM, Lord Knollys argued that:

“Government had to appreciate and to ease the great and disproportionate financial burden borne by Vickers and other companies in private ventures ... Without firm and early support by the Government ... this country is more likely sooner rather than some people might expect, to find itself without a real aircraft industry at all.” (reference 19 page 60).

Knollys wanted support comparable to that afforded by the US government to its “private enterprise aircraft industry”. Vickers was not alone; other civil programmes were in trouble and the SBAC was urging the government to give more direct support to the industry. Aubrey Jones was unsympathetic, and suggested Vickers' problems stemmed from its own “lack of awareness of market conditions. Industry, he argued, had to get on with rationalising to form financially stronger groups (reference 20).

With its relationship with English Electric in a stable, but static condition, Vickers opened talks with de Havilland. Having achieved leadership on the TSR-2, Vickers now laid claim to a similar dominant position in the civil sector. As Sir George Edwards minuted, notwithstanding de Havilland's DH121 contract, Vickers should seek to achieve “a dominant position in the supply of aircraft to BEA” (end note 11). Vickers believed that the VC11 and the Super VC10 could be used to lever support from the Government. But it had to offer something in return: “It appeared that the most promising, and perhaps the only way, for us to deal with this situation, was to consider entering into some form of collaboration with de Havillands as the price of obtaining government aid for the VC10”. The link with English Electric was not forgotten, “it followed, that in now considering some form of collaboration with de Havillands, we should clearly give English Electric an opportunity of joining in” (end note 11).

Any negotiations with de Havilland would be complicated by the existence of the DH121 with its assured BEA contract, as well as de Havilland's existing Airco partnership with Hunting and Fairey. As Vickers privately conceded, the DH121 “would definitely be competitive with our own small jet, and it was very unlikely that the government would be prepared to give support to both” (end note 12). A number of strategies designed to achieve this were considered, including the possibility of a joint bid with Rolls-Royce, with or without English Electric. It was decided to open discussions directly with de Havilland and to tell English Electric once they were under way. In this way, Vickers felt that we would be in a very strong position vis a vis the Government” (end note 11). This was a breathtaking presumption; Vickers was expecting the government to pull them out of a financial mire of

their own creation (even if the private venture policy had left them exposed) in return for launching a new project with public money and effectively undermining an established contract (end note 13).

On 29th July, Lord Knollys, Sir George Edwards and de Havilland's Chairman Sir Aubrey Burke met to discuss the problem of developing civil airliners without government support, and the prospects for wider cooperation between the two companies. Sir Aubrey and Sir George believed that any cooperation "would be purposeless unless the Government took steps to give assistance, by way of orders or otherwise, necessary for large airliner projects to continue at all in the UK".

Burke believed Vickers' approach was "genuinely founded" but in his view, its primary "object was to find some means of obtaining Government assistance against the heavy losses at present expected on the VC10 and Vanguard" (end note 14). The de Havilland Board agreed to inform their Airco partners to see whether Hunting and Fairey might be "associated with such plans". However, any substantive move had to wait until the Minister's position was known (end note 14).

5. The Minister sets out his terms

The two companies then jointly approached the Ministry to discuss the possibility of some form of aid. Vickers was looking for some £309 million from the government (£169 million for the VC10, £32 million for the Super VC10 and £368 million for VC11) (end note 15). Vickers' contribution (new and sunk costs) would total £441 million. Jones told Vickers that any support would be "conditional on the integration (including English Electric) being actually achieved by 31st December 1959". Lord Knollys could not give this assurance. He offered to write giving assurances of best endeavours, but "the Minister was not prepared to accept an expression of intention as sufficient consideration for the promise of government support". Knollys felt that the Minister saw this as a "bailing out" operation, whereas Vickers was making a "constructive proposal" that would result in the UK getting two aircraft that if successful would fully recover investment. The minister, however, felt that most of the investment would be in the Super VC10 and the success of the VC11 far from assured. Jones was adamant that the industry's scale, not individual projects was the key; it followed that "reorganisation of the industry was therefore the vital condition which justified government investment" (reference 16, file VP445).

Three days later, Vickers had another meeting with Jones and again he refused to commit himself to any support for civil aircraft until he had examined the "facts and figures", but he was anxious that the three companies (including English Electric) should come together. Jones' final offer was a contribution to the integrated company of £147 million towards the VC10 and Super VC10; with £73 million for VC11 conditional on winning orders from the Canadian airline TCA. As de Havilland would ask for comparable support for the DH121 and Jones was reluctant to support an existing programme, any hint of the request in public would be embarrassing. He suggested that any formal approach would be best presented as part of the amalgamation talks with a view to "avoid unnecessary competition in the future" (end note 16).

6. English Electric takes stock

On 5th August, English Electric joined the talks, but not before an exchange of views with Vickers. English Electric was opposed to giving de Havilland equal status, proposing instead a new joint company owned equally by Vickers and English Electric that would take over de Havilland. Alternatively, English Electric could make an independent bid. Vickers in turn rejected this, as this would put English Electric “into a stronger position than us. The tripartite approach was best for us, as we did not want to increase our stake in the aircraft industry”. Vickers insisted that de Havilland had the approval of their Board, whereas English Electric “was quite willing to make a take-over bid without such approval”. English Electric reluctantly agreed to the tripartite solution (reference 16, file VP445). But the idea of a direct bid for de Havilland, hostile or otherwise, would not go away.

English Electric believed it could exploit Vickers’ civil ambitions to re-negotiate leadership of the TSR-2. As Lord Caldecote noted in August,

“If Vickers are really to undertake these additional responsibilities in the civil field, I think we should press very strongly indeed for the transfer of the main contract for the TSR-2 to English Electric. This no doubt would be difficult but at the stage when the specification has been agreed during the autumn it would not be impossible. If this is not done I cannot see how we can avoid being an extremely junior partner in a large aircraft organisation and, as I pointed out to the Minister, I think we deserve something better than that” (end note 17).

However, Jones speedily kicked this idea into touch; while he appreciated the strength of the arguments, transferring the TSR2 contract “clearly raised great difficulties”. That was the last of that proposal (end note 18).

Indeed, English Electric recognised that its room for manoeuvre was increasingly limited. It was tied to Vickers on the TSR-2, and was unimpressed by other options – Blackburn, for example, was dismissed as “mediocre”. On the other hand, in respect of Vickers “we have the closest and most harmonious relations with a company who have great experience of the civil market literally all over the world and in addition are a very powerful firm” (end note 19). In short, Lord Caldecote felt that an equal partnership with Vickers was the best deal for English Electric provided this was an equal partnership “and not on the basis that everything was closely controlled from Weybridge. But we have no single piece of evidence during the last nine months of cooperation with Vickers that this is likely to be achieved.” Nevertheless, Caldecote was determined that any further association would only be on the basis of equity.

Moreover, English Electric had to move quickly lest it lost key personnel to new programmes such as the SST (at the time a joint Bristol-Hawker Siddeley project) (end note 20). English Electric was therefore willing to go ahead with a closer association so long as the 50/50 partnership was exactly that; the existing arrangements on TSR-2 should remain “unchanged”; and any new company would use its best endeavours to maintain the Warton establishment as an integrated design and development unit” (end note 21). English Electric also drew a line over making a contribution to the VC10 (end note 17).

7. The tripartite talks open

From the outset, the three-way talks with de Havilland were uneasy. At one of the earliest meetings in Lord Knollys' London flat, Sir Aubrey Burke was "sceptical of the urgency behind this consideration and felt that there was no gain in hurrying to any of the parties except possibly to the minister who might be anxious to see some progress before he left office and therefore haste might be dangerous." Burke was not clear of the benefit to be derived from the association. Although the government had stated preference towards larger groups, "there was no guarantee" of support adequate for the new business and its combined facilities or that support would in fact be confined to the two, "chosen Government instruments" (end note 22).

Both Caldecote and Burke were less keen than Knollys to make a formal statement of intent to the Minister. English Electric felt its short term position was stronger than that of either Vickers or de Havilland. It was certainly determined to avoid being presented by a fait accompli launch of any new civil project. This should also take note of the DH121. Privately, the company believed that the bulk of any factory closures would be from the de Havilland group (end note 23). For its part, de Havilland declared that while it was prepared to merge its aircraft business, it wanted to exclude guided weapons and engines. Vickers was prepared to consider an aircraft only deal, but English Electric argued that this was "selling the problem child without selling the rest". English Electric had a profitable military business, while Vickers and de Havilland had largely speculative civil work. English Electric was not, therefore, "interested in merely swapping good business for bad" (end note 24). However, it was agreed to await the outcome of the General Election and the appointment of a new minister. The companies believed that they would be able to retain the initiative once the result was known. In this respect, they underestimated the energy and determination of Jones' replacement – Duncan Sandys.

8. Duncan Sandys opens his "marriage bureau"

Following the October 1959 General Election, Duncan Sandys moved from Defence to the new Ministry of Aviation (end note 25). He immediately began to play a much more active and interventionist role in re-shaping the aircraft industry. His predecessor's "light touch" had not made enough progress and the whole process was further complicated by tension between the Ministry of Supply/Aviation and the Treasury. Sandys was better placed to take on both the Treasury and the Industry chiefs. He had more political support than his predecessor, as well as a greater willingness to get personally involved in the process. Sandys told the industry that he had discussed their situation with the Prime Minister and they both agreed that it was in best interests of the country that the aircraft industry "should be adequately supported". As a note to the Vickers Board later observed, "It had become apparent that the Minister had been given liberty of action by the Prime Minister and the Chancellor of the Exchequer to ensure concentrations within the aircraft industry which he intended to achieve quickly" (end note 26). It was soon evident that Sandys wanted to see some serious progress towards rationalisation and would have little truck with those reluctant to come to heel.

Attempts to encourage a merger between Bristol and the Hawker Siddeley Group had petered out, and the position in regard of Shorts once it had been dumped from the OR339 consortium was raising some difficult political questions. More damagingly, the unravelling of the “private venture” policy had created such a crisis in the industry that it threatened to undermine the whole rationalisation strategy. As a result, between July 1959 and February 1960, not only did Sandys take a more direct role in forcing the pace of rationalisation, he also hammered out a new approach to civil aircraft and engine funding, a mechanism which is still used to support UK civil aerospace projects.

Beginning in late October, Sandys and his officials held a succession of briefings with the leading aircraft companies, what he and others would call his “marriage bureau”. Each reviewed their respective prospects and concerns, as well as relating progress or otherwise towards creating the larger groups requested by the government. Most went away with a clear warning, merge or face the consequences (end note 27). He was determined to impose a “two group solution on the industry (end note 28). Those companies that did sort themselves out were the most likely to win future contracts and that it would not be government policy to extend orders (unless in special circumstances) to those “which have stood apart from the process of strengthening the industry.” (end note 27). The talks between Vickers, English Electric and de Havilland now had a fourth, and very interested party.

9. De Havilland reconsiders its position

During the pause in the merger talks, de Havilland reviewed its options. None were especially attractive. Alone de Havilland would have to work against the two-group policy; other firms would “do us down and isolate us”. In this environment, Vickers would be biggest commercial and political competitor in the civil field, and it was questionable whether de Havilland would be given any assistance if it remained independent. Combining with English Electric without Vickers was unlikely, and in any event Warton had no civil work and an uncertain future beyond the Lightning. Vickers was undoubtedly stronger than English Electric, which would be third man” in the merged enterprise. Despite some misgivings, a de Havilland internal analysis concluded: “it appears our chances of getting full Government support and attaining a highly technical and commercial grip on all civil requirements are better with Vickers than without them” (end note 29).

Nevertheless, and despite clear warnings from the Ministry that the two-group policy was non-negotiable, some elements within de Havilland were in favour of going it alone. C.B White, de Havilland’s Company Secretary, argued that while there was considerable risk in going it alone in civil aircraft, merging with Vickers and English Electric had few attractions (end note 30). White felt that the problems with the Comet were over and market prospects for the DH121 were good. Revenues would also be helped by sales of the DH 123 business aircraft and the Sea Vixen. On the other hand, a merger with Vickers and English Electric would see all this revenue “dissipated”.

As he saw it, the main problem was Vickers’ determination to launch the VC11; it had no UK orders and de Havilland’s market research suggested it would have limited appeal. A link with Vickers “while theoretically giving advantages to de Havilland, could in fact constitute a

severe drain on such de Havilland business as the merger company took over”, and if their civil business required strength, “it would not appear to be able to find it with Vickers aircraft”. A more comprehensive merger might also have to include de Havilland’s missile interests and a step where “we would lose more than we would gain” (end note 31). Equally, forging links with Bristol or Hawker Siddeley offered even fewer benefits but conversely, there was untapped potential in the Airco partnership.

White talked up the virtues of independence; the company was the second placed “purely aviation” company in the Commonwealth and Europe. As a result, De Havilland could consolidate its place as:

“The first of the aircraft groups outside USA. It therefore seems far from fanciful to regard de Havilland as the centre of one of the main surviving aviation groups in the country. On such an hypothesis, it would not seem realistic to surrender control of promising an enterprise to a group which has far fewer possibilities, simply because of a not very clearly stated or assured threat of some undefinable retribution from the government”

White believed that the Government was rational enough to support success, and would not be willing to support Vickers’ potentially unsuccessful products. The position paper ended with a note of defiance.

“The proposals which Vickers are putting forward so urgently, and apparently for their own salvation, would appear to involve either the weakening or the destruction of the de Havilland group. From any point of view, it would seem to be preferable to be destroyed in a fight for survival rather than to die meekly.” (end note 31).

10. Sandys puts on the pressure

The three companies were already finding it hard to reach agreement on the form the merged enterprise might take. Vickers wanted a comprehensive amalgamation centred on a Holding Company. This implied that the new organisation would be liable for past work and liabilities, which in Vickers’ case amounted to over £375 million of VC10 development costs. English Electric only had a small aircraft development team and the parent group controlled its production facilities. De Havilland preferred to start with a joint R&D company for new products. It also wanted Vickers to drop the VC11 and English Electric to include their aircraft production factory in the merged entity. De Havilland wanted to keep its guided weapons and equipment interests (de Havilland Propellers), as well as links with de Havilland Engines. The status of de Havilland’s overseas subsidiaries further complicated negotiations.

Caldecote felt that Knollys’ views on operational control of the new company were “woolly”. English Electric wanted to limit its risk on the civil side and if this was too high Caldecote told Knollys that his company might reconsider the wisdom of “coming into the civil side at all”. English Electric fully appreciated Vickers’ concern to press ahead, especially after the extent of its losses had become public knowledge. Vickers wanted some reimbursement for losses incurred on its civil programmes and there were some difficult valuation issues to be resolved. English Electric, on the other hand was in no hurry; it had 4-5 years of defence

work, but association with civil programmes would ease Warton's fears of dependence on government policies.

In short:

“Although the government would clearly like to see its policy carried out quickly there is no reason to suppose that the frantic tempo which Vickers is trying to introduce into the negotiations is instigated by the Ministry of Supply. It would be folly to be rushed into any sort of association that was not wholly satisfactory. As Vickers alone appears to be attempting to set this hysterical tempo for their own benefit it would seem that our best course is to go at our own pace”.

There was some risk that de Havilland and Vickers might do a deal based on collaboration between VC11 and 121, but English Electric was confident that the Ministry wanted its supersonic military expertise allied to a civil aircraft company (end note 32).

English Electric also reiterated the benefits of a bilateral merger, “and if DH were to be brought in they should be brought in by purchase”. Moreover, like de Havilland, English Electric preferred to start with a project company to be responsible for future projects such as TSR2 and the VC11. This would have no physical assets and would avoid the valuation issue entirely as well insulating the new company from the effects of VC10 and Vanguard financial liabilities that had been incurred by Vickers during the 1950s. The disadvantage would be a limited integration of the two parent companies' wider resources. Lord Knollys was unhappy with this proposal, citing the Ministry's requirement to discuss a tripartite approach. But it was evident that Caldecote and his team were somewhat suspicious of Vickers' position and expressed some concern internally about whether the other two might be able to outvote English Electric, particularly where risky civil programmes were concerned. Although the Northerners received assurances from Knollys, they wanted a formal commitment that Vickers would not negotiate privately with de Havilland (end note 33).

On 19th October, English Electric and Vickers had their “marriage bureau” meetings with Sandys. As a newly elected government it was in a position to squeeze out over-capacity and he would resist proposals from outsiders unless they were made via the groups. The Minister agreed that the industry could not compete in the civil market without “some measure of Government support”. Vickers made it very clear that their needs were “immediate”. While the details of any assistance would have to be discussed in detail, he had in mind something like £147 million for the VC10, and £75 million for both the VC11 and DH121, provided they were shown not to be competitors. However, he could not see how three more months would make much of a difference to Vickers; it was not “unreasonable that they should continue to carry the risks for that period”. The nearer they got to a final deal, the more favourable he would look on providing assistance; they just had to show that they “really meant business” (end note 34)

However, the Minister was adamant that the new company “must be of substance”; all existing and future contracts must be “thrown in”. He was not interested in a “paper, façade company or project company”. Sandys clearly had no idea of the technical difficulties involved in valuing the three companies, which was quietly pointed out by his official, Denis Havilland. The companies told him that they could not guarantee a resolution, but Sandys told

them that matters had to be concluded “by the end of the year” (end note 35). Reflecting on the meeting, Lord Caldecote felt that “the answers were not entirely satisfactory and did not go so far as one might have hoped in confirming support would be confined solely to these proposed two groups”. But he was impressed with Sandys’ general commitment to the two-group approach (end note 34).

At his meeting with Sandys on the 21st October, Sir Aubrey Burke observed that de Havilland’s future largely depended on the DH121. BEA’s initial order and 12 options took the programme about half way to break-even point. He was somewhat pessimistic about the talks with Vickers and English Electric, but if there were to be aid to industry, de Havilland “would expect a just share”. Sandys was blunt; he did not want another Airco, and the companies had to sort out the relationship between the VC11 and the DH121. Anybody left outside the groups would be a poor place to receive support “even if their product was better” (reference 22). Shortly after this meeting, Sandys made it clear that any assistance to launch the new company beyond the £367 million already authorised by the Cabinet for the industry generally would require Treasury approval. But he agreed the new company was in line with his thinking. For his part, Sandys was not happy with de Havilland’s financial controls and he asked Henry Benson of Coopers to impress on Sir Aubrey the need to join a larger group (reference 23).

Despite Sandys’ mixture of carrot and stick, De Havilland’s misgivings about having only a minority share in the future company increased. The Board could not recommend this to its shareholders (end note 36). The company’s accountants supported this view: the proposals were too vague and were being pushed through too fast. “The information needed to assess merger falls short of that required to enable your Board to make a proper assessment of comparative values”. As it was still not decided how to allocate the liabilities and profits of existing projects, there could be complications in the future. Vickers’ proposal for a third share in the equity of the new company, especially as Propellers was to be included in the deal, did not appear to be “fair to your company”. There were likely to be complex taxation problems attendant on the creation of the new company owned one third by each of the existing groups. Finally, given de Havilland’s obligations to Airco, “the present proposals must cause you some embarrassment” (end note 37).

Vickers were still the more desperate to seal the agreement, citing the fact that the company needed an agreement in principle by the end of November to land a letter of intent from the Canadian airline TCA to launch the VC11 (end note 38). English Electric had a different story from de Havilland, which suggested that the TCA deal was not that certain; indeed Hatfield also had hopes of selling the DH121 to the airline. Lord Caldecote’s team was also increasingly suspicious of the “gentleman’s agreement” that had supposedly led to the VC11 and DH121 “division” of the market. Sir George Edwards could not provide any evidence that de Havilland had signed up to the split (Burke was equally vague, it should be said). English Electric, backed by an analysis provided by Freddie Page’s team at Warton, was quite sure that the two aircraft were direct competitors; “At the moment we felt it difficult to reconcile how these two aeroplanes could live together and the expense of both be justified politically” (end note 38). Similarly, Vickers’s estimates of its debts in relation to the Vanguard and the VC10, as well the predicted recovery rate of the VC11, gave both English Electric and de

Havilland cause for concern (end note 39). English Electric was also determined that the Preston works would not be included in the deal (end note 40).

On 11th November, Caldecote, Knollys and Burke again attempted to hammer out a solution. Vickers and English Electric still wanted to include de Havilland's guided weapons interests, but Burke was equally clear that it should not; he was "unable to see so far any real substantial advantage to de Havilland by such a move". It was put to Sir Aubrey that de Havilland "would surely be better off in a group established as one of the Government's chosen instruments (author's emphasis) than on their own". Burke was sceptical of government assurances especially as it had "no orders to place at the present time, nor any ideas of orders to place, and therefore there was little immediate benefit to the firms concerned". He again emphasised the difference between de Havilland, as a "pure aviation company" and the other two firms, as well as the problem of reconciling de Havilland's overseas subsidiaries with the new company. Burke clearly felt that de Havilland "were big enough on their own in aviation to command support and he was prepared to run this risk". But Caldecote believed that at bottom Burke was really opposed to being a "such a small fish in a big pool" (end note 41).

By early November, Knollys was becoming "very pessimistic" about the chances of de Havilland coming into the group. After Burke left one meeting, Knollys and Caldecote privately "agreed that Sir Aubrey Burke's attitude was so discouraging that they should now commence to consider a possible merger between Vickers and English Electric" (end note 42). However, Knollys still favoured a negotiated merger with de Havilland, rather than a take-over. He feared that this might push Burke to an "adamant refusal", arguing that there was considerable difference between freely entering into a group as a partner and being "put into a new organisation". Knollys and Caldecote agreed that they would revert to bilateral talks but would not inform Sandys until de Havilland formally withdrew. The meeting ended with the somewhat cynical view that de Havilland had had their chances to come in and Burke's actions now "gave the Minister a complete alibi for supporting the VC11 and not the DH121". Both companies recognised that Sandys did not regard a merger of the aircraft interests of Vickers and English Electric alone as a major concentration qualifying for government support". English Electric strongly felt that this alone was justification for making a bid for de Havilland (end note 41).

A further round of talks was held at Knollys' London flat on the 19th November. Burke would not budge on the guided weapons issue and stressed de Havilland's obligations to its Airco partners and its opposition to being an appendage to a larger group. Finally he stated categorically that his company had reached the conclusion that "at the present time it was not in de Havilland's advantage to join the proposed association". Caldecote and Knollys expressed their regrets and Knollys noted that an "opportunity to create something really worthwhile for the aviation industry of this country was being lost" (end note 43).

De Havilland's hard line was bolstered by another analysis of its prospects. In a note to Burke on 5th November, White was confident that the Airco consortium could be a sound basis for future development and which reflected government policy since 1957. De Havilland was "dismayed that current government could cut across and in effect destroy the work of association already achieved. We are prepared to fight for the first place in the British aircraft

industry and we are confident that with our existing products and our technical and financial resources we will achieve that position, if in fact we have not already attained it” (end note 44). The Ministry also hinted that Airco might be acceptable as a focus for future projects, which could include derivatives of existing programmes. For its part, Airco asserted that there was more than enough work to justify more than two groups (end note 45).

De Havilland contended that its adherence to the private venture policy should be rewarded and policy should not be directed at giving “doles to unsuccessful types or orders placed simply to keep manufacturers alive or support their aircraft business from the profits of other products are necessarily temporary expedients and irrelevant to the successful exploitation of the world market, the first requirement of which is the most competitive and efficient aircraft”. Moreover, forced amalgamations would not work; rationalisation must be driven by the “basic principles of private enterprise” and “the Government as chief customer will not be best served by buying not from the failures in order to keep them just alive, but from the successful to enable them to command the world’s markets with even more assurance” (end note 44).

Moreover, de Havilland also felt that the Minister seemed to have overlooked the private investment already made in the DH121 (worth some £29 million) by the Airco team, the bulk of which was provided by de Havilland. As it stood the merger failed both the commercial test and that of the “public interest”. De Havilland recognised that the government was determined to focus on two or three major units, but:

“We have had to consider what constitutes such a unit. De Havilland has a wide, diversified structure and capabilities in the UK and abroad. It is focused on aviation (as are the best American companies), and has an international sales organisation. We consider that the strength of the de Havilland group alone entitles us to be considered by the Government as a unit capable of standing on its own two feet” (end note 44).

At the end of November, de Havilland expressed its growing concerns about the tripartite talks directly to Sandys. Burke wrote that:

“The suggested merger company (fails) to stand up to the test of being a really effective and economic unit, apart from the fact that it is not one we can feel could recommend to our shareholders. None of the options seem preferable to building on the strength of our own group. Which is fully worthy of support as likely to be capable of surviving in the intensely competitive aviation markets in the world”.

De Havilland contended that a more integrated Airco would “justify its place as one of the groups”. The company believed that its clear focus on aviation would be the key to success in world market; “We should not be concerned with closing factories, but of finding new work for them; we should concentrate less on the problems of a contracting military order book and more on the exploitation of the growing civil aviation market” (end note 46).

On 25th November, Sandys and his team had a last meeting with the three companies. He pressed Burke very hard on his reasons for pulling out of the talks. He could not understand the nature of the competition between the VC11 and the DH121, or why de Havilland’s

guided weapons and equipment interests could not be included, because most of this depended on government work anyway. The Airco partners could either join the new company or another group. Vickers conceded that the two aircraft were competitive “but only in a very narrow market segment.” De Havilland argued that the nature of the competition was much more fundamental and it was “commercial suicide” to make both. With Vickers and English Electric prepared to go ahead without de Havilland, Sandys expressed his “regret” at the failure of the three-way merger, which was “in the best interests of the industry and country”. He said it would be “extremely difficult for him to go to the Chancellor and ask for support for the aircraft industry unless he was satisfied with the strength of the groups that were formed and he did not believe there was sufficient work for more than two groups”. However, it was something for the companies to decide in their own interests (end note 47).

Sandys told Burke very firmly that if de Havilland went on its own, he could “not count on qualifying for help”. As Lord Knollys noted, this was potentially explosive: “Such a statement by the Minister in the presence of the Chairman of two groups whom he knew were considering an offer for DH was most embarrassing, to say the least; significantly it is omitted from the record subsequently circulated by the Minister” (end note 48). After Burke left, Sandys indicated that if a bid were made for de Havilland, he would give it maximum support. He offered £147 million support for VC10 & VC11. However, Sandys went on to admit that “if de Havilland were out of the merger he would not in practice let them die, despite what he had said to Sir Aubrey Burke”.

By now, English Electric and Vickers were seriously considering a hostile take-over of de Havilland. However, continued uncertainty about the exact nature of the company that would make the bid complicated the situation. As English Electric’s lawyers noted, “the obscurity of the future made it extremely difficult to put forward an offer which was both attractive to the seller and could be justified by the buyer”. Lord Caldecote also noted, “We should be careful not to commit ourselves to making an offer to de Havilland before we were clear about our relations with Vickers and in particular how the allocation of assets and contracts were to be made” (end note 49). These and other doubts soon ruled out a hostile bid and by 20th November, English Electric was “moving towards our view that an attempted enforced takeover would be inadvisable” (end note 50).

The news that Vickers and English Electric were considering a take-over of de Havilland was passed on to Sandys at a dinner with Sir George and H.G. Nelson. Sandys was enthusiastic and offered his help. He stressed his determination to push things through; he had not taken on the Ministry of Aviation to run it as the Ministry of Supply “under another guise” but to effect the difficult operation of rationalising the aircraft industry. He had full authority from the Prime Minister to execute the policy, and had the complete support of the Cabinet. He was therefore prepared to take considerable risks and give Vickers and English Electric all the support they needed provided it satisfied the government objective of “giving the country the type of industry they thought it needed” (end note 51).

On 24th November, Sandys asked his officials to suggest “possible forms of pressure which might be applied to de Havilland.” This included a decision to “turn off the tap” on research contracts for engines; while de Havilland already knew that it would have to seek a “modus vivendi” with Rolls-Royce”, such an abrupt announcement might have a “disproportionately

great psychological effect on the aircraft and guided weapons negotiations". The Ministry could delay a commitment to the Gnome helicopter engine (although there was no alternative). The Ministry could also disclose that the RAF wanted the VC10 instead of the Comet 4 for its next transport aircraft (true, but de Havilland still believed it was the RAF's preferred supplier) (reference 24).

More substantively, they could call de Havilland's bluff on a commercial dispute over the Comet:

"De Havilland feel they have discovered loophole in Comet levy and don't have to pay £43 million owed (end note 52). They hope we will be afraid to face the legal situation. We should deny this and demand immediate payment and let them sue us. This would publicise their attempt at sharp practice. By bringing into question an immediate liability to pay us nearly £44 million our action would reduce the Company's confidence in its ability to ride out a financial storm".

This could be backed by a concerted effort to undermine confidence in the future of Airco as a group under government policy. The Ministry would make it clear that there would be no future civil work allocated to the consortia and that Vickers would be preferred on sub sonic aircraft, while Bristol and Hawker Siddeley would take on SST development. This would remove from Fairey and Hunting "any incentive to persuade DH to stand apart from the new merged company and continue on the basis of their Airco association alone" (reference 24).

11. Repayable launch investment and the formation of The British Aircraft Corporation

Although Vickers and English Electric continued to ponder a hostile bid for de Havilland into early December, the difficulties of mounting a bid that would have any chance of succeeding with de Havilland's shareholders before Vickers and English Electric had sorted out who exactly was bidding for whom, were soon all too apparent. By December, the main focus of discussion had shifted back to a bilateral deal. The crucial issues were the respective company valuations, English Electric's willingness or otherwise to assume some responsibility for past civil programmes, and prospects for the VC11. On the latter, Vickers was as ever very optimistic and was now prepared to attack the DH121's marketability. The position of English Electric's aircraft production facilities was also problematic, claiming a third the new company's production (end note 53).

Lord Caldecote felt that Vickers had not given "nearly as much thought to the problems of valuation as we had". It was agreed in principle that as much as possible should be put into the new company. As all new projects would be put in the new company, in five years or so, it would receive most of the profits, including those from the VC11. The discussions became somewhat heated, as it was clear that the VC11 was dependent on both government support and the TCA order. Caldecote declared "it must be remembered that Vickers hope to get support for the VC10 up to a sum of £147 million out of this association, and also we are throwing in half of our guided weapons business, so that Vickers have considerable advantage in forming an association now, whereas English Electric have no advantage if they do not get a major participation in a new civil project" (end note 54).

Talks now focused on the creation of a Holding Company that would only be responsible for future work, and by early December they had reached a tentative agreement. They accepted that existing design teams would be retained as “viable units, and it is recognised to maintain this position each team must have a forward project programme”. The status of the existing programmes quickly resolved itself as the “Old Account” and “New Account” solution whereby each company would be responsible for the profits and losses of past programmes, but the new company, would be responsible for all new work, including the TSR2 and the VC11. English Electric would also agree to transfer its aircraft production facilities to the new company (end note 55).

The speedy resolution of the talks depended on Sandys delivering a support package to ease Vickers’ problems with the VC10 and to provide a basis for new civil programmes. Sandys had frequently hinted that in principle something might be arranged, but had steered clear of specifics before confirmation of re-grouping. By mid November, this uncertainty had to be resolved, especially as Vickers’ position was now quite desperate. In a brief prepared by Vickers and English Electric, the price agreed with BOAC for the VC10 was too low (£26 million per aircraft instead of a more realistic £29 million), and the non-recurring costs for development had “reached astronomical figures despite the most stringent controls”. This was on top of the Vanguard losses, now put at £147 million (end note 56). Vickers were looking for some relief on this burden as well as wanting the government to pay for all of the VC11 development costs estimated at £88 million. Company costs would be recovered on the first 40 aircraft, with government’s to follow on the following 40. All in all, the companies were looking for around £485 million in state aid in one form or another.

By the end of 1959, Sandys was aware of the need for speed, especially as the Prime Minister was due to be away for all of January 1960. If matters were left hanging until February, this could lead to a crisis at Vickers. In mid October Sandys had implied an offer of £147 million for VC10 costs and £75 million for VC11 launch (end note 56). On 15th December, he told Knollys and Caldecote that their request for £485 million was out of the question, but there was “some scope for manoeuvre around £368 million”. Sir George Edwards, who was at the meeting, suggested that BOAC would need little persuasion to drop Boeings in favour of a Super VC10, which Vickers was proposing to meet BOAC’s North Atlantic requirements; the RAF would also be best placed to use a mixed VC10 and Super VC10 fleet; both orders would help ease Vickers’ financial needs. However, officials challenged Edwards’ assertion, especially given BOAC’s obligation to act commercially, and estimated that the total financial call (including cost of Boeing sales) would amount to £588 million (reference 25). In the event, Sandys agreed to include the Super VC10 in the package, and later, in July 1960 prevailed on the BOAC Board to order 30 Super VC10s in a re-packaging of its original VC10 contract (end note 57).

Sandys presented this deal to the Cabinet on 17th December as part of a wider package to secure the future of the aircraft industry and to seal the re-grouping exercise. Although the long-term prospects were very good, the industry needed tiding over in the short term, even at some cost to the Exchequer. He admitted that the VC10 was hardly a “promising civil project”; but the decision to support the project was taken “mainly on the ground that it is necessary to tide Vickers over their present difficulties in order to prevent them going out of

the civil business and in the hope of greater success with future civil projects, when a group of sufficient strength has been created" (reference 26).

In advance of the Cabinet meeting, Sandys met Knollys and Caldecote. While he accepted that a link with de Havilland was no longer feasible - indeed by then de Havilland and Hawker Siddeley were close to tying the knot – together Vickers and English Electric were "not quite a big enough group". On 16th December, information was received that Hawker was indeed going to bid for de Havilland with Burke's support. English Electric and Vickers accepted that there was no question of a competing bid for de Havilland, but "it was agreed that Vickers and English Electric should examine together the possibility of bringing in the Bristol Aircraft Company, and while Fairey would not be attractive, the acquisition of Hunting should be considered". Bristol merger was attractive because of their design team, they were keen and it would result in a more "rounded group". The Minister viewed this as a group worthy of support.

On December 18th, Vickers and English Electric agreed to invite Bristol to join the new company. Sir Reginald Verdon Smith, Bristol's chairman joined the meeting. He suggested Bristol Aircraft was a good prospect especially as it had the SST contract to bring to the table (reference 27). Bristol had incurred heavy losses on the Britannia and was in a weak position to resist pressure to fall in with government policy. In earlier discussions with Sandys, Hawker Siddeley had revealed that it was only really interested in its SST design team. For his part Sandys threatened to take away the SST contract if Bristol did not find a stronger partner. With time running out, Bristol had little room to manoeuvre. Bristol joined Vickers and English Electric as a 20% partner (Vickers and English Electric would have 40% each) in the new company British Aircraft Company (BAC), effectively the same structure as discussed with de Havilland in November (end note 58). Hunting followed early in 1960 (end note 59).

With Cabinet's endorsement of Sandys' plan, BAC would receive £64 million for VC10 work, and 50% of the launch costs of the Super VC10 50% to a maximum of £51 million. BAC would also receive 50% of the launch costs of the VC11 (if ordered by TCA) to a maximum of £143 million. In addition, the government would underwrite 50% of up to 20 Super VC10 and/or 20 VC11 orders subject to agreement (reference 28). However, Vickers and English Electric felt that the government's terms for launch aid were "disappointing" and there was concern expressed about the position of the VC10 and uncertainty about BOAC's commitment to Super VC10. "The scale of government contribution is not as considerable as we had hoped but we are prepared to accept the paper", but "we shall reluctantly accept the proposed contribution of £94 million and £83 million in respect of the VC10 and Super VC10 respectively". This will have "continuing financial consequences for both the new company and Vickers and these costs will never be recovered whatever the success of the VC11" (end note 60).

The Ministry also insisted that the government must get its contribution back before industry at a rate that justified risking public money. The company felt this was also unfair "Although the suggestion has been made that the Government is joining in as a partner, it is hardly consistent with the nature of a partnership that one partner should not have the right to recoveries of this legitimate development expenditure. In contrast to the company's exposed

position, the Government will have recovered its investment and be assured of 150% profit on its investment. A loan would have been cheaper, but it might be argued that the Ministry's development contribution is in effect risk money requiring an adequate return".

In the case of the VC11, on an investment of £143 million, the Government would have an excess recovery of £162 million. The Government obviously wants to balance good and bad risk and "for this reason to place no limit on their share of profit arising from a successful aircraft", but it was being inconsistent in depriving the company of a similar right. The government would ultimately receive 150% on its investment compared to an industry risk rate of 10% (end note 60). However, on 31st December, Denis Havilland set out the Ministry's final version of the support and recovery package, stating that this was "agreed government policy from which there was no departure". Havilland agreed to look at the provision for inflation effects on the difference between estimated and actual costs and selling prices. Two days later, on New Year's Day, the Ministry proposed a modified recovery scheme, conceding some improvement in the recovery schedule, but industry still felt that the terms were too harsh (end note 61). However, Sandys reiterated that henceforward all government orders, and those subject to governmental approval (such as for the nationalised airlines) would be placed with one of the major groups (reference 31).

While the formation of BAC was perhaps the most politicised of the mergers, rationalisation of course involved the rest of the industry. Hawker Siddeley integrated its existing units more closely and closed a number of factories. It bought Blackburn; and with nowhere else to go, de Havilland accepted terms. Handley Page did not, and was subsequently frozen into a slow death by the lack of government contracts. Rolls-Royce resisted pressure to buy up other companies that would bring unwanted extra capacity and little additional work. However, the formation of Bristol Siddeley Engines (BSE) from the engine interests of Bristol, Hawker Siddeley, Blackburn and de Havilland, created a strong second UK competitor to Rolls-Royce. Subsequently, BSE were awarded a number of important government contracts. The UK's helicopter assets (Saunders Roe, Fairey and Bristol) were gathered into Westland. Finally, several light aviation companies were grouped under Beagle (end note 62).

12. Final words

BAC's subsequent history is better charted, and is soon engaged in collaborative programmes with Europe, facing and recovering from the trauma of the TSR-2 cancellation and a continuing competition with Hawker Siddeley for government support for civil programmes. Indeed, the merger policy launched in 1957 and its attempt to create four competing airframe and engine companies soon unwound, culminating in the Plowden report of 1965, which advocated further restructuring and internationalisation of development and production. Throughout the 1970s, a merger of BAC and Hawker Siddeley was often considered, but not consummated until 1978. Arguably, the continued competition between BAC and Hawker Siddeley weakened the airframe sector, reducing influence in European programmes and in British government policy towards aerospace generally (end note 63).

Which, naturally enough leads to the tantalising "what might have been" about the formation of BAC, and if de Havilland had finished up as part of the new company? The combined

group would immediately have been a powerful force in UK aviation. If it had retained the SST contract (and Bristol might have been encouraged to go with Hawker Siddeley to strengthen its civil business) as well as the TSR2, “BAC” would have had two of the largest government contracts then available. While fusing Hatfield and Weybridge would have been at least as problematic as Weybridge and Warton, the UK would have had one of Europe’s, if not the world’s most capable civil airline assets. It is not inconceivable that “BAC” would have been better positioned to develop a family of short and medium haul airliners. Given Hawker’s vulnerability to later defence cuts, it might have been drawn into a merger with BAC sometime in the 1960s.

Whether this grouping, or just the “greater BAC” would have been as vulnerable to the economic and market forces that urged a collaborative logic is a debatable contention. However, the UK would certainly have been far better placed in the politics of European collaboration. The UK would have been spared the distracting competition between Hawker Siddeley Airbus and the BAC 2-11 and then 3-11. As a result, the future geography of the European aircraft industry may well have had an entirely different shape.

End notes

1. This paper is part of a continuing project on the history of the UK aerospace industry in the 1950s and early 1960s.
2. In addition to the National Archive documentation, we are fortunate in having company records of the negotiations, including transcripts of telephone conversations with Duncan Sandys: the 2nd Viscount Caldecote Papers lodged at the Institution of Engineering and Technology, London (record reference SC MSS 165/1/1/2); the Vickers Archive at the University of Cambridge (VP); the de Havilland papers at the RAF Museum Hendon (F625); and the Duncan Sandys Papers at Churchill College Cambridge. Additional material is contained in the Freddie Page Memoirs in the Royal Aeronautical Society National Aerospace Library.
3. But anticipated by two previous Defence Statements and Cabinet level discussions. Cabinet Committee on Defence Policy, C (54) 250, 24th July 1954
4. The problems faced by the industry were the subject of a Treasury led interdepartmental Aircraft Industry Working Party that sat from 1957 until mid 1958. See National Archive files under AVIA 65/1084, reference 12.

5. The Aircraft Industry Working Party had some doubts that this would be enough. See National Archive file AVIA 65/1084, 18th April 1958.
6. The Caldecote papers contain an English Electric memorandum outlining the background to the Vickers - English Electric merger talks. Reference 18, Institution of Engineering and Technology Archive, London, record reference SC MSS/165/1/1/2, 14th October 1959.
7. Contribution by Handel Davies to discussion at an RAF Historical Society seminar 'TSR2 with hindsight', April 1997, RAF Historical Society Journal issue 17B, p.121.
8. Hawker, as Hawker Siddeley Aviation, would pick up several other design contracts as the Government moved away from the Sandys' mantra; these would focus on VTOL combat aircraft, the P.1127, the supersonic P.1154 and the HS681 transport - the last two victims of the 1964-5 round of cancellations.
9. The RAF had also seen off a strong and persistent challenge from the Navy to adapt the Blackburn NA39 (Buccaneer) carrier strike aircraft for OR339. The NA39 lobby would not go a way and would return in force as TSR2 costs began to escalate.
10. Memorandum to Vickers from English Electric, 24th January 1958. Reference 16, file VP 447.
11. Reference 16, file VP 445 and note of meeting involving Sir George Edwards, 26th June 1959, reference 16, file VP 447.
12. Vickers would not be so candid about the relationship between the two aircraft in the negotiations that followed.
13. The degree to which the DH121 and the VC11 were competitors is debatable. Given that BEA had forced de Havilland to reduce the 121's size, Vickers proposed a larger aircraft aiming, it claimed at a different market segment - a somewhat questionable assertion given the likely overlap at the top end of the DH121 market.
14. Company Board Special Meeting 29th July 1959. De Havilland papers at the RAF Museum, X003-6163 Box 6525; see also English Electric memorandum on possible collaboration, 14th October 1959, reference 18.
15. All values at current prices based on the Treasury deflator.
16. Aide Memoire by A. S Kennedy (Director, de Havilland) based on telephone call from Sir Charles Dunphie (Vickers), 31st July 1959, reference 17.
17. Memo from Lord Caldecote to H. G. Nelson, 6th August 1959, reference 18.
18. Note of meeting with the Minister, 6th August 1959, reference 18.

19. Memo from Air Commodore S. Graham, 4th September 1959, reference 18.
20. Note from Lord Caldecote to H.G. Nelson on the Association with Vickers, 16th September, 1959, reference 18.
21. Letter from H.G. Nelson to Lord Knollys, Chairman Vickers, 18th September 1959, reference 18.
22. Record of a meeting between Lord Caldecote, Lord Knollys, and Sir Aubrey Burke, 21st September 1959, reference 18.
23. Record of a meeting between Lord Caldecote, Lord Knollys, and Sir Aubrey Burke, 21st September 1959 and memo to H.G. Nelson, September 1959, reference 18.
24. Lord Knollys suggested that George Edwards head the new group. However, Caldecote privately noted that while Edwards had a fine reputation based on Viscount and its profits, much of these have now been “mortgaged on more doubtful ventures for the future which are now a liability, even worrying an organisation as large as Vickers.” Nor had Edwards been able to carve out a place of “any importance for Vickers in the guided weapons field”. SCMS/165/1/1/2; note from Lord Caldecote to H.G. Nelson on the Association with Vickers, 16th September 1959.
25. The Ministry of Aviation replaced the Ministry of Supply as the ministry responsible for aircraft development and production. It also included responsibility for civil aviation, formerly in the Ministry of Transport and Civil Aviation.
26. Reference 16, file VP 445. 23rd November 1959.
27. See National Archives file AVIA 63/135, 18th November 1959, for the minutes of these meetings.
28. In reality, five; two airframe/missile companies, two engines and a single rotary-wing company. He had no explicit preference for composition, but as we will see, Sandys was very keen to see de Havilland join English Electric and Vickers.
29. Summary of Options, 16th October 1959, reference 17.
30. C.B White, de Havilland Company Secretary to Aubrey Burke, Note on proposed Association of Vickers, English Electric and de Havilland, 26th October 1959, reference 17.
31. Reference 17, 26th October 1959.
32. English Electric memorandum on Possible Collaboration, 14th October 1959, reference 18.

33. Meetings with Lord Knollys and memo from Lord Caldecote to H.G. Nelson, 15th & 19th October 1959, reference 18.
34. Reference 21, 19th October 1959; also reference 18, note by H.G. Nelson to Lord Caldecote, 19th October 1959.
35. Reference 18, note by H.G. Nelson to Lord Caldecote, 19th October 1959.
36. Aide Memoire from A.S. Kennedy, 10th November 1959. A note on the practicality of the merger, 19th November, 1959, reference 17.
37. Opinion to Sir Aubrey Burke from Peat, Marwick, Mitchell, 23rd November 1959, reference 17.
38. Note of meeting between English Electric and Vickers, 4th November 1959; note of a talk with Sir Aubrey Burke, 6th November 1959; memo from Freddie Page comparing DH121 and VC11, 4th November 1959, all from reference 18.
39. Meeting of Financial Controllers, English Electric, Vickers and de Havilland, 5th November 1959, reference 18.
40. Memo from English Electric, 18th November, VP 447, reference 16.
41. Meeting between EE-Vickers-DH at Lord Knollys' flat, 11th November 1959, reference 18; see also VP445, reference 16.
42. VP 445, reference 16.
43. Meeting between EE-Vickers-DH at Lord Knollys' flat, 19th November 1959, reference 18.
44. C.B White, de Havilland Company Secretary to Aubrey Burke, note on proposed association of Vickers, English Electric and de Havilland, 5th November 1959, reference 17.
45. Note of a meeting between Airco and Ministry of Supply, 16th November 1959, reference 17.
46. Draft and Letter from Sir Aubrey Burke to Duncan Sandys, 24th & 25th November 1959, reference 17.
47. Meeting at MoA between Ministerial team, Vickers, EE and DH 25th November 1959, reference 17. The same meeting is noted in reference 18, 25th November 1959, where Sandys' asperity with Burke is detailed.
48. Note of meeting with the Minister, reference 16, VP447, 19th-27th November 1959. The Minister's views about de Havilland's prospects are indeed missing from the

- official record. Lord Shawcross, who acted as an informal political adviser to the de Havilland, wrote to C.B White commiserating with this bruising encounter with the Minister, “The Minister certainly seems to have given you a rough time. I am afraid Vickers has got certain political advantages”. Letter to C.B. White from Lord Shawcross, 7th December 1959, reference 17.
49. Meeting between English Electric and legal team, 10th November 1959, reference 18.
 50. Vickers Board memorandum, 20th November 1959, reference 16, VP447.
 51. Meeting at Hilcote Hall, 21st November 1959, reference 18.
 52. The Comet levy was the schedule of repayments to the Government following the bail out of De Havilland in the mid 1950s.
 53. A series of meetings, 11th-18th November 1959, reference 18.
 54. English Electric-Vickers meeting 23rd November 1959, reference 18.
 55. A move which would have full support from Freddie Page at Warton, reference 1, Chapter 3.
 56. Case for Maximum Aid for VC10 and VC11, 11th November 1959, reference 18.
 57. This decision would cost BOAC dear, and was seen at the time as “something of a gamble”; see Hayward, reference 4, pp. 48-9 and *Flight*, 8th March 1962.
 58. Reference 16, VP 445.
 59. BAC Board Minutes (RAF Museum, Hendon) April 22nd 1960.
 60. “A note on Ministry of Aviation assistance proposals of 22nd December”, reference 18, 30th December 1959 and reference 29, 1st January 1960.
 61. Reference 30, AVIA 63/135, 5th and 6th January 1960; reference 16, VP 445.
 62. Reference 5, p.78. Beagle would not last long, collapsing in the mid 1960s at a cost of £8.5 million to the taxpayer. Shorts remained outside the two groups, largely because its nationalised status made it difficult to fit inside two privately owned companies.
 63. The Rolls-Royce take over of BSE in 1966 further increased the imbalance.

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