S
811

PREM 19/1692

MT

PART 4

SECRET

40/11 PT2

42.18

Confidential Filing

Procurement of Weapon Systems.

HARM/ALARM air launched missiles.

Cost of Defence Procurement.

DEFENCE.

Part 1: March 1983

Part 4: June 1986

Referred to	Date	Referred to	Date	Referred to	Date	Referred to	Date
~~10.6.86~~		~~17.12.86~~					
~~19/6/86~~		18.12.86					
~~31.7.86~~		22.12.86					
~~12.8.86~~							
~~5.9.86~~							
~~12.9.86~~							
~~22.9.86~~		PART ENDS					
~~23.9.86~~							
~~25.9.86~~							
~~30.9.86~~							
~~13.10.86~~							
22.10.86							
~~26.11.86~~							
27.11.86							
~~28.11.86~~							
~~1.12.86~~							
4.12.86							
~~10~~							
~~4.12.86~~							
9.12.86							
~~10.12.86~~							
~~15.12.86~~							
~~16.12.86~~							
~~17.12.86~~							

PREM 19/1692

PART 4 ends:-

MOD TO PS/CDL 22.12.86

PART 5 begins:-

R. IGGS TO PM 6.1.87

TO BE RETAINED AS TOP ENCLOSURE

Cabinet / Cabinet Committee Documents

Reference	Date
CC(86) 42nd Meeting, item 4	18/12/1986
OD(86) 21	15/12/1986
OD(86) 22	15/12/1986

The documents listed above, which were enclosed on this file, have been removed and destroyed. Such documents are the responsibility of the Cabinet Office. When released they are available in the appropriate **CAB** (CABINET OFFICE) CLASSES

Signed G. Gray Date 16/3/2015

PREM Records Team

Published Papers

The following published paper(s) enclosed on this file have been removed and destroyed. Copies may be found elsewhere in The National Archives.

House of Commons HANSARD, 18 December 1986, columns 1349 to 1357: Airborne Early Warning Aircraft

Signed J. Gray Date 16/3/2015

PREM Records Team

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7L

22nd December 1986

CDS
23/XII

Dear Andrew,

ALARM

Thank you for your letter of 16th December.

The Defence Secretary has considered BAe's position further in the light of their bid for Royal Ordnance (RO). He fully appreciates the difficulty BAe face in meeting our timetable for the RO sale but he does not believe that independent arbitration would be a practical way of resolving the dilemma. It would be likely to expose Defence Votes to unnecessary risk and would anyway be virtually impossible to arrange on any satisfactory basis in the timescale.

In an attempt to find a way forward which suits all sides, the Minister of State for Defence Procurement, Lord Trefgarne, had a meeting this morning with Sir Austin Pearce. Sir Austin accepted that we would face a real practical problem in selling RO to BAe while the ALARM issue remained unsettled. He also agreed that both sides wanted a settlement on ALARM as soon as possible and a compromise solution was worked out. BAe's bid for RO will now be processed in parallel with those of the other Companies who are on our short-list and they will be given access to the various RO sites early in the New Year so that they may find out more about the Company. But unlike the other short-listed bidders they will not at this stage be given access to RO Head Office or to the books. This more critical access will be available to them only once it is clear that a statement on ALARM is agreed. In practical terms, this means that they must aim to reach an ALARM settlement before the end of January if they are not to fall behind the hunt in the RO competition. BAe have accepted this and Lord Trefgarne has undertaken that the MOD will do everything possible to ensure a settlement on ALARM can be reached in the very tight timescale.

Andrew Lansley Esq

SECRETARY OF STATE

I am sending copies of this letter to the Private Secretaries to other members of OD, the Chief Secretary and Sir Robert Armstrong.

(I C F ANDREWS)

DETECTIE

ALARM

PTT

23

DRAFT STATEMENT BY SECRETARY OF STATE ON AWACS/NIMROD

Although defence needs were the crucial factor in the decision on AWACS which George Younger announced today, I know that its impact on jobs is a significant issue, particularly for the individuals involved. So, I asked my Department to assess those consequences.

My Department's view is that the net effect on jobs is at worst likely to be neutral, and could well be positive. Although the Department's assessment notes that there may well be redundancies, they could be lower than expected as skilled people are redeployed to other contracts. But the assessment also notes that there will be additional jobs as a result of the decision, some created immediately and more created as the work progresses. Collaboration on other contracts with Boeing has created many jobs in this country over the past few years. Boeing has agreed to place business in the UK as part of the AWACS deal and this will create new jobs. For example, it is estimated that Plessey's collaboration with Westinghouse should create an additional 1,400 new jobs in the first year and double that thereafter. Individuals made reduntant by GEC may well be absorbed by these new jobs. Such jobs will be mainly in high technology and spread over the whole country. Indeed some will come in areas of high unemployment where they are needed most.

Most important of all, these new jobs will be won because the British firms concerned are competitive with the best in the world. This opportunity to demonstrate how competitive British firms can be is the best guarantee of jobs in the future.

CC (MEA BMG DIC)

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~930 7022~~ 218 2111/3

MO 26/7/3L

18th December 1986

CDP 18/12

Dear Charles

AEW COMPETITION : PUBLIC LINE TO TAKE

I attach a speaking note for Ministers to draw upon when responding to questions about the outcome of the AEW competition. Also enclosed is a copy of the statement my Secretary of State will be making in the House later today.

I am sending a copy of this letter to the Private Secretaries to all Ministers in charge of Departments and should be grateful if they would ensure that it is copied to the Private Offices of their junior Ministers. A copy also goes to Trevor Woolley in the Cabinet Office.

Yours ever

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

SPEAKING NOTE FOR USE BY MEMBERS OF THE CABINET AFTER ANNOUNCEMENT OF A DECISION IF IN FAVOUR OF E-3A

1. Airborne early warning has a vital role to play in detecting hostile aircraft attacking our shores. The Nimrod AEW system should have entered operational service with the RAF in 1984. But it has been in serious technical trouble and has overrun badly on cost and timescale. Last February GEC were given 6 months to make proposals for achieving the specified performance at a firm price. At the same time other firms were given the chance to bid against the same specification. The Boeing E-3A, which is already in service with NATO and the United States Air Force, emerged as the best alternative.

2. MOD's evaluation of GEC's proposals showed that Nimrod still had a very long way to go to meet the specification. GEC explained how they planned to do this. The Defence Secretary had to judge whether the firm could achieve an acceptable standard within an acceptable timescale.

3. The unanimous advice of MOD's scientific and military experts was that the prospects were not good and the technical risks were still high. They concluded that Nimrod was unlikely to achieve the required performance before the mid-1990s at the earliest, if then. This meant that the RAF would lack this vital capability for the better part of a decade, apart from the obsolescent Shackletons which have only limited value. This is too long to leave the nation's defences in a state of unreadiness.

4. The Boeing E-3A on the other hand meets the specification in all essential respects and in some ways exceeds it. Because of its greater size it is more capable than Nimrod of being developed further to match the increasing threat posed by modern weapons. It will be delivered in 1991, some months earlier than GEC's date for Nimrod in its final form. It is true that it costs more than the remaining cost of Nimrod, but the difference is not great if you take account of running costs over the lifetime of the aircraft; and the extra money is worth paying for the greater assurance of performance in the timescale we need.

5. This has been a very difficult decision for the Defence Secretary and MOD, and there is no question of its having been handled in a biassed way. In fact the easy course would have been to let Nimrod carry on and hope for the best. The Defence Secretary took the right and courageous course and grasped the nettle.

6. This is not a disaster for British industry. There may be job losses for GEC and their suppliers, though these are for the firms concerned to decide. Offsetting these will be gains to companies all over the country as a result of Boeing's commitment to spend in Britain £130 for every £100 spent on the E-3A. The net result should be no fewer jobs and perhaps more. Furthermore British firms will participate in the E-3A project itself at the level of high technology, not just tin-bashing.

7. I see no need for an independent review. It is up to the Government to take the decision, both as customer responsible for the defence of Britain and as custodian of the taxpayer's interests.

STATEMENT BY THE SECRETARY OF STATE FOR DEFENCE

AIRBORNE EARLY WARNING AIRCRAFT FOR THE ROYAL AIR FORCE

1. WITH PERMISSION, MR SPEAKER, I WISH TO MAKE A STATEMENT ON AIRBORNE EARLY WARNING AIRCRAFT FOR THE ROYAL AIR FORCE.
I APOLOGISE IN ADVANCE FOR ITS LENGTH.

2. THE HOUSE WILL RECALL THAT IN MARCH 1977 THE THEN GOVERNMENT ANNOUNCED THEIR DECISION TO PROCEED WITH THE NIMROD SYSTEM TO REPLACE THE SHACKLETON IN THE AIRBORNE EARLY WARNING ROLE. CONTRACTS WERE PLACED WITH WHAT IS NOW BRITISH AEROSPACE PLC FOR THE NECESSARY WORK ON THE NIMROD AIRFRAME, AND WITH GEC AVIONICS LIMITED FOR THE DEVELOPMENT AND PRODUCTION OF ITS MISSION SYSTEM AVIONICS.
AT THAT TIME IT WAS ENVISAGED THAT THE AIRCRAFT WOULD BE AVAILABLE TO THE RAF IN A TRAINING ROLE IN MAY 1982 AND FOR OPERATIONAL SERVICE IN APRIL 1984.

3. BRITISH AEROSPACE HAVE DELIVERED THE AIRFRAMES IN ACCORDANCE WITH THEIR CONTRACT.
BUT AS THE HOUSE KNOWS, SERIOUS DIFFICULTIES HAVE ARISEN IN THE DEVELOPMENT OF THE AVIONICS SYSTEM FOR THE AIRCRAFT, AND THESE HAVE LED TO VERY SERIOUS TIME AND COST OVERRUNS.

ON 26TH FEBRUARY LAST MY RT HON FRIEND THE THEN MINISTER OF STATE FOR DEFENCE PROCUREMENT INFORMED THE HOUSE THAT THE GOVERNMENT HAD DECIDED TO CONSIDER ALL OF THE AVAILABLE OPTIONS, BOTH FROM THIS COUNTRY AND FROM OVERSEAS, FOR MEETING THE RAF'S NEEDS BEFORE TAKING A FINAL DECISION ON THE WAY FORWARD.

HE ALSO ANNOUNCED THAT FOR NIMROD ITSELF WE HAD NEGOTIATED WITH GEC REVISED CONTRACTUAL ARRANGEMENTS INVOLVING A SHARING OF FINANCIAL RISK WITH THE COMPANY AND GIVING THEM ADEQUATE INCENTIVES FOR COMPLETION.

THE INTENTION WAS THAT, BY THE END OF AN INTERIM PERIOD OF SIX MONTHS, GEC WOULD PROVIDE US WITH A FIRM PRICE PROPOSAL AGAINST A TECHNICAL SPECIFICATION AIMED AT FULFILLING THE NEEDS OF THE RAF, AND WOULD ALSO DEMONSTRATE TO US THE PROGRESS THEY HAD ACHIEVED ON THE DEVELOPMENT OF THE PROJECT.

MEANWHILE WE WOULD EXPLORE ALTERNATIVE SOLUTIONS.

ON 25TH SEPTEMBER MY NOBLE FRIEND MINISTER OF STATE FOR DEFENCE PROCUREMENT ANNOUNCED THAT BEST AND FINAL OFFERS WERE BEING INVITED FROM GEC AVIONICS FOR THE NIMROD AND FROM THE BOEING AEROSPACE COMPANY FOR THE E-3A AIRCRAFT.

THESE OFFERS HAVE NOW BEEN RECEIVED AND ASSESSED.

4. GEC'S OFFER FOR NIMROD HAS BEEN JUDGED AGAINST A CARDINAL POINT SPECIFICATION BASED ON THE AIR STAFF REQUIREMENT ENDORSED IN 1977, WITH THE ADDITION ONLY OF AN AIR-TO-AIR REFUELLING CAPABILITY.

SINCE 1977 THE AIR THREAT AGAINST THE UNITED KINGDOM HAS INCREASED.

BUT WE HAVE NOT (AS THEY SAY) MOVED THE 1977 GOALPOSTS SO FAR AS THE NIMROD SYSTEM IS CONCERNED.

5. GEC'S OFFER COVERS THREE LEVELS OF ATTAINMENT.
IN ASCENDING ORDER, AND CUMULATIVELY, THEY HAVE OFFERED THREE AIRCRAFT IN THE SECOND HALF OF 1987 TO THE STANDARD OF THE PRESENT TRIALS AIRCRAFT; SIX AIRCRAFT BETWEEN MID-1989 AND MID-1990 WHICH WOULD APPROACH THE FINAL STANDARD SUBJECT TO CERTAIN EXCLUSIONS, OF WHICH THE MOST IMPORTANT IS A VITAL SECURE DATA LINK TO AND FROM THE AIRCRAFT; AND 11 TO THE FINAL STANDARD BETWEEN OCTOBER 1991 AND SEPTEMBER 1993.
THE FIRST OF THESE OFFERS IS NOT OF ANY VALUE AS THE SYSTEM IS NOT NOW OF A STANDARD THAT COULD BE USED FOR TRAINING.
THE QUESTION I HAVE HAD TO CONSIDER IS WHETHER, TAKING ACCOUNT OF THE WORK GEC HAVE DONE SINCE FEBRUARY, AND IN PARTICULAR OF RECENT FLIGHT TRIALS, TOGETHER WITH OUR KNOWLEDGE OF THE RESULTS THEY HAVE ACHIEVED DURING THE LAST NINE YEARS, I CAN HAVE CONFIDENCE THAT THEY COULD DELIVER AIRCRAFT WITH THE SECOND AND THIRD LEVELS OF PERFORMANCE IN THE TIMESCALES THEY HAVE OFFERED.
THIS IS AN ASSESSMENT OF THE NIMROD PROGRAMME AGAINST THE OBJECTIVE STANDARD OF THE AIR STAFF REQUIREMENT AND NOT AGAINST THE E-3A.

6. I AM SORRY TO SAY THAT THE CONCLUSION I HAVE REACHED AFTER THE MOST CAREFUL CONSIDERATION IS THAT I CANNOT HAVE THAT CONFIDENCE. GEC HAVE CERTAINLY MADE TECHNICAL PROGRESS IN SOME AREAS SINCE FEBRUARY, AND HAVE ALSO ACCEPTED CONTRACTUAL TERMS WHICH WOULD GIVE THEM THE STRONGEST INCENTIVE TO ACHIEVE SUCCESS.

I PAY TRIBUTE TO THEM FOR THAT.
NEVERTHELESS THERE HAVE BEEN TECHNICAL DISAPPOINTMENTS AS WELL AS PROGRESS.
THE RECENT FLIGHT TRIALS WHICH HAVE BEEN ATTEMPTED HAVE NOT PRODUCED A CONSISTENT AND RELIABLE PATTERN OF RESULTS.
SUCH RESULTS AS HAVE BEEN ACHIEVED FALL WELL SHORT OF THE AIR STAFF REQUIREMENT.
THE COMPANY HAVE THEREFORE MADE PROPOSALS FOR A NEW PROGRAMME OF WORK WHICH WOULD IMPROVE THE SYSTEM'S PERFORMANCE OVER THE NEXT FEW YEARS.
I HAVE CONSIDERED THE PROPOSALS VERY CAREFULLY, BUT THE UNANIMOUS VIEW OF MY SCIENTIFIC AND MILITARY EXPERTS IS THAT THE REQUIRED PERFORMANCE IS UNLIKELY TO BE ACHIEVED BEFORE THE MID-1990S AT THE EARLIEST, IF THEN.

7. THIS IS A QUESTION OF SCIENTIFIC AND ENGINEERING JUDGEMENT; THE LIKELIHOOD OF SUCCESS DOES NOT LEND ITSELF TO ABSOLUTE PROOF ONE WAY OR THE OTHER.
I MUST JUDGE THE PROSPECTS ON THE BASIS OF THE SCIENTIFIC AND SERVICE ADVICE AVAILABLE TO ME.
THAT ADVICE IS CLEAR AND UNANIMOUS.

8. AS I HAVE SAID, NIMROD AEW SHOULD HAVE ENTERED RAF SERVICE FOR TRAINING IN 1982 AND FOR OPERATIONS IN 1984.
AIRBORNE EARLY WARNING IS A VITAL AIR DEFENCE CAPABILITY AND MULTIPLIES THE VALUE OF OTHER FORCES.

THE EXISTING SHACKLETONS, WHICH ENTERED SERVICE IN THIS ROLE IN 1972, ARE OBSOLESCENT AND WOULD BE OF LIMITED VALUE IN HOSTILITIES.

9. VERY RELUCTANTLY, I HAVE DECIDED THAT THE TIME HAS NOW COME TO CANCEL THE NIMROD AEW PROGRAMME, NOTWITHSTANDING THE EXPENDITURE OF £660M SO FAR, JUST OVER HALF OF WHICH HAS BEEN SPENT ON THE AVIONICS.

ALL EXISTING CONTRACTS ARE THEREFORE BEING TERMINATED.

SUBJECT TO SATISFACTORY COMPLETION OF CONTRACTUAL NEGOTIATIONS, WE SHALL INSTEAD BE ORDERING SIX E-3A AIRCRAFT FROM BOEING NOW, WITH THE OPTION OF ADDING A FURTHER 2 WITHIN THE NEXT SIX MONTHS.

THE E-3A IS ALREADY IN SERVICE WITH THE NATO AEW FORCE AS WELL AS WITH THE UNITED STATES AIR FORCE.

THE RAF VERSION WILL MEET OR COME CLOSE TO THE 1977 OPERATIONAL STANDARD WE HAVE SET AND WILL IN SEVERAL RESPECTS, SIGNIFICANTLY EXCEED IT, THUS IMPROVING THE RAF'S CAPABILITY AGAINST THE MILITARY THREAT.

THERE IS PLENTY OF POTENTIAL FOR STRETCHING THE SYSTEM TO MATCH FURTHER DEVELOPMENTS IN THE THREAT.

I AM CONFIDENT THAT THE E-3A WILL GIVE EXCELLENT SERVICE WITH THE RAF.

10. ALLOWING FOR TERMINATION COSTS ON THE NIMROD CONTRACTS, THE COST OF ACQUIRING THE SIX E-3As WITH INITIAL SUPPORT WILL BE £860M AT 1986/87 PRICES, WHICH IS £200M MORE THAN THE REMAINING COST OF ACQUIRING 11 NIMRODS.

THESE PRICES ARE BASED ON STERLING QUOTATIONS FROM BOEING.

THE DIFFERENCE REPRESENTS VALUE FOR MONEY GIVEN OUR TOTAL CONFIDENCE IN THE E-3A'S ABILITY TO PERFORM THE OPERATIONAL TASK IN AN ACCEPTABLE TIMESCALE.
ON A THROUGH-LIFE COST BASIS INCLUDING RUNNING COSTS OVER 20 YEARS THE DIFFERENCE IS MARGINAL.
THESE COMPARISONS ARE CONFINED TO FUTURE EXPENDITURE AND TAKE NO ACCOUNT OF PAST EXPENDITURE ON THE NIMROD SYSTEM.
THE COST OF THIS PURCHASE WILL BE CONTAINED WITHIN THE PLANNED DEFENCE EXPENDITURE TOTALS PUBLISHED IN MY RT HON FRIEND'S AUTUMN STATEMENT.

11. NEVERTHELESS THIS IS A SAD DECISION TO HAVE TO TAKE, BUT I HAVE NO DOUBT THAT IT IS THE RIGHT ONE.
THERE ARE LESSONS FOR ALL OF US IN THIS OUTCOME, AND I DO NOT SEEK TO EVADE MY DEPARTMENT'S SHARE OF RESPONSIBILITY.
OUR EXPERIENCE WITH NIMROD HAS REMINDED US OF THE IMPORTANCE OF ESTABLISHING AGREED CONTRACTUAL TERMS AT THE EARLIEST POSSIBLE STAGE, WITH CLEAR SPECIFICATIONS AND AGREED ACCEPTANCE CRITERIA, WHICH PLACE THE CONTRACTOR UNDER AN EFFECTIVE DISCIPLINE.
MY FELLOW DEFENCE MINISTERS AND I WILL BE ENSURING THAT THESE AND OTHER LESSONS ARE FULLY ABSORBED AND ACTED ON IN OUR FUTURE HANDLING OF MAJOR PROJECTS.

12. WHILE THIS MUST INEVITABLY BE A SAD DAY FOR GEC AND THEIR WORKFORCE, THIS DECISION MUST BE SEEN IN ITS PROPER CONTEXT.

THEY WILL REMAIN ONE OF MOD'S BIGGEST EQUIPMENT SUPPLIERS; WE SPENT OVER £700M WITH THEM LAST YEAR EVEN EXCLUDING EXPENDITURE ON NIMROD.

THEY AND OTHER BRITISH FIRMS WILL CONTINUE TO DESIGN AND MANUFACTURE AIRBORNE RADARS DESPITE THE PRESENT DECISION.

THE LOSS TO BRITISH DEFENCE TECHNOLOGY WILL BE SOLELY IN THIS HIGHLY SPECIALISED FIELD OF LARGE AND ADVANCED AEW SYSTEMS, AND IT IS NOT STRATEGICALLY VITAL FOR THIS CAPABILITY TO BE RETAINED IN BRITISH INDUSTRY.

IN ANY CASE, BRITAIN WILL CONTINUE TO BE INVOLVED IN THIS TECHNOLOGY THROUGH THE PARTICIPATION OF RACAL, PLESSEY AND FERRANTI IN THE E-3A ORDER FOR THE RAF.

13. FURTHERMORE, BOEING'S PROPOSALS FOR THE E-3A INCLUDE A CONTRACTUAL COMMITMENT ON THEIR PART TO AN EXTREMELY HIGH LEVEL OF OFFSET, AMOUNTING TO £130 TO BE SPENT ON WORK FOR BRITISH COMPANIES FOR EVERY £100 WHICH WE SPEND ON THE E-3A. THIS COMMITMENT HAS BEEN WELCOMED BY BRITISH FIRMS WHO WILL BE PARTICIPATING IN THE E-3A PROJECT.

BOEING ARE PUBLICLY COMMITTED TO PLACING HIGH TECHNOLOGY WORK WITH BRITISH COMPANIES AND HAVE AN EXCELLENT RECORD FOR HONOURING UNDERTAKINGS OF THIS KIND.

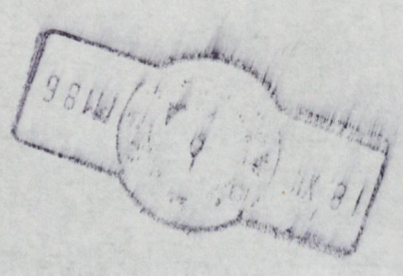
OUR ASSESSMENT IS THAT JOB LOSSES RESULTING FROM THE CANCELLATION OF NIMROD WILL BE EQUALLED IF NOT EXCEEDED BY JOB GAINS IN FIRMS ALL OVER THE COUNTRY RESULTING FROM BOEING'S OFFSET PROPOSALS.

14. AS I HAVE SAID, MR SPEAKER, THE DECISION I HAVE ANNOUNCED HAS NOT BEEN AN EASY ONE.

I WISH VERY MUCH THAT IT COULD HAVE BEEN OTHERWISE.

HOWEVER, IF THE RAF IS TO HAVE THE EQUIPMENT IT URGENTLY NEEDS TO DEFEND THIS COUNTRY, THIS IS THE ONLY DECISION THAT CAN BE RIGHT.

I COMMEND IT TO THE HOUSE.



Nimrod: the big questions

Lord Weinstock, managing director of GEC, recounts the history of his firm's contender and appeals for a fair chance to clear away the confusion

The essential features of our agreement with the government were that we would work closely with the Ministry of Defence to do everything possible to ensure that the Nimrod airborne early-warning system met the RAF's cardinal points specification; that the Ministry of Defence would examine alternatives to satisfy it that it was getting good value for money for the remaining Nimrod programme, or a fall-back alternative if that should prove necessary; and that GEC would take 50 per cent of the financial risk.

No-one who benefited from the protection of the RAF during the onslaught of the Luftwaffe in the 1940s should feel other than an awed respect for the service. Of course the RAF must have an early-warning system which meets its specification and is available at reasonable cost and within the stipulated time. Had we been in any doubt that we could achieve this, we would not since March 1986 have put £25 million of our own money into the project. Still worse, if delivery *was* three years late, as has been suggested it might be, that would cost the company well over £200 million under the onerous contract terms we have promised to accept. So there is every reason for GEC to drop out of the contract if Nimrod wil not do the job. But we do not believe that to be the case.

No criticism

Progress on the development has been continually notified over the past months to the MoD and RAF in a series of reports which showed that all the target dates had been either met or beaten. I have received no criticism from the MoD.

So far as I have been able to ascertain, little or no active assistance was rendered either constructively or critically by the MoD during these months, except for the provision of target aircraft and visits at our invitation to see for themselves what was being done. On these occasions, the comment tended to be complimentary and certainly not critical.

The fact is that the company has demonstrated that it will be able to meet the RAF's specification against which the performance of both systems was to be measured; what was *not* envisaged was a sudden-death playoff of the two systems in their present state. As the Secretary of State for Defence said recently in a broadcast, the Nimrod system works, but the task put on GEC Avionics last March was to establish that the Nimrod would meet the RAF specification *at the end of the development period.*

That Boeing's Awacs is operational today, although still below the RAF's requirements, does not mean that its delivery will be any sooner or its capability any greater than Nimrod's. In fact, Nimrod looks certain to be ready sooner, with added functions for much less than the Boeing cost.

Had our performance been as bad as it is apparently painted, it is extraordinary that we could have been nominated as recently as September 25 to go forward for final adjudication when the three other contenders were eliminated. Even later, at the end of September, we were asked by the MoD to continue for a further three months on the same 50:50 pricing arrangement.

Contrary to recent media reports that Nimrod has been achieving only a 30 per cent success rate in trials, the project has achieved 91 hours and 40 minutes of successful mission system operation out of a potential 100 hours (20 flights) between October 23 and last Friday afternoon.

The nature of the comments in some newspapers purporting to emanate from the Ministry of Defence suggests that Nimrod cannot be made to work, or would in any case be years late. But our people, just as experienced, dedicated and patriotic, say precisely the opposite, and question the depth of the assessment given the magnitude of the programme. And Lockheed is offering to many countries overseas an airborne early-warning system comprising its famous Hercules C-130 airframe and GEC's Nimrod mission system – clearly Lockheed is fully satisfied with the system.

I have outlined why any layman might doubt the validity of the assessment, but why do our experts doubt it? Because the assessment of schedules and resources was not interlinked or co-ordinated with the technical assessment of development programmes; no MoD team members, expressed any residual concern and no copy of the report was offered to GEC for comment – although Boeing seems to have found itself in a position to issue a statement stating that the evaluation had been conducted in an "exemplary" manner and was, in its opinion, "technically thorough and scrupulously fair". We could not possibly have written such a statement because we have never had access to the necessary information on which it is presumably based.

The unanswered questions surrounding the project can only serve to cloud the issues. We have fulfilled our obligations under the arrangements which were entered into with the MoD in February 1986.

However, if Nimrod is so bad now after its "amazing" progress in the last nine months, how could it ever have been right to waste another £50 million, half of it public money? If this is not the case, why was Nimrod not eliminated in August when three alternative systems were dropped?

Why, why?

Why has no critical comment been received since last March on the technical progress we have reported? Why is Lockheed/Georgia prepared to rely on Nimrod avionics for worldwide sales of airborne early-warning systems? Why the ministerial statements that Nimrod "works"? Above all else, why does the MoD steadfastly refuse to show us the technical assessment which an "official" told *The Sunday Times* he will make public to GEC's detriment?

Surely, we should now be given the opportunity of putting forward our critique of the whole assessment before some mutually agreed independent party capable of making a judgement as to whether the conclusions of the assessment are justified.

If that assessment is right, and as one of the government's largest suppliers of military equipment, we will be very grateful to have been saved the loss and ignominy which failure on our part to fulfil the contract would involve. If not, the government would want to reconsider.

Because of the importance and significance of this matter for Britain, in terms of defence, avionics, jobs, export earnings and national pride, the decision should not be allowed to be taken against such a background of seeming confusion and disorder.

"The Government are anxious to give the company the chance to demonstrate that it can complete the project satisfactorily. The company has now shown its commitment to, and confidence in, its ability to do this. It has also recognized – I pay tribute to it for this – the need to show that its solution is competitive with the alternatives that are on offer. The Government have sought in the negotiations to give it every opportunity to recover a most unsatisfactory position which reflects, in part, wider shortcomings in the management of defence procurement. That, too, must be vigorously tackled."

Commons statement by Norman Lamont, Minister of Defence Procurement, February 26, 1986

22

PRIME MINISTER

CABINET: AEW

We propose to circulate the minutes of today's OD discussion at the beginning of Cabinet so they will be available to all members. You might like to say a word of recognition for the very difficult task which the Defence Secretary inherited in dealing with the AEW decision, and the careful and methodical way in which he has gone about it.

You will also want to stress the vital importance of a united front by the Government. The arguments for buying AWACS are very strong and can be presented with confidence. You hope that each and every Minister will go out of his way to help make the case publicly for the Government's decision.

CDP

Charles Powell

17 December 1986

DG2BPO

CONFIDENTIAL
Covering SECRET UK EYES A COMMERCIAL IN CONFIDENCE

21

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~930 7022~~ 218 2111/3

MO 26/7/3L

17th December 1986

CDP
15/XII

Dear Charles,

AEW COMPETITION : STATEMENT TO PARLIAMENT

Following this evening's meeting of OD, and subject to the outcome of tomorrow morning's Cabinet, I attach the latest draft of the Statement that my Secretary of State hopes to be able to make to the House tomorrow afternoon.

I am sending a copy of this letter to the Private Secretaries to other members of OD, the Secretaries of State for Northern Ireland and Employment, the Chief Whip and Sir Robert Armstrong.

Yours ever

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

Covering SECRET UK EYES A COMMERCIAL IN CONFIDENCE
CONFIDENTIAL

1. With permission, Mr Speaker, I wish to make a statement on airborne early warning aircraft for the Royal Air Force. I apologise in advance for its length.

2. The House will recall that in March 1977 the then Government announced their decision to proceed with the Nimrod system to replace the Shackleton in the airborne early warning role. Contracts were placed with what is now British Aerospace plc for the necessary work on the Nimrod airframe, and with GEC Avionics Limited for the development and production of its mission system avionics. At that time it was envisaged that the aircraft would be available to the RAF in a training role in May 1982 and for operational service in April 1984.

3. British Aerospace have delivered the airframes in accordance with their contract. But as the House knows, serious difficulties have arisen in the development of the avionics system for the aircraft, and these have led to significant time and cost overruns. On 26 February last my rt hon Friend the then Minister of State for Defence Procurement informed the House that the Government had decided to consider all of the available options, both from

this country and from overseas, for meeting the RAF's needs before taking a final decision on the way forward. He also announced that for Nimrod itself we had negotiated with GEC revised contractual arrangements involving a sharing of financial risk with the company and giving them adequate incentives for completion. The intention was that, by the end of an interim period of 6 months, GEC would provide us with a firm price proposal against a technical specification aimed at fulfilling the needs of the RAF, and would also demonstrate to us the progress they had achieved on the development of the project. Meanwhile we would explore alternative solutions. On 25 September my noble Friend the Minister of State for Defence Procurement announced that best and final offers were being invited from GEC Avionics for the Nimrod and from the Boeing Aerospace Company for the E-3A aircraft. These offers have now been received and assessed.

4. GEC's offer for Nimrod has been judged against a Cardinal Point Specification based on the Air Staff Requirement endorsed in 1977, with the addition only of an air-to-air refuelling capability. Since 1977 the air threat against the United Kingdom has increased, and we would be setting a higher standard if we were starting afresh today. Nevertheless we have not moved the 1977 goalposts.

5. GEC's offer covers three levels of attainment. In ascending order, and cumulatively, they have offered 3 aircraft in the second half of 1987 to the standard of the present trials aircraft; 6 aircraft between mid-1989 and mid-1990 which would approach the final standard subject to certain exclusions, of which the most important is the vital secure data link between the aircraft itself and other assets; and 11 aircraft to the final standard between October 1991 and September 1993. The first of these offers is not of any value as the system is not of a standard that could be used for training. The question I have had to consider is whether, taking account of the work GEC have done since February, and in particular of recent flight trials, together with our knowledge of the results they have achieved during the last nine years, I can have confidence that they could deliver aircraft with the second and third levels of performance in the timescales they have offered. This is an assessment of the Nimrod programme against the objective standard of the Air Staff Requirement and not against the E-3A.

6. I am sorry to say that the conclusion I have reached after the most careful consideration is that I cannot have that confidence. GEC have certainly made technical progress

in some areas since February, and have also accepted contractual terms which would give them the strongest incentive to achieve success. I pay tribute to them for that. Nevertheless there have been technical disappointments as well as progress. The recent flight trials which have been attempted have not produced a consistent and reliable pattern of results. Such results as have been achieved fall well short of the Air Staff Requirement. The company have therefore made proposals for improving the system's performance over the next few years. I have considered the proposals very carefully, but the unanimous view of my scientific and military experts is that the required performance is unlikely to be achieved before the mid-1990s at the earliest, if then.

7. This is a question of scientific and engineering judgement; the likelihood of success does not lend itself to absolute proof one way or the other. I must judge the prospects on the basis of the scientific and Service advice available to me. That advice is clear and unanimous.

8. As I have said, Nimrod AEW should have entered RAF service for training in 1982 and for operations in 1984. Airborne early warning is a vital air defence capability and

a major force multiplier. The existing Shackletons, which entered service in this role in 1972, are obsolescent and would be of limited value in hostilities. Thus a capability gap has existed for some years and exists today. Its continuation for a further 9 years or more would not be tolerable, either for ourselves or for the NATO Alliance to which we are pledged to make a substantial AEW contribution.

9. Very reluctantly, I have decided that the time has now come to cut our losses on the Nimrod AEW programme, notwithstanding the expenditure of £660M so far. All existing contracts with GEC and British Aerospace are therefore being terminated. Subject to satisfactory completion of contractual negotiations, we shall instead be ordering 6 E-3A aircraft from Boeing with the option of adding a further 2 within the next 6 months. The E-3A is already in service with the NATO AEW Force as well as with the United States Air Force. The RAF version will meet or come close to the 1977 operational standard we have set and in several respects significantly exceeds it, thus enhancing the RAF's capability against the military threat. There is plenty of potential for stretching the system to match further developments in the threat. I am confident that the E-3A will give excellent service with the RAF.

10. Allowing for termination costs on the Nimrod contracts, the cost of acquiring the six E-3As with initial support will be £900M at 1986/87 prices, which is £240M more than the remaining cost of acquiring 11 Nimrods. The difference represents value for money given our total confidence in the E-3A's ability to perform the operational task in an acceptable timescale. On a through-life cost basis including running costs over 20 years the difference is much narrower, with the E-3A only £70M dearer. These comparisons are confined to future expenditure. ~~If~~ a failure to account for past expenditure ~~is~~ ~~included~~ on the Nimrod system. ~~side of the comparison, the E-3A is by far the cheaper system~~.

11. Nevertheless this is a sad statement to have to make. High hopes have been built on the Nimrod AEW project by successive Governments, by industry and on both sides of the House. To acknowledge failure is a bitter pill to swallow, even though I have no doubt that it is the right decision. There are occasions, and this is one of them, when it is necessary to draw a line under the past and start again with a fresh sheet of paper. There are lessons for all of us in

this outcome, and I do not seek to evade my Department's share of responsibility.

12. While this must inevitably be a sad day for GEC and their workforce, it would be wrong for them, or the House, to view it too tragically. They will remain one of MOD's biggest equipment suppliers; we spent some £800M with them last year. They and other British firms will continue to design and manufacture airborne radars despite the present decision. The loss to British defence technology will be solely in this highly specialised field of large and advanced AEW systems, and it is not strategically vital for this capability to be retained in British industry. In any case, Britain will continue to be involved in this technology through the participation of Racal, Plessey and Ferranti in the E-3A order for the RAF.

13. Furthermore, Boeing's proposals for the E-3A include a contractual commitment on their part to an extremely high level of offset, amounting to £130 to be spent on work for British companies for every £100 which we spend on the E-3A. This commitment has been welcomed by British firms who will be participating in the E-3A project. Boeing are publicly committed to placing high technology work with British

companies and have an excellent record for honouring undertakings of this kind. Our assessment is that job losses resulting from the cancellation of Nimrod will be equalled if not exceeded by job gains in firms all over the country resulting from Boeing's offset proposals.

14. As I have said, Mr Speaker, the decision I have announced has not been an easy one. I am convinced however that it is the right one and I commend it to the House.

CONFIDENTIAL
Covering COMMERCIAL IN CONFIDENCE

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1A 2HB
Telephone 01-218 2111/3 (Direct Dialling)
01-218 9000 (Switchboard)

MO 26/7/3

17th December 1986

CDP
17/XII

Dear Clive,

AEW COMPETITION: SPEAKING NOTE FOR COLLEAGUES

You commissioned earlier this week a speaking note which Cabinet members might draw upon when commenting on the selection of the Boeing AWACS to meet the RAF's requirement for an airborne early warning system. I attach a draft.

Yours ever

(I C F ANDREWS)
Private SEcretary

C D Powell Esq
10 Downing Street

Covering COMMERCIAL IN CONFIDENCE
CONFIDENTIAL

CONFIDENTIAL UK EYES A COMMERCIAL IN CONFIDENCE

(UNCLASSIFIED WHEN USED)

DRAFT

SPEAKING NOTE FOR USE BY MEMBERS OF THE CABINET AFTER ANNOUNCEMENT OF A DECISION IF IN FAVOUR OF E-3A

1. Airborne early warning has a vital role to play in detecting hostile aircraft attacking our shores. The Nimrod AEW system should have entered operational service with the RAF in 1984. But it has been in serious technical trouble and has overrun badly on cost and timescale. Last February GEC were given 6 months to make proposals for achieving the specified performance at a firm price. At the same time other firms were given the chance to bid against the same specification. The Boeing E-3A, which is already in service with NATO and the United States Air Force, emerged as the best alternative.

2. MOD's evaluation of GEC's proposals showed that Nimrod still had a very long way to go to meet the specification. GEC explained how they planned to do this. The Defence Secretary had to judge whether the firm could achieve an acceptable standard within an acceptable timescale.

CONFIDENTIAL UK EYES A COMMERCIAL IN CONFIDENCE

3. The unanimous advice of MOD's scientific and military experts was that the prospects were not good and the technical risks were still high. They concluded that Nimrod was unlikely to achieve the required performance before the mid-1990s at the earliest, if then. This meant that the RAF would lack this vital capability for the better part of a decade, apart from the obsolescent Shackletons which have only limited value. This is too long to leave the nation's defences in a state of unreadiness.

4. The Boeing E-3A on the other hand meets the specification in all essential respects and in some ways exceeds it. Because of its greater size it is more capable than Nimrod of being developed further to match the increasing threat posed by modern weapons. It will be delivered in 1991, some months earlier than GEC's date for Nimrod in its final form. It is true that it costs more than the remaining cost of Nimrod, but the difference is not great if you take account of running costs over the lifetime of the aircraft; and the extra money is worth paying for the greater assurance of performance in the timescale we need. (If you allow for money already spent on Nimrod, the E-3A is much the cheaper system.)

5. This has been a very difficult decision for the Defence Secretary and MOD, and there is no question of its having been handled in a biassed way. In fact the easy course would have been to let Nimrod carry on and hope for the best. The Defence Secretary took the right and courageous course and grasped the nettle.

6. This is not a disaster for British industry. There may be job losses for GEC and their suppliers, though these are for the firms concerned to decide. Offsetting these will be gains to companies all over the country as a result of Boeing's commitment to spend in Britain £130 for every £100 spent on the E-3A. The net result should be no fewer jobs and perhaps more. Furthermore British firms will participate in the E-3A project itself at the level of high technology, not just tin-bashing.

7. I see no need for an independent review. It is up to the Government to take the decision, both as customer responsible for the defence of Britain and as custodian of the taxpayer's interests.

THE GENERAL ELECTRIC COMPANY, p.l.c.
1 STANHOPE GATE · LONDON W1A 1EH
01-493 8484

17th December, 1986

Prime Minister

It's in Lord Weinstock's court throw. One could say that he should have put these resources at the disposal of the Nimrod programme long ago.
CDP
17/XII

Dear Margaret,

I don't know whether our talk yesterday evening did the slightest good in my cause, but I did feel a good deal better at the end of it.

Further reflection and news coming in this morning to the office prompt me to write again to you before the fatal hour arrives.

As you know, we have been genuinely mystified by what we heard about the assessment, and how devastating it was said to be about Nimrod. We now understand that it accepts that GEC Avionics have made great progress in the months since they took control, as of course do George Younger and David Trefgarne. I gather the main problem is the doubts as to our ability to complete on time. As you know, our tender is framed in such a way that we could lose perhaps £200 million or more if we fail to deliver. This is an indication of our confidence that we would not be late.

/.....

It appears, however, that our acceptance of even this huge risk gives you insufficient reassurance that we will do what is needed when it is needed. Let me therefore try to reinforce the commitment we have already made with further steps that we will take. And I must add that whatever we do will not divert resources from other MOD contracts.

(i) We will place at the disposal of GEC Avionics as a first priority the whole of the resources of the Hirst Research Centre and the Marconi Great Baddow Research laboratories;

(ii) we will place GEC Computers Ltd., which is on the same site as GEC Avionics at Borehamwood, under the direct control of GEC Avionics to complete the development of the multi-processor system and to render such other assistance as might be useful to Nimrod;

(iii) the fact is that we have sufficient engineers to do the job, but what could be helpful is an infusion of high-grade managerial people.

/.....

Therefore, to make assurance doubly sure, we will recruit in the United States six high grade technical managers with commensurate engineering qualifications and a minimum of ten years' experience in the aviation field. We can achieve this quite quickly through our existing organisation in Atlanta, and I have no doubt that Lockheed will help if necessary. To make sure we get them, we are prepared to pay an extravagant price; on the basis of three-year contracts, for which we would make a commitment, this might cost us between £5 and £6 million, but even if we have to pay twice as much, we are prepared to do it, and to do it now.

I suggested to you last night that you should allow us a further two weeks beyond the end of the current contract (31st December), during which MOD would have no cost liability, before a decision is made. After all, we are still flying trials for the French and Lockheed. In this short extra period, our people could, with MOD and other acceptable professionals, have

/.....

a further look, consult together and advise. If, after this period, the view was taken that there was an unacceptable risk that we could not fulfil the requirement, we would at least both be able to say that every effort had been made.

I have always felt that you and your colleagues would want the Nimrod solution if they could be sure that it will work, and I still believe that. Can we not make one last great effort to save this project for British industry?

Yours,

Lord Weinstock

P.S. As there is so little time, I am copying this letter to George Younger, who was present yesterday evening, to Willie Whitelaw, as Leader of the House of Lords, and to Nigel Lawson, as Chancellor.

The Rt. Hon. Mrs. Margaret Thatcher, MP,
10, Downing Street,
LONDON, S.W.1.

SECRET

PERSONAL

20

CP CDS17/XII

Helen have a word.

CABINET OFFICE

70 Whitehall, London SW1A 2AS Telephone 01-~~930~~ 5422 ext 233-8339 NLW 17-12

17-XII-86

Dear Nigel

AWACS.

You no doubt have more than enough on this, & the die seems cast.

But I thought you might care to glance at this note by John Wiggins which raises some still disturbing points. I must say that some of my own personal contacts support the impression that scientists within the Procurement Executive do not necessarily see

eye to eye with those in the RAF..

Yours

Spitfire.

SECRET

Mr Nicholls

c. Mr Unwin

NIMROD AEW

Here are some gleanings from GEC in the light of the material in the Defence Secretary's further papers:

a. GEC would lose £175 million of their own money on the basis of the contractual obligations they have offered to undertake if they were 3 years late in meeting the RAF specification;

b. GEC say that their system is more advanced than AWACS because it is much more automated (AWACS need an additional 5 crew members at least to operate manual tracking, while Nimrod should do this automatically). This seems to be at the root of the problem about computer power in the section of the Assessment paper about Data Handling: the comparative performance of AWACS in this respect is not addressed in the MOD paper;

c. The assessment paper says an RSRE audit concluded in July 1985 that the GEC radar would never have power to meet the ASR in normal operating conditions. (This prompts the question why the project was not then cancelled forthwith.) The GEC reply seems to be that MOD (PE) in effect acting as its own prime contractor deliberately chose the Comet airframe and thereby accepted that they would use a lower powered radar than that mounted on AWACS — the Nimrod task is to see aircraft at sea level at 200 miles, not aircraft at 30,000 feet at 600 miles as over the polar regions, and MOD deliberately chose to go for a cleverer, lighter system.

d. GEC feel that the RAF assessment has been fixed against them. They say that it is widely believed among working level engineers both in their own company and at MOD Research Establishments that the technical data have been deliberately distorted by the RAF. As Mr Levene has admitted, many of the problems are between MOD(PE) and the RAF rather than between the contractor and the customer.

e. On the Tornado radar GEC assert that the equipment they have delivered meets the specification in their contract with MOD (PE). But its performance does not meet the present ambitions of the RAF (whose disgatisfaction has presumably rubbed off on the Sandis). According to GEC it is not simply a question of their radar failing to operate satisfactorily: the problem also concerns how the radar is fitted into the aircraft, which is partly the responsibility of BAe (as contractor for the airframe) and partly that of MOD(PE) (as in effect overall prime contractor). A year's development work was thought to be required to meet the RAF's present specification.

2. The GEC working level clearly believe that their top management would be ready to continue the project for another 2 months at the company's expense if they were assured that there really would be a genuinely independent

assessment of the project and the prospects for its success. If they were then proved wrong, they would have to accept AWACS with a good grace.

3. I should add that this information was volunteered to me, and I have not drawn in any way on the material in the MOD's papers in responding to it.

JW

16/12

SECRET

PRIME MINISTER

cc: Lord President
Chief Whip
Mr Wicks
Mr Powell
Prof Griffiths
Mr Whybrew

NIMROD/AWACS - PRESENTATION

I have discussed a presentational programme with the Ministry of Defence and the broad outline is as follows:

First, the immediate announcement.

Secretary of State for Defence:

- Statement in the House; followed by
- Televised press conference at MoD; followed by
- Radio and television interviews; possibly followed by
- SO20 Debate.

This takes care of immediate Government presentation. The MoD is producing a speaking note for Ministers and Mr Younger is still apparently intending to write to MPs setting out the Government's case on lines similar to the speaking note.

It is important that the Chief Whip should be able to promise a briefing note to those Backbenchers whom he gears up to respond immediately to requests from press, radio and television. The Government needs half a dozen heavyweight Backbench quotes in support of the Government's decision either in the House or outside - preferably to PA - immediately after the Secretary of State has completed his statement.

SECRET

It will be especially important to get strong support on radio and television for the Government's decision in North London and Hertfordshire and Cheshire.

Follow-up

The media's follow-up interest will be in a confrontation between Government and GEC. MoD are anxious to avoid this, while at the same time keen for Cabinet Ministers to be seen to be supporting the collective decision.

You may care to mention at Cabinet your hope that Cabinet Ministers will make known their support for the decision, but refuse to take part in confrontation programmes. They should instruct their Chief Information Officers, in handling requests from the media, to decline all confrontation formats and insist on straightforward interviews.

We shall of course need to ensure that the Government's case is covered on the late night Thursday and Friday morning breakfast radio and television shows. I am asking Departments to keep No 10 posted with bids and acceptances for all radio and television.

Crucial Issues

There are three crucial issues on which presentation will turn:

- the extent to which the Government is prepared to justify its decision at the expense of GEC; the MoD's mood after weekend interventions by Jim Prior is to go as far as security allows;

- the extent to which, again consistent with security, the Government is prepared to expose the technical evidence lying behind the decision;

- the Government's ability to say its decision is unanimous, and based on unanimous advice.

You may agree that the Government's best interests will be served by a forthright presesntation of its technical case which does not exhibit too tender a concern for GEC. In essence what many people want to hear is the evidence which will enable them to back the Government. Going AWACS only makes sense if the evidence is against NIMROD, but potential supporters want confirmation. The Government's aim should be to let them have it, and to demonstrate that the Government and the experts who advise it are unanimous.

BERNARD INGHAM
16 December 1986

CONFIDENTIAL
COMMERCIAL IN CONFIDENCE

B. 07629

PRIME MINISTER
cc Sir Robert Armstrong
Mr Unwin

Airborne Early Warning (AEW) Aircraft
OD Meeting: 17 December
Supplementary Brief

In his supplementary memorandum OD(86)22, the Defence Secretary has set out arguments for public use in justifying a decision to purchase AWACS. Although the material covers a number of likely points of criticism on the technical aspects, there are certain additional points which would need to be countered. You may wish to mention them at OD and ask that they are fully covered in Ministers' briefing:-

a. GEC allege that the MOD have changed the specification (or "moved the goal posts") since the project was first initiated.

b. Why was the project not terminated sooner and money saved - a point that will no doubt be pursued by the House of Commons Defence Committee?

c. A decision to purchase six AWACS with an option on a further two implies that, at the end of the day, no more than six may be affordable. Yet this is known to fall short of the full RAF requirement. GEC might say that this makes it all the more unreasonable for the MOD to complain that the Nimrod system is operationally inadequate.

d. The public defence of the decision for AWACS should be as positive as possible about GEC's defence and other work for government. In questions today, you quoted a figure of £800M for defence contracts in 1985/86. The Secretary of State for Trade and Industry should be asked to provide details of work being done for government on the civil side. In addition, the overseas aid budget is understood to be supporting exports and overseas projects of GEC valued at £131M. The Foreign and Commonwealth Secretary should be asked whether this could be quoted.

C L G MALLABY

16 December 1986

10. XII 1986

CONFIDENTIAL

SLPC

CABINET OFFICE
WHITEHALL, LONDON SW1A 2AS

Chancellor of the Duchy of Lancaster

Tel No: 233 3299
7471

16 December 1986

Ian C F Andrews Esq
Private Secretary to the
Secretary of State for
Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SW1

CDD
17/XII

Dear Ian,

ALARM

Thank you for your letter of 9 December. The Chancellor of the Duchy has also seen Timothy Walker's letter of 10 December to John Howe.

The Chancellor shares the concern of the Secretary of State for Trade and Industry that BAe should not suffer as a consequence of problems largely not of their making. Similarly, the Chancellor would wish careful consideration to be given to the industrial implications of any decision on the future of the ALARM contract.

The possibility of a BAe bid for RO has further complicated matters. While the Chancellor accepts the need for the cost to public funds of any settlement to be kept to a minimum, it is arguably unreasonable to insist on a prior acceptance by BAe of an arrangement to limit MOD's liability on a timescale of MOD's choosing, and to penalise BAe in the bid for RO on account of their legitimate pursuit of a claim.

The Chancellor would like to know whether, in these unusual circumstances, your Secretary of State would consider remitting the question of a claim arising from the difficulties with the rocket motor to an independent arbitrator, with guarantees of full disclosure of necessary information from all parties.

The negotiation of a new revised fixed price contract, with BAe accepting all further risk, would remain, but would not necessarily

be prejudiced if RO were in BAe's ownership. Indeed, MOD's position as customer might even be simplified.

I am sending a copy of this letter to the private secretaries to members of OD, the Chief Secretary and to Sir Robert Armstrong.

Yours Sincerely

Andrew Lansley

ANDREW LANSLEY
Private Secretary

DEFENCE: Procurement: Pt 4

MTG records.

Subject cc master

file 18

cc BGV

cc CDP

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

16 December 1986

Dear Ian,

AEW

The Prime Minister saw Lord Weinstock this evening at his request. The Defence Secretary was also present.

Lord Weinstock spoke at some length about his strategy for GEC, his resentment at the way the proposed merger with Plessey had been blocked and his fears about the consequences for GEC's reputation and standing in the City of a reverse over Nimrod.

He also had two specific complaints, which the Prime Minister assured him would, if justified, be put right promptly. There were:

(i) that permission had been denied to GEC by MOD to send up a TV or photographic team in Nimrod, while such facilities were readily available for AWACs;

(ii) that GEC were heavily over-charged for the use of Nimrod for demonstration purposes. This appeared to relate in particular to a demonstation flight planned for tomorrow for the French government.

The Defence Secretary undertook that both points would be investigated promptly.

Lord Weinstock put forward a number of arguments for postponement of a decision on AEW while GEC were given access to the MOD's technical assessment. The Prime Minister and the Defence Secretary promised that his points would be made available to OD and Cabinet colleagues. I am therefore setting them out in the attached note which could if appropriate be circulated to OD and Cabinet. But it is possible that Lord Weinstock will himself provide a paper.

Lord Weinstock mentioned that an article in his name would appear in tomorrow's Times. It was not intended to be confrontational.

JB

Since dictating the above we have received the enclosed letter and papers from Lord Weinstock. They are generally in line with the points he made, although not exactly the same. It may be that both sets of papers should be circulated at OD. The Prime Minister would, I think, welcome your Secretary of State's advice on this.

I am not at this stage circulating my letter more widely.

yours sincerely

C D POWELL

Ian Andrews, Esq.,
Ministry of Defence

AEW: NOTE OF POINTS MADE TO THE PRIME MINISTER AND DEFENCE SECRETARY AT A MEETING ON 16 DECEMBER AT 10 DOWNING STREET

When Lord Weinstock met the Prime Minister and the Defence Secretary on 16 December, he made a number of points about the choice between Nimrod and AWACs. The Prime Minister and the Defence Secretary promised that these would be brought to the attention of colleagues before a decision was reached.

Lord Weinstock argued that he assumed that the Government would wish to choose Nimrod if at all possible, because it would patently be in the wider national interest to buy British unless there was an overwhelmingly strong reason not to do so. This reason could only be that the technical assessment of Nimrod was devastatingly bad.

GEC had not been given access to the assessment. But he could not accept that it could be so bad as to rule out Nimrod, for a number of reasons:

- he suspected that the assessment reflected the bias against Nimrod within the RAF and the MOD;

- the MOD no longer had staff who were sufficiently qualified technically to make an adequate assessment. The technology had gone beyond them;

- the assessment had not been conducted in a properly professional way. The reason was that the MOD thought that they knew all about Nimrod, because they had been involved with it for years. They had failed to take account of the enormous strides which had been made since GEC took over the management of the project in March 1986;

- GEC's own assessment was so very different, to the point that he was prepared to stake £250 million of GEC's own money on being able to produce a system meeting the RAF's requirements within three years.

He would never take this risk unless he was absolutely confident that GEC could deliver on time;

- Lockheed, who were experts in this field, accepted that GEC could complete the job and were offering GEC avionics in their own aircraft, with considerable export prospects. The French government also appeared to be seriously interested in purchasing Nimrod.

For the difference in assessments to be so large, something must be wrong. Either GEC's assessment was flawed, in which case he would want to be relieved of the contract as rapidly as possible. Or the MOD assesssment was at fault. It was only fair to the British firm that this discrepancy should be cleared up before a decision was taken.

He therefore had two requests:

- that GEC should be given access to the MOD's technical assessment or at least independent assessors should see it;

- and that a decision on the choice of AEW should be postponed for two or three weeks while the matter was cleared up.

At the least this would help GEC presentationally and lessen the damage to their reputation of a decision in favour of AWACs.

He did not pretend that GEC's record over Nimrod was satisfactory. But the MOD had failed to take reasonable account of the substantial improvements in their performance since March 1986. This had been carefully monitored and reported regularly to MOD. There had been no indication from MOD that the outcome was as unsatisfactory as the technical assessment seemed to imply.

It would have been more straightforward to have agreed cancellation of the contract, with compensation, at an earlier stage. He had himself proposed this in January 1986.

There was a risk that the Government would spend a great deal of extra money quite unnecessarily on AWACs.

The blow to GEC's reputation and standing internationally from a decision to reject Nimrod would be very severe. This further strengthened the case in equity for ensuring that the technical assessment really was fair and accurate.

He hoped therefore that the Prime Minister and the Defence Secretary would bring to the attention of their colleagues the fact that substantial doubts existed about the validity of the technical assessment which would be the basis for their decision.

C D POWELL

16 December 1986

SLHADP

THE GENERAL ELECTRIC COMPANY, p.l.c.
1 STANHOPE GATE · LONDON W1A 1EH
01-493 8484

cc RTA

16th December, 1986

Dear Margaret,

Thank you for spending the time to see me with George Younger this evening.

I enclose two papers, one by our Chief Scientist explaining why we are so confident that the Nimrod AEW is right for the Royal Air Force, and the second by Jim setting the record straight about both his and the GEC's views of the assessment process.

I am grateful for your assurance that these matters will receive proper consideration by you and your colleagues in Cabinet.

Yours,

Arnold

Lord Weinstock

The Rt. Hon. Mrs. Margaret Thatcher, MP,
10, Downing Street,
LONDON, S.W.1.

Enc.

PAPER BY THE RT. HON. JAMES PRIOR MP

Much has been written about the GEC views, and my views in particular, about the AEW contract decision. I must set the record straight.

1. I am not, and do not, impugn the reputation of the RAF. I yield to no-one in my respect and admiration for the service. Anyone who has had to travel securely back and forth from Northern Ireland as much as I have gets to know the RAF in operation pretty well.

2. I am not accusing the MOD or the RAF of a biased assessment. As we have not seen the assessment it is impossible for us to criticise it or its findings.

3. What we have had to deal with are specific leaks, primarily to the Sunday Times, which have become common currency, all of which purport to have come from the Ministry of Defence and have never been denied. This is not our first experience of leaks from the MOD. We wrote to the Secretary of State for Defence in January on the same subject pointing out the damage being done to the GEC and now the same process is happening again.

4. The substance of these leaks is two key points. First that the EPC and MOD are recommending AWACS, and secondly that the assessment of the Nimrod AEW is so "overwhelmingly bad" that no other choice is possible. It is these leaks, which albeit may not be true, that are doing the damage to our company and to the opportunity for the Cabinet to make an objective decision. It is these leaks to which we have had to respond. It is these leaks which lead to our incredulity over the findings of the MOD assessment.

We cannot believe that the report concludes an "overwhelmingly bad" assessment of Nimrod AEW because :

1. Our technicians have set their current and their development achievements against the RAF five cardinal point requirements and are confident that Nimrod AEW is capable of their fulfilment.

2. Our progress since March has been carefully monitored and reported regularly to the MOD. We received one critical commentary after the first report, since when no other critical comments have been received.

3. Neither in March, when the Secretary of State's agreement was reached, nor in September, when the three other contenders were eliminated, did the MOD give any discouraging sign or seem to be aware of any "overwhelmingly bad" problems.

4. The onerous terms of the agreement between GEC and the MOD mean that we would have to be sure of our ground in order to proceed. If, as has been suggested, we might deliver three years late, we would incurr penalities of at least £200 million. No commercial company could run such a risk, not even the GEC, despite its superbly successful track record in technical development, electronic research, sales and marketing, fulfilment of defence contracts and financial management.

5. Lockheed, who have every reason to be thorough and cautious, have chosen the Nimrod mission system for their C130 Hercules aircraft in order to capture, together with the GEC, the highly profitable and prestigious export market, and are already in talks with more than a dozen countries.

6. Let me give one example of our sharp disagreement with the leaked "results" of the

assessment. Based on our more detailed comparison of ground-based and Nimrod-based target tracking, we claim a "success" rate of greater than 80%, compared with the MOD's generalised 50% claim. However, what we believe is even more important is that our analysis of the "missed" targets indicates that the further low risk system developments, scheduled for completion over the next 9-12 months, would raise the success rate to the full specification. In our most recent test flight (12.12.86) we achieved the full radar range of 200 miles, thus giving approximately 50% increase in the surveillance area (and corresponding increase in the number of targets seen) compared with the 160 mile range achieved during the Secretary of State's flight. This information has already been forwarded.

In short, we find ourselves asking many questions about the whole affair -

a) What is the reason for this bizarre process of leaks from the MOD?

b) Can these leaks be true, given our assessment of our own project?

c) Why have we not been able to see the assessment since if it is as bad as it is said to be we would not wish to proceed with the contract?

d) How can our technicians, who have been involved in many successful defence contracts, be so wrong?

e) How can the whole of the last 9 months have passed without the slightest indication to us by the MOD that the outcome could be so "overwhelmingly bad"?

f) Why have we been allowed to work on to the detriment of our reputation and at considerable cost to both the taxpayer and GEC?

16th December 1986

VITAL POINTS ON FINANCIAL ASSESSMENT

1. GEC's price will have been increased by the interest to be paid on the withheld 50%, but the AWACS contract will have to be financed by the MOD to the extent of 75% and presumably no debit has been made for the cost of finance for the extra 25%.

   If this hypothesis is incorrect, has the financing of both offers been made on an equivalent basis?

2. Similarly, have both offers been treated on an equivalent basis for VAT purposes?

3. Is the dollar/sterling exchange rate realistic in the 20-year cost assessment of AWACS in relation to maintenance and support services and spares?

PAPER BY D. H. ROBERTS

As the senior technical authority and Chief Scientist in GEC, I have participated for the last 10 months in a weekly review of the technical progress of NIMROD AEW and am fully aware of the performance improvements we have made in this period.

It seems to me that undue emphasis is being placed on a comparison of Nimrod as it now is, with an AWACS aircraft which has been in operational service for 10 years. This comparison is illogical, as we have offered a further two years of development and flight proving to provide the necessary improvements to meet the RAF's specification. The issue should be the judgement of the degree of risk involved in GEC's completing the work yet to be done, and I have no hesitation in giving you my personal assurance that the technical solutions which have been identified and the timetable proposed are soundly based.

We are continuing to make progress at a rapid rate. As recently as last Friday we demonstrated improvements which increased the radar range to the specification figure. The remaining modifications to get the radar to full specification standards in other respects will be flown and demonstrated during 1987. The method by which we have analysed the cause of "missed targets" strengthens my conviction that we will meet the programme which we have set out.

Perhaps the best measure of a company's confidence in its programmes is its willingness to accept commercial risks, and in this regard GEC has offered financial penalties which would be crippling in the event of delays occurring.

GEC Avionics has a long track record in providing complex avionic systems, not only to MOD, but also to the USA and other countries, to specification and on time. It would be a major blow to us and the industry at large if Nimrod were not to proceed because of disbelief in undertakings which we have contractually offered and which I regard as technically sound.

Derek Roberts

16.12.86.

16. XII 1 PM 18

CCPC

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7/3V

16 December 1986

Dear Charles,

AEW COMPETITION: MEETING WITH LORD WEINSTOCK

You may find it helpful in preparation for the Prime Minister's meeting this evening with Lord Weinstock to see a copy of the record of my Secretary of State's meeting yesterday with Mr Prior.

The main thrust of Mr Prior's message was one with which we have become very familiar over the last few days. This was that the company believed that Nimrod could meet the RAF's requirement in the timescale, that the MOD assessment had been unprofessional and superficial and that GEC's concerns on this score could not properly be taken into account unless they were granted access to the information on which the assessment had been based. His bottom line was that the decision should be delayed to permit MOD and GEC experts to discuss the manner in which the evaluation had been conducted and that an independent assessor should be appointed. Without this, given the damming technical appraisal produced by the MOD, Ministers would have no alternative but to decide in favour of Boeing.

In reply, the Secretary of State undertook to represent the company's concerns to his colleagues but pointed out that the technical assessment was only one of the factors that would have to be taken into account (and the formal risk assessment was but one part of that technical assessment). Although he himself had acknowledged that both systems worked he had to be satisfied that they could achieve the required level of performance in an acceptable timescale. At the end of the day the customer would have to make a judgement between the two systems on the basis of the best available information. No independent authority could or should make that decision.

Yours ever,

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
10 Downing Street

MF

MO 26/7/3V

RECORD OF A MEETING BETWEEN THE SECRETARY OF STATE AND THE CHAIRMAN OF GEC AT 1730 ON MONDAY 15TH DECEMBER 1986

Present:

The Rt Hon George Younger MP
Secretary of State for Defence

The Rt Hon James Prior MP
Chairman of GEC

Sir Clive Whitmore
PUS

Mr Derek Roberts
Technical Director of GEC Avionics

I C F Andrews
APS/Secretary of State

The meeting took place in the Secretary of State's room at the Palace of Westminster.

2. Mr Prior said that he could not understand how the MOD's technical assessment could have found so conclusively against Nimrod as leaked reports suggested. GEC had accomplished all that had been expected of them since March and such was their conviction that they were on schedule to meet the specification that they were prepared to risk some £170M of their own money if they failed to achieve it. This confidence was shared by Lockheed who had already invested some $5M in the project. If they could be persuaded that Nimrod was indeed technically flawed and could not achieve the required performance they would accept that they had lost the competition. But this was not the view of their experts who were leaders in their field and had been surprised at the way in which the MOD assessment had been conducted; it had been superficial and unprofessional. Although ostensibly there had not been a "fly-off" between Nimrod and the E3A, the flight assessment team had given the impression that they were comparing one with the other and there had been no opportunity for GEC engineers to discuss the method of assessment with the MOD team. If the prospects for the project were as bad as was now suggested, why had GEC been allowed to enter the final stage of the competition? Nothing had changed since September.

3. Mr Roberts agreed. A year or more ago, GEC would have understood MOD's assessment of the project; the system did not work and they had seriously considered cancelling it themselves. But they had made progress since March and until the last few days the feedback they had had from the MOD had been

encouraging. None of the five progress review reports had elicited any adverse comments. He too had reservations about the superficiality of the risk and flight assessment exercises. Both had been dominated by the RAF and only two of the eight members of the risk assessment team had been scientists; one of these, the radar expert, had spent only three days "interacting" with the Company's engineers. He questioned the technical competence of those involved in the flight trials and claimed that the information derived from them had not been shared as had been agreed. It had taken a month to obtain data on the two flights on which the MOD assessment had been based.

4. GEC had thought that the purpose of these trials had been to establish the extent of the improvement in performance but they had been conducted not to derive engineering information but to provide a direct operational comparison with the E3A. It was a fact that the E3A had a larger and more powerful antenna and that it would always be able to out-perform Nimrod but the MOD's method of analysis favoured the more powerful system. In the Company's view the Nimrod MSA was capable of achieving the range specified in ASR 400 and they had just learned that on Friday, with the new analogue to digital converter in place, it had achieved 200 nautical mile detection range against a head-on Canberra. He went on to explain to the Secretary of State, using the most recent progress review report, how GEC's methodology for analysing tracks differed from that of the MOD. By focusing on the 15% of tracks that had been missed, the Company had been able to propose modifications that would ensure that they were detected. This enabled them to draw very different conclusions from the MOD's simple track count; they could not understand why the MOD had not conducted a similar analysis.

5. Mr Prior did not see how, faced with what appeared to be a damning technical appraisal, Ministers could do anything but decide in favour of AWACS. But not everyone shared the EPC's assessment. He hoped to obtain more time to permit further discussions to take place between MOD and GEC experts over the manner in which the assessment had been conducted and he urged the Secretary of State to accept a delay of some three to four weeks to permit an independent assessment to be undertaken. If that found against Nimrod, GEC would accept their experts were wrong.

6. The Secretary of State made it clear that he was determined to avoid direct comparisons between Nimrod and the E3A. Both would be judged against ASR 400. He himself had made clear that both systems worked but he had to be satisfied that they could achieve the required level of performance within an acceptable timescale. He could not alter the technical assessment that had been made but he would ensure that colleagues were made aware of GEC's reservations and of the differences of view between the Company and the MOD. But the decision they had to make would

not be taken on the technical assessment alone. Among the factors that Ministers would have to take into account were price, the money already spent on the 11 airframes and the fact that one of the systems was British; many of these arguments favoured Nimrod. The impact of any decision on the Company would also be at the forefront of their minds. But at the end of the day the customer would have to decide between the two systems on the basis of the best information available; he could not abdicate that responsibility. There was no role for an independent assessor.

7. Mr Roberts acknowledged that it was for the customer to choose but he needed to have the confidence to make that decision. He could not accept that a decision that would be potentially extremely damaging to GEC's international reputation could be taken on the basis of one relatively junior and inexperienced scientist's assessment based on just three days spent with the Company. PUS confirmed that Ministers had already been made aware of GEC's views and of the relative merits of the methodologies adopted by the Company and the MOD but he pointed out that the assessment had not been the work of just one man. A very large number of experts of many disciplines, by no means all of whom were from the RAF and including scientists from outside the Procurement Executive, had been involved. The MOD could not prove that it was right; but then neither could GEC. It was a matter for judgement but the MOD could not conceal the evidence on which that judgement was based and it would have to be justified after the event when both competitors would be fully debriefed.

8. Mr Prior concluded by repeating that if the Company could be convinced they had been ruled out of the competition for valid reasons they would accept that. But Ministers were not well equipped to weigh the relative merits of the technical arguments and he did not see how GEC's views could be taken into account if they were denied access to the MOD assessment data. He made a final appeal to the Secretary of State to delay a decision until the New Year to permit MOD and GEC experts to meet to resolve the Company's concerns and to permit account to be taken of further trials. In the meantime, GEC had invited two eminent experts in the field - an American whom he did not name and a British academic, Dr Den Davies of UCL - to conduct an assessment of the progress they had made to date, the results achieved and their proposals for meeting the specification.

9. The Secretary of State thanked Mr Prior and Mr Roberts for explaining their concerns and urged them to let him have an account of the results of the most recent flight so that he could make his colleagues aware of it. He had found the meeting very useful and assured them that he would ensure that their concerns were represented to and fully understood by his

colleagues. He would not disguise the fact that the Company took issue with some of the technical opinions expressed by the MOD.

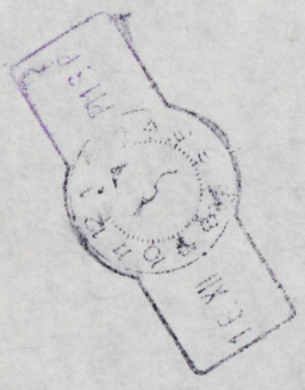
10. The meeting ended at 1900.

1A

Ministry of Defence
16th December 1986

Distribution:

PS/Minister(DP)
PS/US of S(DP)
PS/PUS
PSO/CDS
PS/CDP
PS/CSA
PS/CAS
PS/CA
PS/CERN
DUS(DP)
DCSA
AUS(Systems)
AUS/Air(PE)
AS/Air PE 3
DAEW
Hd of RP Systems
DCDS(S)



(1)

PRIME MINISTER

AEW

You may like to see the note which I have done regarding the main points made by Lord Weinstock at his meeting with you and the Defence Secretary. You agreed to bring these points to the attention of Cabinet colleagues before a decision was taken. You may, therefore, wish to circulate them at OD tomorrow so that it can be said afterwards that Ministers were fully aware of GEC's point of view.

Since I have written the note you have received the attached letter and papers from Lord Weinstock. You may wish to have these circulated as well as my note (or instead of it).

CDP.

I think Arnold's letter + enclosures would be best. There is no doubt that their views are before Cabinet (although BWAC's are not).

C.D. POWELL
16 December 1986

BM2BBk

cc BIU

17

PRIME MINISTER

OD: AIRBORNE EARLY WARNING AIRCRAFT

There will be a full attendance. Both CDS and Chief of the Air Staff will be present. Sir Colin Fielding is available if you want (probably a good idea to have him there).

I don't think that you have yet read the two supplementary papers produced by MOD.

The Cabinet Office brief suggests a large number of questions. You will want to remind your colleagues that the main points are:

(i) we must be certain that the RAF have a system which will work;

(ii) all things being equal, we should give preference to the British system;

(iii) but the Defence Secretary's paper makes clear that there are grave doubts whether GEC can produce an adequate system in an acceptable timescale;

(iv) if the judgement of colleagues is that these doubts - which Sir Colin Fielding can amplify - are justified, then the decision must be in favour of AWACs;

(v) presentation will be of the utmost importance. We shall need to explain very fully the reasons, including the technical arguments, which led up to the Government's decision in favour of AWACs. All Ministers should be equipped with the arguments, and answers to questions and use them;

(vi) the proposal for an independent inquiry is a red herring. The customer must decide what he needs and the extent to which the various bids can meet it. The Government cannot abdicate its responsibility.

C D.P

(C.D. POWELL)

16 December 1986

DCABPI

file FA 54
cc MoD
P.C

10 DOWNING STREET

THE PRIME MINISTER

16 December, 1986.

Dear Mr. Shrontz

Thank you for your letter of 9 December.

I am pleased that you consider the competition to have been handled by the Ministry of Defence in a fair and open manner, and am grateful for your personal assurances regarding the product and your offset commitment.

I appreciate your offer to come to see me to discuss the matter but I think that you have already given us all the information we need to help us arrive at our decision.

Yours sincerely

Margaret Thatcher

Mr. F. A. Shrontz.

16

SECRET

PRIME MINISTER

cc: Lord President
Chief Whip
Mr Wicks
Mr Powell
Prof Griffiths
Mr Whybrew

NIMROD/AWACS - PRESENTATION

I have discussed a presentational programme with the Ministry of Defence and the broad outline is as follows:

First, the immediate announcement.

Secretary of State for Defence:

- Statement in the House; followed by
- Televised press conference at MoD; followed by
- Radio and television interviews; possibly followed by
- SO20 Debate.

This takes care of immediate Government presentation. The MoD is producing a speaking note for Ministers and Mr Younger is still apparently intending to write to MPs setting out the Government's case on lines similar to the speaking note.

It is important that the Chief Whip should be able to promise a briefing note to those Backbenchers whom he gears up to respond immediately to requests from press, radio and television. The Government needs half a dozen heavyweight Backbench quotes in support of the Government's decision either in the House or outside - preferably to PA - immediately after the Secretary of State has completed his statement.

SECRET

It will be especially important to get strong support on radio and television for the Government's decision in North London and Hertfordshire and Cheshire.

Follow-up

The media's follow-up interest will be in a confrontation between Government and GEC. MoD are anxious to avoid this, while at the same time keen for Cabinet Ministers to be seen to be supporting the collective decision.

You may care to mention at Cabinet your hope that Cabinet Ministers will make known their support for the decision, but refuse to take part in confrontation programmes. They should instruct their Chief Information Officers, in handling requests from the media, to decline all confrontation formats and insist on straightforward interviews.

We shall of course need to ensure that the Government's case is covered on the late night Thursday and Friday morning breakfast radio and television shows. I am asking Departments to keep No 10 posted with bids and acceptances for all radio and television.

Crucial Issues

There are three crucial issues on which presentation will turn:

- the extent to which the Government is prepared to justify its decision at the expense of GEC; the MoD's mood after weekend interventions by Jim Prior is to go as far as security allows;

- the extent to which, again consistent with security, the Government is prepared to expose the technical evidence lying behind the decision;

- the Government's ability to say its decision is unanimous, and based on unanimous advice.

You may agree that the Government's best interests will be served by a forthright presesntation of its technical case which does not exhibit too tender a concern for GEC. In essence what many people want to hear is the evidence which will enable them to back the Government. Going AWACS only makes sense if the evidence is against NIMROD, but potential supporters want confirmation. The Government's aim should be to let them have it, and to demonstrate that the Government and the experts who advise it are unanimous.

BERNARD INGHAM
16 December 1986

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1A 2HB
Telephone 01-218 2111/3 (Direct Dialling)
01-218 9000 (Switchboard)

MO 26/7/3

15th December 1986

CDP
15/XII

Dear Charles,

Thank you for your letter of 9th December with which you enclosed another to the Prime Minister from a Group Captain J K Palmer.

Group Captain Palmer is in fact none other than John Palmer, Marketing Manager of GEC Avionics Ltd. In the circumstances I do not believe that his letter merits even a Private Secretary reply!

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

DEFENCE : Procurement : Part 4

15

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~230 7822~~ 218 2111/3

MO 26/7/3L

15th December 1986

Dear Charles,

AEW COMPETITION : ADDITIONAL OD PAPERS

I attach advance copies of the additional two papers for OD commissioned in your letter of 11th December 1986. These will be circulated formally by the Cabinet Office tomorrow morning.

As I mentioned to you when we spoke earlier, my Secretary of State will be seeing Mr Prior at the latter's request later this evening. I shall let you know if any points arise of which the Prime Minister should be aware before she meets Lord Weinstock tomorrow.

I am sending a copy of this letter to Trevor Woolley.

Yours ever,

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

MR WICKS

NOTE FOR THE RECORD

NIMROD/AWACS

Cecil Parkinson rang me today to say that he has a very big constituency interest in the outcome of the issue.

"What I am trying to do is to make sure - as I am sure they will in any case - that Cabinet considers all the angles" he said. "I shall not give them (the media) any headlines about rebellion etc, hard though they are trying to get me to do so."

He said he had not discussed his Early Day Motion with anyone else, or canvassed support for it.

I noted that it contained the words: "acknowledges the paramount need of acceptability by the Royal Air Force and all the forces who use it".

I said I would be relying on that sentence. He said that of course the RAF must always have the best and he was telling people in interviews:

"We are not buying a toy. We are buying a central part of our airborne defence system and it goes without saying it must work".

Mr Parkinson said he did not have much time for Lord Weinstock or the way Jim Prior was playing it. But he did think GEC had done well in their handling of the project this year.

BERNARD INGHAM
15 December 1986

Mr. Derek JACKSON
5/1
D 6/1/87
2. 13. 1. 87

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

15 December 1986

I attach a copy of a letter the Prime Minister has received from Mr Derek Jackson.

I should be grateful if you could provide a draft reply for Private Secretary signature. It would be helpful if this could reach me by 5 January 1987.

C D POWELL

David Ball Esq.
Ministry of Defence

DB (MOD) RS

Strictly Private and
Confidential

RIS/12.

1 Greenfield
Hatfield
Herts

Dear Mrs Thatcher,

You will not remember me, I'm sure, but when you visited Marconi Avionics at Rochester some years ago, I was very pleased to show you around the advanced flight controls work we were doing at the time associated with the Tornado and also experts to the U.S.A. For the last two or three years I have been helping to sort out the Nimrod AEW problems, and I am now writing to you as a private citizen, who happens to work in GEC, to ask for your help.

You will know that we have been working since March this year to demonstrate what progress we could make given the freedom to run the job ourselves, and the team has worked enthusiastically around the clock and has produced outstanding performance improvements. We have prepared proposals which offer to fully meet the RAF's requirements and I believe we are the lower cost and best delivery. In an overseas competition, e.g. in the USA, we would expect to be successful in these circumstances, particularly as we have taken the risk of lateness with a fixed price and very large lateness penalties.

However the MOD has produced a 'risk assessment' which I gather has concluded that there is a great risk of us being very late and that our programme is likely to be discarded in favour of Awacs. I am extremely unhappy with the way this risk assessment has been done, information on the terms of reference were not given to us, & the whole exercise in terms of their contact with us was very superficial, judged

against the issues involved in this decision. For example, the people who assessed the important schedule/time element - the project schedules - were with us for a day & a half only. Moreover the MOD people we met almost exclusively expressed their satisfaction with the information we provided at the 'working level'. Overall, however the whole atmosphere of the risk assessment was hostile to us and the Nimrod, and very many of us in the company are prepared to believe that the aim from the start was to eliminate Nimrod so that Awacs could go forward as the only viable solution. The key to the risk assessment of course is the manner in which the detail assessments are edited and conclusions drawn & we are extremely concerned about how this has been done.

I am extremely upset that this kind of activity could occur in my own country. One doesn't always get fair play completely when tendering overseas but the treatment we have had on Nimrod these last ten months seems to me to take outrageous. Of course many of the people in MOD, who are both judge and jury in this situation, are involved in the past fracas on the project and are not in a position to be objective.

Hundreds and hundreds of people have worked their hearts out in these last months to pull the Nimrod round - they know they have succeeded and that Nimrod will be got right by the dates stated which incidentally, are our own freely chosen dates, not ones stipulated by MOD.

A large and difficult project such as Nimrod, now on the threshold of success must not be wiped out by superficial risk assessment, which we are not allowed to see or have the opportunity to rebuff or answer. The tragedy of a decision against us would not be the job losses - large though they would be - but the sheer injustice to a team which has put heart and soul into Nimrod.

Mrs Thatcher, Christmas 1980 without Nimrod would be a very uncharitable one for a lot of hard-working people and their families

Yours Sincerely

Derek Jackson.

cc BJP

PRIME MINISTER

MEETING WITH LORD WEINSTOCK

Lord Weinstock is coming to see you tomorrow about the AEW contract. The Defence Secretary will also be present. There is only half an hour for the meeting.

You will want to see the MOD's note dealing with criticisms which GEC have made of the handling of this contract.

You will want to make clear to Lord Weinstock that the Government's decision will be reached on the basis of a technical judgement about the relative ability of Boeing and GEC to meet the requirements. No-one is disparaging what GEC have done since they finally took a serious interest in this contract. And no-one would be happier than you if the contract could go to the British firm. But the technical judgement is likely to be that there is simply too much ground for GEC to make up. After nearly a decade of waiting, you are determined that the RAF should have equipment which we are certain will enable them to do the job.

You might also say that you deplore the attempt to stir up a political row about this. There are no politics in the decision. If the Government have been guilty of anything, it is of giving GEC the benefit of the doubt for far too long. The last thing you want to do is damage GEC's reputation. But the more the Government are attacked, the more they will be forced to defend themselves and their defence is bound to bring out the extent to which GEC have let down the RAF and indeed the country by their failure to produce the goods and to live up to the undertaking in Lord Weinstock's 1977 letter. It would be absurd for GEC and the Government to be attacking each other when:

(i) GEC have lost virtually nothing on this contract, indeed they have enjoyed a steady income from it;

(ii) the MOD are regularly responsible for something like 15-18% of GEC's annual turnover. Last year their payments to GEC were over £800 million; Last year over £1 billion.

(iii) GEC get a larger share of ATP than any other British company (nearly £70 million in their own right or as part of consortia over the last eight years, equivalent to 15% of total ATP).

You would much prefer to concentrate on future cooperation than get involved in a slanging match.

C.D.P.

CHARLES POWELL
15 December 1986

EL3BPL

14

CDP 15/12

MR POWELL

cc: Mr Wicks
Prof Griffiths
Mr Whybrew
Chief Whip

PRESENTATION - NIMROD/AWACS

On the basis of all I have read this weekend, this note sets out a checklist of points Government presentation:

a. needs to make positively;

b. needs to meet on the basis of publicity so far.

It would be useful to be able to use much of the material in the Sunday Times article yesterday (December 14) - attached at Annex I.

POSITIVE POINTS

- With £1bn already spent, and British technology, 5000 jobs (gross) and potential exports involved, the Government clearly needs a good reason not to buy NIMROD

- Whole history of the project shows the Government's prejudice in favour of NIMROD and against cancellation

- Reason for cancellation now is fourfold:

  - even GEC acknowledges that NIMROD does not meet the original requirements laid down in 1977

  - NIRMOD is already 4 years late and the Government's estimate that at the very least it will take another 6-7 years to get NIMROD to deliver what AWACS does now

- an early warning system is vital to Britain's defence and no Government can responsibly go on for ever relying on an increasingly outmoded system with no certainty that NIMROD will make it

- it is only recently that it has been possible to measure the operational performance of the NIMROD system as a whole - and this development prototype has been found wanting, as GEC acknowledge

- The basic requirement laid down in 1977 has not been changed; GEC's original proposals were based on reasonable assumptions about the march of technology and the failure could not have been predicted

- AWACs meets all the basic requirements and is in service

- GEC Avionics already has £1.2bn worth of MoD contracts, offering considerable export potential, including the A124 radar system for the Tornado and a world beating infra-red system; it is therefore nonsense to say Britain will disappear from this technology

- in any case, RACAL, Ferranti and Plessey are involved in the Boeing AWACS system, the contract for which provides for 130% offset in Britain

- GEC's reported expectations for NIMROD in the export field would only be realised if the system meets requirements

- the skills involved are in short supply in Britain and the redundancies threatened by GEC are clearly gross figures, which do not reflect the likely net outcome, which may well be no loss of employment at all

- GEC has lost nothing on NIMROD so far since it was a cost-plus contract; they have in fact the experience of the last 9 years research in the bank - experience which will be of real value to their other avionics work

- there comes a time in any project when, in the face of all the facts and requirements, any responsible Government has to call a halt; the key factor then - as it is now - is not what has so far been invested but what, on any reasonable assumption, is possible in the future and in what timescale. The Government has reluctantly concluded that the timescale for NIMROD is too long and the prospects of success too uncertain to allow it to go on

- this has been one of the most difficult decisions for the Government to take, but it considers it to be the right decision. What is more, it is a unanimous decision based on unanimous expert advice. It has been taken on the only basis it could be taken - what is best for the country's defence.

CRITICISMS TO MEET

Our briefing, if not the statement, needs to meet the following points:

GEC claims that:

- it was never allowed to see MoD's assessment;

- the aim of the independent assessment set up by MoD and cancelled after a few days, was to rubbish NIMROD

- RAF biased against NIMROD and in favour of Boeing

- cancellation of NIMROD will cut Britain out of high-tech early warning business; cost thousands of jobs and exports worth £2.5bn; and damage GEC's credibility;

- MoD refused to sanction improvements in the system on grounds of cost when problems were identified eight years ago;

- since taking direct hold of the contract GEC has met, or bettered, every timescale target laid down

- a new independent inquiry should be set up before a decision is taken; why is this not feasable?

Political points:

- cancellation of NIMROD is a vote of no confidence in British technology; and a demonstration once again that the Prime Minister is Reagan's poodle

- Cecil Parkinson and 70-odd other MPs back NIMROD (NB: Mr Parkinson has a constituency interest)

- there has been bungling on all sides, but the major fault lies with MoD who have fiddled for 9 years while GEC were allowed to burn £1bn

- Boeing wishes to destroy the UK as an effective world competitor in early warning technology

- the Government's decision is making GEC pay for its support for Mr Heseltine in the Westland business

OTHER ISSUES

I shall be pursuing information on:

- potential job losses and gains and their creation - what are the chances of mopping up redundancies in the areas where they occur?

- the truth about GEC export prospects

- the extent of the additional work which needs to be done on AWACS - opponents of the Government's decision will have an apparently powerful argument if the AWACS system is not ready for immediate service when available; and when will it be available?

- the cost differential over 20 years, in the life of the AEW, taking into account the £1bn which NIMROD has already cost; some reports say the difference is negligible.

BERNARD INGHAM
15 December 1986

010

13 cc PC/ B/UP.

SECRET - UK EYES A
COMMERCIAL IN CONFIDENCE

B.07626

PRIME MINISTER

cc Sir Robert Armstrong
Mr Unwin

Airborne Early Warning (AEW) Aircraft
OD Meeting at 5.30pm on
Wednesday 17 December

CONCLUSION

Subject to discussion, the Committee might be guided:

a. to endorse the Defence Secretary's proposal:

i. to terminate all existing contracts with GEC Avionics (GAv) and British Aerospace (BAe) for Nimrod;

ii. to purchase six Boeing E-3A AWACS with the option of adding two more within six months;

b. to agree that this conclusion be referred to Cabinet for decision on 18 December;

c. to invite the Defence Secretary to arrange for the decision to be announced on 18 December, taking into account presentational points made in discussion.

BACKGROUND

2. The decision to proceed with full development of Nimrod AEW was taken in 1977 at a then estimated cost of £856M (at today's prices), for a first delivery in May 1982. Although £930M has so far been spent, a satisfactory avionics capability has not yet been developed, which has entailed running on the increasingly obsolescent Shackletons. (The Shackleton is a derivative of the Second World War Lancaster.) In 1978, our NATO European allies decided to buy 18 Boeing E-3A AWACS, which were delivered between February 1982 and April 1985 within cost estimates.

3. The project was reviewed by the then Defence Secretary (Mr Pym) in August 1979 by when the estimate had risen and the delivery date had slipped to late 1982; he and the then Chancellor of the Exchequer (Sir Geoffrey Howe) agreed that the balance of advantage lay with continuing with the project. The cost of the AEW system continued to rise and the estimated date to slip. In November 1983 progress payments to the firm were withheld for six months, after which GAv undertook to submit incentive price proposals for the completion of the development work. At the end of 1984, the previous Defence Secretary decided that the existing development contract should be terminated as soon as possible, at which point incentive contracts, where feasible, and competition would be introduced for the remainder of the programme. Negotiations continued throughout 1985 with the Company, who continued to offer a level of capability which fell short of specification.

4. In February 1986, OD agreed that alternative systems should be explored. GAv were to be told that, nevertheless, the Government's strong preference was for successful completion of the Nimrod project; and that the project would proceed if after six months there was a firm prospect that the full RAF specification could be satisfactorily met within reasonable time. The possibility of a joint purchase with the French was also to be explored.

5. In September, the Defence Secretary reported that, in the light of the evaluation of rival systems, five were to be discarded and that AWACS provided the only realistic alternative to Nimrod.

6. In his memorandum OD(86)20 the Defence Secretary reports that, although GAv claim that an aircraft with a radar which meets the 1977 requirement could be available by mid-1989, the current performance of the system still falls well short of this standard; his experts do not believe that it will be attained before the mid-1990s, if at all. In his judgement, to persist with Nimrod AEW carries too great a degree of risk, especially bearing in mind the obsolescence of the Shackleton force, and would be to pour good money after bad. We should therefore switch to the E-3A, which fully meets the 1977 standard (and in some respects exceeds it). It could be in RAF service by 1991.

7. In order to provide the desired radar coverage, 8 AWACs are needed. At an exchange rate of $1.28 to the £, the total acquisition cost of 8

aircraft is £420M higher than the remaining costs of 11 Nimrods, bearing in mind that the latter aircraft have already been bought. There is insufficient headroom in the defence programme to pay for more than six; the purchase of two more would entail displacing or postponing projects and the opportunity cost has yet to be explored. But even 6 E-3As would represent a more effective operational capability than the Nimrods. The Defence Secretary therefore proposes to purchase 6 E3As now with an option to buy two more within 6 months.

ATTENDANCE

8. All members of the Committee will be present. The Secretaries of State for Northern Ireland and Employment, the Chief Whip, and the Chiefs of the Defence Staff and the Air Staff have been invited to attend.

[Sir Colin Fielding will also be available]

HANDLING

9. After the Defence Secretary has introduced his memorandum, discussion should address the following points:

A Nimrod AEW

How confident is the Defence Secretary in his experts' pessimistic assessment? Have there been no indications of recent improvement? Is there no chance that GAv can achieve the RAF requirement by 1989, bearing in mind their management reorganisation earlier in the year and the more stringent contractual arrangements (which require them to bear 50% of the development cost) now in force? And is there no substance in GAv's allegations that the requirement has been made more demanding - as they put it "the goal posts

have been moved" - a point disputed in paragraph 4 (and Annex A, paragraph 1) of the Defence Secretary's memorandum? Is the Ministry of Defence vulnerable to criticism that the validity of the conflicting assertions made by MOD experts and by the Company has not been independently assessed? The Company say that the MOD sent in independent consultants to assess what had been achieved, but withdrew them before they could reach any conclusions. (Defence Secretary, Secretary of State for Trade and Industry)

B. E-3A

Can we be confident that the first aircraft will be available by 1991? When will the force (whether of 6 or 8) be complete? How essential are 8, given that the proposal to purchase 6, with an option on a further two, implies that no more than 6 may turn out to be affordable? The 18 existing NATO E-3As are to undertake six patrols, compared with the RAF's 4. Is there not scope for reallocating patrol areas, thus reducing the potential size of the E-3A purchase? What about the French, who are expected to buy 3 E-3As? (Defence Secretary, Chief of Air Staff)

C. Budgetary Implications

Is it yet possible to indicate what projects might have to be displaced from the defence programme in order to make way for extra E-3As? Is this not going to arouse further criticism that the defence budget is overstretched and that something important

will have to be dropped from the defence effort? Would the purchase even of six E-3As cause difficulty in the early years (given the requirement for 95% progress payments to Boeing as against 50% to GAv)? Is there no risk of cost escalation after two years, when increases would be allowed if Boeing's costs rose more than foreseen (Annex B, paragraph 4)? (Defence Secretary) Is the decision (Annex B, paragraph 3) to go for a sterling price really the best option? (Chancellor of the Exchequer)

D. Industrial Implications

A decision to opt for AWACS and cancel Nimrod would, of course, be bitterly resented by GEC but supported by Plessey, Ferranti and Racal. On the evidence presented the balance from the standpoint of UK industry favours AWACS. But a number of worries will need to be borne in mind, given the barrage of criticism with which any decision is likely to be greeted. The MOD believe that the net effect on jobs should be broadly neutral: cancellation of Nimrod would result in the loss of 2,000 direct and 3,000 indirect jobs (although GEC put the figures slightly higher); but Boeing, who have undertaken to spend £1.30 in the UK for every £1 spent in the US, estimate that their offset proposals would create some 3,200 direct and 4,800 indirect jobs. Does the Trade and Industry Secretary agree? The Defence Secretary acknowledges (Annex D) that some of the jobs promised by Boeing might come to the UK even if the E-3A were not purchased. Can he quantify this proportion? How watertight is Boeing's undertaking to

provide 130% offset? How great a proportion will be high technology work? Is there not a risk that any displacement of equipment projects from the defence programme to make way for additional E-3A purchases will have a depressing effect on the UK defence industry?

E. Presentation

If we go for AWACS, this will be the real problem. Both firms have been mounting vigorous campaigns and a number of MPs have been given briefings. A decision in favour of Boeing is likely to be strongly criticised, especially on grounds of cost (particularly when the initial purchase will be less than the total required), the damage to GEC and the British electronics industry and the loss of jobs. Can the Defence Secretary or the Trade and Industry Secretary suggest examples of current government co-operation with GEC which could be quoted in response to such criticism? How do we justify a decision against Nimrod without criticising GEC, which would not be in the national interest? How do we answer GEC's claim that they can meet the RAF requirement at lower cost than AWACS? The Defence Secretary will be circulating before the meeting a further memorandum addressing the presentational aspects. He plans to make an announcement the following day, 18 December (the day before the House rises for the Christmas Recess). There have already been demands that the decision should be debated before it is made final. How does the Defence Secretary propose to handle the announcement? Does he envisage a statement

in both Houses and a press conference? What about NATO, including the French? The Lord Privy Seal and Chief Whip should be invited to comment.

C L G Mallaby

12 December 1986

No thanks yet
CDP 15/12

CCPX

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7/3V

12th December 1986

Dear Charles

AEW COMPETITION: MEETING WITH LORD WEINSTOCK

The Defence Secretary will of course be present when the Prime Minister sees Lord Weinstock on Tuesday and the subject of the AEW competition was discussed at some length at the meeting yesterday morning. Will you please let me know if the Prime Minister requires any further briefing.

Yours ever

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

CCPC

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7/3V

12th December 1986

Dear Charles,

AEW COMPETITION : LETTER FROM PRESIDENT OF BOEING

In your letter of 10th December to John Howe, you asked for a draft reply for the Prime Minister to send to a letter she had received from the President of Boeing.

Although she will be seeing Lord Weinstock on Tuesday 16th December, my Secretary of State would not recommend the Prime Minister to take up Mr Shrontz' offer of a meeting. He believes that a short acknowledgement should suffice and I attach a draft.

Yours ever

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

54

DRAFT LETTER FROM PRIME MINISTER TO CHAIRMAN OF BOEING

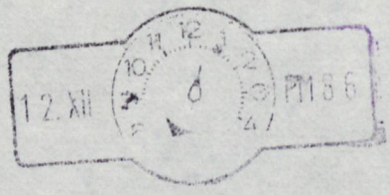
Thank you for your letter of 9th December.

I am pleased that you consider the competition to have been handled by the Ministry of Defence in a fair and open manner, and am grateful for your personal assurances regarding the product and your offset commitment.

I appreciate your offer to come to see me to discuss the matter but I think that you have already given us all the information we need to help us arrive at our decision.

CP

DEFENCE: Procurement : PE 4



cc: Mr Powell
Mr. Ingham
Mr. Addison

PRIME MINISTER

PARLIAMENTARY HANDLING OF NIMROD/AWACs

The Chief Whip believes that it will be very difficult to avoid an SO20 Debate on Thursday - probably between 1900 and 2200. Indeed, he sees some possible advantage in such a debate. It would, hopefully, set the seal on the decision and make it easier to avoid a full day's debate next year. Some Government backbenchers could well vote against.

You will no doubt wish to discuss this with the Business Managers at the Monday meeting.

N.L.W.

NLW
12 December 1986

(12)

File DCA

cc PC
BC Ingham
BC Griffiths

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

11 December 1986

Dear John,

AIRBORNE EARLY WARNING AIRCRAFT

The Prime Minister held a preliminary discussion this morning on the choice of an Airborne Early Warning Aircraft (AEW), which is to be considered more formally in OD next week. The Lord President, the Defence Secretary, the Chancellor of the Exchequer, the Trade and Industry Secretary, the Chancellor of the Duchy of Lancaster, the Chief Whip and Sir Robert Armstrong were present. Sir Colin Fielding joined the later stages of the meeting.

The Prime Minister said that the purpose of the discussion was to identify the main issues which would have to be weighed in making the choice between the GEC Nimrod and the Boeing AWACs, and to commission any further work which might be needed before the OD meeting. She and the Defence Secretary would be seeing Lord Weinstock on 16 December.

Political Aspects

The Defence Secretary summarised the paper which he was circulating to OD. Nimrod was a British system, was cheaper than AWACs, and the aircraft had already been built. There were therefore obvious advantages in chosing it. But it was acknowledged even by GEC that Nimrod did not yet meet the requirement established in 1977, while AWACs did so and was in service with a number of countries. GEC claimed that further development work would enable Nimrod to meet the requirement within 2 to 3 years. The unanimous view of the defence establishment was that 6 to 7 years was a more realistic period, if indeed GEC were ever able to meet the requirement. Ministers had to chose between these two assessments. In his view it would be irresponsible, in the light of their record with this project, to take GEC at their word.

A number of points were raised in discussion:

(i) it was difficult for Ministers to reach a judgement on a highly technical issue. But if they were in the

event guided by the unanimous advice of technical experts and the RAF, this would make it difficult for others to argue that the decision was not objective;

(ii) a possible approach would be to say to GEC that the Government would give them 2/3 years to complete the project, but would make no further payments until the 1977 requirements had been met in full. If GEC were to reject this proposition, as was likely, they would be on the defensive. The problem with such an approach was that if GEC were to accept the challenge but once again failed to meet the requirement, the RAF would be left without an AEW capability;

(iii) making the case for AWACs involved drawing attention to GEC's failure. This could be very damaging to their prospects and to the national interest. The greatest care would be needed;

(iv) there would be difficulties in containing the cost of either system within the agreed public expenditure totals. The difficulties would be greater with AWACs. If AWACs were chosen, it might be necessary to order fewer aircraft, perhaps as few as 4. Arguably this would be more in line with our normal share of what should be seen as a joint NATO effort. On the other hand, the UK would not be able to cover its allotted tasks with only 4 aircraft. If 6 aircraft were ordered, the Defence Secretary would need to be able to show what economies he was making in other areas to accommodate AWACs;

(v) the arguments in favour of AWACs in the Defence Secretary's paper were compelling. In the event that OD decided to buy AWACs, we must be ready with an effective public presentation of the case for doing so. It would also be necessary to move rapidly to convince the Government's supporters in Parliament. The presentation should be worked up straightaway and should deal with claims made by GEC: for instance their assertion that since they had taken direct control of the project, they had succeeded in solving pretty well all the difficult technical problems, and had met or bettered every timescale target;

(vi) in the context of a decision in favour of AWACs it would be important to get the most detailed possible statement from Boeing of the offset work which would be placed with British companies.

Technical Aspects

Sir Colin Fielding joined the meeting to deal with a number of technical points about Nimrod:

(i) it was not the case that MOD had, as GEC alleged, 'moved the goalposts'. The basic requirement had been unchanged throughout the history of the project. In particular, the MOD had never demanded a capability to

track targets over land. The only stipulation had been that over sea performance should not be devalued when flying near or over land;

(ii) the MOD had assessed in 1985 that Nimrod's radar would never be able to meet the required detection range of 190 nm. GEC had argued that, with a major effort, the range could be achieved but had still not done so. The system was defective in terms of power and of the aperture of the radar. This in turn stemmed from the decision to squeeze the radar into the nose and rear of the aircraft rather than build a radardome. Considerations of weight and aerodynamic effect made it impracticable to put a radardome on Nimrod;

(iii) the Nimrod system might, with a lot of hard work, be capable of meeting the tracking requirement. But it could only be done by introducing fixers, which would degenerate other aspects of the system's performance, and probably make it even more difficult to achieve the required detection range;

(iv) the computers for data handling were not sufficiently powerful. GEC were probably capable of achieving some improvement of performance with the 41/90 computer. But a much more complex multicomputer would be required to make the system effective in the longer term. Although GEC claimed that they could develop this by 1991, MOD assessed that the problems were too difficult to crack in that timescale;

(v) GEC's original proposal in 1977 was based on reasonable assumptions about the march of technology, and their failure could not have been predicted. But there had been a progressive realisation in the MOD during the 1980s that the Nimrod system was fundamentally flawed. Even then it had been difficult to say absolutely that GEC could never meet the requirement. This was why MOD had agreed to GEC's plea to be given a further six months. Nonetheless the company would have been aware at that stage, from MOD's audit of the project, of the Government's substantial reservations about GEC's capacity to complete it satisfactorily;

(vi) GEC's project management had been faulty. In particular they had failed until recently to appoint an individual as overall project manager;

(vii) AWACs met all the basic requirements established in 1977, and did not have Nimrod's problems e.g. over blind speed. The only area in which further work was required was introduction of the Link 16 data link, to allow information to be transmitted to other aircraft and to the ground. This was required both for AWACs and Nimrod. Since it would be needed in all AWACs aircraft in and entering service, the prospects were that Boeing would find it easier to manage introduction than would GEC.

The Prime Minister concluded that two further papers were required for OD and should be available by the evening of 15 December:

- a clear statement in layman's language of the technical problems encountered with Nimrod, following the lines of Sir Colin Fielding's presentation;

- a paper setting out the public presentation of the case for buying Nimrod and AWACs respectively, and proposing responses to criticisms likely to be made. The paper should bring out the consequences for the RAF of any further delay. It should be prepared by the MOD in co-operation with the No.10 press office.

I am copying this letter to the Private Secretaries to the Lord President, the Chancellor of the Exchequer, the Trade and Industry Secretary, the Chancellor of the Duchy of Lancaster, the Chief Whip and to Sir Robert Armstrong.

Yours sincerely,

Charles Powell

(C.D. POWELL)

John Howe, Esq.,
Ministry of Defence.

MR WICKS

10 DOWNING STREET
LONDON SW1A 2AA

From the Press Secretary

CHIEF WHIP

AWACS/NIMROD

You have seen my separate note to the Prime Minister last evening in advance of today's meeting. I am in touch with the MoD on the preparation of a presentation paper for Ministers for their boxes on Monday evening.

If you agree, I will work in a reference to the need for the Whips' Office to be provided with explanatory material. But you may well feel that the paper should not trespass further on your activity.

Against that background, it may be helpful if I suggested how your office might make a major contribution to overall presentation.

First, positive. The Government's first requirement is a background note which brings together the best possible presentation of the Government's case for its particular choice. This needs to be in your hands for use immediately the Defence Secretary has read out his statement and before he takes questions. In this way you will be able to arm those who are disposed to be helpful and, so armed, to urge them to go on local radio etc.

I assume you will have in mind those figures, both heavyweight and in process of winning spurs, who would go enthusiastically into bat for the Government.

Second - and still positive - the Government needs to work through those MPs whose constituencies will benefit from the Government's eventual decision. I shall be asking the MoD to identify the areas which will benefit from the Government's choice.

Third, negative. If the decision goes against NIMROD, you will need a paper to deploy with that extensive list of MPs who have declared their support for this system and especially those with a constituency interest.

Given the presentation disadvantages to whatever choice is made, and the damage which a Government divided within itself can do, the "negative" role of the Whips' Office - or its role in mitigating criticism - will be almost as important as the positive role in this case.

In this context we need particularly to ensure that Defence, Science and Technology and Industry Select Committee members are informed, and where possible to enlist their aid in speaking up for Government on radio and television, and to the Press Association. It would be particularly helpful if, say, six substantial Backbenchers could be persuaded to give supportive quotes to PA soon after the Defence Secretary sits down.

You may wish to discuss.

BERNARD INGHAM
11 December 1986

SECRET

COMMERCIAL IN CONFIDENCE

W0341

PRIME MINISTER

10 December 1986

AIRBORNE EARLY WARNING AIRCRAFT: OD(86) 20.

I have some comments to offer on the technology aspects of the choice between Nimrod and E-3A AWACS. These tend to support the Secretary of State for Defence's recommendation in favour of E-3A. I recognise, however, that other factors will also be important in the final decision.

2. On the fitness of the aircraft for the intended purpose, there is no doubt that at present E-3A can do the job and Nimrod cannot, though there may be room for argument about the precise size of the shortfall. GEC Avionics (G Av) claim that the radar, though not the full system performance, can be brought up to the required standard by 1989. I agree with the Secretary of State for Defence's view that this involves high technical risks, and nothing in G Av's performance so far inspires confidence that these risks will be overcome. It is also true that E-3A has much greater growth potential than Nimrod, which is inherently limited by the smaller airframe and antennae.

3. Cancellation of Nimrod would undoubtedly involve the loss to the UK of some very interesting technology, only partly offset by the technology content of Boeing's offset package. But it is technology that appears to have little commercial future for the UK; given its well-publicised history, it is difficult to envisage the Nimrod AEW being a great commercial success. In these circumstances, I do not believe that this project should continue to tie down a large number of people with scarce skills which I consider could be more profitably used elsewhere in the economy.

4. I am copying this minute to Sir Robert Armstrong.

JOHN W FAIRCLOUGH
Chief Scientific Adviser

CONFIDENTIAL

C

1.7

PRIME MINISTER

10 December 1986

(1) Overseas within sight of land but not over land.

AEW: NIMROD AND THE E-3A

The Secretary of State should be congratulated for producing such a lucid paper on a highly complex subject.

Technical Risk

On the basis of the recent trial flights, the technical performance of Nimrod fails to meet the ASR 400 specification by a wide margin - the detection range of the radar is poor, false and unwarranted plots occur on the screen and the radar only detects 30-40% of all targets seen by ground radar. By contrast the E-3A meets the requirements in all essential respects.

Nimrod however is a development aircraft, while the E-3A is an operational one. Comparing Nimrod and the E-3A is like comparing apples and pears. The crucial question which needs to be asked therefore is the following:

> "On the basis of improvements in the past six months, what is the probability that GEC will solve their technical development problems and deliver 6 aircraft by mid-1990 which meet the ASR 400 specification."

It is important that you probe the Secretary of State on this issue. To do this the above question might be broken down as follows:

1. Everyone accepts that GEC has improved significantly, since it took over full control of the project in March of this year. What are the nature of these improvements, (a) technically, and (b) in terms of management and organisation?

CONFIDENTIAL

2. When the Secretary of State issued the new contract to GEC in March of this year, what did he expect that GEC might achieve in six months? Did they have any chance of succeeding? If not, could the Government be held responsible for allowing a major British company with a high technical reputation in domestic and overseas markets to stake that reputation in a contest that it had no chance of winning?

3. MOD scientists take a totally different view from GEC's research team as to whether the remaining technical problems can be solved by mid-1990. Why? Is it (a) the inherent scientific barriers which have to be crossed, even if GEC had the best staff in the world (b) the quality of GEC's research scientists (c) the organisation and management of the project within GEC?

4. GEC claim the following:

> "Since GEC took over full control of the project in March of this year, they have met or bettered every timescale target. Since submitting our bid we have immediately commenced work on the programme and are completely on schedule. There is in short not a shred of evidence that under the current management arrangements on the programme on which we are now working that GEC will be late."

Please see the letter and attachment from Jim Prior (Appendix A).

Have MOD checked these targets are in fact being met? If so, and in view of the financial straightjacket into which GEC have put themselves by this contract, why do they think GEC will not meet them?

5. MOD hired an independent firm, CAP Scientific, to assess the technical risk but then fired them a few days later. Why did they hire them in the first place? If they were fired because they were biased, should the Secretary of State still insist on a second opinion, but from a different source? Would a second opinion be of value in presenting the case to the public?

If these questions are answered to your satisfaction, the Nimrod contract should clearly be cancelled.

My own personal view is that

(a) GEC are probably correct in claiming that the RAF have a strong preference for the E-3A and that there is an anti-GEC lobby within MOD,

(b) GEC have taken major steps forward since March, particularly in the management of the project, but

(c) the inherent technical problems remaining to be solved are formidable and it is almost certain GEC will run into difficulties on this score (after all it took the US something like 15 years plus to crack the problem), which means a delay in the delivery date,

(d) in order to avoid therefore the possible risk of not having an early warning system by 1990, the E-3A is a safer bet for the UK.

Put in this way the decision is not anti-GEC. It is simply a recognition of the likely delays arising from the formidable technical problems. However it does not put the government in a good light, as they should have recognised the difficulties earlier.

In all the discussions on this subject I have been most impressed by Sir Colin Fielding, the head of research and development at the MOD: he is a master of the subject, a lucid expositor and very fair minded.

Presenting the decision

If the decision goes against Nimrod, there is likely to be fierce political opposition. The presentation of the decision needs to be conducted like a military campaign, with nothing left to chance.

The key questions to which we need answers are:-

(a) Why did we not take this decision at the beginning of the year: after all we have very little further information?

(b) What more could GEC have reasonably done over the past 6 months to prove their competence?

(c) What are the quantity of the offsetting contracts Boeing will place with Plessey, Ferranti and Racal?

(d) Why did MOD hire Cap Scientific and then fire them? Why did they not replace them by another independent firm?

(e) What new jobs likely to be created from offsetting Boeing contracts?

Stephen Sherbourne is committed to playing a major part in the presentation exercise.

BRIAN GRIFFITHS

Appendix A

Letter from J. Prior to Lord Trefgarne

9th December, 1986

AIRBORNE EARLY WARNING

We hear that the current stance of the Ministry of Defence Procurement Executive is to prefer AWACS to Nimrod AEW on the ground of risk of Nimrod AEW either not operating up to specification or not being delivered on time; they seem to have no serious doubt about the capability of GEC Avionics to complete the remaining development work, but fear that our record indicates we will be substantially late.

GEC Avionics cannot take pride in its record on Nimrod AEW. But what happened when we were working under the direct and specific instructions of MOD on a day-to-day basis has already proved to be no guide to what happens when we have managerial control of the project. Over the last nine months, during which GEC Avionics has had direct control of the job, we have succeeded in solving pretty well all the difficult technical problems, culminating in successful flight demonstrations two weeks ahead of programme. I enclose the relevant progress charts.

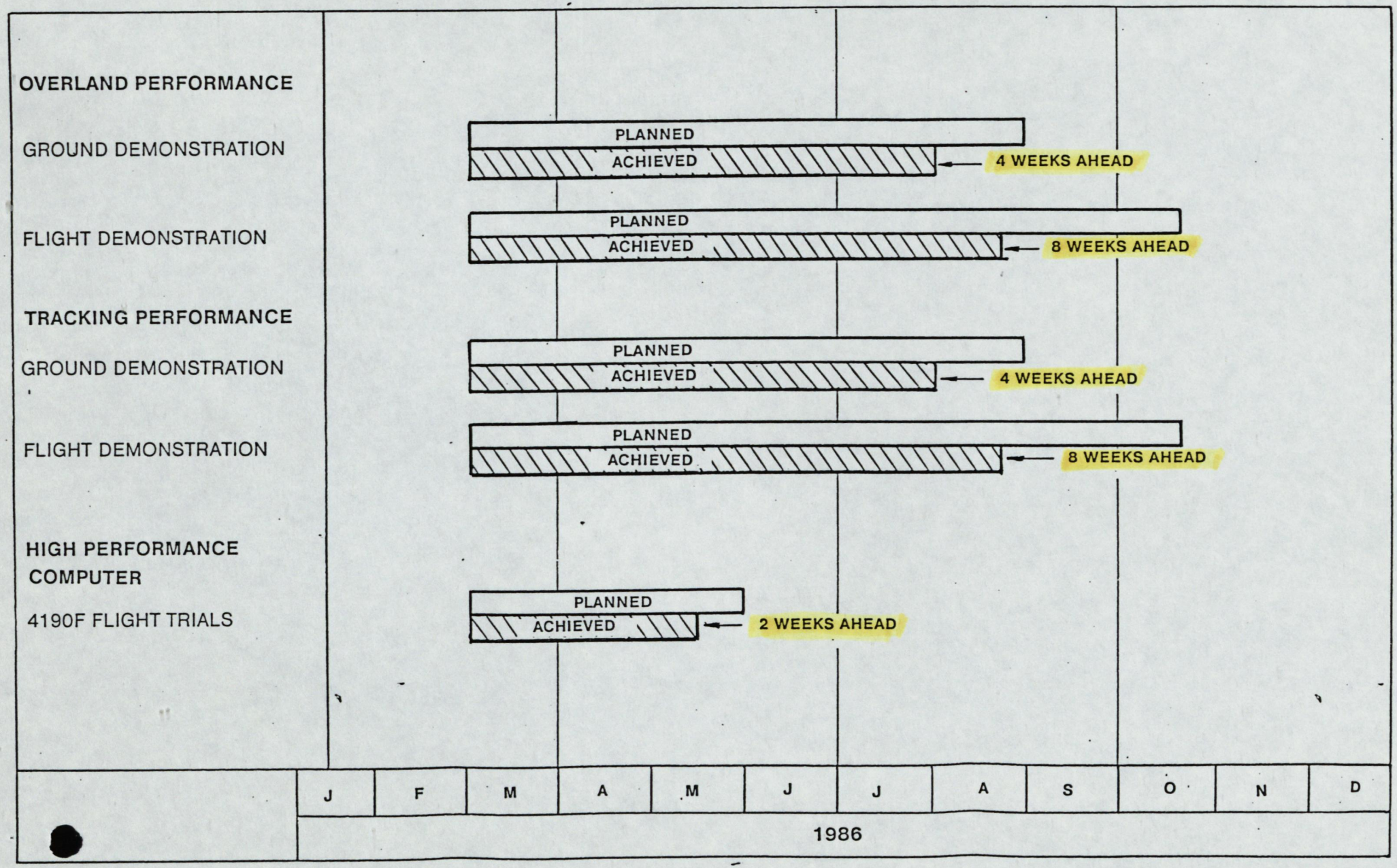
/.....

So for as GEC Avionics is concerned, the remaining tasks are well understood and the time allowed for delivery in our offer contains adequate contingencies. It is on this basis that we have the confidence to accept the dreadful contract terms to which we were obliged to submit during the period of negotiation earlier in the year and which are incorporated in our bid.

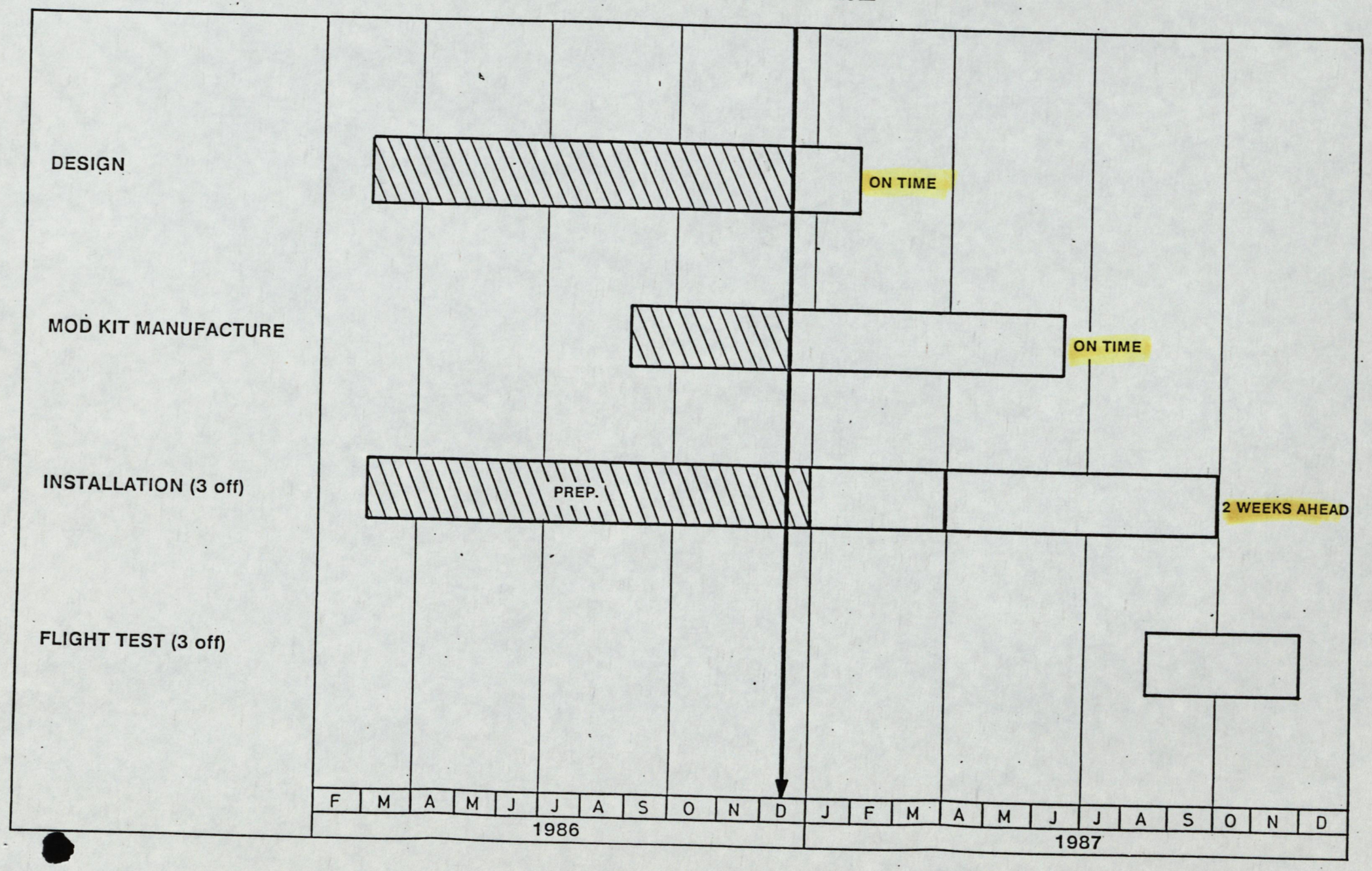
We remain sensitive to the active hostility to Nimrod AEW in some quarters of the MOD/RAF, and I therefore write to ask, in pursuance of the assurances you gave at our discussion at the Ministry on 4th December, for the opportunity to respond to the detailed criticism put forward as to the present development status of Nimrod AEW or the competence of GEC Avionics to complete its development on time to the required standard.

The Lord Trefgarne,
Minister of State for Defence Procurement,
Ministry of Defence,
LONDON, SW1A 2HB.

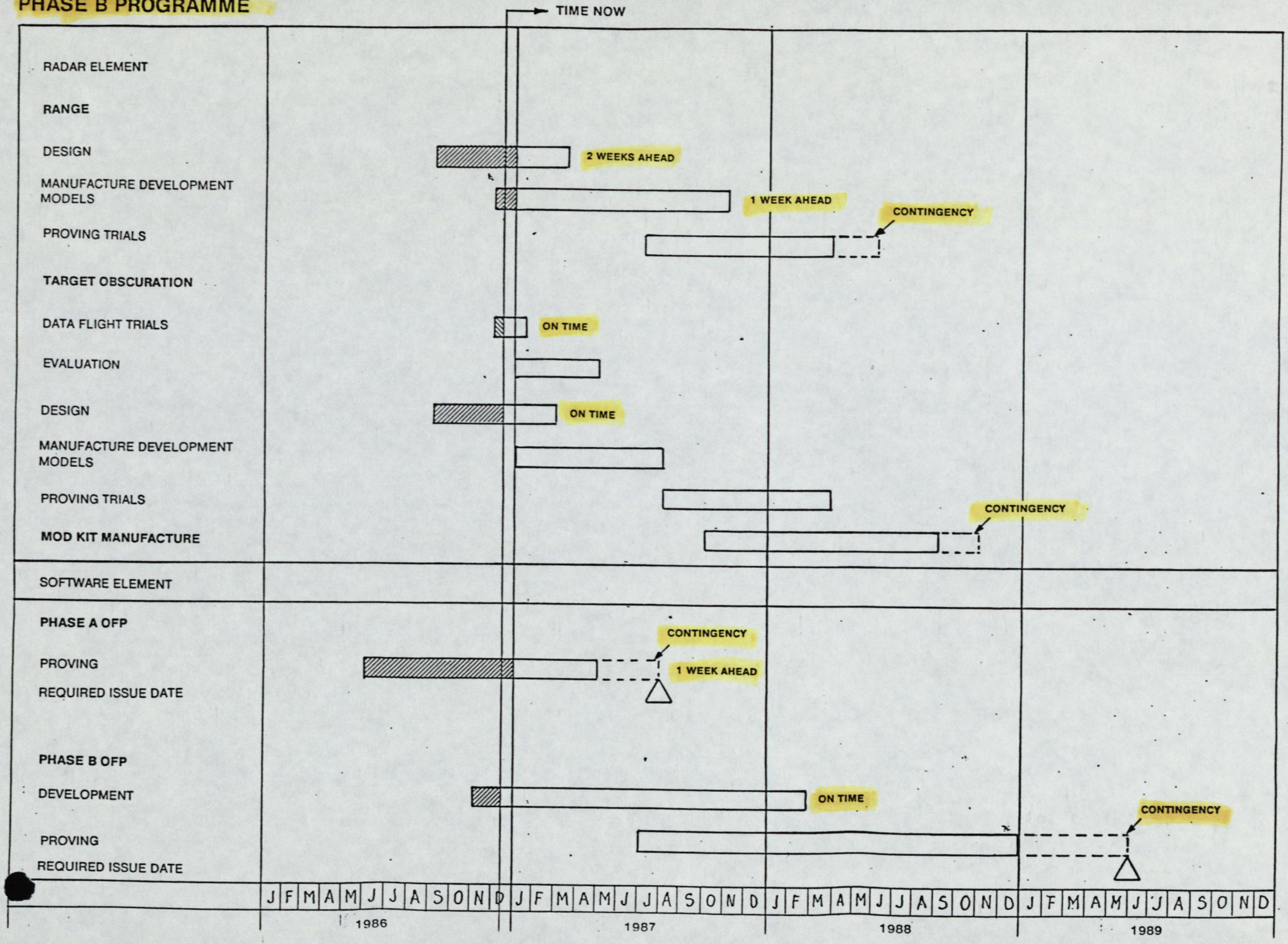
SIX MONTHS DEMONSTRATION PROGRAMME



PHASE A PROGRAMME



PHASE B PROGRAMME



file

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

10 December 1986

I enclose a copy of a letter to the Prime Minister from the President of Boeing about AWACS.

I should be grateful for a draft reply.

C D POWELL

John Howe, Esq.,
Ministry of Defence

File SAL

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

10 December 1986

I am writing on behalf of the Prime Minister to acknowledge receipt of your letter of 9 December. I shall ensure that you receive a full reply as soon as possible.

C D POWELL

Mr. F. A. Shrontz

c: Mr Wicks

1. MR POWELL
2. PRIME MINISTER

NIMROD-AWACS PRESENTATION

This note in advance of a collective discussion of a tricky problem may be useful.

Background

Each of the three possible options (on the assumption that a mixture of NIMROD/AWACS is not on) has presentational problems. But the choice of NIMROD only presents serious problems if a. it doesn't work; and/or b. it is chosen in the face of united Service opposition.

Serious problems arise over the choice of AWACS or a decision either to buy nothing (which seems remote) or to postpone a decision (which again seems unlikely).

Postponing a Decision

Any postponement of a decision would have a presentational penalty. It could be seen as evidence that the Government:

- was preparing for an earlier rather than later election

- was prepared to sacrifice our conventional defence interests to political advantage and to be ready to ditch British manufacturing industry after winning an election - otherwise it would have bought NIMROD now

- was wobbling in the face of an election; behaving uncharacteristically; and running out of steam.

In short, I believe that we have reached the stage when people expect a clean decision to be taken one way or the other.

Buying NIMROD

The atmosphere in which a decision has to be taken is not particularly anti-American, because the time (years) and resources (£1bn) which GEC has had to develop the system are thought to have been extremely generous. However that point needs to be kept in front of the public until a decision is taken.

Thus, if the Government decides to buy NIMROD it will need to show:

1. it works satisfactorily and is not dependent on more research;

2. it is accepted that it satisfies Service requirements, whatever the argument there may be in the Armed Forces;

3. the choice has not been made solely for political reasons;

4. there are substantial economic, industrial and technological benefits at least as good as the offers made by Boeing;

5. the export potential is tangible - ie GEC are demonstrating faith in their product by going after orders abroad.

In short, if NIMROD is bought the Government's main task will be to persuade people it has done the right thing.

Link 16 - Data link
Inf aircraft about
Links to other
aircraft to
ground.

A capability

Buying AWACS

If the Government decides to buy AWACS it will need to demonstrate that it has not done the wrong thing by:

1. the taxpayer;

2. British technology;

3. British industry in general and GEC in particular;

4. British jobs;

5. taking a decision now - ie why there is no reason to suppose that NIMROD would be a better proposition if GEC were given yet more time and money.

It is conceivable, in view of Boeing's offers in terms of jobs, that the most difficult presentational issue will be the impact of the choice of AWACS on British technology. Superficially, the less satisfactory NIMROD can be shown to be technically, the easier it is for the Government to justify its choice. But this aspect of presentation will need the closest possible care because of the risk of damning British technology - and British trade interests - across the world.

The Government will also need to be aware of anti-American sentiment and whether this latent force in British society can be managed in view of:

- its power, as demonstrated earlier this year when it was stirred up

- Reagan's political difficulties and the Prime Minister's close identification with him

- Britain's increasing (and some would say already dangerous) dependence on the USA - Trident etc and the possible adoption of American technology at Sizewell

- the approach of an election.

Recapitulation

In my judgement public opinion - or that bit of it which is aware of the impending decision - feels the time has come for settling the issue and is half expecting AWACS to be chosen. But that does not mean that AWACS is the easiest option presentationally - it is probably the most difficult. But doing nothing or choosing NIMROD would require very careful presentation.

Action Required

Two issues arise:

- can anything be done in the run up to a decision to help presentation?

- what needs to be done when a decision has been taken?

This and a number of tricky policy decisions which are looming require exceptional care over their presentation, and there is a case for a small team, perhaps including me, to work on it, getting together not merely a line of argument but also a presentational programme once the decision is announced.

Problems properly anticipated are often problems forestalled or quickly overcome. In other words, good presentation is 90% anticipation and 10% execution.

I am not impressed with the idea of the entire OD Committee being flown demonstration flights, but there might be some merit in a sub-committee reporting on flights, provided they

came up with the right answer to which they all felt able to subscribe. I do not think the Prime Minister should be involved; this would set an undesirable precedent for difficult technical decisions.

I do not see any practical way of the Government's demonstrating rival systems to the media in advance of a decision.

Any decision to be announced needs to be given in a statement to the House with the minimum of delay - ie the same day.

BERNARD INGHAM
10 December 1986

SECRET

PRIME MINISTER

MEETING OF MINISTERS: NIMROD/AWACs

You are to have a preliminary discussion of this difficult issue with senior colleagues tommorow. The Lord President, the Defence Secretary, the Trade and Industry Secretary, the Chancellor, the Chairman and the Chief Whip will be present. (The MOD's head of research and development, Sir Colin Fielding, is also available.) There will be a more formal discussion in OD on 17 December (and in Cabinet if necessary on 18 December). You and the Defence Secretary are to see Lord Weinstock on 16 December.

The Defence Secretary's paper for OD is in the folder (A). It comes down firmly in favour of the Boeing AWACs.

In essence the MOD argue that Nimrod's performance as of today is grossly inadequate. They do not believe that an acceptable standard can be achieved by 1989. They reckon that it would take until the mid-1990s, if ever, and that this is just too long to wait. The Boeing E-3A on the other hand fully meets the technical standard (indeed exceeds it) but costs a lot. Buying 8 of them would cost £420 million more than completing the 11 Nimrods needed (leaving aside what has already been spent on Nimrod). This gap could be closed by reducing the order to 6. This is fewer than the RAF need, but they would still prefer 6 Boeings which work to 11 Nimrods which don't work properly. There are also implications for jobs. GEC claim that cancellation of Nimrod would cost 2,500 direct and 3,700 indirect jobs mostly in Hertfordshire and Cheshire. MOD reckon 2,000 and 3,000 would be more accurate. But Boeing are committed to 130% offset and the overall jobs effect is likely to be neutral.

The Chief Scientific Adviser (B) supports the MOD decision. While we shall lose some interesting technology, it is technology which appears to have little commercial future.

SECRET

The Policy Unit (C) suggest some questions which you need to ask.

Jim Prior's letter (D) gives a clue to the sort of objections which GEC will raise to a decision in favour of Boeing.

There are notes on presentation (E) by Bernard Ingham and Stephen Sherbourne.

You may want to take discussion tomorrow under two headings: technical and political.

TECHNICAL

The need here is to subject MOD's arguments against Nimrod and in favour of Beoing to destruction testing. No-one doubts that Boeing is better. But that is not really the question. We are not starting from scratch but from a situation where nearly £1 billion has been spent. You need to know whether GEC are so bad that they cannot produce an adequate system in an acceptable time-scale. The judgement is bound to be largely subjective even for experts. But you need to get the feel for how strong the evidence against GEC ever making the grade is; and how well the case can be made to stand up in public. This means getting the MOD to bring all the skeletons - changes in specification, dislike of GEC etc - out of their cupboard now, rather than waiting until the Government is publicly committed.

POLITICAL

There is a difficult balance to be struck. If you take a chance on Nimrod, the Government will get a relatively smooth ride now. But the decision could return to haunt you in a year or two's time if Nimrod still doesn't work. That has been the problem with Nimrod all along.

If you decide on Boeing AWACs, you will face a battle with GEC (who will fight dirty). 71 Government backbenchers have already put their names to an EDM supporting Nimrod. The Government will be made to look unpatriotic, particularly because the case for Boeing is best made by pointing out the inadequacy of the British company GEC. The Opposition will wrap themselves in the Union Jack. You will also have to explain away why the Government fiddled for so long while GEC floundered, instead of cutting the taxpayers' losses well short of the £900 million now down the drain. In short you will need to work up a very strong presentation: and a team under Bernard should start work on this straight after your meeting tomorrow.

Above all, you will want to ensure that all your principal colleagues are fully committed to the decision you take - which must surely be in favour of Boeing. It will be very much more difficult to sustain a decision in favour of AWACs if there is sniping from within the Government.

C.D.P

Charles Powell

10 December 1986

JA2AIH

610

CC B/G

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET
Telephone (Direct dialling) 01-215) 5422
GTN 215) .....
(Switchboard) 01-215 7877

Secretary of State for Trade and Industry

CONFIDENTIAL

10 December 1986

The Rt Hon George Younger MP
Secretary of State for Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SW1

Prime Minister 2

It is doubtful whether MOD are taking seriously enough E(A)'s decision to constrain defence R&D.

This is of course relevant to the Nimrod decision.

DRN
10/12

Dear George.

E(RD) REMITS TO THE MINISTRY OF DEFENCE

As you know, a meeting of E(RD) was scheduled for 8 December, essentially to discuss papers from you about the implications of constraining future defence R & D expenditure in accordance with the earlier E(A) decision (arising from the E(RD) meeting at the end of September), about your Department's future strategy for international collaboration in the development of new weapon systems and its implications for UK industry, and about the practical arrangements to be made in your Department to ensure that the industrial dimension is fully taken into consideration at all stages of decision-making on defence R & D and procurement (the later two remits deriving from E(RD)'s consideration before the summer holiday of the MISC 110 follow-up report).

As Chairman of E(RD) I was therefore concerned to hear that there now appears to be no prospect of any of this material being available before Christmas, including the paper on the practical arrangements between our two Departments to ensure that full consideration is given at every stage to the industrial implications of defence R & D and procurement decisions. I understand that your officials feel that this latter paper has to await the outcome of a meeting between our respective Permanent

DW4BTK

1786 1986 BOARD OF TRADE BICENTENARY

999-1

Secretaries on 19 December, and that they expect also to draw on that discussion in preparing the substantive paper about your future R & D programme which you were invited to prepare by the end of November in consultation with the Chief Scientific Adviser, Cabinet Office. My officials tell me, on the other hand, that they never thought that this meeting should result in several weeks delay in the completion of outstanding work.

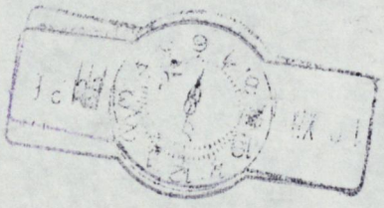
I know that you yourself strongly endorse the importance we have collectively attached to pressing ahead with efforts to increase the benefits to British industry and the UK economy from Government spending on R & D, more than half of which is the responsibility of your Department. I very reluctantly accept that there is unlikely now to be the opportunity before Christmas for a constructive discussion of adequately prepared papers, but I am clear that we owe it to colleagues not to delay beyond January - not least so that you are in a position to take account of decisions in your next annual review of defence plans. I should be very grateful, therefore for your help in ensuring that, following discussions with officials of all Departments concerned, all three papers will be ready for a meeting of E(RD) in mid-January.

I am copying this letter to the Prime Minister, E(RD) colleagues, Sir Robert Armstrong and Mr Fairclough.

Yours,

PAUL CHANNON

DW4BTK



CCBG

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET
Telephone (Direct dialling) 01-215) 5422
GTN 215) .....
(Switchboard) 01-215 7877

Secretary of State for Trade and Industry

PS/

CONFIDENTIAL

10 December 1986

John Howe Esq
Principal Private Secretary to the
Secretary of State for Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SW1A 2HB

CDP
10/12.

Dear John

Cathcart

My Secretary of State has seen your Secretary of state's minute of 24 November and the subsequent correspondence.

The Secretary of State agrees that ideally, it would be desirable to resolve this matter quickly, particularly since BAe have told officials here that the company has not relinquished its interest in bidding for the Royal Ordnance Factory and has been asked by MoD to submit its bid this week. It would be unfortunate if BAe were to be ruled out as a potential bidder because of problems which have arisen on the ALARM contract which are largely not of BAe's own making.

Clearly, the cancellation of ALARM has serious industrial implications for BAe and its main sub-contractor GEC-Marconi. Depending upon the decision reached by Ministers on the choice between the AEW system and AWACs, this could prove a double blow to both companies, as well as to a range of sub-contractors. When evaluating HARM as an alternative option it would be helpful if these industrial consequences could be fully assessed, including the possibility of work for UK firms should HARM prove technically suitable to meet the requirement. Another factor, although one more for your Secretary of State to assess, is the effect that cancellation may have on the future technological capacity of the guided weapons industry, since that was a key factor in the original decision to select ALARM.

JF6AJX

1786 1986 BOARD OF TRADE BICENTENARY

999-1

In view of the importance of this project, my Secretary of State believes that before any final decision is taken on BAe's revised proposals, there should be further consultation and if necessary discussion with Ministerial colleagues in the light of Mr Younger's further report.

I am sending a copy of this letter to the Private Secretaries to members of OD, to the Private Secretary to the Chief Secretary and to Sir Robert Armstrong.

Yours sincerely

Timothy Walker

TIMOTHY WALKER
Private Secretary

JF6AJX

10. XII
1936

1. MR WICKS ✓ N.L.W 9.12

2. MR POWELL

3. PRIME MINISTER

AWACS AND NIMROD

1. When the decision is announced, whatever it is, there could be adverse political spin-off unless preventive action is taken. For a start, the press will be looking for another "Westland" and trying to discern ministerial dissent. So the need for a united ministerial front, once the decision is announced, is essential.

2. But that in itself will not be enough. If I were GEC, I would be ready to spring into immediate action if the decision were to go against me: I bet they have MPs' packs waiting to be sent out to all the affected constituencies, and likewise for the press.

3. It is imperative, therefore, that the Government are equally prepared to spring into action, with their own packs, immediately after the announcement. Ministers will need to talk personally to the relevant MPs. The press will need to be talked to and particular journalists singled out.

../..

4. To mount an exercise on this scale and at this speed will require detailed advance planning, and the timing becomes all the more acute if a decision is announced before Christmas. The MoD are the logical people to mount such a campaign, and they have the resources of a major Department at their disposal. But I believe that they will need detailed political overseeing which, I suspect, only you as Prime Minister and No. 10 can provide.

5. You will obviously want to consider how you wish to proceed and how these overall objectives can best be secured. But I thought it sensible to alert you to the dangers at this stage so that you can, if you wish, set work in hand immediately.

SS.

STEPHEN SHERBOURNE
9.12.86

CHARLES

Prime Minister

CDD
10/12

THE BOEING COMPANY

SEATTLE, WASHINGTON 98124-2207

F. A. SHRONTZ
PRESIDENT
CHIEF EXECUTIVE OFFICER

9 December 1986

Dear Prime Minister

As you know, Boeing has had the opportunity of proposing the E-3 AWACS in competition with the Nimrod programme as the Airborne Early Warning System for the defence of Great Britain. I have been most impressed with the fairness of the competition and the open way in which the Ministry of Defence has dealt with us.

I want to give you my personal assurance that the reputation of The Boeing Company stands behind both our product and our offset commitment. I believe that the E-3 AWACS has already proved in operations with NATO and the U.S. Forces that it offers the best solution to the British AEW requirements for many years to come. I also want to assure you that we will honour to the full our commitment to a 130% offset programme which will offer jobs in British industry, export opportunities and partnership in advanced technology.

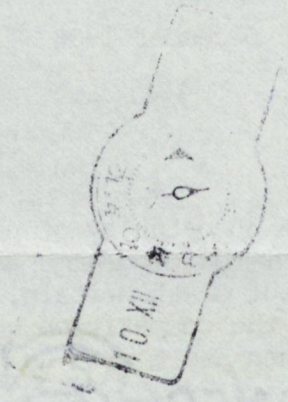
Boeing has undertaken offset obligations in more than a dozen countries since 1973. We are meeting or exceeding our obligations in each case. I intend personally to monitor our progress to assure not only that this record remains intact, but that a foundation is established for Boeing cooperation with British industry which will extend well beyond eight years.

If at any stage in the decision-making process it would be helpful to you to discuss the matter personally, I would be happy to come to London to call on you.

Sincerely,

Frank Shrontz

The Rt Hon Margaret Thatcher MP
10 Downing Street
London SW1A 2AA
England



cc PC.

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1A 2HB
Telephone 01-218 2193 (Direct Dialling)
01-218 9000 (Switchboard)

PERMANENT UNDER-SECRETARY OF STATE
SIR CLIVE WHITMORE K C B C V O

PUS/L86/1128
83/1/2

DEA

9 December 1986

Dear Nigel,

DROPS

Thank you for your letter of 4 December.

2. This is a very long running story which Ministers here, as well as senior officials, have gone into very thoroughly. But there is now such a divide between the Department and Mr Stride and his supporters (who include Sir Ian Gilmour) that I fear a reconciliation of views is impossible.

3. As you have discovered, Christopher Monckton remains active for the interests of Boughtons and Ministers here know of his approach to Stephen Sherbourne.

4. We have not heard the last of this matter, but I very much hope that it need not take up any more of your time, let alone that of the Prime Minister.

Yours ever,

Clive Whitmore.

Nigel Wicks Esq CBE
PPS/PM
10 Downing Street
SW1

DEF: Provenat pt 4.

CCPC

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~230 7922~~ 218 2111/3

MO 26/7V

9th December 1986

DW Rose
CDP 11/12

Dear Andrew,

ALARM

FILE ON D/LP

Thank you for your letter of 1st December to John Howe.

Our concern over a sale of Royal Ordnance (RO) to British Aerospace (BAe) while responsibility for the ALARM motor problem remains unsettled stems from the indemnity we have given to RO. I emphasise the word "responsibility" because it is this rather than the technical problem which gives rise to our concern over this aspect of the ALARM position.

In the event that BAe make a claim against RO - and they have already indicated their intention to do so - any eventual settlement would have to be funded by the Ministry of Defence. It would therefore be important to ensure that the claim was resisted robustly and any settlement to be paid from public funds kept to a minimum; but we would be heavily dependent on RO in such negotiations. They have all the relevant information as well as all the technical expertise which may need to be drawn upon in contesting BAe's claim. It would, in our view, be extremely difficult to be sure that we were getting the best service out of RO in helping us to resist this claim if they were owned by BAe.

This is not to say that we cannot sell RO to BAe. If BAe were to propose an acceptable arrangement which relieved us of our present open-ended liability in relation to RO, then our objection to a sale would be removed. We are in discussion with BAe about the sort of package they are willing to propose but it is too soon to say whether the problem can be resolved within the timescale to which we are working on privatisation. Nor is the company in any doubt about the nature of our concern.

Andrew Lansley Esq
Private Secretary to
Chancellor of the Duchy of Lancaster

I enclose a copy of a letter which the Minister of State for Defence Procurement, Lord Trefgarne, wrote to Sir Austin Pearce on 9th September and in which he makes clear our position.

I am sending a copy of this letter to the Private Secretaries to other members of OD to the Chief Secretary, and to Sir Robert Armstrong.

Yours ever

(I C F ANDREWS)
Private Secretary

G34

IN STRICT CONFIDENCE

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB
Telephone 01-218 6821 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

D/MIN/DGT/6/5/3

9 September 1986

Dear Sir Austin,

Thank you for your letter of 28th August about which you have since spoken to George Younger.

I am sorry that we have not made clear the logic of the position set out in my earlier letter. Our problem is one of practicality. It is clear to us that we could not treat negotiations to sell Royal Ordnance in a vacuum separately from our discussions on ALARM. The fact is that BAe has informed us of claims it intends to press against the MOD as well as against RO and it is clear that both we and RO will have to defend those claims. Moreover, I should tell you that HM Government has indemnified RO against third party claims over Nuthatch and RO has agreed to fight claims vigorously to protect our position. There are, therefore, real practical problems in BAe taking over control of RO while the ALARM position is unresolved and possible legal action outstanding. It would clearly be very difficult for us to rely on a company which was wholly owned by BAe to defend our financial interests against a BAe claim.

This is not in any sense meant as a threat. I emphasise that we see the problem as one of practicality.

/ It ...

Sir Austin Pearce CBE

It would also be difficult for us to disclose to BAe, in any negotiation over the sale of RO, information which might prejudice RO's defence against a BAe claim over Nuthatch. A final but important issue for us is that, even if we were to reach a settlement over ALARM and to sell RO to BAe, the public presentation could be difficult. We would have to be ready to defend against accusations that we had sold out the taxpayer's interest just to get rid of RO.

In the light of what I have said, I hope you can now understand our difficulty. If, against this background, BAe still wish to maintain their interest in acquiring RO, and incurring the associated costs of preparing a bid, we are prepared to include you on the list of bidders. If you confirm your interest to me, I will instruct Rothschilds to add BAe to the list of those who will receive the Selling Memorandum in the next week or two.

If you wish to speak to me tonight before your meeting tomorrow, my home telephone number is Woking 68165.

Yours sincerely,

David Trefg—.

Lord Trefgarne

DEFENCE

PROCUREMENT

PT 4

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

9 December 1986

I attach a copy of a letter the Prime Minister has received from Group Captain J.K. Palmer.

I should be grateful if you could provide a draft reply for Private Secretary signature. It would be helpful if this could reach me by Tuesday 23 December.

(CHARLES POWELL)

Ian Andrews, Esq.,
Ministry of Defence.

IN CONFIDENCE

Group Captain John K.Palmer OBE RAF (Retd)
"Hill Dene"
Ludlow Avenue,
Luton,
Bedfordshire LU1 3RW

0582 457344

The Rt.Hon. Mrs.Thatcher, MP
10 Downing Street
London SW1.

9th December, 1986

Dear Prime Minister,

I write concerning the decision you are about to take concerning the Nimrod Airborne Early Warning (AEW) System.

I write under my own volition; I have not been briefed to write, neither does anyone else know that I am writing. I am very conscious that there are doubtless matters of National interest involved - way above my pay grade as the Americans say - but then I believe that what I have to say is important. If I don't say it, perhaps no one else will do so - certainly not in quite the same way.

I am a patriot; I love this country, I believe in its future and the part it has to play in the future of the free world. I served for 37 years in the Royal Air Force before joining the defence industry in 1983. For what it is worth, I am also a Conservative who happens to think Margaret Thatcher is the best thing to happen to this country since Winston Churchill!

My credentials for talking AEW include 30 years in the Air Defence role, spent either flying, lecturing, or writing Operational Requirements in support of air defence systems. Specifically, I wrote the first Air Staff Requirement for AEW for the RAF, I had mid-level MOD management responsibility for the programme between 1979-82, and I have flown all of the systems which have been in contention starting with the American systems some 16 years ago. I therefore believe I can claim an understanding of the operational, technical, financial and commercial issues of AEW which is probably unrivalled.

I am sorry that this letter cannot be shorter, but I have seen so much misunderstanding created recently amongst your colleagues by attempting to reply on a few bull points to make the case. However, if I have to choose such points to retain your interest Prime Minister I'll offer the following:

* NIMROD WORKS AND WILL MEET THE RAF REQUIREMENT
* ITS EXPORT POTENTIAL IS REAL AND SUBSTANTIAL
* AWACS WORKS - BUT WHY PAY MORE AND CRIPPLE BRITISH INDUSTRY ?

* ADMIRE AMERICAN PRODUCTS - BUT THINK AND BUY BRITISH

The media "leaks" over the weekend of a firm Equipment Policy Committee (EPC) recommendation for AWACS came as no surprise in light of experience with certain RAF staffs since the evaluation phase began in March.

Their scarcely-disguised biased approach to Nimrod reached a new high once the competition became focussed on the E-3A, and of course they found massive support from Boeing on those points outside their sphere of interest i.e. UK jobs, retention of technology, offset programmes and claims of cost advantages. Their steady compiling of negative evidence, as opposed to genuinely objective assessment of the concept, improvements and potential of the GEC system, resulted in a powerful case being made through the RAF chain up to top level in the MOD PE,and thence to the EPC.

The most disturbing aspect of the evaluation is that the conclusions passed to the Equipment Policy Committee appear to have been reached months ago and the evidence since made to fit those conclusions. The basis - for what I acknowledge to be provocative statement - is that by any standards, GEC development progress and reduction of residual risk to a low level has been remarkable. In the past nine months, every reporting and demonstration deadline has been met or bettered; in-flight demonstrations in particular have far exceeded the results promised to the Chief of Defence Procurement in April, and all this has been achieved whilst writing a multitude of reports and proposals both for the UK and French governments, and whilst responding in great detail to the investigations of a number of MOD committees. Throughout the entire period, the RAF have continued to have full access to their 3 Production aircraft and to all GEC development flight data. Boeing on the other hand have experienced very little such exposure and investigation, and have been free - together with supporting British firms totally uncommitted to any form of investigation - to mount a dedicated PR and politico/industrial campaign of influence both in the UK and in GEC's potential export markets overseas.

During this evaluation period it is also worth pointing out that the MOD have shown not the slightest willingness to protect GEC from such disruptive influences as disinformation being passed by competitors, or the pressure of the French to have written papers and demonstrations concurrent with the Companys' crucially important commitments to the MOD.

It is of course inevitable in such difficult circumstances that the Company may interpret certain MOD actions as provocative or unduly biased against them. But this programme, certainly since 26th September has been marked by a flood of unsolicited warnings to the Company from MOD staffs, politicians, industrialists and the media that the evaluation was being heavily biased against GEC success. From my experience of 7 years in the MOD (Operational Requirements) department, 4 years in Industry and some 20 years of procurement-related experience, this degree of anti-UK-industry feeling is unprecedented even amongst senior service officers noted for their beliefs that British Industry cannot compete with the Americans, and high level civil servants dedicated to getting full value for money out of defence contracts with UK firms.

It is a fact of life I fear that the US defence industry will always have the edge on their British counterparts. They have an enormous guaranteed in-house market with the US military and, when problems arise in R & D, are able to commit a lot of money using a number of companies under extremely competitive conditions. Their greater investment in R & D, and the sheer size and scope of their defence industry and market, allied to the fact that they already have an empire-like industrial stranglehold throughout the Western world, means they can almost invariably win any major defence project on which they set their sights. Tornado resisted the US challenge only because of the European consortium, otherwise the RAF front line would now consist of F15s and F16s - the RAF's first choice you will recall for air defence and strike attack aircraft.

Going now for Boeing not only hands the lucrative world AEW market wholly to the US, but effectively kills off the British capability and experience built up over 25 years. Plessey, Ferranti, Racal - and GEC one expects - will be around only to pick up the crumbs from the US table. That does not mean that I am anti-American; far from it. I have lived in the USA for a number of years, GEC has a tremendous export prospect using a US aircraft, and I believe that we need the Americans in Europe and in our industry. But, first and last I am British - and if we can produce quality goods at the right price and timescale, which we can, they why should we go elsewhere?

If I appear to be out of line with my criticisms of previous colleagues in the MOD, I should say that I was amongst those who supported an AWACS buy in 1976 (or more correctly, supported an RAF requirement which specified overland performance as mandatory). I also supported cancellation of Nimrod in 1980 when it was clear that the radar development programme was in trouble and when NATO interoperability was a major issue in my Directorate. Later, in 1983, I had serious reservations about the Company's chances of a successful conclusion when the management appeared to have little sense of urgency or a real feel for the work essential to overcome the many problems. That changed however with a new management approach followed by a revised development programme, supported by the export activities, and culminating in a GEC Company-wide support of the GEC Avionics work during the evaluation phase. I have no doubt now that given the same drive and commitment of resources in the future, the Company can meet the RAF CPS in full and meet Growth requirements over the service life of Nimrod, as well as having a lucrative export campaign. To round off the achievements in development and the improved management and other resources, you should be aware that the Company has also put forward a performance, timescale and cost package which is more onerous than any previous defence contract I have ever known.

At this critical stage of decision, many people are saying "The RAF must have the best". The inference is that it must have the best in every respect; that is not possible as you well know. For instance, the RAF don't have the best fighters in the world or the best close support aircraft; the Navy don't have the best submarines and the Army don't have the best communications equipment. I don't have the best car, I doubt if you have the best fitted-kitchen or your husband the best set of golf clubs. We all probably have the best we can afford, that which meets our needs without being gold-plated. The best is often the enemy of the good.

AWACS is the best AEW now in-service, but it is extremely expensive

overall. Nimrod is very close to AWACS in all major respects of performance, and is better in some. It will meet the RAF Requirement and it will offer an extremely attractive export option at a far more affordable price than AWACS. It is also British - which in itself isn't enough - but taken with all the other considerations should be more than enough to guarantee its' retention.

Had the MOD decided to change AEW horses in mid-stream at the time of the intended first RAF delivery in 1984, the Company could hardly have complained. Similarly, a cancellation following the failure to agree a reduced Requirement in January 1986 might also have made sense in that the development risk then was considerable. To cancel now after the allocation of a further £50M, having tied up MOD resources for 9 months, and in the light of the acknowledged great technical improvements, smacks more of a covering up of past procurement errors rather than a balanced review.

A particularly sad aspect of recent months has been that this "Civil War" blood-letting between the MOD and UK industry, has taken place in full view of the UK's greatest competitors in the defence field, the USA and France. It is impossible to imagine similar circumstances being allowed to prevail in Washington or Paris over a foreign purchase, whilst a British company being allowed to lobby in the USA as openly and aggressively as Boeing have been allowed here is unheard of. Indeed, since I left the RAF I have been appalled to see how we commit commercial suicide in our fragmented marketing overseas, whilst the French, Americans and Japanese invariably act as a cohesive unit; government, military and industry working as one.

In summary, I believe the Royal Air Force - if not the MOD in general - are in this instance guilty, at least of over enthusiasm for American products and a determination to pay back GEC for previous shortcomings. I understand their sceptism but in my view, those are not justifiable reasons for pouring millions of pounds down the drain and handing Britain's air defence future and much of its technology to a foreign government.

On the basis of the enormous improvements made in the system, the resultant low risk of the residual work, and the Company's total commitment to meeting the new timescale and budget with commensurate operational performance, I respectfully suggest, Prime Minister, that GEC has every right to expect that it be permitted to complete the Nimrod project.

Yours faithfully,

John K.Palmer

Personal

Appointment made for 17.45 on 16 December.

THE GENERAL ELECTRIC COMPANY, p.l.c.
1 STANHOPE GATE · LONDON W1A 1EH
01-493 8484

8 December, 1986

CDP.

Dear Margaret,

I enclose a copy of a letter Jim Prior has sent to a few of his ex-colleagues in the Cabinet.

The A.E.W. issue is really of critical importance and I would be grateful if, even in the midst of your many other pre-occupations, you would spare me twenty minutes or so in the course of the next couple of days.

Yours,

Arnold

COPY

D

THE GENERAL ELECTRIC COMPANY, p.l.c.
1 STANHOPE GATE · LONDON W1A 1EH
01-493 8484

FROM THE CHAIRMAN
THE RT. HON. JAMES PRIOR, MP

The Rt. Hon. the Viscount Whitelaw, CH, MC,
Lord President of the Council
& Leader of the House,
House of Lords,
LONDON S.W.1.

PRIVATE & CONFIDENTIAL

5th December 1986

At this critical time, I thought I should write to give you the reasons why the Government should stick to its original decision to buy the Nimrod Airborne Early Warning System (Nimrod). GEC has taken a great deal of criticism for what has happened in the past; some of it is justified, but most of it would have been more properly directed at MOD and the system which governed its procurement policy.

The new contract arrangements which we accepted last March are uniquely onerous, and are in themselves a recognition of the vital importance we attach to the project. The lavish attention it is receiving from Boeing and the very fact that they are prepared to make exaggerated claims and promises is an indication of the potential work load they see in this field. Barring some sub-contract work, this will be lost to Britain, and with it prospects for £2½ billion of exports, together with the jobs of 2,500 people already employed on the project.

GEC is satisfied that Nimrod can do the job, but we are worried that some of the main issues presently at stake have been obscured in what is an unavoidably complex matter. This is because comparisons between a mature system and one still in course of development are bound to reflect adversely on the latter unless the criteria of judgement take full account of the operational

.../...

improvements which will accrue to it. I am uneasy that the RAF has never relinquished its original desire for AWACS and this may affect MOD's objectivity in making its assessment between an in-service AWACS and a Nimrod dependent on further development for its enhanced operational performance.

Recent performance demonstrations should have eliminated any doubts about Nimrod's ability to meet the RAF's requirement. Although there is still nearly two years' development work to bring the system to full operational standard, three aircraft can be an effective patrol within a year to take over from the old Shackletons.

GEC's bid is fixed price and we offer to be paid only 50 per cent during the period up to completion, the balance being payable only when the ASR Cardinal Point Specification is met. This commitment on our part can only be given because of our confidence to complete the job satisfactorily, and should be enough to conmvince even the most sceptical observer.

The management and contractual agreements established in 1977 were quite ineffective to deal on a satisfactory basis with the intricacies of the complex Nimrod programme. Norman Lamont recognised this in the February debate on the RAF, during which he said "It is certainly not my wish to ascribe blame to any party, nor indeed to seek to escape blame. I am sure that this is not a project of which anyone can be proud.". However, it is fair to point out that the project was managed by MOD and run by them by reference to control of month-by-month expenditure rather than against a timetable of achievements. (To give two examples: the need for a vehicle filter to remove false tracks and clutter caused by picking up vehicle movements was proposed by GEC in 1978 but rejected on the grounds of not being required for Nimrod's operational role; secondly, on numerous occasions from 1977 onwards, the need for a larger capacity computer

.../...

was brought up but never sanctioned). I know we should have refused to continue; but for one reason or another we didn't, and that is where we were at fault.

The 1986 contract in which GEC was for the first time given complete management responsibility has since provided a sound framework within which the programme has made significant progress. This is recognised by statements made by David Trefgarne and others.

An important reason for the Government's 1977 decision to proceed with Nimrod rather than buy AWACS was that the Nimrod Radar and its associated avionics were to be designed to meet the specific needs of the United Kingdom. The Nimrod system still has this advantage; further, since its development began about ten years later than the American AWACS, it stands on a newer technology base and will be more readily adaptable as the threat to the UK changes in the future.

Nimrod will cost less. The eleven aircraft and their equipment have already been built, and the cost of modifying the equipment to meet the RAF's current specification must obviously be very much lower than the price of the equivalent number of AWACS with their radars and other avionics. The cost of maintaining and supporting the two types of aircraft over their projected lives is unlikely to be very different, but such differences as have been identified are in Nimrod's favour.

Several countries are coming to realise that they need an AEW capability. But apart from the GEC Avionics system developed for Nimrod, the only AEW systems available are American. Since there is now no UK airframe available, GEC Avionics has worked with Lockheed-Georgia on a version of the Hercules (C 130) designed to take our Nimrod Mission System. The Hercules is already in extensive service by many of the world's air forces and is thus a very acceptable platform. There is a very good

.../...

chance of success with this machine; Lockheed has worldwide connections, and GEC Avionics' export performance far exceeds that of any of its UK competitors. Of an outstanding order book amounting to £1.1 billion, about £500 million is for the United States Department of Defense, eloquent testimony, surely, to its efficiency and competitiveness.

In his letter of 16th February, 1977 to the then Prime Minister, Arnold Weinstock said that GEC could produce an airborne early warning system which would be cheaper, better and more quickly available than the alternative on offer. I think it has been proved since March that had we been given the opportunity from the beginning to manage the contract, we could have fulfilled all three. The delay in delivery is now past recall, but in terms of cost and performance we are still well ahead, and we can add to that the export potential which is much clearer now than it was then.

We are determined to make Nimrod a great British product: it would be tragic if we were not allowed to do so.

0001213/25729 ITN "News at 10"

2 mins 5th December 1986 10pm

Early Warning Radar System

Alastair Burnet: The Defence Secretary, Mr. George Younger, is making his final choice this weekend between an American and a British radar warning plane for the RAF. Buying American, with the Boeing AWACS version, would mean writing off £1000 million investment in the Nimrod plane by GEC. An announcement is expected before Christmas.

Geoffrey Archer: The report the Defence Secretary will study this weekend is almost certain to recommend the American Boeing AWACS, as the best aircraft to fill the airborne radar needs of the RAF. It has proven its effectiveness over nine years of service, and equips the multinational NATO early warning force in Germany. The troubled British Nimrod airborne radar plane has overcome many of its earlier problems, though not all, but with nearly a billion pounds already spent on it, Mr. Younger has to balance its shortcomings against the likelihood that if its development could be completed it would cost much less than buying Boeing.

There's also the key question of jobs and British technology. GEC, the makers of Nimrod's radar systems, say 2,500 jobs would be lost if Nimrod is cancelled, and an important area of British technology would die.

Boeing however have promised to place off-set contracts in Britain. Plessey has signed one which they claim would create up to 2,800 high technology jobs by the end of the 1990s, if Britain buys AWACS.

Defence Secretary, George Younger has flown in both competing aircraft.

Mr. George Younger: What I can say is it's quite clear that both of them do work, and it's a question of how they work in relation to the cost that each of them would be, and that is the assessment that I've got to make.

Report No. 35. - Continuation 1

C. Archer: Are there not going to be political .. great political difficulties, if you have to cancel the Nimrod project?

Mr. Younger: Well we are not at that stage. If that were to happen I suppose there would be a political problem, but there would be a much greater political problem if we were to decide to choose one of those systems that wasn't going to meet the RAF's requirement.

C. Archer: The Boeing is the plane the RAF has always wanted. Within days they should learn whether they will get it.

...ooOoo...

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

Prime Minister

AWACS / NIMROD

The MOD's Equipment Policy Committee unanimously recommended AWACS to Boeing

Next Ministers.

CDP

RESTRICTED

FILE
DA

10 DOWNING STREET

From the Principal Private Secretary

4 December 1986

Dear Clive,

DROPS

I write to let you know of a telephone call received by Simon Dugdale here in our press office today. Mr. David Stride, who described himself as a former director of Boughtons, told Simon Dugdale today that if his former company did not receive the DROPS contract, they would make allegations of bribery and corruption going well up within MOD. He alleged Mr. Heseltine knew about the matter. When Mr. Stride was asked why he was ringing No.10 about this, he said, I am afraid to say, that Christopher Monckton, formerly of the Policy Unit, had spent some time with his firm, at his (Stride's) invitation, and would no doubt have briefed the Prime Minister.

Brian Griffiths tells me that the Policy Unit can find no trace of Monckton's interest in this company in their papers. He has left No.10 and now works for the Today newspaper.

I leave you to take any action you think fit as a result of this phone call. Mr. Stride gave his telephone number as 581-3484.

Nigel Wicks

(N.L. WICKS)

P.S. Since dictating this letter, I have been shown a letter which Monckton has sent to Stephen Sherbourne, the Prime Minister's Political Secretary, about this case. I attach a copy of Monckton's letter, but not of its voluminous attachments. Our press office sent Helm in MOD press office these papers late in November.

Sir Clive Whitmore, K.C.B., C.V.O.

RESTRICTED

TODAY

Allen House, 70 Vauxhall Bridge Road, Pimlico, London SW1V 2RP.
Telephone: 01-630 1333 (Sales & Advertising) 01-630 1300 (Editorial)

Mike Horne M — w/ Martin Helm MOD with SS blessing? Ajm

All that Chris Monckton told me this morning was that this was all likely to surface in the press.. I therefore thought MoD should be alerted.
Stephen 25/11.

25 November, 1986.

Dear Stephen,

BOUGHTONS LTD. v. MoD

We spoke briefly about Boughtons this morning. The firm consider that they have been unfairly treated in a competition to supply palletised loading and unloading systems to MoD, and they say MoD selected equipment which was of a lower specification than theirs, offered at higher prices and in most important respects inferior. The attached sheet sets out some of their grievances.

The issue was given a thorough airing on Panorama in July. Some weeks before the programme was broadcast, a consultant to Boughtons saw my name in the papers in connection with the short/fat inquiry and asked if I could help Boughtons as well. I said No, but listened to what they had to say. From the papers they showed me, the Panorama programme is in substance correct: but I have not heard the MoD's side of the case, except insofar as it appears, rather skimpily, in the attached bundle of letters.

There is now a danger of a hefty row in the newspapers. Trafford Boughton, the chairman of the firm, told me on the telephone last month that a senior MoD general had telephoned him and urgently requested him to write and fax to MoD a letter (no. 1 in the bundle) dissociating himself and his firm from the Panorama program and saying that the firm had no quarrel with MoD's decision. Mr. Boughton tells me that he understood this "request" to be supported by an implicit threat that, if he failed to comply, he would lose other MoD business for which he was tendering.

You will see from letters 3, 4, 5, 7 and 8 that both George Younger and David Trefgarne had repeatedly tried to maintain that Mr. Boughton had written "on his own initiative". Letter 6, from Mr. Boughton to Ian Gilmour, shows that he had, in fact, written at MoD's urgent request. Panorama say they did not mention the letter on the programme, although MoD had asked them to do so, because they were aware it had been obtained under what amounted to duress.

R. Rowland J. Gunn T. Robinson
Directors: S. J. Shah, [redacted] H. Graham, [redacted] Lord Harris of Greenwich, [redacted] B. T. G. Nicholson, N. Dunn, [redacted]
Registered Office News (UK) Ltd., 138 Bridge Street, Warrington, Cheshire WA1 2RU.
Registered Number 1879283, Registered in England. Telex Number 629536 NEWSUK.

Letter 9, from Richard Ottaway, smokes MoD out by asking David Trefgarne explicitly whether anyone at MoD had written, telephoned or in any way communicated with Mr. Boughton inviting him to write a letter dissociating himself from the forthcoming Panorama programme. In letter 12, David Trefgarne admits the truth. And in letter 15, Mr. Boughton wrote to Richard Ottaway setting out in full the circumstances of the conversation with the General at MoD.

Matters then became a great deal worse. David Trefgarne summoned Richard Ottaway and pointed out to him that, as a PPS and hence "a member of the Government" he should accept Ministerial assurances that all was well and should not continue to pursue the matter. As Ian Gilmour points out in letter 17, this is a scandalous breach of parliamentary privilege. If it becomes public, David Trefgarne will have to resign.

I found this part of the story so hard to believe that I asked Richard Ottaway to confirm it first by telephone and then in writing. His letter to me is no. 18. In letter 21, George Younger tries to reassure Ian Gilmour that "it was in no way David's intention, or mine, to "warn off" Richard Ottaway", but that is not how Richard saw it.

Letters 22 and 23 show that Ian Gilmour and Trafford Boughton are both asking, as they have repeatedly asked before, for either a new competition with at least some assessors independent of MoD or an independent inquiry into the entire affair.

The Conservatives are the party of defence, and we do not want any more scandals in MoD to damage our electoral chances in the coming months. I cannot keep this out of our newspaper for long, as Boughtons and their consultants have been talking not only to Panorama but also to several other papers and the story is bound to break soon. It would be best if, before it does, Ministers clear the decks by agreeing to an inquiry. If matters are as fine and dandy as they believe, they have nothing to fear from an inquiry, which, as Ian Gilmour points out, could be held very quickly and cheaply. If, as I believe from what I have seen so far, there is something badly askew, Ministers will be seen in a more respectable light because they have had the courage to hold the inquiry.

I leave it to your discretion to decide whether the PM should be warned of this latest development in the Boughtons case. Usually, she prefers to be told these things, though there is a school of thought (misguided, I think) among the Private Secretaries which holds that she can escape difficult parliamentary questions about matters she hasn't been told about. Westland might have taught them to rethink that one.

SHORT/FAT SHIPS

I hear from a reliable contact that the Treasury Solicitor's office believe British Shipbuilders will lose the short/fat ships case, which finally comes to trial in January. What, you may ask, is TSol doing looking at a case which, according to MoD, has nothing to do with them and hence doesn't involve the Government? Answer: the case does involve the Government, and TSol has, therefore, been following it closely from the start. The buzz is that at least one very senior former MoD official may end up in prison unless he's careful - and those Defence Ministers who believed their officials and resisted the plaintiffs' pleas for assistance and protection may end up looking very silly indeed.

One defence scandal would be bad enough: two could be electorally fatal. Please do what you can to make sure that George Younger (and, if necessary, the PM) knows the danger. If there's not much else going on in the Press when these stories break, either of them could perhaps turn rather nasty on us. And, more important, in both cases I think an injustice has been done which ought to be put right.

With all good wishes, and many apologies for being "the first bringer of unwelcome news".

Yours ever,

CHRISTOPHER MONCKTON
Assistant Editor.

Stephen Sherbourne, Esq.,
10 Downing Street, London, SW1.

GROUNDS FOR ATTACK
MoD DROPS CONDUCT

M o.D called for a FEASIBILITY STUDY and asked for PRICES to be provided for feasibility demonstrator/trials equipment in order to take the project on to the production procurement stage when a further round of competetive tendering would take place, possibly against a revised specification

MoD selected equipment which was :-

A) of a lower specification than Boughton's (i e. of less inherent "value")

B) offered at MUCH higher prices than Boughton's intrinsically more valuable equipment,

C) in virtually every respect inferior to Boughton's equipment in terms of its compliance with the STATED requirements

In making the selection,MoD :-

A) neglected to verify the most important issues of the overall compliance with the STATED requirements,

B) introduced NEW and arbitrary "requirements" which :-

i) were designed to favour systems other than Boughton

ii) were irrelevant or wrong

iii) were at variance with EITHER, established MoD policy, OR established MoD "expert opinion",

iv) are NOW seen to be incompatible with achieving the STATED requirements for DROPS

In dealing with complaints and enquiries since the decision MoD (or its responsible Ministers) has/have :-

A) lied to M.P s about the relative prices of the competing equipments,

B) lied about the compliance of the equipments to the requirements of the competition,

C) intimidated Boughtons to supress their legitimate complaints,

D) lied to M.P s about crucial issues touching on this intimidation

In continuing regardless with its procurement programme, MoD :-

A) may be breaching an undertaking given by Mr Pattie,

B) may be rendering itself liable to substantial damages in law

C) may be acting impoperly in refusing to consider the available equipment which is possibly still the best, the best proven and the cheapest equipment to meet its requirements

D) may be knowingly incurring substantial hidden future costs rather than admit it made a mistake.

(1)

Fax No: 02404 5

...ood ... of Companies
...ll Lane
...mersham
...cks. ... ENGLAND

Telex 83132 TT

Tel No: 02404 44

TTB/MJW

Major General S.R.A. Stopford M.B.E.,
Ministry of Defence
St. Christopher House
Southwark Street
London SE1 0TD.

30th June, 1986.

FORTHCOMING PANORAMA PROGRAMME

I am writing to you to say that this Company has taken no part in the forthcoming programme and we have requested that this is made clear in the presentation.

I would like to say that we recognise the prerogative of the Ministry of Defence in their choice of equipment and we have no quarrel with the decisions taken. There is the ongoing matter of the interpretation of Mr. Geoffrey Pattie's letter of 22nd May 1984. I have no doubt that this will be amicably settled between the Department and my Company.

...ssage: See letter ...

T. TRAFFORD BOUGHTON

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

(2)

HOUSE OF COMMONS
LONDON SW1A 0AA

11 July 1986

Dear George.

I am writing about the long running saga of Boughton's and DROPS, which was featured in Panorama this week.

I set out the case in my letters to Michael Heseltine of June 1983 and 14 February 1984, and I have little to add except to say that the case has never been answered and that the affair smells increasingly nasty as the years go by. It could and should have been cleared up in 1983, when Boughton's should have been added to the trialists and there should have been an enquiry into what had gone wrong.

Unfortunately, the Ministry of Defence, stretching I fear to quite near the top, decided to close ranks and cover up. The most respectable, if still unacceptable, reasons for that were umbrage and mistaken loyalty. To judge from Panorama that is still the attitude - and I am deeply sorry that David Trefgarne said some of the things he did - but I do not think it can be allowed to persist. It is clearly ridiculous to pretend that nothing went wrong; obviously a great deal went wrong.

There is now the further difficulty which was touched on in the programme: firms now have every reason to fear giving the Army their best ideas. I am therefore asking you to set up an independent enquiry. In view of the way the Ministry has behaved up till now, an internal one would be more or less valueless. An independent enquiry is the very least that is needed to restore confidence in the procurement process.

.../2

And I am also asking you to enquire into the way Geoffrey Pattie's clear undertaking about the use of Boughton's ideas is apparently being broken. It is contemptible to pretend that they were not Boughton's ideas. Of course they were, and the sort of defence that MoD seems now to be peddling could have been erroneously used about any invention.

I am quite confident that nothing so disgraceful as the DROPS events could have taken place during your and my days in the Ministry during the 1970s, and I know that nothing of the sort will take place from now on. In my letter of February 14, 1984, I told Michael that the issue will not go away. I look to you to take action that should have been taken three years ago.

There is one last deeply disturbing matter, which is the subtle - and not so subtle - attempted intimidation of Boughton's. I do not have to tell you that I regard the letter written by Mr. Boughton not as an exoneration but as a condemnation of certain elements in the Ministry.

yours ever

Ian

The Rt. Hon. George Younger, MP,
Secretary of State,
Ministry of Defence.

(3)

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218 6169

D/S of S/213/85

7 August 1986

Dear Ian,

Thank you for your letter of 11th July about the DROPS/ Boughton affair and the Panorama programme on 7th July.

I was, of course, very sorry to see that you and Peter Mills continue to share a strong conviction that Boughtons suffered major injustices in the DROPS procurement process and that they have been the victims of skulduggery. But I am bound to tell you that successive examinations by Ministers here over the last three years, as well as enquiries conducted by the Chief of Defence Procurement, revealed utterly no evidence that anything of the kind happened. Moreover, in my own consideration of the matter, I have been struck by the remarkable absence of any credible explanation as to what prompted the Department to single out Boughtons for such ill-treatment and to reject what are alleged to be ready-made best solutions to the Army's procurement requirements. Incompetence might, I suppose, be thought to be part of it, but

The Rt Hon Sir Ian Gilmour Bt MP

frankly I found the other explanations advanced in the course of the Panorama programme to be quite unconvincing.

Given all the past enquiries, I did not find that it advanced matters at all to persevere - as I fear the Panorama programme did - with a series of over-generalised assertions and highly selective points, most of which have been examined and answered so many times before. Whilst it is obviously for the BBC to justify their approach, we noticed that the programme reflected little of the full scale presentation on the DROPS procurement process which we gave the producer and his team in May or of the subsequent "no-holds barred" two hour question and answer session with our experts. During this, authoritative technical and other explanations were offered on virtually every critical aspect later featured in the programme, including the charge of being in breach of our undertakings and obligations regarding Boughtons' intellectual property. I do not, of course, know what fresh grounds you have for repeating this charge now, but I hope you are aware of the dialogue which our Patents Directorate has been conducting very conscientiously with the Company and its appointed Patent Agents since last January in pursuit of our undertaking; and that you will know that the evidence offered so far has been unable to sustain any of the claims made and, despite continual promptings on our part, nothing more has been forthcoming.

You describe the allegations made in the programme about the Ministry's attempted intimidation of Boughtons as deeply disturbing. Indeed they were, but I believe them to be completely without foundation. Mr Trafford Boughton's letter was sent entirely at his own initiative well before the programme was screened and I must point out that it was wholly consistent with the position he took as long ago as May 1984 following his discussions with Geoffrey Pattie. Moreover, I have to observe how, despite being declared frankly to the Panorama producer at the time and in spite of David Trefgarne's reference to it in his recorded interview, the letter got no mention at all in the programme.

You have asked me to consider establishing a further and independent enquiry into all these allegations. I have to say plainly that, on the evidence now available to me, I do not believe that any kind of case for an enquiry has been made out or that it would be justified to spend yet more Ministerial time and other effort pursuing these old grievances. This is particularly so when the Chairman of the Company alleged to have suffered all these injustices has put it on the record that he has no grievances which would form the basis for an enquiry and when their pursuit could only be at heavy expense for the taxpayer and with serious delay in satisfying urgent operational capabilities.

I am, nonetheless, very concerned that we should have failed so signally to persuade you that we have acted in good faith in this affair. I feel I must make one further attempt to put this right. I have asked the responsible officials here to prepare a comprehensive presentation for me on the DROPS procurement programme - including the Boughton dimension - which will enable me to meet my own responsibilities and provide me with the opportunity to get answers at first hand on any outstanding issues. I am hoping that this will be held in September and I should very much welcome it if you and Peter Mills - to whom I am also writing - could accept an invitation to be present to hear for yourselves the Department's account and explanations. I really cannot think of any more promising way in which we might be able to dispel all the clouds of suspicion that have been generated. Perhaps you will let me know if this will be helpful, so that we can arrange a convenient date.

Yours ever,

George

George Younger

(4)

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

D/MIN/DGT/MP/5208

11 August 1986

Dear Richard,

Thank you for your letter of 9th July about the Panorama programme on DROPS. I had indeed noted your past interest in this case.

As you recognise, I could not agree either that the Panorama programme was balanced or that it succeeded in presenting any real case for its assertions of Boughtons having suffered a major injustice at the Department's hands. It seemed to me that much of the programme consisted of a now familiar mix of old assertions which have failed to pass the inspection of Defence Ministers so many times previously and a number of highly selective points taken out of their vital context. Moreover, whilst I note your remarks about Panorama's resort to so-called independent assessors, I fear that, without knowing what factual or briefing information was provided to them, I should have to treat their views with the greatest caution. For example I had to notice that Mr Tidbury's views on technical matters were solely addressed to questions of the competence of Boughton's designs, whereas what was really at issue in a competition adjudication was their merits relative to those of the eleven other contenders. As another example, I noted that Mr Shaw's evidence on prices made the quite crucial admission that the

(1) (2) (3) (4) (5) (6)

/ Boughton ...

Richard Ottaway Esq., MP

Boughton production estimates were considerably more expensive than their competitors' which is, frankly, all that we have ever claimed. But it seemed odd that the programme then went on to try to dismiss a significant difference like this in a competitive procurement exercise by asserting that Boughton's competitors were less professionally competent in this area of performance and that, therefore, their production estimates were largely guesswork. The truth of the matter is that, three years on from the competition and despite the inevitable changes in specifications brought about by trials and other experience, our chosen firms' prices still compare favourably with anything Boughtons offered.

In the light of the evidence available I fear I can offer you no prospect of an independent inquiry being set up to consider these old and largely discredited charges. This could not take place without involving the taxpayer in major extra costs and damage to the progress we have made towards satisfying urgent defence requirements.

Moreover, I do not understand how it is thought to be open to us to pass Ministerial responsibilities for the defence procurement process and decisions to some other body and consider grievances which are now disowned by even the supposedly aggrieved party. The fact is that Mr Trafford Boughton wrote to us on 30th June disassociating himself from the programme and making it clear that his company not only recognised the Ministry's duty to make difficult decisions like these, but also that it had no quarrel with the ones that were taken in this case. The lack of even-handedness in the Panorama approach is, perhaps, best evidenced by the fact that, despite being well known to the Panorama team and being mentioned in my own recorded interview, these formal Boughton views got no recognition in the programme that went out.

Yours,

David

Lord Trefgarne

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

5

D/MIN/DGT/MP/5247

20 August 1986

Dear George,

Thank you for your letter of 17th July enclosing one from Mr P L Cove of Ridgeway Industrial Estate, Iver, Buckinghamshire, concerning the Panorama report on the Army's DROPS vehicle programme.

The Panorama presentation has given rise to a number of quite wrong impressions of the Department's approach to this procurement and its consideration of the Boughton equipment. I hope I can put matters in a truer perspective for Mr Cove on a number of the points he has made.

The first is the suggestion that Easams, who provided management consultancy support in the DROPS competition to the Department's procurement staff, had no experience in this field. That is simply not the case at all. Easams have undertaken a variety of assignments previously for the Department including in particular ones related to the Services' logistic task and vehicle requirements. A further important factor is that they had no commercial links with the competing firms or the industry generally.

/ Boughtons ...

Sir George Young Bt, MP

Boughtons have never been denied any opportunity to compete. The firm put forward its equipment in the 1982/83 procurement competition for assessment on an even-handed basis with those of its competitors and against a broadly stated set of requirements. Over 20 firms entered this competition initially and Boughtons not only got every consideration, but actually made our final short list of five. The crucial point which did not come out sufficiently in the Panorama report, however, was that the Department's assessments had to be competitive ones ie our selection of the equipment to go forward into the next stage of extended operational trials and evaluations had to be of the best of the equipments offered. The line drawn was not a narrow one as our final choice of two separate vehicle manufacturers (with two vehicle types each) and three load handling systems will demonstrate. Moreover, I am sure you will understand that, in fairness to all the other competitors and our primary responsibilities to the Army and the taxpayer, it was not open to us to award Boughtons some privileged position in the selection process solely by virtue of its earlier associations with the Army trials. The plain fact is that the Boughton proposals were beaten on their merits by better contenders and the Panorama suggestion that they should have been allowed through if only to set "benchmarks" for their competitors is a gross misappreciation of the circumstances and the business.

Mr Cove suggests that, in some way, the Department has "stolen" Boughton ideas. The position here is that the Army's DROPS concepts and requirements represented the fruit of studies and experiments by its logisticians and defence research staffs over more than a decade. Boughtons had no role as a development contractor in this process: the firm's contribution was a worthy but essentially limited one of supplying a small number of commercial load handling systems - the Ampliroll system mentioned in the programme which is French in its origins - for the Army's trials.

/ Finally ...

Finally I should like to make it clear that I and my colleagues fully understand the hopes and disappointments which are involved for firms in their efforts to get our defence business. The competitive process is essential to make sure we get value for money equipment and, inevitably, there will always be more losers than winners in each competition. It is very important to us that this process is orderly, reputable and fair and Defence Ministers over the last three years have spent a great deal of time and effort in reviewing the DROPS procurement story to make sure that the firm was properly treated. Absolutely no evidence of any injustice or impropriety has been found. Moreover, you should know that in June Boughton's Chairman wrote to the Ministry on his own initiative to put on record the fact that his company wished to disassociate itself from the Panorama programme and that it had no quarrel with the decisions made by the Ministry in this case. It is a great pity that this got no acknowledgement in the broadcast. My own reference to this point, and much else, was edited out.

Yours,

Donald.

Lord Trefgarne

(6)

HOUSE OF COMMONS
LONDON SW1A 0AA

4th September 1986 ... July 1986

TTB/MJW

... Mr Boughton,

I enclose a copy of my letter to ... and of ...

The Rt. Hon. Sir Ian Gilmour, Bt., M.P.,
House of Commons
London SW1A 0AA.

... anything to report.

With good wishes.

12th September, 1986.

DROPS

Thank you for your letter of the 4th enclosing your correspondence with George Younger.

I would like to point out that Mr. Younger has been misinformed when he states "Mr. Trafford Boughton's letter was sent entirely of his own initiation well before the programme was screened" The facts are that I was approached by a good friend of mine a retired Colonel, at the Aldershot show, who told me that it may be in the firm's best interests if I would write to the Procurement Executive saying that the firm had had no part in the production of the then forthcoming Panorama programme. I duly considered this and decided not to write. However, I was telephoned early on the morning of 30th June by General Steven Stopford, who requested that I fax a letter to him urgently in view of the Panorama programme which was to come out on the 7th July, hence the letter. I have not told anyone else who telephoned me, I have had an excellent relationship over the years with General Stopford.

Yours sincerely,

T. TRAFFORD BOUGHTON.

.../2

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

7

D/MIN/DGT/MP/5208

30 September 1986

Dear Richard,

Thank you for your further letter of 1st September about the Panorama programme on the DROPS/Boughton affair.

I am not quite sure that I understand what you mean by the Department "soliciting" Mr Trafford Boughton's letter. Mr Boughton wrote as he did in his full independent authority as Chairman of the Company and in the light of his own perceptions and views of its interests.

I must say plainly that throughout the whole of this unhappy business, the Department has been at pains to maintain normal, amicable relationships with the firm and its Chairman. As I am sure you will understand, in this we have been concerned to distinguish between answering representations made very properly on their behalf about their business with us and those made without their authority or knowledge by others. And we have been concerned also to avoid saying or doing anything in our public defences and replies which might do lasting harm to the firm's interests or reputation. In this context Mr Trafford Boughton told us in May and subsequently that his Company did not wish to be associated with the Panorama enquiries and programme and he indicated that he might wish to put this on record with us. In no way, however, could these contacts reasonably be interpreted

/ as ...

Richard Ottaway Esq. MP

as constituting any form of solicitation by the Department. Indeed you will note that Mr Boughton's letter gave no indication of any previous approach by the Department, formal or otherwise, and its terms went considerably beyond mere disassociation from the Panorama enquiry.

I hope that what I have said will put paid finally to this suggestion or any similar ones about our having "pressured" Boughtons into silence.

Yours,

David.

Lord Trefgarne

8

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218

D/S of S/215/86E 3rd October 1986

Dear Michael,

Thank you for your letter of 2nd September enclosing one from your constituent Mr J D Taylor about the Panorama report on the Army's DROPS vehicle programme.

As you will have appreciated, I am sure, from your own knowledge of this project, the Panorama presentation has given rise to a number of quite wrong impressions of the Ministry of Defence's approach to this procurement and its consideration of the Boughton equipment. I hope I can put matters in a truer perspective for Mr Taylor on a number of points he has made.

In the first place Mr Taylor can be reassured that there is no question of the Ministry having taken over patents or any system invented by Boughton. The Army's DROPS concepts and requirements represented the fruit of studies and experiments by its military logisticians and defence research staffs over more than a decade.

The Rt Hon Michael Heseltine MP

Boughtons had no role as a development contractor in this process; the firm's contribution was a worthy but essentially limited one of supplying a small number of commercial load handling systems - the Ampliroll system, mentioned in the programme, which is French in its origins - for the Army's trials.

The second point I might make is that Boughtons have never been denied any opportunity to compete. The firm put forward its equipment in the 1982/83 procurement competition for assessment on an even handed basis with those of its competitors and against a broadly stated set of requirements. Over 20 firms entered this competition initially and Boughtons not only received every consideration, but actually made our final shortlist of five. The crucial point which did not come out sufficiently in the Panorama report, however, was that the Department's assessments had to be competitive ones ie our selection of the equipment to go forward into the next stage of extended operational trials and evaluations had to be of the best of the equipments offered. The line drawn was not a narrow one, as our final choice of two separate vehicle manufacturers (with two vehicle types each) and three load handling systems will demonstrate. Moreover I am sure you will understand that, in fairness to all the other competitors and our primary responsibilities to the Army and the taxpayer, it was not open to us to award Boughtons some privileged position in the selection process, solely by virtue of its earlier associations with the Army trials. The plain fact is that the Boughton proposals were beaten

on their merits by better contenders, and I have to consider the Panorama suggestion that they should have been allowed through if only to set "benchmarks" for their competitors as being a gross misunderstanding of the circumstances and the way business is that conducted.

In the light of the above I am sure your constituent will understand that the competitive process is essentially to make sure we get equipment which represents value for money and, inevitably, there will always be losers as well as winners in each competition. It is very important to us that this process is orderly, reputable and fair and, as you will recall, Defence Ministers over the last 3 years have spent a great deal of time and effort in reviewing the DROPS procurement story to make sure that the firm was properly treated. Absolutely no evidence of any injustice or impropriety has been found. Moreover I have to tell you that, in June, Boughton's Chairman wrote to the Ministry on his own initiative to put on record the fact that his Company wished to disassociate itself from the Panorama programme and that it had no quarrel with the decision made by the Ministry in this case. It is a great pity that this received no acknowledgement in the broadcast.

Finally the suggestion which has been made that EASAMS, who provided management consultancy support in the DROPS competition to the Department's procurement staff, had no experience in this field

is simply not the case at all. You may recall that EASAMS had undertaken a variety of assignments previously for the Department including, in particular, ones related to the Services' logistic tasks and vehicle requirements. A further important factor is that they had no commercial links with the competing firms or the vehicles generally.

I do hope that this will help put matters in a truer perspective for Mr Taylor.

Yours ever,

George

George Younger

From: RICHARD OTTAWAY, M.P.

9

HOUSE OF COMMONS
LONDON SW1A 0AA
Office: 01 219 4017

13th October 1986

Your ref: D/MIN/DGT/MP/5208

Lord Trefgarne
Minister of State for Defence Procurement
Ministry of Defence
Whitehall
LONDON SW1A 2HB

Thank you for your letter of the 30th September on the DROPS/Boughton affair. I feel that your letter has somewhat talked around the point I was trying to establish which I put to you again.

Did anyone, in say the 2 weeks before the broadcasting of the Panorama programme, write, telephone or in any way communicate with Mr Trafford Boughton, the Chairman of Boughtons inviting him to write a letter dissociating himself from the Panorama programme ?

I hope this is put in a simple enough manner to elicit a 'yes' or 'no' answer. I hope a reply can be produced a little more speedily than the last letter.

(10)

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

D/MIN/DGT/5/4

23rd October 1986

Dear Ian,

George Younger has asked me to reply to your letter of 13th October.

As you say the presentation about the DROPS procurement has now been firmly fixed for next Monday and I do hope that this will provide the opportunity to put your concerns and those of colleagues to rest. The briefing is going to cover as much as possible all the major issues which have arisen concerning the Department's competition and selection. I very much hope also that there will be adequate opportunity for you and your colleagues to put particular questions to us.

In these circumstances I believe you might accept that we should not try to engage in further extensive rounds of commenting and reply in advance of the briefing session. I do not think that many of the questions really lend themselves to Yes/No treatment or that it would help you if we attempted them that way. And, with so little time available - your letter only arrived last Friday - it really is not practical for us to undertake all the work normally needed to provide a decent considered reply.

/ There ...

The Rt Hon Sir Ian Gilmour Bt, MP

There is one final point I must make. A number of the questions specifically ask us to provide in documentary form detailed volumes of technical or commercial information about the proposals made by Boughton's competitors. There is a very real difficulty for us here and, with the best of wills, I have to say that I cannot see at the moment how we could possibly meet these demands at all readily without breaching our obligations to others.

I look forward to seeing you on Monday.

Yours,

David

Lord Trefgarne

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

11

HOUSE OF COMMONS
LONDON SW1A 0AA

23rd October 1986

Dear David,

Thank you for your letter of today.

I am very sorry indeed that the decision has been made not to answer the questions that I put. With respect, contrary to what you say, nearly all the questions can be answered by "yes" or "no", and I think those answers would have been extremely useful not only to Peter Mills and myself but also to George Younger, yourself and other people in the Ministry of Defence.

I take your point, of course, about commercial confidentiality. Obviously I would be prepared to give any undertakings that were necessary, and the difficulty may be got round by not giving the answers in writing. As you probably realise, I have had much of the relevant information for a long time and have of course preserved total confidentiality.

There is one final point: you talk about resolving my "concerns" and those of my colleagues. That is not the point. I do not have "concerns"; I have been closely involved in this matter for a number of years and I have a good deal of knowledge of it. To be brutal, it is not my concerns that you should be worrying about but what has been done by the Ministry of Defence.

Yours ever

Ian

The Lord Trefgarne,
Minister of State for Defence Procurement,
Ministry of Defence.

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB
Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

12

D/MIN/DGT/MP/5208

24th October 1986

Dear Richard,

Thank you for your further letter of 13th October concerning DROPS.

To the best of our knowledge Mr Trafford Boughton's only official contact with the Department in the period you mention on this subject was a telephone conversation he had with the Director-General of Fighting Vehicles - Major-General Stephen Stopford - towards the end of June. My earlier letter explained the background to this. General Stopford has no doubt whatsoever it was Mr Trafford Boughton's own idea to write to the Department as he did.

Yours,

David.

Lord Trefgarne

Richard Ottaway Esq. MP

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

13

HOUSE OF COMMONS
LONDON SW1A 0AA

29th October 1986

Dear George,

Thank you for inviting me to Monday's presentation which was much more revealing, in more ways than one, than I expected. This is not the time to mount a critique of it, but some of the things we heard made an interesting commentary on facts in my possession and indeed on page 3 of your letter of 7th August to me. And I was, of course, grateful to be told how the Procurement Executive works!

As you know, I asked Michael Heseltine to set up an independent enquiry three years ago. What a lot of time and trouble would have been saved, had he done so! I am still convinced - indeed more than ever after Monday's presentation - that such an enquiry is the right solution. If the Procurement Executive are sure of their case, I cannot see why they should object. Indeed I should have expected them to welcome an independent enquiry, which if they are right would vindicate their decisions and their activities. Of course time is an important factor. But I am pretty sure that a competent assessor would ascertain the true facts in a matter of days.

There is a great deal of newspaper interest, and I have done what I can to "disalert" them. But I don't know how successful I will prove to have been. Quite apart from anything that might happen on our side, MOD is itself notoriously leaky. It would, in any event, be helpful if we could have the transcript of the presentation very quickly - and if there is a transcript of the discussion afterwards that would be useful too.

yours ever
Ian

The Rt. Hon. George Younger M.P.,
Secretary of State,
Ministry of Defence.

14

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

D/MIN/DGT/5/4

10th November 1986

Dear Mr Boughton,

As I am sure you are well aware, in the wake of the Panorama programme George Younger and I have been responding to further representations about the DROPS procurement competition of 1982/83.

I believe it would be very much in our mutual interest to meet to discuss the situation and get a clear idea of how we all stand. If you could possibly lend yourself to this I should be most grateful, and if you agree I will ask my office to arrange a convenient time.

Yours sincerely,

Trefg—

Lord Trefgarne

T Trafford Boughton Esq.

15

TTB/MJW

PRIVATE AND CONFIDENTIAL

Mr. Richard Ottaway, M.P.,
~~Williams and Crump~~ William A. Crump
4th Floor
9 St. Helens Place
London EC3A 6AE.

11th November, 1986.

Dear Mr. Ottaway,

I am writing as requested to clarify the position concerning my views on the DROPS issue and the accuracy of what is being imputed to me.

As you know from your own experience, we have been deterred in the past from pursuing any line critical to the M.O.D. in fear of the consequences of such action. Added to this is the fact that when I met Mr. Pattie at Shrivenham in April 1984 I agreed to ask Sir Ian Gilmour and others in the House of Commons to allow the whole question of an enquiry on the subject of DROPS to be put to rest in exchange for certain assurances from the Minister among which was that "there would be no unauthorised use by the Ministry of any original ideas Boughtons submitted to the Department." This Mr. Pattie gave in his letter of 22nd May but it now appears that the Ministry of Defence has no intention of honouring Mr. Pattie's pledge and when we have raised the matter of the original ideas, we have felt that we were jeopardising our future relationship with other sections of the Ministry of Defence.

We sought to make it clear to everyone that we were not the instigators of the Panorama programme and that we were not in any way participating in its making. David Stride resigned in order to assist Panorama and both he and the producer assured me that they would make it clear in the programme that we had not participated in any way. I felt that this was adequate assurance and decided to remain silent.

In the weeks before the programme I received a telephone call from a senior member of the M.O.D. enquiring about the Panorama programme and at the B.A.E.E. at Aldershot we were visited by several people who indicated both to me and to other people that the Panorama programme would do our cause no good and the Chief of Defence Procurement made it plain that the issue was closed and that we should accept the fact that "some you win and some you lose" and that we had lost.

As I have explained already to Sir Ian Gilmour, I was also approached at the exhibition by a retired Colonel,who urged me to write to the M.G.O., General Vincent, to disassociate myself and the company from Panorama. I decided against this as I had been assured by the Panorama producers that it would be made perfectly clear in the programme that neither I nor the company had had any part in the production of the programme, I was very surprised on the morning of 30th June when Major General Stopford called me to ask me to write to the M.O.D. immediately disowning the programme and requested me to copy the letter straight away by facsimile transmission. I felt that this was a request I could not refuse. Despite the alarm, my letter was written in terms designed to be neutral as to the underlying issues. I stated that we had taken no part in the forthcoming programme and that we had requested that this was made clear in the presentation. I also said that we accepted the M.O.D.'s prerogative in the choice of equipment, but I also pointed out that there was the ongoing matter of the interpretation of Mr. Geoffrey Pattie's letter of the 22nd May 1984.

Since much has been imputed to my views to justify the M.O.D.'s position I must put the record straight. I do believe that the original decision was wrong and that it may have been affected by an unhappy personal relationship between David Stride and a member of the Procurement Executive, which was well known and widely discussed in advance of the competition. Far from believing that there were no grounds for an enquiry, it was this that I was seeking when Mr. Pattie requested a meeting with me at Shrivenham. I believe that If Mr. Stride is able to obtain a judicial review as is his expressed intention, he will have no difficulty in proving his case on the available facts.

In conclusion, the company has not been pursuing the complaint as it has been made plain to us by the M.O.D. in their letters and responses to date that this would be utterly futile and would have no chance of success and it has also been made plain by a number of third parties and by the M.O.D.'s reaction to complaints that were made that to do so could damage any prospects the company might have for further M.O.D. contracts.

I have also said elsewhere that we do have a complaint about the Ministry's entire approach to the matter of Mr. Patties assurance and we are currently in discussions with our legal advisers.

You may be aware that the Boughton Group are at present tendering for a contract for the supply of 4x4 vehicles to the M.O.D. and I would not like to think that this letter would in any way jeopardise our chance of securing this tender.

Yours sincerely,

T. TRAFFORD BOUGHTON.

16

D/MIN/DGT/5/4
TTB/MJW

The Lord Trefgarne
Minister of State for Defence Procurement
Ministry of Defence
Main Building
Whitehall
London
SW1 2HB.

12th November, 1986.

I duly received your letter of 10th November.

I would value the opportunity of a discussion and I would like to ask Sir Ian Gilmour if he would accompany me. Would this be in order?

Trafford is too polite
for his own good!
Trefgarne will attempt to claim
that this shows there is
nothing sinister

T. TRAFFORD BOUGHTON.

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

17

URGENT

HOUSE OF COMMONS
LONDON SW1A 0AA

12th November 1986

Dear George,

DROPS

At the presentation on 22nd October you said you would need a fortnight to consider; it is now three weeks since we met and there has been no follow up to me.

There have, however, been two other developments. David Trefgarne has seen Richard Ottoway and in effect "warned him off" the case. I think David should be rather more careful about his conduct. My understanding is that for a member of the House of Lords to seek to stop a Member of Parliament performing his parliamentary duties is a breach of privilege. It is also, by any standards, reprehensible behaviour and will make very sorry reading when it comes out either by way of a privilege case or by other means.

The second development is a letter from David to Trafford Boughton. I don't know whether you authorised that letter or not. If you did not, no doubt you will be dealing with the matter. If you did, I must say that I find MOD's underhand behaviour very odd - except that it is very much all of a piece with what has happened since the beginning of the case. It is astonishing that such a letter should be written - without any notification to me - and, more importantly, without any replies to the questions that I sent you a month ago or my letter of 29th October. As you know, there have been attempts to intimidate Mr Boughton before, and I had trusted that things would be very different on your arrival at the ministry.

Two or three years ago I agreed to let the matter drop (no pun intended) because Mr Boughton expressed himself satisfied with his agreement with Geoffrey Pattie - which is evidently being broken.

But there is no question of my letting it drop a second time. And if MOD did succeed in intimidating Mr Boughton again, I should regard that as yet another confirmation of the need for an independent enquiry or a proper airing of the whole affair in the press and on television.

In view of what has happened and has not happened, I hope you will take immediate action.

yours ever

Tam

The Rt. Hon. George Younger M.P.,
Secretary of State,
Ministry of Defence.

From: RICHARD OTTAWAY, M.P.

18

HOUSE OF COMMONS
LONDON SW1A 0AA
Office: 01 219 4017

13th November 1986

Christopher Monkton Esq
Deputy Editor
Today
70 Vauxhall Bridge Road
LONDON SW1

Dear Christopher

DROPS

Following our telephone conversation today I am pleased to confirm in writing what we discussed.

I have been involved with this case for the last 18 months. I have no constituency interest but know David Stride from old and believe him to be a genuine person. He has shown me a number of documents which have lead me to believe an injustice has been carried out to Boughtons and that the selection process of this equipment for what will be a very large procurement contract with the Ministry of Defence was not carried out properly.

I first drew this matter to the attention of Michael Heseltine who told me he was advised that the contract went to the supplier of the best equipment which offered the best value for money and that Boughtons equipment was too expensive and not good enough.

Matters rested there as I knew that Panorama were interested in the issue and as you know a programme was subsequently made. Following that programme I asked George Younger, by then Secretary of State for Defence for an independent investigation into the whole matter. He then asked the Ministry of Defence for a presentation on the whole issue and kindly asked me to attend and invited me to put questions to the officials after the presentation. The presentation took about 40 minutes of which about 5 minutes got to the crux of the argument and that was the technical merits and price evaluation of the system. Even then there was no analysis or comparison, we were simply told that Boughtons had come sixth out of six contenders. I then put a number of technical questions - the officials were at first reluctant to answer the questions, when they did, of the four technical comparisons I put, Boughtons equipment was as good as the winning contractor on three fronts and better on the fourth.

After the presentation I briefly discussed this with David Trefgarne the Minister of State for Procurement at the Ministry of Defence, and subsequently arranged a meeting with him.

At the meeting he took the view that Ministry of Defence was accused of either being incompetent or crooked and until we could produce allegations on either score he would advise the Secretary of State not to re-open the matter. He also said that the independent inquiry carried out inside the Ministry of Defence had found no evidence of either. I expressed a view that from what I had seen of the technical evidence that whilst I made no allegation of incompetence or crookedness the figures simply did not add up. On the one issue of production estimates where Boughtons apparently come out badly I put forward the point that in their opinion the feasibility study had not asked for a proper tender on production estimates.

Slightly to my surprise David Trefgarne then pointed out that as a PPS in the Foreign Office I was a member of the Government and should accept an assurance from a Minister that he was satisfied that the selection process had been carried out properly. Strictly speaking he is quite right and I am now obliged to abide by this convention. I was, however, very surprised that he should lean on me in this way. If there was nothing to hide I would have thought that one very dispensable politician could be allowed to make a fool of himself rather than attempt to muffle him in this way.

Yours sincerely

Richard Ottaway

Richard Ottaway MP

19

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218 6169

MO 26/4L

17th November 1986

Dear Ian,

Thank you for your letter of 29th October and also for your letter of 23rd October to David Trefgarne.

I am glad that you found it useful to attend the briefing presentation on DROPS which I was given on 27th October. As was said at the beginning of the presentation (and, indeed, in my letter of 7th August), its purpose was to provide in-house advice to me. I hope you will understand that because of this - and because of the confidential and commercial-in-confidence information which the presentation contained - I am afraid that I cannot pass onto you a copy of the text.

As we agreed, I am reflecting on the way forward. I shall be in touch with you as soon as possible.

Yours ever,

George.

George Younger

The Rt Hon Sir Ian Gilmour Bt MP

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

20

HOUSE OF COMMONS
LONDON SW1A 0AA

18th November 1986

Dear George.

DROPS

Thank you for your letter of yesterday telling me that you are reflecting on the way forward. I am sorry that you have now decided not to give me the text of the presentation. You will remember that at the presentation you agreed to do so, and moreover you said it out loud - so that anybody who had wanted to raise the point about commercial-in-confidence information could then have done so. In your letter you do not answer any of the questions that I put to you in my letter of 13th October. Nearly all those questions were straightforward and could have been answered in a short time, yet now a month has passed. Altogether the inference is difficult to resist.

I understand that you did not get my letter of 12th November, though it only had to go from my office here to yours by the internal post. It was clearly marked "urgent", and the urgency - particularly of the breach of privilege - has grown. Notwithstanding your reflections, therefore, I hope you will be able to let me have a more or less immediate reply.

Yours ever

Ian

The Rt. Hon. George Younger, M.P.,
Secretary of State,
Ministry of Defence.

21

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218 6169

MO 26/4E

November 1986

Dear Ian,

Thank you for your letters of 12th and 18th November.

I do of course entirely understand your concern about the DROPS case. For this reason I have been taking a very close interest and the steps that David Trefgarne has taken have been with my full agreement. Let me assure you that it was in no way David's intention, or mine, to "warn off" Richard Ottaway - indeed David came away from the meeting with the clear expectation that Richard was going to raise the matter in the House before long.

Let me assure you too that it is absolutely not the intention of our invitation to Trafford Boughton to discuss the matter that we should use this meeting to intimidate him. He is a much valued Defence contractor and it is surely right that we should talk to him about the situation as he sees it. It would, I believe, be quite remarkable if we did not have direct contact with Mr Boughton in the present circumstances. I understand that arrangements have

The Rt Hon Sir Ian Gilmour Bt MP

been made for you to be present at the meeting. I am very glad about that and I hope that you will find it useful and constructive.

As you recognise, this matter has now been dragging on for a number of years, and has been considered by successive Ministers - as well as a large number of military and civilian officials. It was because the matter has been examined so exhaustively that we thought it might be helpful for you to come to the presentation last month. I am very sorry that you did not find the occasion reassuring but I simply cannot accept that there was in any sense - as you have indicated - some conspiracy to exclude Boughton from the DROPS competition. What would the aim of this have been?

Having now considered this matter most carefully, I can find no evidence that suggests that Boughtons were dealt with in any way unfairly. You may be aware that last year we asked for a review of the DROPS procurement to be made by an appropriate official from outside the Procurement Executive. He concluded:

a. That he could find no evidence of any impropriety on the part of the staff concerned.

b. That Boughton was rightly eliminated in the selection of the two main DROPS contenders.

c. That on the evidence available, there had been no specific infringement of design rights.

I have reached the same conclusions.

As all Ministers here have consistently made clear, we have been fully prepared to consider all the allegations that you wish to make. This we have done, and I should have hoped that in the end you would accept the veracity of the answers that we give you.

Yours ever,

George.

George Younger

22

HOUSE OF COMMONS
LONDON SW1A 0AA

Your ref: MO 26/4E

20th November 1986

Dear George,

Thank you for your letter.

I have been surprised by the way you have sought to deal with this matter, and you still have not answered any of my questions. I trust you will soon do so.

What you say about David Trefgarne's meeting with Richard Ottoway is flatly untrue.

Of course it is right that the MOD should talk to Trafford Boughton. What is not right is that it should have sought to do so behind my back and without answering any of the points that had been put.

You can hardly be surprised that Tony Buck, Richard Ottoway and myself were not reassured by the presentation. You showed every sign of not being reassured yourself. And your refusal to let me see the transcript, despite what you had earlier said, does not suggest you have great confidence in its contents. To take one small example of its unreliability: we were told that the U.S. army had sent back the Boughton equipments and this demonstrated their inferiority. The U.S. army have in fact retained all 21 Boughton equipments and paid for them in full.

The argument about commercial-in-coinfidence is profoundly unconvincing, since I have already seen the proposals of other selected competitors.

The inquiry by an unnamed official of the Ministry of Defence, hearing only one side of the story has no evidential value whatever.
Incidentally, I take it that you are referring to the "enquiry" conducted by Mr Julian Walker, himself a former member of MVEE. In any case General Mans, as you know, came to the opposite conclusion.

The dissembling and duplicity, to put it no higher or lower for the time being, that I have consistently encountered in this case unfortunately inhibit me from accepting "the veracity" of what I have been told. But "conspiracy" is your word not mine. "Scandal" on the other hand is a word I have used and unfortunately you have not yet given me any reason to cease doing so. It is just as clear to me now as it was before that there are only two proper courses of action: an independent enquiry or a new competition.

Yours ever

Ian

The Rt. Hon. George Younger M.P.,
Secretary of State,
Ministry of Defence.

TBT EST 1897 The Boughton Group

REGISTERED OFFICE
BELL LANE
AMERSHAM
BUCKS, HP6 6PE

TELEPHONE:
LITTLE CHALFONT (02404) 4411
TELEX: 83132

23

HEARNCREST BOUGHTON
ENGINEERING LIMITED

YOUR REF

OUR REF TTB/MJW

The Lord Trefgarne,
Minister of State for Defence Procurement
Ministry of Defence
Main Building
Whitehall
London
SW1 2HB.

21st November, 1986.

Dear Lord Trefgarne.

I refer to our meeting yesterday morning attended by Sir Ian Gilmour and General Vincent, at which I was glad to have the opportunity to discuss the apparent misunderstandings about my views on the DROPS issue.

As I explained, I had agreed with Mr. Pattie to substitute a complaint about the competition for an assurance which I believed could only result in the purchase and use of our equipment. The equipment we have seen is such that I am still firmly of the opinion that this should be the result.

It was extremely valuable to have your confirmation that the word "unauthorised" in Mr. Pattie's assurance does in fact mean "unauthorised by Boughtons in writing" as we had always understood it to mean. The logical consequence of this is unavoidable. There must now be a complete halt to the DROPS competition and the question of the "original ideas" must be submitted to independent adjudication, preferably by agreement rather than by litigation, which had seemed inevitable until our meeting.

As you may not have been aware, Mr. Pattie's undertaking was that M.O.D. would not "USE" any such original ideas. It is clear that "using and then compensating us afterwards" is not the same as "not using".

I am also particularly concerned that all action taken by M.O.D. to undermine our intellectual property rights in its own defence, also undermines those same rights in the U.S.A. to the direct benefit of our foreign competitors. I hope that you are in no doubt of the implications for U.K. trade and employment of the M.O.D.'s attempts to discover or create loopholes.

In my view the result of an independent enquiry into the original ideas

issue would leave M.O.D. only two options, either of which would be acceptable to us - firstly, the award of the contract to Boughtons on the grounds that there was no alternative, or, secondly, to order a new competition, from which equipment incorporating such "original ideas" would be excluded.

If on the other hand M.O.D. is unwilling to stick by the undertaking made by the then Minister and proceed as outlined above, then I believe the M.O.D. is in honour bound to stop the procurement and order an independent enquiry into the original selection and all the subsidiary issues so far raised. This was after all the alternative for which Mr. Pattie's assurance was substituted in 1984.

I hope you agree therefore that there is no alternative to the involvement of fresh, impartial and independent judges at this stage and while I agree to further direct discussion between our respective patent specialists, this should in no way distract us from the main issues.

I very much welcome your statement that if there had been an injustice you would be very keen to rectify it.

Yours sincerely,

T. TRAFFORD BOUGHTON.

FILE
DA

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

4 December 1986

Dear Ian,

Thank you for your letter of 4 December enclosing your Secretary of State's letter to Sir Ian Gilmour. I have shown this to the Prime Minister and she is content.

yours sincerely,

Charles Powell

(Charles Powell)

I.C.F. Andrews, Esq.,
Ministry of Defence.

010.

CDPC (1)

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/4V

Prime Minister 4th December 1986
This seems to be a very fair reply.
Content?
CDP 4/12.

Dear Charles,

DROPS

We spoke earlier this afternoon about Ian Gilmour's question to the Prime Minister on DROPS. I told you that I thought that we had written to Gilmour today and would be announcing the outcome of the competition by means of an inspired PQ later this afternoon. In fact the announcement will be made tomorrow and we have managed to stop the letter, a copy of which is attached, together with that to which it refers.

I should be grateful if you would confirm that the Prime Minister is content that we should proceed as Mr Younger has proposed.

Yours ever,

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

M-

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218

MO 26/4L

4th December 1986

Dear Ian,

Thank you for your letter of 20th November concerning DROPS. I am sorry that despite our best endeavours you remain unhappy about some aspects of the competition. There are three main questions which you and others have raised and I will take them in order.

First, was the Ministry of Defence right to eliminate Boughtons from the competition at the penultimate stage? For all the reasons explained to us at the presentation, I believe we were entirely right, both on technical and cost grounds. In any event, as the customer we are entitled to choose for ourselves the product which best suits our needs.

Second, was Boughtons treated in any way unfairly during the competition? In other words, was there some reason other than cost or technical shortcoming which persuaded us to

The Rt Hon Sir Ian Gilmour Bt MP

eliminate them when we did? I know of no such reason, and none has been produced. I therefore conclude that the firm was indeed treated fairly, and I hope you will too.

Third, was any of Boughtons intellectual property used by the Ministry of Defence during this competition? As David Trefgarne made clear in his letter to Mr Boughton of 25th November, there has certainly been no deliberate use, nor do we think there has been any inadvertent use. In case you have not seen it, I attach a copy of David's letter which fully sets out our position on this aspect of the matter, which we wish to resolve amicably as soon as possible.

You also refer to David's meeting with Richard Ottaway. That meeting was a private one, at Richard's request, and I can see nothing improper in the way that it was conducted.

You will wish to know that this competition has now been concluded and, in confidence, I can inform you that we will be announcing details of the outcome tomorrow by means of a Written Answer and Press conference.

I recognise that, despite all our efforts you remain, so far at least, unpersuaded. I have been considering therefore what could be done to set your mind at rest.

You indicated at the end of your last letter that you felt that an independent inquiry was one of the only courses you could see as a way of resolving this matter. You may therefore be pleased to know that the Comptroller and Auditor General has now decided to include the DROPS programme as part of his regular review of MOD procurement. His people are already examining our papers on this subject, all of which are open to them, in the normal way. He reports, of course, to Parliament and his findings are, as you know, followed up by the Public Accounts Committee. This will ensure, in line with your concerns, that this programme receives detailed and independent scrutiny. I welcome this development.

Yours ever,

George.

George Younger

MINISTRY OF DEFENCE
WHITEHALL LONDON SW1A 2HB

Telephone 01-218 6621 (Direct Dialling)
01-218 9000 (Switchboard)

Minister of State
for Defence Procurement

ENCLOSURE NUMBER 52

D/MIN/DGT/5/4

25 November 1986

Dear Mr Boughton,

Thank you for your letter of 21st November which followed our meeting of 20th November at which Sir Ian Gilmour and General Vincent were also present. I should perhaps make it clear at the outset that there has certainly been no deliberate use of either your patents or other intellectual property by the Ministry of Defence in this project. Nor do I think there has been any inadvertent use. However, I recognise that you take a contrary view and I am anxious therefore that this matter should be fully investigated.

You agreed during the course of our conversation that there should be an early meeting of experts from your company and the Ministry of Defence to consider this matter further and I am now setting in hand arrangements for such a meeting. It would be helpful if you would let me know whom you would like to represent your company at this meeting. I can of course confirm, as I did at our meeting, that if it is established that we have indeed inadvertently adopted any of your intellectual property in the DROPS equipment which we shall in due course be acquiring, then we will certainly want to put the matter right.

/ As ...

T Trafford Boughton Esq

As I indicated at our meeting I look forward to meeting you and Sir Ian Gilmour again as soon as we have the advice from our respective experts to hand.

As you know the DROPS competition is now in its final stage and we expect to be announcing the outcome before long. I am afraid therefore that I cannot agree either to halt the competition or to institute an independent Inquiry as you suggest, but may I assure you again that if there has been any inadvertent use of your intellectual property then we shall hasten to reach an amicable agreement with you. Your company has long been, and remains, a valued supplier to the Ministry of Defence and we are anxious to lift this shadow from our relationship at the earliest possible moment.

Yours sincerely,

Trefg—.

Lord Trefgarne

From: The Rt. Hon. Sir Ian Gilmour, Bt., M.P.

AcQ 25/11
~~213/85~~
MO 26/4

HOUSE OF COMMONS
LONDON SW1A 0AA

Your ref: MO 26/4E

20th November 1986

Dear George,

Thank you for your letter.

I have been surprised by the way you have sought to deal with this matter, and you still have not answered any of my questions. I trust you will soon do so.

What you say about David Trefgarne's meeting with Richard Ottoway is flatly untrue.

Of course it is right that the MOD should talk to Trafford Boughton. What is not right is that it should have sought to do so behind my back and without answering any of the points that had been put.

You can hardly be surprised that Tony Buck, Richard Ottoway and myself were not reassured by the presentation. You showed every sign of not being reassured yourself. And your refusal to let me see the transcript, despite what you had earlier said, does not suggest you have great confidence in its contents. To take one small example of its unreliability: we were told that the U.S. army had sent back the Boughton equipments and this demonstrated their inferiority. The U.S. army have in fact retained all 21 Boughton equipments and paid for them in full.

The argument about commercial-in-coinfidence is profoundly unconvincing, since I have already seen the proposals of other selected competitors.

The inquiry by an unnamed official of the Ministry of Defence, hearing only one side of the story has no evidential value whatever. Incidentally, I take it that you are referring to the "enquiry" conducted by Mr Julian Walker, himself a former member of MVEE. In any case General Mans, as you know, came to the opposite conclusion.

The dissembling and duplicity, to put it no higher or lower for the time being, that I have consistently encountered in this case unfortunately inhibit me from accepting "the veracity" of what I have been told. But "conspiracy" is your word not mine. "Scandal" on the other hand is a word I have used and unfortunately you have not yet given me any reason to cease doing so. It is just as clear to me now as it was before that there are only two proper courses of action: an independent enquiry or a new competition.

Yours ever

Ian

The Rt. Hon. George Younger M.P.,
Secretary of State,
Ministry of Defence.

3419.002

copy.

CONFIDENTIAL

Treasury Chambers, Parliament Street, SW1P 3AG

J F Howe Esq
Private Secretary to the Secretary of
State for Defence
Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

CDP
2/12

2 December 1986

Dear John,

ALARM

The Chief Secretary has seen the Defence Secretary's minute of 24 November about the problems which have arisen over the ALARM programme. MOD officials have been keeping us in touch with progress and in the light of these reports you know that the Chief Secretary had already expressed his considerable concern about these developments, and had stressed the need for early notification to colleagues.

The Chief Secretary hopes that Mr Younger's further report can be made available quickly. He believes it important that this matter should not be allowed to drift on, but rather that there should be an early and substantive review of the ALARM project and a detailed assessment of the alternative options. He has asked that the alternative options include an accurate assessment of the costs and operational implications of cancelling ALARM and buying the US HARM missile - ALARM's original competitor which is already in service with US and FRG forces.

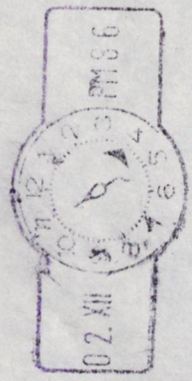
I am copying this letter to the Private Secretaries to members of OD and to Sir Robert Armstrong.

Yours,

Jill Rutter

JILL RUTTER
Private Secretary

DEFENCE : Procurement . Pt 4



CONFIDENTIAL

CCDC

CABINET OFFICE,
WHITEHALL, LONDON SW1A 2AS

Chancellor of the Duchy of Lancaster

Tel No: 233 3299
7471

1 December 1986

John Howe Esq
Principal Private Secretary to
the Secretary of State for
Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SW1A 2HB

CDP
1/Ki

Dear John.

ALARM

The Chancellor of the Duchy has seen your Secretary of State's minute of 24 November to the Prime Minister.

It would be helpful to my Chancellor, in considering the implications of this, to know more precisely why it is that the MOD would find it very difficult to complete a sale of Royal Ordnance to BAe, while the Alarm motor problem is unsettled. Wouldn't a sale to BAe simplify matters, by limiting the parties to two, and then BAe can take in-house the motor problem difficulties at ROF since it is there, and not at BAe, that these problems have arisen. Otherwise, BAe look to stand to lose out twice because of the inability of Royal Ordnance to meet its sub-contract with BAe.

I should be grateful for your further elucidation of this point.

I am sending a copy of this letter to the private secretaries to members of OD, the Chief Secretary, and to Sir Robert Armstrong.

Yours Sincerely,
A. Lansley

ANDREW LANSLEY
Private Secretary

Procurement: DEFENCE

pt 4.

10 DOWNING STREET

Nimrod / Awacs

Lord Pres.
Def. Sec.
Foreign Sec X
Chancellor
Chancellor of the Duchy
Chief Whip
+
CDP.

Northern Ireland Secretary.

CDP.

How after Cabinet
on Thursday 11 Dec.
ER 28/11

CCFC.

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~930 7822~~ 218 2111/3

MO 26/7/3L

28th November 1986

CDP
28/11

Dear Charles,

AEW DECISION TIMETABLE

Thank you for your letter of 26th November which I discussed with the Defence Secretary on his return from Oman earlier today.

Mr Younger welcomes the Prime Minister's suggestion of an initial meeting of senior colleagues along the lines you propose. He would hope that it would be possible for this to take place no later than 15th December and that, in view of the possible implications of the decision for United Kingdom industry, the Secretary of State for Trade and Industry might also attend.

I am sending copies of this letter to Joan MacNaughton in the Lord President's office and to Trevor Woolley (Cabinet Office).

Yours ever

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street

DEFENCE

~~HARM~~

PT4

CONFIDENTIAL

8kw

cdc

10 DOWNING STREET
LONDON SW1A 2AA

From the Private Secretary

27 November 1986

Dear John,

ALARM

The Prime Minister has noted with concern the Defence Secretary's minute of 24 November about the problems which have arisen over the ALARM programme. She will await a recommendation from the Defence Secretary.

I am copying this letter to the Private Secretaries to members of OD, the Private Secretary to the Chief Secretary and to Sir Robert Armstrong.

yours sincerely

(C. D. POWELL)

John Howe, Esq.,
Ministry of Defence

CONFIDENTIAL

8kw

CONFIDENTIAL

SRWANO

cdc

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

26 November 1986

AEW DECISION TIMETABLE

Thank you for your letter of 25 November about the timetable for the decision on Nimrod/AWACS. Subject to your Secretary of State's views, the Prime Minister's preference would be to have an initial meeting in a smaller group of Ministers at some point between 9 and 17 December. This would be followed by an OD discussion on 17 December and, if necessary, consideration by Cabinet on 18 December. Those who might participate in the first meeting, apart from the Defence Secretary, would be the Lord President, the Chancellor, the Foreign Secretary and the Chief Whip. I should be grateful if you could let me know if the Defence Secretary is content with this. It would also be helpful if Joan MacNaughton, to whom I am copying this letter, could let me know whether the Lord President has any different views. Subject to that I will try to fit in a meeting in the period in question.

Bf

I am also copying this letter to Trevor Woolley (Cabinet Office).

(C. D. POWELL)

CA

Ian Andrews, Esq.,
Ministry of Defence.

CONFIDENTIAL

CONFIDENTIAL

Prime Minister

Mr. Younger's feeling is that OD is likely to need two bites at this before 18 December.

Agree to hold two meetings of OD? Or prefer an initial meeting of a smaller, central group of Ministers?

CDP 25/11

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7/3V

25th November 1986

Dear Charles

AEW DECISION TIMETABLE

I understand that John Howe spoke to you briefly on Friday about the AEW decision timetable.

As you may be aware, "best and final" offers were received from Boeing and GEC on 6th November. These are now being evaluated and the Defence Secretary hopes to be in a position to circulate a memorandum to the Prime Minister and to other members of OD on 9th December with a view to announcing the outcome of the competition, if possible, on Thursday 18th December. During this period, Mr Younger plans to offer to brief colleagues personally on the background to his recommendations. But he is concerned that if OD does not meet before the afternoon of 17th December as currently planned, there will be insufficient time to resolve any differences that remain. In that event, although it would be politically most undesirable and would increase the risk of a leak, there would be no alternative but to defer the announcement of the decision until the New Year.

The latter

Mr Younger believes therefore that it is highly desirable that the Committee should meet, if possible, before 17th December and he would welcome the Prime Minister's views. He is aware that the Lord President might not be able to be present at an earlier meeting on Monday 15th December but he is one of those colleagues to whom Mr Younger would hope to be able to offer a personal briefing during the previous week. He thinks it unlikely that a final decision would be taken before the 17th.

I am sending a copy of this letter to Joan MacNaughton in the Lord President's Office and to Trevor Woolley (Cabinet Office).

Yours ever

(I C F ANDREWS)

Charles Powell Esq
No 10 Downing Street

CONFIDENTIAL

PM 8 6
25. XII

MO 26/7V

PRIME MINISTER

ALARM

1. When we decided in Cabinet in July 1983 to choose the ALARM missile proposed by British Aerospace (BAe), in preference to the American HARM, to meet the Royal Air Force's requirement for a defence suppression weapon, my predecessor was invited, in consultation with the Chief Secretary, to arrange for the regular monitoring of the ALARM programme.

2. As you know, significant problems have arisen in the development phase of this programme. These are expected to lead to delays in the missile's entry into service, could involve my Department in additional expenditure and, according to BAe, will entail a reduction in the missile's range which will affect some but not all of the operational roles for which the missile has been designed. The main problems concern the sub-contracted development of the rocket motor.

3. Although the prime contract awarded to BAe in 1983 is at a fixed price (£260M at present economic conditions), my Department is not immune from bearing the additional costs which

might emerge as a result of the motor development problems. BAe in turn placed a fixed price sub-contract on the Rocket Motor Executive (RME) (then part of the Ministry of Defence), for the development and production of the rocket motor. Although RME was transferred to Royal Ordnance in January 1985 under the Ordnance Factories and Military Services Act 1984, subsequent legal advice was that the terms of the transfer had applied only to the assets and benefits of the ALARM motor sub-contract, and that the liabilities under the sub-contract probably remained with the Ministry of Defence. If they did, the Department would be responsible for any delays and additional costs to the prime contractor that could be contributed to a failure on the part of the motor sub-contractor.

4. As the potential additional costs to Royal Ordnance of overcoming the motor development problems (and, separately, the liabilities Royal Ordnance might incur to BAe for the disruption of the ALARM programme stemming from these difficulties) would damage the prospects of a successful privatisation, I was obliged to give Royal Ordnance an indemnity. This formally accepted that the Ministry of Defence would be liable for successful claims for compensation by third parties, including BAe, against Royal Ordnance (except in certain limited circumstances of negligence) and also committed the Department to meeting any losses suffered by Royal Ordnance in excess of £19M on the motor sub-contract.

5. In normal circumstances, we would wish to enforce our contractual rights against BAe under the prime contact and to hold them responsible for taking the risks and bearing the additional cost of completing the ALARM programme, and, if necessary, of ultimate failure. But in this case, we in turn are liable to meet any claim which BAe might subsequently establish for the cost of delay, or of cancellation of the contract by the Ministry of Defence on account of the problems associated with the motor development. As it is, BAe have already given notice of a claim against both the Department and Royal Ordnance in respect of their additional costs resulting from these problems.

6. We are therefore in a position where we must negotiate with BAe as to whether the development of ALARM can still be achieved and where subsequent costs and risks might lie. Progress payments to the company were stopped on the instructions of Ministers on 15th July this year.

7. BAe made an initial proposal under which they would continue with the programme at an additional cost - to be borne by the Ministry of Defence - of £59M, but they did not show themselves prepared to take on all future risk. My officials rejected this approach since:

a. they were not convinced that the technical problems with the motor could be overcome within the timescales and at the costs that BAe envisaged;

b. uncertainties were also emerging in other areas of the development programme which might evolve into major problems. BAe have yet to accept these as problems which they would be liable to meet under the prime contract.

8. The company were then asked to submit, as a matter of urgency, a revised proposal which would return to the concept of a fixed price contract with all risk being borne by them. Further discussions with the company have subsequently taken place on the development of this proposal during which my officials have re-emphasised our expectations on these points. Later this month, when these proposals are forecast to be to hand, I shall be in a better position to begin to assess the costs and risks involved and whether it is in our best interests to proceed with ALARM, taking account of any sales prospects (such as to Saudi Arabia) which exist. One of the options we would have to consider would be that of cancellation in favour of an alternative solution.

9. I shall report again when I have formed a view. Meanwhile, you should know that BAe is one of the companies which have

expressed an interest in buying Royal Ordnance. They have been told that, although we are prepared to consider a bid, we should find it very difficult to complete a sale to them, while responsibility for the ALARM motor problem is unsettled. For this and other reasons, Sir Austin Pearce has recently said that they may not pursue their interest.

10. I am sending copies of this minute to other members of OD, to the Chief Secretary and to Sir Robert Armstrong.

G.H.

Ministry of Defence

24th November 1986

CC BJKP 9

SECRET

PRIME MINISTER

22 October 1986

As you know I am joining Plessey. Plessey will be one of Boeing's UK partners if they were to win. fls.

NIMROD OR AWAC

How Culpable are GEC?

There can be now doubt Arnold Weinstock grossly over-sold the virtues of the GEC approach back in 1977, but right from the start it is clear from papers that I have seen that both GEC and MOD were well aware of the technical problems that would arise.

The overland performance that became so contentious because of clutter problems was clearly flagged by both sides. It is wholly misleading for the MOD to suggest that the aircraft does not have to fly over populated areas because it matters not where the aircraft is but what its radar is illuminating. Although the MOD now claim that the ASR requires the Nimrod to spot targets against a background of land, the papers clearly show that this was not the MOD's original interpretation. Likewise computer capacity was accepted as inadequate and as early as 1977 the idea of a training standard solution was being discussed.

In my view both MOD and GEC had a mutual interest in concealing these problems because they would have caused considerable difficulties and perhaps jeopardised continuation of the project, particularly during the moratorium on defence expenditure.

What of GEC's Technical Competence?

GEC were trying to develop an AEW system in less than half the time that it took the Americans, and although considerably more has been spent than we would have liked, I would be surprised if reaching this stage of development cost the Americans any less. In the past six months GEC have genuinely made tremendous strides in sorting out the major problem areas. If they were able to sustain the

same level of achievement over the considerable problems yet to come, then they ought ultimately to deliver a reliable system. I believe that GEC are capable of doing this provided they are prepared to continue to commit the resources and the management to the project.

Comparison of AWAC against Nimrod

The AWAC is not the ultimate AEW system. Neither the AWAC nor the Nimrod currently has the JTIDS communications system because this has yet to be fully specified by the Americans. The AWAC does not detect targets flying at less than 85 knots (a problem that has plagued GEC), nor apparently can it guarantee to detect all the targets that there might be in an area. It is said to require a larger crew and not to be so highly automated as the Nimrod. It can only handle 300 tracks and spare computer capacity is less than required. It lacks frequency agility for anti-jamming. All these claimed differences (and no doubt others) should be resolved in the fly-off.

But the major difference is that the AWAC is an existing system with proven mission reliability. Even if Nimrod meets its forecasts, AWAC reliability will still be considerably greater.

Stretch Capability

By the time our new AEW system goes into service the Russians will be developing, or indeed may well have developed, new threats particularly in the form of more distant stand-off cruise and stealth missiles. The ease with which the system can be adapted or stretched to meet the developing threat will therefore be a key factor.

The Americans are certain to develop the AWAC to meet the threats that they perceive to be important, but these will

not necessarily be identical to the UK's requirements. Indeed, if the unilateralists succeed in breaking up NATO, then the role of the American AWAC could be substantially different. Moreover the Americans wish to keep all of the AWAC technology to themselves and the UK may be unable to modify the AWAC without their cooperation.

By contrast the Nimrod will be entirely under UK control. But there is a risk that the UK will be unable to meet the developing threat on its own because the GEC system and more particularly the Nimrod airframe are already stretching towards their limits.

Conclusions

It is not possible to make a recommendation on which system should be chosen until the MOD have completed their evaluation and hopefully had a fly-off between the two aircraft. The price of the AWAC, even after so many have been produced, demonstrates that it is not so much that GEC have spent an outrageous amount of money in trying to develop the Nimrod, but rather that GEC made a reckless promise as to what they could achieve. GEC should not be ruled out at this stage, quite apart from political considerations, because if they are prepared to make the commitment then they could still be a realistic contender.

In deciding between the two options the MOD must produce a proper and complete comparison of their technical capability and an assessment of their stretch potential. You will want to be sure that modifications to meet the changing threat will be made available on the AWAC at a reasonable price (and preferably undertaken by British Companies) and that in any offer that GEC make there is a genuine and sustained commitment to delivering the goods.

Peter Warry

PETER WARRY

CCPE

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000

DIRECT DIALLING 01-218 .....

MO 26/7/3V

13 October 1986

CDP 13/X.

Dear Paul,

AIRBORNE EARLY WARNING AIRCRAFT: STRETCH POTENTIAL

Many thanks for your letter of 23rd September about the relevance of development potential to our ultimate decision between GAv and Boeing on the choice of AEW aircraft.

As I said in my minute of 18th September, as part of the work to be undertaken before I make a final recommendation to OD, my Department will be re-assessing in-house the likely evolution of the military threat which our future AEW system must match, and considering which of the two remaining contenders has the better potential for future development to respond to that changing threat. But I see this very much as one of the factors which may influence our decision but are outside the terms of the competition, and I would not expect

The Rt Hon Paul Channon MP

it to be decisive. Moreover, I believe that any formal notification to the companies specifying stretch potential as a criterion for assessing their "best and final bids" could be interpreted as "moving the goalposts" at this stage in the competition. (You will recall that GAv suggested in the earlier stages of the competition that the Department did just this by changing the requirement during the course of the project).

Both firms are already well aware at working level that, as a part of the normal conduct of such business, factors of this kind will form part of our overall assessment of the competitors. I am satisfied that this meets your point.

I am sending copies of this letter to the Prime Minister, to other members of OD, and to Sir Robert Armstrong.

Yours ever,

George

George Younger

DEFENCE
ALARM
PTY

ccpc (2)

Rec Minute

CHIEF SECRETARY TO THE TREASURY

Treasury Chambers, Parliament Street, SW1P 3AG

CDP
13/X.

I C F Andrews Esq
Private Secretary to the
Secretary of State for Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SWIA 2HB

10 October 1986

Dear Ian,

ALARM

We spoke earlier this week about your Secretary of State's proposal to delay a report to colleagues on this project for a few weeks. I have now seen your letter of 8 October to Charles Powell.

You will be aware that when Cabinet agreed to the purchase of ALARM in 1983, they asked that your Secretary of State, in consultation with the Chief Secretary, should arrange regular monitoring of progress, and should report major developments to Ministers. MOD officials keep us in close touch with progress and, through these arrangements, the Chief Secretary is aware of the problems that have come to light on this project.

On the basis of the reports we have received, the Chief Secretary has expressed considerable concern about progress; he considers the problems with the motor and (if confirmed) with the propellant and navigation unit are major developments of the kind Cabinet envisaged should be reported to Ministers. He notes Mr Younger considers a more comprehensive report could be made early in November, and is prepared to agree to a delay of this length. But it is important that Ministers should be alerted as soon as possible to projects with significant problems and he would not be willing to agree to a report on ALARM being delayed beyond early November. In the meantime, MOD project staff should continue to keep Treasury officials closely in touch with the negotiations with BAe.

A copy of this letter goes to Charles Powell at No. 10.

Yours,
Jill

JILL RUTTER
Private Secretary

CONFIDENTIAL

DEFENCE Procurement PT4

(2)

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

MO 26/7E

8 October 1986

Prime Minister

CDP 9/X.

Dear Charles,

ALARM

The Prime Minister expressed her concern over the problems encountered during the development of ALARM when she met with the Chiefs of Staff last month.

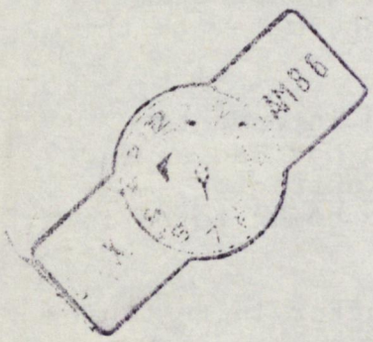
My Secretary of State shares this concern and intends to submit a full report to the Prime Minister when he has had an opportunity to consider proposals from the Prime Contractor, British Aerospace, for recovering the project. He hopes to be in a position to do so early in November.

I am sending a copy of this letter to Jill Rutter in the Chief Secretary's Office.

Yours sincerely

(I C F ANDREWS)
Private Secretary

Charles Powell Esq
No 10 Downing Street



005/2982

RESTRICTED

FROM: CHIEF SECRETARY
DATE: 30 September 1986

PRIME MINISTER

CDP
1/X.

EUROPEAN FIGHTER AIRCRAFT

I have seen George Younger's letter of 25 September recording the current position on this project and proposing that Defence Ministers might sign the General Memorandum of Understanding at Gleneagles next month.

2 I note George's view that the baseline design of the aircraft will satisfy the operational requirement of all four nations and is compatible with the technical parameters drawn up in Turin. Signature of the MOU now will be seen by others (both our partners and industry) as a significant political commitment to the project, although OD agreed on 7 May 1985 (OD(85)5th meeting) that it must be possible for the United Kingdom to withdraw from the EFA programme without political difficulty at the conclusion of the Project Definition phase, if this proved necessary. George has said that signature of the General MOU does not represent a formal commitment to any phase of the EFA programme. I am content that we should sign now on the understanding that this does not prevent us from choosing a different solution to the RAF's requirement when we have a full analysis of all the choices next year.

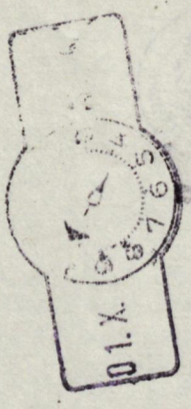
3 I am copying this minute to George Younger, other members of OD and to Sir Robert Armstrong.

JM

JOHN MacGREGOR

RESTRICTED

DEFENCE; Procurement Pt 4.



(2)

Prime Minister
CDP
25/9.

MO 26/11/9E

PRIME MINISTER

EUROPEAN FIGHTER AIRCRAFT

My predecessor wrote to you on 2nd August 1985, about the agreement reached in Turin last August between the National Armament Directors (NADs) of the United Kingdom, Germany and Italy to proceed with the definition of a collaborative programme for a European Fighter Aircraft (EFA), to enter service in the mid 1990s. Spain subsequently joined the project on 12th September 1985, leaving France, of the original 5 partners, as the only nation not to do so. Much collaborative work has been done since Turin, including the completion of negotiations on the General and Project Definition Memoranda of Understanding (MOUs). Before signing these documents, I am writing to let you know where the project now stands.

2. Work on the Project Definition (PD) phase of the project began in September 1985. Although PD has lasted three months longer than planned and will not now complete until 30th September because of the need to carry out additional work to reconcile the technical specification of the aircraft with the European Staff Requirement,

agreement has now been reached on a revised baseline design. This will satisfy the operational requirements of all four nations and is compatible with the technical parameters drawn up in Turin. A full appraisal of the results of PD will now be conducted before the participating nations decide whether to proceed to Development.

3. While this national evaluation process takes place, the EFA industrial teams will remain in place so that, if the decision is taken to proceed with the project, the start of Development will not be unduly delayed. The design and definition of the aircraft will continue to be refined and the negotiation of development contracts will be carried forward. The process of selecting equipment, including the radar, for the aircraft will also continue.

4. The essential elements of the General MOU, which will be supplemented by separate MOUs for each major phase and which defines the overall objectives of the programme and identifies certain general principles, are based on the agreement reached in Turin. They are:

a. Management. The programme will be controlled by a Steering Committee of officials, with an executive Board of Directors. Overall management of the programme will be carried out by an International Programme Office (IPO), which will have NATO status, giving it the legal capacity to place

contracts and pay bills. The general structure of the IPO will be similar to the NAMMA organisation established for Tornado; the allocation of posts being broadly in accordance with the nations' share of the programme.

b. Industry. Industrial management of the programme will be undertaken by two industrial consortia, one being responsible for the airframe and overall systems integration (including integration of the engine) and the other for the engine itself. The airframe consortium, which includes British Aerospace for the UK, was established in June as "Eurofighter-Jagdflugzeug GmbH". The joint engine company, which includes Rolls Royce for the UK, was established earlier this month and is known as "Eurojet Engines GmbH". Both companies will be collocated with the IPO in Munich.

c. Workshare. For the Development phase the nations will adhere to the workshares set out in the Turin Agreement (UK 33%, GE 33%, IT 21%, SP 13%), which are consistent with curren international declarations of national aircraft requirements. Work will be shared between the nations on both a qualitative and a quantitative basis. Workshares for Production will be based on the number of aircraft each nation commits itself to ordering at the time of launching Production.

Although it has taken longer than expected, because a number of difficult issues had to be resolved, the text of the General MOU has now been finalised and arrangements are in hand for it to be signed by the four Defence Ministers concerned in the margins of the NATO Nuclear Planning Group meeting at Gleneagles in October.

5. The General MOU does not represent a formal commitment in itself to any phase of the EFA programme; that is the purpose of the MOU for each separate phase. But signature will be a significant political step forward which will consolidate EFA as a firmer prospect than hitherto. It will also permit the MOU for the PD phase to be signed retrospectively; although this is a formality for the UK, it is important for some of our partners.

6. I hope to be in a position by the Spring of next year to invite colleagues to consider the alternative solutions to the RAF's requirement for a future fighter aircraft; one of these will be the EFA.

7. I am sending copies of this minute to other members of OD, to the Chief Secretary and to Sir Robert Armstrong.

G.H.

Ministry of Defence

25 September 1986

DEFENCE Procurement PT4

8

FROM: CHIEF SECRETARY

DATE: 25 September 1986

CDP 25/9.

PRIME MINISTER

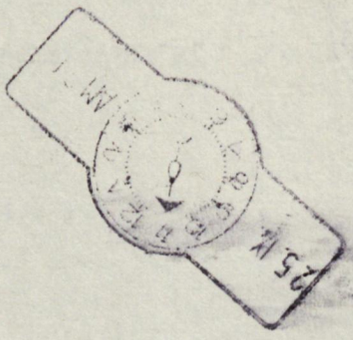
AIRBORNE EARLY WARNING AIRCRAFT

I have seen George Younger's minute to you of 18 September. I am content with his proposed approach.

2 I am sending copies of this minute to George Younger, other OD colleagues and to Sir Robert Armstrong.

JOHN MacGREGOR

DEFENCE: Procurement: Pt 4.



7

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET
Telephone (Direct dialling) 01-215 5422
GTN 215) .....
(Switchboard) 01-215 7877

Secretary of State for Trade and Industry .

SECRET - UK EYES A

23 September 1986

The Rt Hon George Younger MP
Secretary of State for Defence
Ministry of Defence
Main Building
Whitehall
LONDON
SW1

CDP
24/9.

Dear George,

AIRBORNE EARLY WARNING AIRCRAFT

Thank you for sending me a copy of your minute of 18 September to the Prime Minister.

I should just like to raise one point in relation to the final stage of competition between GEC and Boeing. I understand that the question of the future development potential of the systems may be a factor in the eventual decision. I recognise that various factors, some outside the immediate terms of the competition, may influence the decision, and that it is not practicable to inform competitors of all such factors in advance. However where such a factor arises directly from consideration of the system itself, as in the case of development potential, I would have considerable reservation if this were not clear to the competitors. This is partly a general matter of straight dealing. But more specifically, I think the Government would be open to criticism if it became known that development potential had been a material factor in the decision, but competitors had not been warned of this. The impact of such criticism would be the stronger, of course, if the British company turned out to be the loser.

I have in mind only that GEC and Boeing should be told that development potential is one factor that will be examined, (if this is the case), not that it should be included in the

JF1BIT

1786 1986 BOARD OF TRADE BICENTENARY

SECRET - UK EYES A

specification against which the companies are invited to bid. If the matter is handled in this way, I do not believe it should cause any delay to the final stage of the competition. It may well be that the question of future development potential will not be a factor in the decision, but I should be grateful for reassurance on this point.

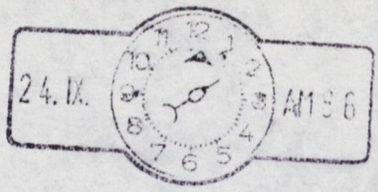
I am sending copies of this letter to the Prime Minister, the other members of OD, and to Sir Robert Armstrong.

Yours,
Paul

PAUL CHANNON

JF1BIT

DEFENCE Procurement Pty.



Prime Minister (4)

MINISTRY OF DEFENCE CDJ 22/9.
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~330 7022~~ 218 2111/3

MO 22/9E

22 September 1986

Dear Catherine,

"SELLING TO THE MOD"

The Defence Secretary thought that colleagues might like to be aware of the publication of a new edition of "Selling to the MOD" - a booklet designed to help small firms and component suppliers in competing for Ministry of Defence business. I attach an advance copy of the booklet which is due to be formally launched on 25th September.

AT BACK of FILE

I am sending copies of this letter to the Private Secretaries to members of E(A).

Yours sincerely,

David Ball

(D C J BALL)
Private Secretary

Catherine Bradley
Assistant Private Secretary/
Trade and Industry Secretary

22.IX.
1906

SECRET - UK EYES A
COMMERCIAL IN CONFIDENCE

85 EA

6

10 DOWNING STREET

From the Private Secretary

22 September 1986

AIRBORNE EARLY WARNING AIRCRAFT

The Prime Minister has considered the Defence Secretary's minute of 18 September setting out the next steps in the selection of an airborne early warning aircraft. Mr. Younger discussed this with the Prime Minister on the way back from Germany on 17 September.

Subject to the views of colleagues, the Prime Minister is content that the shortlist should now be reduced to two, that is GAv and Boeing, and that both should be invited to make best and final offers and that a technical evaluation should be done of both of them by RAF personnel and MOD scientists, with a recommendation coming to OD in December.

I am copying this letter to the Private Secretaries to members of OD and to Sir Robert Armstrong.

(Charles Powell)

John Howe, Esq.,
Ministry of Defence.

SECRET - UK EYES A
COMMERCIAL IN CONFIDENCE

JB

5

PRIME MINISTER

AIRBORNE EARLY WARNING

Mr. Younger discussed this with you on the way back from Germany. He has now minuted OD colleagues in the same sense, recommending that there should be a final run-off between Nimrod and the Boeing AWACs. A decision between these two would be taken in early December.

The Policy Unit have done a note (also attached). It sees some case, although not a strong one, for keeping the Lockheed in the competition. I don't myself see much to be gained by this. We should be the lead customer and exposed all over again to the same sort of risk that we took with Nimrod in 1977.

You might suggest that we should start to explore with the US Administration and with Boeing (who are adept at putting pressure on them) the scope for counter-purchases of UK military equipment - ideally involving GEC - if we were to opt for the Boeing AWACs.

Content with Mr. Younger's proposal, subject to the views of colleagues?

Yes

CDP

CHARLES POWELL
19 September 1986

EL3BJW

4

PRIME MINISTER 18 September 1986

UK AIRBORNE EARLY WARNING (AEW) DECISION

The primary role of the AEW is to detect Soviet bombers before they can launch their missiles, it will not detect Stealth and Cruise missiles until they are relatively close (perhaps too close). The AEW does not act as a flying command post but feeds data to the ground stations who perform that role. If the Soviets see the AEW as being a grave threat to their operations they will no doubt seek to create a fast long-range anti-AEW missile which would be difficult to deflect with current technology.

None of the proposals (even the Boeing AWAC) meet the full ASR 400 specification. At last week's MOD Equipment Policy Committee officials and the military whittled the four serious contenders down to just Nimrod and the Boeing AWAC. They plan a 'fly-off' between these and a recommendation to Ministers in early December. George Younger is expected to endorse this plan. The comparative cost of the four options are set out below:

	Grumman Hawrod	Lockheed P-3	Boeing AWAC	Nimrod	£m
Number of Aircraft	10	8	8	10	
Basic Price	480	760	960	610	
Cost inc. extras at 87 prices	750	850	1,250	700	
Whole life cost (over 20 years)	1,750	1,500	2,300	1,700	
UK jobs sustained (man years)	6,200	12,600	17,100	10,000	
Amount of direct offset	50%	75%	10%	N/A	

S

The price of the AWACs could be reduced by £150m if the US Government, as expected, waive their levy, and perhaps by a further £50m if the French were also to order Boeings. The Nimrod cost is just the additional expenditure required to complete the project.

COMPARISON OF ALTERNATIVES

All comparisons are fraught with difficulties over different aircraft, different radar systems and speculative running costs. Nevertheless, even with the waiver, Boeing is considerably more expensive than the other options. Whilst it offers the highest amount of offset, only 10% is directly related to the order, which leaves some doubts over its additionality and indeed achievability. If the number of AWACs were reduced from 8 to 6, prices would be more comparable albeit at the expense of defence capability.

Both the Grumman Hawkrod (the Nimrod airframe with American equipment) and the Lockheed P-3 look to be competitive on cost, but both use UHF rather than S-band radar. As yet there are no frequency allocations available for UHF radar and MOD had anticipated that it would cause significant interference with other users. MOD now believe they may have overstated these problems and think there is a reasonable chance that frequency allocations could be negotiated by the planned AEW in-service date, although there must remain a risk that it takes longer or agreement is not achieved at all. On the plus side, however, the lower frequency UHF is inherently more capable of detecting Cruise and Stealth missiles which are likely to become an increasing threat during the life of the AEW.

The MOD have decided to eliminate the Hawkrod and the Lockheed P-3 on the grounds of technical risk rather than UHF radar. To my mind the technical risk on the Hawkrod is at least as great as that on the Nimrod and because it is

constrained by the Nimrod airframe it seems to offer little advantage over the Nimrod. I therefore agree it should be discarded. On the other hand the Lockheed solution does not seem to have quite the same level of risk and could well offer a stretch capability that is not present in the Nimrod. The Lockheed offer is also arguably cheapest on whole life costs, promises mission reliability better than that for Nimrod and has the greatest amount of direct offset work. Against these virtues is the unpleasant fact that the Americans would be being paid in effect to develop a system where GEC have failed.

GEC have come a long way but they still have a long way to go. The bulk of their expenditure is still on development and is thus high risk; two-thirds of the expenditure is to meet the Phase B standard which is the first stage at which the RAF would have a useable system. Although the GEC system is working better it is not spotting all aircraft or holding on to them when it has spotted them. Moreover, there must be significant doubts that the Nimrod is capable of being stretched to meet the threats of the year 2000 even if GEC ultimately get Nimrod operational in the 1990s.

CONCLUSION

The problem of narrowing the field to just two contenders means that in December the Government will be faced with a stark choice of a Boeing low-risk high-cost option and a Nimrod high-risk low-cost (!) option (or more probably of buying fewer Boeings and thereby diminishing the AEW capability).

Surely not - Nimrod is more expensive if you count what we've spent already. CDP!

This is probably unavoidable, but if it were thought politically plausible that the UK could ultimately purchase the new Lockheed (which would be more difficult to justify than the existing AWAC) then would be a case for keeping them in the race to provide a compromise between the two

extreme choices. This would however cause the MOD major resource problems in running a 3-horse competition with very limited time.

R. Goodman

pp PETER WARRY

3

MO 26/7/3E

PRIME MINISTER

AIRBORNE EARLY WARNING AIRCRAFT

When we met with OD colleagues on 12th February attached it was agreed that GEC Avionics (GAv) should be given six months to demonstrate a firm prospect that the specification for the Nimrod AEW system could satisfactorily be met within a reasonable time. Meanwhile, I was authorised to investigate alternative ways of meeting this requirement through approaches to US companies, and also to initiate discussions with the NATO authorities who operate the Alliance's AEW system, and with the French Government to explore the possibility of a joint Anglo-French purchase of any alternative to Nimrod. The then Minister of State for Defence Procurement so informed the House on 26th February.

2. The six months are now up, and my officials have completed their evaluation of the following eight proposals:-

Nimrod (British)

Boeing E-3A AWACS (US)

Grumman E-2C Hawkeye (US)

Hawkrod (US radar in Nimrod airframe)

Lockheed P3 AEW & C (US)

MEL radar (British)

Airship Industries airship (British)

Pilatus Britten-Norman aircraft with Thorn-EMI radar (British)

Their assessment of each option is summarised at Annex A. Comparative costs, as far as we can establish them, are summarised at Annex B; the figures for Nimrod exclude the £930M already spent or committed.

3. For the reasons given at paragraphs 6-8 of Annex A none of the last three proposals listed above comes anywhere near meeting the requirement, and I have accepted my officials' advice that they should not be considered further.

[incl. airship]

Nimrod

4. There is no doubt that over the past six months GAv have achieved significant technical progress, including progress in the key areas of shortcoming identified in my memorandum to OD

(OD(86)2), namely the radar capability when looking towards land from over the sea and the tracking capability of the system. The radar's detection range has been improved, and the earlier saturation of its receiver has been almost entirely eliminated. The overloading of the radar signal processing chain and the data handling system have been largely overcome. GAv claim that the first aircraft could enter service at the full required standard at the end of 1991. But the improvements have been demonstrated mainly on the ground and only to a limited extent in the air. There is moreover a fear that the steps taken to reduce the overloading of the system may be reducing the number of real targets detected. It is clear that the company still have a long way to go before they are in a position to put a fully effective and reliable system into the air, and we do not yet have technical confidence that they will eventually achieve this.

Alternatives to Nimrod

5. There has been some press publicity about the merits of the alternative technical approaches to the radar, namely S-band and UHF, and this issue requires explanation by way of background. Nimrod and the Boeing E-3A use S-band; the Grumman E-2C, Hawkrod and the Lockheed P3 use UHF. The arguments are summarised at Annex C. Briefly, both solutions have technical advantages and disadvantages, and either is acceptable in principle. The real

difficulty applies to UHF but not S-band, and concerns what is known as "frequency supportability", mainly though not entirely in peacetime. The powerful signal transmitted by the radar would interfere with the transmissions of civil and military ground communications systems and of radio amateurs, not only in Britain, but in a number of continental countries when the aircraft was operating over the North Sea; it could also interfere with the Ballistic Missile Early Warning System (BMEWS) at Fylingdales. Because other nations are involved we would need to negotiate with them an agreement to our using the relevant UHF waveband for this purpose. While this would certainly be difficult it is not necessarily impossible; but it would take time, and the issue could not be resolved within the timescale for our final decision on the AEW problem. While this difficulty does not require us to exclude all the UHF-based contenders in principle, it does mean that we would need to have very good reasons for selecting a UHF system in the face of the problem I have described.

6. Turning to the systems themselves, the Grumman E-2C Hawkeye, though a good system which has proved itself in service, is a small aircraft with no room for a relief crew; crew fatigue would therefore severely limit the time the aircraft could spend at its operational station. This is an overriding objection, and the E-2C must therefore be ruled out. Hawkrod - the E2C radar in an improved version installed in the Nimrod airframe - gets round this difficulty. It would however involve putting a large

mushroom-shaped rotodome on top of the airframe, and this could impair the aircraft's aerodynamic stability and fatigue life. Integrating the avionics into the airframe would be difficult; and the improved radar has not yet been fully developed, so there would be some timescale and perhaps performance risk here. I have considered this option carefully but concluded that, since the technical risk is assessed as being greater than for Nimrod itself, it too must be discarded. The Lockheed P3, incorporating the same radar as the E-2C and Hawkrod, is one of the cheaper options and on paper looks attractive; but it is an untried concept, and Lockheed's assessment that the first aircraft could be delivered well within four years is judged by my experts to be an under-estimate. The UK would be the lead customer for a project whose technical risk is of the same order as that remaining in the Nimrod programme, and I do not think we should get into this position.

7. In summary, the E-2C is discarded as inadequate for the requirement, and Hawkrod and the P3 on grounds of considerable development risk. I believe it would be wrong to drop Nimrod in favour of an equally risky alternative. The UHF frequency supportability problem is an additional objection but not a decisive one. I believe this conclusion is publicly defensible, and indeed that it would be wrong to keep any of these three options in the competition any longer in the face of these substantial technical doubts.

8. I have accordingly concluded that the only realistic alternative to Nimrod is the Boeing E-3A AWACS. This is performing well with the NATO and Saudi Arabian forces as well as the USAF, and it would fully meet our own requirements with the addition of a data link (Link 16) which, the USAF are planning for their own E-3A aircraft and which, as for all other options, is necessary to make it interoperable with other aircraft and ground installations within the UK air defence system. Boeing are offering a 100% offset through purchases in the UK, of which 80% would be in high technology. But the E-3A is expensive. The cost depends on whether or not the US Government would be prepared to waive the standard development levy; we believe they would be, subject to certain conditions which on first inspection seem reasonable. The capital cost would be £1100M with waiver (or £1250M without waiver) compared with £700M for the remaining expenditure on Nimrod. The cost could be reduced by buying fewer aircraft than the number needed to meet the full requirement. The operational penalty would be inability to mount the full number of simultaneous patrols needed to match the threat. Plainly this would be most unwelcome, but pressures on the budget compel me to look at this possibility.

9. It has been suggested that if we selected the E-3A we should adapt it to take the V2500 engine in which Rolls Royce have a stake. I would be opposed to this, since not only would it increase the cost of this option by up to £100M (of which a large

part would go on R & D) but it would import technical risk into an option whose principal attraction is that it provides a technically safe means of meeting the RAF's requirement.

The Way Ahead

10. In summary, I see this now as a two-horse race; but I believe we still lack some of the information we need before making a final choice. In particular I am not convinced that GAv's price of £700M is the best they can do, and Boeing too will almost certainly be prepared to reduce their price, quite apart from the waiver of levy point.

11. I therefore intend to seek best and final offers from GAv and Boeing for both full and reduced quantities of aircraft: 11, 10 and 8 in the case of Nimrod, 8 and 6 in the case of E-3A. I shall also seek proposals from Boeing for an annual payment profile for E-3A with a better match to defence budget constraints year by year. And the US Government's willingness to waive its levy needs to be formally established. Draft contracts with both firms will be negotiated so as to flush out any cost or other implications of either solution which may have escaped notice so far, and to enable us to sign up promptly when we have taken our final decision.

12. This work will take about two months, and we shall make use of the time to carry out a programme of trials of the Nimrod system to test it in flight against a more representative range of targets. If possible, this will include a "fly-off" between a Nimrod and an E-3A to compare their performance. I shall be arranging for a joint team of RAF personnel and MOD scientists to participate in this work to ensure that we have the best possible technical basis for a judgement of the remaining risks when we take our final decision; though I should warn colleagues that even at that stage it will still be very much a matter of judgement rather than demonstrated capability. At the same time my Department will be re-assessing in-house the likely evolution of the military threat which our future AEW system must match, and considering which of the two remaining contenders has the better potential for future development to respond to that changing threat. Finally we shall be carrying forward our discussions, already begun, with the French and with NATO to establish what cost savings could be made through joint procurement and support of the E-3A if chosen. My intention is to report to OD before Christmas with a final recommendation.

13. I intend to announce the next steps through an MOD press conference on Thursday 25th September. All the contenders will be informed shortly beforehand.

14. I am sending copies of this minute to OD colleagues and to Sir Robert Armstrong.

G.Y.

Ministry of Defence

18th September 1986

CONQUEROR
LONDON

ANNEX A

ASSESSMENT OF COMPETING SOLUTIONS

A. Serious contenders

1. Nimrod AEW

Airframe by British Aerospace (BAe), mission systems avionics (MSA) by GEC Avionics (GAv). Incorporates S-band radar. 10 aircraft are required for full capability, given air-to-air refuelling (AAR). Technical risk is discussed in the main minute. GAv offer the first aircraft to full standard by the end of 1991 and the last by September 1993.

2. Boeing E-3A

Boeing 707 airframe, radar (S-band) by Westinghouse. In service with the US Air Force, the NATO AEW Force and the Royal Saudi Air Force. A mature system which has been proven in service and which, with the inclusion of the Link 16 ECM-resistant data link for communicating with other aircraft and ground installations, together with an electronic support measures (ESM) system, would generally meet and in many respects exceed the required standard (ASR 400 1st Revise). The radar production line has been closed and would need to be reopened. 8 aircraft are required for full capability,

given AAR. Technical risk confined to integration of Link 16 and ESM into MSA. First aircraft offered by end 1990, eighth at the end of 1992.

3. Grumman E-2C Hawkeye

Grumman airframe, General Electric (US) UHF radar. A twin turbo-prop carrier-borne aircraft of the US Navy which has been sold to Israel and other nations. In theory 19 aircraft are required for full capability, given AAR; in practice the small size of the aircraft, and its inability to carry a relief crew, mean that crew fatigue would severely limit time on patrol and thus make it impossible to carry out missions at the required range and of the required duration. Some technical and cost risk because of need to develop improved version of radar and to integrate Link 16. First aircraft offered by October 1990, 19th at beginning of 1994.

4. Hawkrod

A proposal from Grumman to incorporate the E-2C's radar (in developed form) and data handling in the Nimrod airframe. UHF radar as for E-2C. 10 aircraft required for full capability, given AAR. Would give adequate range and endurance. Substantial technical, cost and timescale risk related mainly to the need to integrate the E-2C avionics

system into a different aircraft; to aerodynamic stability and fatigue life of tail structure (due to placing a large rotodome on top of the aircraft); and also to radar development and Link 16 integration as for E-2C. First aircraft offered at beginning of 1991, tenth by end 1992.

5. Lockheed P3 Airborne Early Warning and Control (AEW&C)

A Lockheed airframe, successfully in service since 1962, combined with the same UHF radar (ie in developed form) as in the Hawkeye and Hawkrod proposals. 8 aircraft required for full capability, given AAR. An aerodynamic prototype has flown, but without an AEW system. No orders placed so far. Would come close to meeting operational requirement, but major development work has still to be undertaken on airframe, avionics hardware and software and systems integration, including integration of Link 16. Although first aircraft is offered for mid-1990 and eighth for September 1991, this assumes that development could be completed in well under 4 years as Lockheed claim. MOD judge this as very optimistic and assess technical, cost and timescale risks as high.

B. Proposals that do not come close to meeting the military requirement

6. MEL (UK subsidiary of Philips)

They offer a radar but no aircraft.

7. Airship Industries (British)

They offer an airship but no radar or other avionics.

8. Pilatus Britten-Norman (British)

They offer a Thorn-EMI radar, based on the successful Searchwater, installed in a version of their own Islander aircraft. The proposal falls far short of the requirement in aircraft range and endurance, radar detection range, tracking capability, reliability and service life. The firm recognise this and justify their proposal as a stopgap solution in the short term with a useful non-AEW role when a more capable system can be obtained.

ANNEX B

COSTS OF COMPETING SOLUTIONS

All figures at 1986/87 outturn prices, VAT-exclusive, and assuming an exchange rate of £1=$1.50

	(a) Cost of acquisition	(b) Cost of acquisition plus 20 year operating costs
	£M	£M
Nimrod - 10 aircraft	700	1700
Boeing E-3A to enhanced standard (ie with JTIDS, Link 16 and ESM) - 8 aircraft:		
(i) if US Government levy not waived	1250	2300
(ii) if US Government levy waived	1100	2150
Grumman E-2C - 19 aircraft	1100	1900
Hawkrod - 10 aircraft	750	1750
Lockheed P3 - 8 aircraft	850	1500

Notes

1. Acquisition cost of Nimrod includes £150M for interest charges due to deferred payment. It excludes sunk costs of £930M.

2. Boeing E-3A figures make no allowance for potential savings through collaborative procurement with the French or sharing of support facilities with NATO.

3. E2-C, Hawkrod and Lockheed figures in column (a) include US Government levies of £40M, £20M and £10M respectively which might also be waived.

4. All figures in column (a) other than Nimrod include (i) Government furnished equipment purchased separately in the USA, (ii) cancellation charges of £50M for winding up Nimrod contract and (iii) expenditure in the range £60-140M to provide adequate support in the UK for the equipment once in service.

5. 20 year operating costs include aircrew, fuel, maintenance, and the marginal costs of tanker aircraft sorties. They are necessarily tentative at this stage.

ANNEX C

UHF VERSUS S-BAND

1. The radars of Nimrod and the Boeing E-3A operate in the S-band frequency; those of Hawkeye, Hawkrod and the Lockheed P3 operate or would operate on UHF frequencies. Grumman have claimed in full-page press advertisements (eg the Times of 5 September) that S-band systems are out of date and that the future lies with UHF systems. The facts are as follows.

2. Performance. Other things being equal UHF has a greater innate capability to detect small objects - of increasing importance as signatures get smaller through the deployment of cruise missiles and the use of "stealth" technology - and to minimise clutter, as claimed by Grumman. Against this, the angular resolution of detected objects is inferior to that of S-band, and the UHF is more susceptible to jamming. MOD judge the performance of S-band to be adequate to match the foreseeable threat, including cruise missiles.

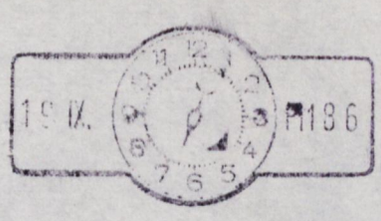
3. Jamming. It is forecast that a large-scale Soviet air attack on the UK - the threat against which the RAF's AEW

would be principally directed - would include a jamming offensive which would successfully attack the S-band (without however destroying AEW's operational value). The Soviets have developed a jamming capability against UHF radars but are not known to have deployed it in the NATO theatre.

4. Frequency supportability. This means the ability of a system to conform to the national and international network of frequency allocations. Whereas S-band presents no difficulty in this regard, UHF presents serious difficulties. The RAF's AEW force would operate in the North Sea and the very powerful signals from its radars would illuminate Norway, Denmark, West Germany, Belgium, Holland and France, as well as the UK. Under international rules the radars could transmit within only a relatively narrow waveband (between 430 and 440 Megahertz), which in Europe is allocated in peacetime to radar systems, low power radio systems and amateur radio enthusiasts on a basis of equal rights. In the UK the AEW system, when functioning, would interfere not only with the transmissions of the amateurs (who are numerous - of the order of 60,000) but also with the Ballistic Missile Early Warning System (BMEWS) at Fylingdales, which is about to be given a major technical

upgrade. Furthermore no nation may interfere with other nations' use of the spectrum; negotiation and agreement with European partners would therefore be necessary, and there are indications that the latter would not be readily forthcoming. This problem would take time to resolve and would certainly not be resolved by the end of 1986; there would also be costs. It follows that any decision within that timescale to procure a UHF-based system would be taken against a background of uncertainty over whether the AEW force could eventually be deployed for training in its intended area of operation.

5. MOD conclude that, while it would be wrong to exclude systems using UHF frequency on that ground alone, there would need to be very strong grounds for selecting such a system in face of the uncertainty over frequency supportability described in paragraph 4.


19 IX.
1186

2 PPS (2)
CDP
CCMS

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-930 7022

Prime Minister
This issue was raised with you during your visit to Ferranti in Edinburgh.
The advice is that it would be premature to raise the specific point with Chancellor Kohl before tender documents have even issued. But you could make the general point that EFA must be a truly European project

MO 26/11/9

12th September 1986

Dear Nigel

FERRANTI AND THE EUROPEAN FIGHTER AIRCRAFT (EFA)

Thank you for your letter of 5th September reporting the Prime Minister's conversation on the subject of the radar for EFA with the Chairman of Ferranti Defence Systems Ltd, Mr D M McCallum, during her recent visit to South Gyle. You also enclosed a memorandum on the same topic which the Prime Minister had received from Lord James Douglas-Hamilton MP.

Allowing for natural Ferranti partisanship in favour of their ECR90 radar there is much force in their arguments - although the technical differential between the ECR90 and the Hughes APG65 as it would be developed for EFA is by no means as clear cut as Ferranti make it.

The choice of radar is a major hurdle which the EFA project has to face: it may even prove decisive for the project as a whole. The German policy is to support the APG65 for reasons which make sense from a narrow point of view. The prospect of commonality with their Phantom aircraft is attractive to them - although we believe the attraction to be superficial because the radars would in practice be rather different versions - but it is not really an issue which should drive the design of a European aircraft project of this magnitude. If the German position has been clearly articulated, UK officials have been no less supportive of Ferranti. A recent meeting of the EFA Board of Directors was held in Edinburgh with the main aim of allowing Ferranti to make their case directly to EFA policy-makers in the other countries - which they did to good effect.

N Wicks Esq
10 Downing Street

SECRETARY OF STATE

Given the importance of the issue it may well become necessary to ask the Prime Minister to intervene at an appropriate stage. But our advice is that the stage has not yet been reached. The formal international position is that the four EFA nations have agreed that options for the choice of the radar should be kept open during the Project Definition phase which completes at the end of this month. Selection will then be made on the basis of a competition in which all competent firms will be invited to participate. Tender documents should be issued in October with a request to respond within 6-8 weeks. We expect the serious bidders to be Ferranti (with FIAR of Italy and INISEL of Spain), Hughes (also with FIAR and INISEL but additionally with AEG of Germany and GEC Avionics) and possibly Westinghouse (who are looking for collaborative partners). Naturally we hope that Ferranti will emerge clear winners on cost and technical grounds. There are, of course, other considerations: the need to be able to export the aircraft without US interference (a major concern for us), the retention of UK technological leadership in Europe in the field of avionics, consolidation of the European technological base, and indeed the political need for European industry to benefit from a European project to the maximum extent. But first we must determine the position in terms of relative cost-effectiveness, and that will not become clear until the end of this year.

The Prime Minister should not, however feel inhibited from stressing to Chancellor Kohl the need for EFA to be a truly European project, nor indeed from pressing him on the issue of the moment - signature of the General Memorandum of Understanding for EFA which Mr Younger has proposed should take place at Gleneagles on 22nd October immediately after the Nuclear Planning Group. (Mr Younger will be minuting the Prime Minister on this subject). The Germans have been uncertain whether they can meet this date but Mr Younger will be pressing Dr Woerner to do so in the margins of the summit. The significance of the timing is that German decision making will soon be overtaken by their General Election.

I am sending copies of this letter to Colin Budd (Foreign and Commonwealth Office), Alex Allan (HM Treasury), Timothy Walker (Department of Trade and Industry) and Robert Gordon (Scottish Office).

Yours sincerely,
John Howe.

(J F HOWE)
Private Secretary

Defence

Procedure

PT4

NEW ST. ANDREW'S HOUSE
ST. JAMES CENTRE
EDINBURGH EH1 3SX

N L Wicks Esq
Principal Private Secretary
10 Downing Street
LONDON
SW1

11 September 1986

Dear Nigel

FERRANTI AND THE EUROPEAN FIGHTER AIRCRAFT

You wrote on 5 September to John Howe seeking advice on whether the Prime Minister should raise with Chancellor Kohl when she meets him later this month the issue of the radar contract for the European Fighter Aircraft. Mr Rifkind has asked me to let you have his views, particularly on the implications for Ferranti.

That Ferranti should gain at least a substantial share of the EFA radar contract is extremely important for the future of the company. Its current workload is very heavily tied to the Tornado programme and, as that work declines towards the end of the decade, it is essential to the company that replacement work of the magnitude of this contract is found. Despite the successful efforts to diversify into the civil market, Ferranti's Scottish activities are still very largely directed towards the military market. If it is to maintain its competitiveness in world markets, it must have continuity of work.

As Scotland's largest electronics firm, Ferranti is a very major asset to the Scottish and, indeed, British economy and is, at the moment, the main credible flagbearer for the radar industry in Britain. Should a European radar system with Ferranti's involvement not be chosen for the EFA, the implications for Ferranti would be injurious.

Mr Rifkind suggests that the Prime Minister's forthcoming meeting with Chancellor Kohl would be opportune for this matter to be raised.

I am copying this letter to the recipients of yours.

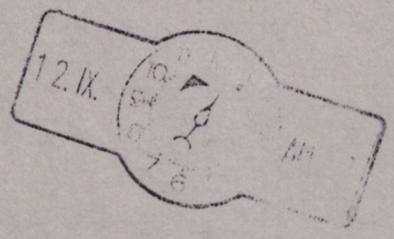
Yours ever

Robert Gordon

ROBERT GORDON
Private Secretary

L2925307

Defence: Harm/Alarm PT 4



SUBJECT
cc master

File

GA.
JA2AD2.

10 DOWNING STREET

From the Principal Private Secretary

5 September 1986

FERRANTI AND THE EUROPEAN FIGHTER AIRCRAFT

When the Prime Minister visted Ferranti's South Gyle factory on Thursday 4 September, the Chairman of Ferranti Defence Systems Ltd., Mr. D. M. McCallum, raised with her Ferranti's particular interest in the European fighter project. The company had already sent the memorandum attached, through the local MP, Lord James Douglas-Hamilton, which describes this interest.

Mr. McCallum recalled that Ferranti's success in the early 1970s in winning the radar contract for Tornado had been vital in giving credibility to the company's efforts to win business in Japan and the United States. Similar success in securing the radar systems for the European fighter aircraft (EFA) was necessary in giving credibility for future contracts. The company had already been chosen as the UK lead contractor for the radar contract which was worth at least £1 billion, of which some £300 million might go to Ferranti. The company's efforts were, however, being frustrated because the German AEG company had been directed by the West German Ministry of Defence to support the US Hughes' radar for the project, even though it was out of date and too big for the aircraft. One motive of the West German Ministry of Defence in pushing for Hughes' radar was their wish to use similar equipment for their Phantom aircraft. The inclusion of US equipment into the project would inhibit future extra sales of the aircraft since the US Government would insist on vetting customers. One possible way around this difficulty was for the aircraft to be made available with alternative radar systems, one US and one European. But that route would add considerably to the costs of the project.

The Prime Minister said that she was surprised to hear that the West German Government had directed AEG to support the US equipment. She would consider whether she should raise the matter with Chancellor Kohl when she saw him in Germany later in the month.

JB
8/9

I should be grateful if you would provide the Prime Minister with a note on the points put to her by Ferranti, together with advice on whether she should raise this issue with Chancellor Kohl, by close of play on Friday 12 September.

I am copying this letter to Colin Budd (Foreign and Commonwealth Office), Alex Allan (HM Treasury), Timothy Walker (Department of Trade and Industry) and Robert Gordon (Scottish Office).

(N. L. WICKS)

John Howe, Esq.,
Ministry of Defence.

From LORD JAMES DOUGLAS-HAMILTON, M.A., LL.B., M.P. MR WICKS

HOUSE OF COMMONS
LONDON SW1A 0AA
Tel: 01- 219 4399
01- 219 4206

12 Quality Street Lane,
Davidsons Mains,
Edinburgh EH4
Tel: (031) 336 4213

CONFIDENTIAL:

22nd August, 1986.

The Rt. Hon. Margaret Thatcher M.P.,
The Prime Minister,
No. 10 Downing Street,
London SW 1.

Dear Prime Minister,

You may like to have an up to date briefing on the European Fighter Aircraft Project and Ferranti's particular interest, before you visit Scotland.

This has been prepared by Mr. Philip Atterton, Managing Director of Ferranti Defence Systems.

This issue is of the utmost importance to Ferranti who employ about 8,000 persons in Scotland, and are the largest Science based Company North of the Border.

It must not be under estimated that the entire Radar Contract is worth at least £1 billion, and Ferranti's possible interest might be worth 1/3 of that figure over a period of years.

Yours sincerely,

James Douglas-Hamilton

M.P. for Edinburgh West.

EUROPEAN FIGHTER AIRCRAFT

1. Ferranti Defence Systems Limited is involved in the production phases of the multi-national Tornado air programme. Equipment provided includes, for the IDS (strike aircraft), the Inertial Navigation System, two major Cockpit Displays, the Laser Ranger and Marked Target Seeker and a significant amount of the Nose Radar. The ADV (air defence) aircraft is supplied with two Inertial Navigation Systems and a significant part of the Foxhunter Radar and a Data Recorder.

2. The Company is involved in a number of major national programmes including the Buccaneer update (Navigation System and Radar update), the Jaguar (Navigation System), the Harrier GR5 (Navigation System), Sea Harrier and EH101 Helicopter (new radar development and manufacture).

3. A significant proportion of our output is for export which has been won against international competition. This includes Displays and Laser Ranger for the F-18 (US), part of Radar for the JAS39 (Sweden), Inertial Guidance System for Ariane (France), Radar for Sea King Helicopter (FRG), Nav-Attack System for A-4 Aircraft (Singapore), Head-Up Display for A-4 Aircraft (New Zealand), Display for Jaguar and Navigation System for Army (India), and Radar for Helicopter (Turkey).

4. The foregoing projects and programmes are based on the most modern technologies for Navigation, Radar, Displays and Electro-Optics, our chosen areas of business. The Company has invested heavily in capital equipment and in training skilled manpower over many years and this must be a considerable National asset. The European Fighter Aircraft presents the opportunity to apply this technology to many of the equipments and the Company is negotiating with several European companies to compete for a significant amount of this work. We are confident that, in true competition, we could obtain a substantial proportion of the programme.

5. The major avionics equipment on the EFA is the Radar and, together with Italian and Spanish partners, the Company is proposing the European Collaborative Radar (ECR 90) which is based on the Ferranti Blue Vixen Radar, now well into development for the Sea Harrier mid-life update. Regrettably Germany (AEG) withdrew from the consortium in order to promote an American radar, the Hughes APG65. We understand that this was at the prompting of the German Government who claim savings due to commonality of equipment with their F-4 aircraft. The F-4 programme has not yet been approved. The adoption of a US Radar for an essentially European programme with all the attendant security and commercial problems must be a retrograde step and, unless radar technology is retained and supported in Europe, the future of the fighter aircraft industry must, in the longer term, be in doubt. A European radar is essential to the health of the European military aircraft industry.

6. The following brief comments summarise two of the contending radars:

a) The Hughes APG 65

i) This American radar is based on technology and concepts now 10 years old and will require extensive modification even to fit into the EFA airframe. There are real problems in meeting the EFA technical requirements and the costs and technical risks will be much higher than might at first sight appear to be the case.

ii) If fitted in a European aircraft it would be open to US political influence and thus likely to be difficult to export, and there are real technology transfer problems.

iii) The gain to European technology would be limited only to such licensed technology as was finally agreed. Real design and development technology of the critical items would be likely to remain in the US.

iv) The choice of a US radar for a European built aircraft would be a major setback for the European aerospace industry and a major weapon in the hands of the US industry for the future. It might begin to erode the EFA project as a whole, and would certainly put in doubt the European ability to design a total weapon system.

b) The ECR 90

i) This modern radar stems largely from fully funded advanced (1985) technology radar projects now flying in Europe.

ii) The radar systems concepts used will continue to be viable well into the twenty-first century.

iii) It is free of US technology and free of all possible technical or external political restrictions and therefore more likely to be exportable.

iv) Final development and production will consolidate European capability in the most modern radar concepts.

v) It will enable the European industry to produce an up-to-date aircraft entirely designed and built in Europe and thus maintain the industry wholly competitive with the rest of the world.

7. The political, technical and industrial case for the European radar is sound and the Company will fight strongly for its adoption. It is hoped that the Government and the main contractors will support the case with vigour. Ferranti will, in addition, bid for other significant equipments for this programme which it sees as essential to the long term future of the Industry and the employment here in Scotland.

PA/kg
19.08.86

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1
Telephone 01-~~XXXXXX~~ 218 2111/3

MO 10/4L

12th August 1986

Dear Catherine,

Thank you for your letter of 9th July to John Howe concerning the V2500 engine and the Boeing E-3A (AWACS).

As you know MOD is currently considering proposals from a number of companies, including Boeing, for Systems to meet the UK Airborne Early Warning (AEW) requirement. I understand that the respective merits of the V2500 and CFM56 engines, will be one of the factors taken into account during the assessment process.

I am copying this letter to David Norgrove at No 10.

Yours sincerely,

(I C F ANDREWS)
Private Secretary

Mrs Catherine Bradley
Department of Trade and Industry

Nimrod reaches to the end of the runway

Britain's attempt to build an airborne radar for identifying enemy aircraft has ended. Now the Ministry of Defence has to decide whether to buy Nimrod

Steve Connor

THE ENGINEERS aboard a lone Nimrod flying off the coast of northeast Scotland last year returned home feeling pleased with themselves. The Nimrod's radar had successfully tracked the aircraft participating in an exercise for the Royal Air Force 300 kilometres away off the coast of East Anglia. The radar had even identified the tracks of low-flying fighter aircraft, which are notoriously difficult for radar to pick out.

When the Nimrod turned back to its base, the engineers on board switched the radar on again to look at Edinburgh as it woke for the morning rush hour. Their instruments quickly jammed as they detected a mass of slow-moving objects "flying" at low altitude. The "aircraft" were vehicles travelling along the roads into and out of the city. The engineers on board realised that the saga of the Nimrod had not yet ended. Yet another difficulty had joined the long list of problems that have plagued the project since its inception over a decade ago.

GEC Avionics

Nimrod is based on the airframe of the Comet passenger jet. The official title for a Nimrod with a radar to look down on aircraft in its vicinity is the Nimrod AEW (airborne early warning). Although Nimrod aircraft have proved their worth in maritime reconnaissance, partly because of their long range and relatively slow flying speed, the Nimrod AEW has become the most notorious project ever to darken the corridors of the Ministry of Defence (MoD). It has become the *bête noire* of the defence establishment: a technological project that breaks its budget several times, overruns its schedule, becomes the focus of acrimony between defence companies and the MoD, and, worst of all, does not work. With the benefit of hindsight, as one senior official in one of the companies involved said, everyone participating in the Nimrod project would probably have preferred to have left it on the drawing board.

The story of Nimrod began in the early 1960s, when Britain first started to research into the possibility of an airborne radar that could "look down" on enemy aircraft. At the same time, a special working party of the Air Defence Committee, then a group of senior scientists and officers in the RAF, reviewed the air defence of Britain for the decade beginning 1975. In 1964, this working party, chaired by R. V. Jones (now emeritus professor of physics at Aberdeen University), strongly recommended that Britain should have airborne early warning by 1975. When Jones saw the US's Airborne Warning and Control System (AWACS) in 1975, he was extremely annoyed, he says. "This was exactly the aircraft we had recommended 10 years earlier, and we had not got it," he now recalls.

The RAF had made a half-hearted attempt to develop an aircraft for airborne early warning in the 1960s. It first mooted the idea in January 1963, and in 1966 came up with a firm outline of what it wanted, called an Air Staff Requirement, or ASR. The RAF wanted an aircraft that could identify 500 separate targets

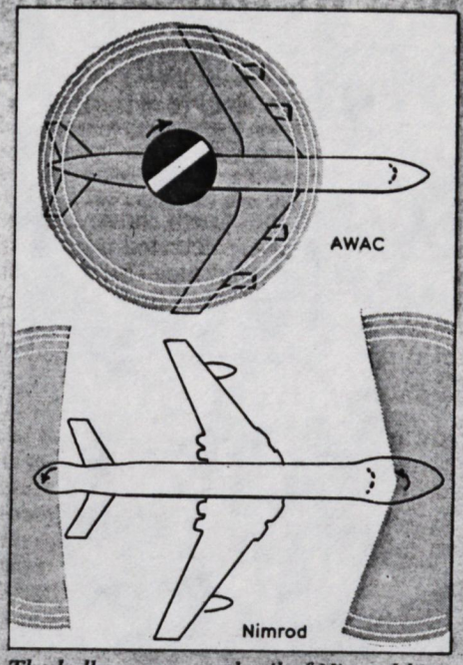
How early warning works in a Nimrod

AIRBORNE early warning relies on one of the oldest principles of military science: the higher you are, the further you can see. An aircraft carrying radar not only can look down into valleys but it can also see further over the horizon. A good airborne early-warning system should spot low-flying aircraft up to 300 kilometres away. The higher the approaching aircraft, the more likely it is that an airborne early-warning radar will spot them.

A Nimrod fitted with radar for airborne early warning is packed with electronics. There are three systems: the radar itself; equipment to distinguish between friendly and enemy aircraft, called Identify Friend or Foe; and devices for listening to radio waves coming from enemy aircraft, called Electronic Warfare Support Measures (ESM).

The ESM picks up radio signals in the area and tries to match them against an up-to-date library of signals. This library is essentially a list of all the different types of radio transmissions made by enemy aircraft. Identify Friend or Foe is a similar system that detects the "squeaks" made by civil and friendly aircraft. It can tell the operator that an aircraft is approaching which is showing all the signs of being a civilian flight, but it cannot necessarily advise the operator whether the plane is an enemy bomber disguising itself as the 1500-hours flight from Malaga. (Every civil aircraft carries a device that transmits a pre-arranged signal that identifies it as a civil airliner.)

Nimrods use pulse-doppler radar. This radar detects the speed and direction of an aircraft by the shift in the frequency of the reflected radio wave. Waves bouncing off



The bulbous nose and tail of Nimrod have two radar antennas to AWAC's one

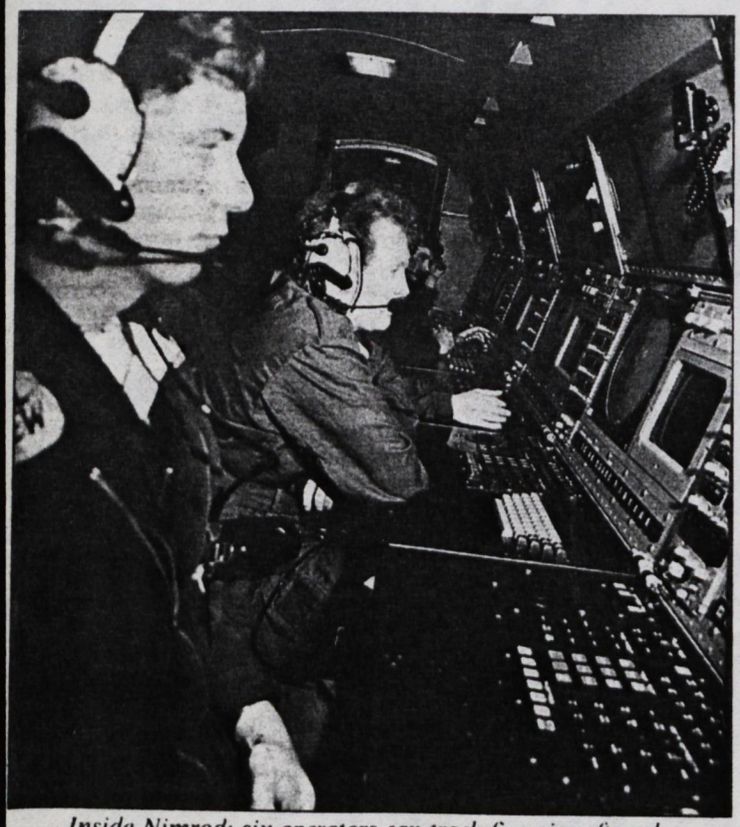
an aircraft coming towards the Nimrod will have higher frequencies than the same waves emitted by the radar's transmitter. Aircraft moving away from the Nimrod will lower the frequency of the reflected wave. The radar measures the distance to a target by the time it takes for a radio wave to return to the Nimrod. For this to be done accurately, the radar pulses at a high repetition frequency. The transmitter sends out many pulses a second at different frequencies, allowing the radar to estimate accurately how long it has taken for a particular pulse to return.

The shorter the interval between pulses, the better the detection of fast-moving targets, but at such pulse frequencies the pulse-doppler radar cannot pick up slow or stationary targets, such as ships. There is a point, called the doppler-notch, when such targets get lost in the background clutter—the reflections of other objects in the range of the target. The Nimrod has another radar, which has longer intervals between pulses to tackle this problem. This radar does not have such a long range, and it cannot pick out very small targets; however, it does spot slow-moving targets the size of ships with relative ease.

Nimrod has two radar antennas, one in the nose of the aircraft and one at the rear. As the one in the nose scans 180 degrees in the front of the aircraft, the one in the rear returns to its starting position ready to take over when the front antenna has completed its semicircular scan. The AWACS perform this task by mounting the structure that houses the antenna, the radome, above the aircraft and letting it spin like a conventional radar. GEC Avionics says that the Nimrod's unique design has caused no significant problems.

In addition to spotting enemy aircraft, Nimrod can operate as an airborne command centre, with its six operators on board to control five aircraft each. Each operator sits in front of orange screens that were originally designed for submarines.

A complicated array of high-frequency, very high-frequency and ultra high-frequency radios link the crew with the ground and other flying aircraft. □



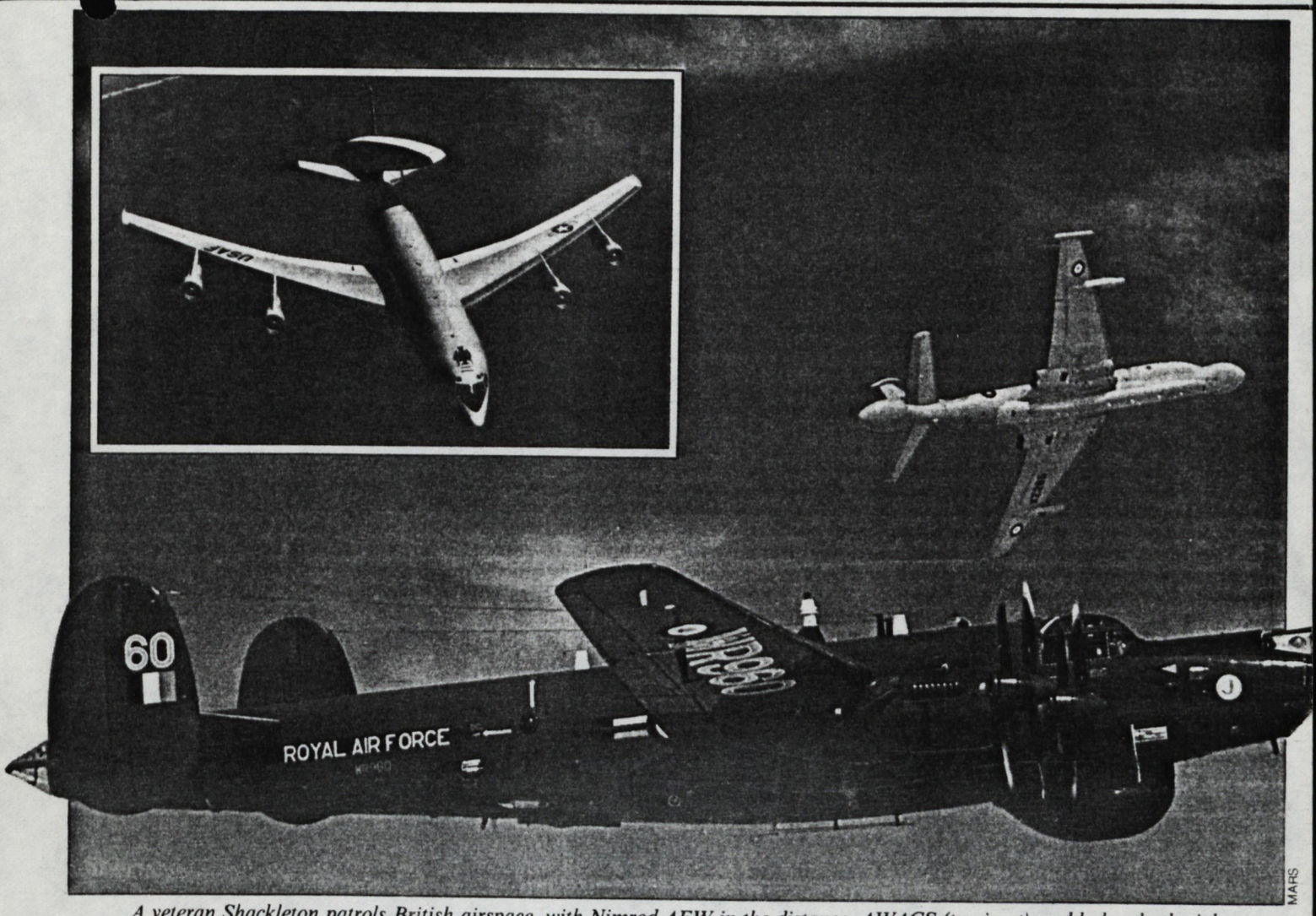
Inside Nimrod: six operators can track five aircraft each

within a range of about 200 kilometres. The technicians involved in the feasibility study suggested an aircraft with one radar antenna in the nose, and one in the tail so that the system could cover 360 degrees. The RAF suggested using the Nimrod's airframe to house the equipment.

The mistake the RAF made, however, was in choosing a type of radar called frequency-modulated intermittent continuous wave. Although this radar appeared to be best in the mid-1960s, by the end of that decade another radar, called pulse-doppler, had proved itself better at identifying the height and speed of aircraft. The government cancelled the embryonic Nimrod AEW in 1970.

There was little progress for the next five years. Britain was waiting for NATO to make up its mind over the type of airborne early warning the organisation wanted to defend Europe. Had NATO chosen the American AWACS, which the US Air Force was already operating, then Britain would have bought this system as well. NATO, however, deliberated. Britain, meanwhile, had already put a squadron of ageing Shackleton aircraft into the air to carry out radar surveillance of the eastern coast. The Shackletons have one advantage: they are slow. Any aircraft carrying radar for airborne early warning must minimise the relative speed between itself and the aircraft it wants to track. In every other respect, however, Shackletons are a liability. Conditions for the crew are noisy, cramped and cold. The radar is primitive and cannot accurately determine the height and speed of incoming aircraft. Indeed, the radar is so unreliable that it might not even spot the planes in the first place.

Despite their failings, the Shackletons are to this day Britain's prime means of detecting enemy aircraft that



A veteran Shackleton patrols British airspace, with Nimrod AEW in the distance. AWACS (top inset) could also do the job

intrude into British airspace.

By 1975, NATO had still not decided whether to buy the American AWACS, so the MoD revitalised the idea of a Nimrod with a radar for airborne early warning. A year later, the RAF drew up a detailed Air Staff Requirement, a document called the ASR 400. In 1977—with NATO still procrastinating about AWACS—the MoD approved the development of the Nimrod AEW. The total projected cost was £817 million.

The Nimrod AEW would meet the requirements of the ASR 400, and it would be in service by May 1982. The ministry signed contracts with Hawker Siddeley (now part of British Aerospace) to develop the airframe and the flight electronics, which control the movement of the aircraft, and with Marconi Avionics (now GEC Avionics) to develop the radar. The contracts were on a "cost-plus" basis: the MoD pays an agreed price for the development of the system plus an agreed profit margin. If GEC, during the development, wants to make changes which are going to cost more than the agreed price, the company must have the MoD's permission. Once it has this permission, the ministry will help to pay the extra costs. The problem, as GEC sees it, is that the company does not have the freedom to adapt to changes in the technology. It must always go to the ministry cap in hand to ask for more money, and suffer the time-consuming bureaucracy of a government department. The problem of "cost-plus" as the MoD views it is that GEC has no incentive to make the project work, and work swiftly.

Things soon went wrong. Perhaps the first problem arose from the marriage between the Nimrod airframe, which is British Aerospace's responsibility, and the radar's complicated and bulky electronics, GEC's responsibility. It was all a bit of a tight squeeze, and the engineers had to stretch Nimrod slightly to fit it all in. The radar's transmitter, for instance, weighs a tonne—and that is without the large plinth that it sits in. GEC quickly realised that it would have to reduce the size of the transmitter without reducing its power. The company has had to fight between the constant trade-off of small transmitter and high power. One of the RAF's constant criticisms is that the radar on Nimrod does not have the range the force wants. The details of what the RAF wants, as stated in the ASR 400, have not been made public, and the force refuses to talk about its requirements for airborne early warning. GEC, although it is not specific about what its radar can do, has told *New Scientist* that the aircraft can detect small, low-flying targets 300 kilometres away when Nimrod flies at 7500 metres (25 000 feet). For bigger targets flying at greater heights, the range is even further, the company says.

Another problem with the radar transmitter in Nimrod was that it generated too much heat. GEC found that the cooling system failed to cool the transmitter efficiently, leading to electrical interference when it overheated. Fuel circulating around Nimrod's wings cools the electronics in flight: when the cooled fuel returns from the wings, it exchange heat with a liquid-cooling system that flows around the transmitter and the other electronics on board. GEC says that it has now overcome these problems of over-heating.

The company has found that Nimrod's signal-processing equipment is more reliable than the transmitter, which has a mean time between failure of 10 000 hours. But the processor's reliability has not been the problem. The real difficulty is that the computer on board Nimrod is too small to

handle the information it has to manipulate. GEC originally wanted to install machines based on its GEC 920 computer, but eventually bowed to the recommendation of the Ministry of Defence's Royal Signals and Radar Establishment that the company should use the more powerful GEC 4080.

Yet even this computer could not meet the demands placed on it. The radar picked up genuine objects that it was not supposed to, called "clutter" in radar parlance, such as oil rigs out at sea and lorries on land. Such clutter overloaded the computer, which slowed down processing. Slower processing in turn meant that an object showed two tracks on the radar's console, which spiralled into further overloading of the computer until, eventually, it failed completely. GEC believes it has solved the problem of overloading by fitting Nimrods with its 4190 computers. This model can store four times as much data as the GEC 4080 and is twice as fast. By the end of next year, the company says, it will have an upgraded version of the 4190, the 4190RE, which will increase the speed of processing still further.

Problem upon problem led to delay upon delay. The costs began to escalate as well. The then minister for defence procurement, Geoffrey Pattie, became so concerned about the delays and costs that in October 1983 he flew by helicopter to GEC Avionics for a showdown. He wanted the company to accept a new contract with fixed penalty clauses to act as an incentive for GEC to "get its act together". The meeting was reportedly angry and short. GEC expected Pattie to stay the day and to look around. He stayed half an hour and made it clear that he was angry at GEC's delay.

The MoD's version is more prosaic: "The minister visited GEC Avionics and expressed his dissatisfaction with their performance." GEC did not like the idea of penalty clauses in the contract, but responded with the idea of a contract paid in stages, on completion of given items of work. Technical problems, meanwhile, continued.

Such problems did not please the RAF, which at the end of the day is the customer for the Nimrod. When the RAF had seriously evaluated Nimrod for the first time in 1984, the system had failed the test. The RAF said that Nimrod did not meet the requirement of the ASR 400. GEC responded by complaining that the RAF had modified what it had said it wanted when the deal was agreed. As an executive from GEC Avionics remarked: "The goal posts were moved in that the RAF said that Nimrod's performance was not good enough. We said that we didn't agree on the performance in the first place." To help to resolve this impasse, in 1984 the MoD established a trials unit at RAF Waddington. GEC delivered the first Nimrod AEW for trials at the end of that year.

GEC suggests that the latest problem with Nimrod's radar—identifying vehicles driving along roads and mistaking them for helicopters—would not have arisen had the RAF made it clear that it wanted to use Nimrod AEW for reconaissance over land as well as sea. Originally, the RAF envisaged that AEW aircraft for Britain would protect the north-western approaches, stretching from Scotland to Norway and Iceland. The aircraft would essentially have a maritime role. Soon after the Falklands war, GEC says that it detected a change of emphasis. The RAF now wanted airborne early warning to operate over land, and it also wanted Nimrod to control the RAF's own aircraft, acting as an airborne command station. GEC claims that it now had the extra problems associated with looking down on land as well as over sea.

The company is solving the problem by programming the computer to eliminate objects moving below a certain speed. By ignoring objects moving at less than 80 knots, for instance, cars and lorries pose no problem. GEC has until the end of this summer to rid Nimrod AEW of this and any other problem that the RAF might have found with the aircraft. The MoD, meanwhile, is reviewing the tenders from six other companies wishing to oust Nimrod. Boeing, inevitably, is a strong contender with AWACS. Another American supplier, Grumman, is offering two approaches, its smaller Hawkeye airborne early warning or the possibility of fitting its radar equipment into Nimrod. Lockheed has suggested a politically more acceptable solution for the British: a consortium with nearly 20 British companies to supply an aircraft fitted with radar for airborne early warning. Other contenders have proposed fitting radar to small civil aircraft, and there is one suggestion to fit radar to an airship. With so many wolves baying for GEC's blood, what better incentive could there be for the company to get it right this time? □

The story of Nimrod: or how not to build early-warning radar

1963 RAF investigates possibility of airborne early-warning radar with antennas in the nose and tail of aircraft.

1964 Working party of the Air Defence Committee recommends that airborne early-warning radar should be operating from 1975 to 1985.

1966 RAF issues requirement for airborne early-warning radar, favouring frequency-modulated radar over pulse-doppler.

1970 Frequency-modulated radar overtaken by pulse-doppler. Project for airborne early-warning radar shelved.

1972 A dozen ageing Shackleton aircraft with primitive radar enter service to guard against aerial attack.

1975 Ministry of Defence (MoD) endorses the need for airborne early-warning radar. NATO undecided whether to buy the American system, AWACS. MoD goes ahead with the Nimrod project.

1976 RAF draws up an air staff requirement (ASR 400) to state its need for airborne early-warning radar. MoD rejects purchase of nine Boeing AWACS. US offers 32 AWACS aircraft for $2·6 billion.

1977, March NATO still undecided over airborne early-warning radar. MoD gives full go-ahead for development of Nimrods equipped with airborne early-warning radar, from mark I to mark III. Total cost of project estimated at £817 million for 11 aircraft, to be operational by May 1982.

1977, April Contracts signed with Hawker Siddley (now British Aerospace) and Marconi Avionics (now GEC Avionics).

1978, May European defence ministers agree to buy 18 AWACS for $1·9 billion.

1978, December NATO signs Memorandum of Understanding for 18 AWACS.

1979 Nimrod costs overrun by £75 million (1978 prices) and finishing date slips seven months to December 1982. AWACS reviewed but dropped because costs would be equivalent to continuing with Nimrod.

1980 Further delays of 13 months. Nimrod now expected to enter service in April 1984—two years later than first planned. Real costs overrun by 3·4 per cent, or £24·7 million (1983 prices). Problems almost entirely due to failings of the radar's electronics. Estimated final costs now reach £1008 million.

1981 RAF retires half of the squadron of its Shackleton aircraft.

1982 First AWACS delivered to NATO. First "production" Nimrod equipped with airborne early-warning radar flies, but GEC does not deliver it to the MoD until 1984.

1984 Nimrod fails the RAF's evaluation. The RAF establishes a trials unit, to iron out the problems with servicemen themselves. First "production" Nimrod equipped with radar for airborne early warning is delivered. Serious crew training expected in 1985-87.

1985 RAF suggests a new type of contract with GEC Avionics, which puts prime responsibility for the project on the company. GEC agrees, but MoD refuses, saying that this is a "mid-life" update. Last AWACS delivered to NATO.

1986, February New contracts with GEC Avionics, with company taking prime responsibility, as suggested a year ago. GEC and MoD to share costs of £50 million to discover whether Nimrod has a future. Six-month deadline imposed.

1986, June MoD receives final tenders from Nimrod competitors.

1986 MoD decides whether to drop Nimrod AEW and buy American. □

CONFIDENTIAL

cc PC (2)

SECRETARY OF STATE

MINISTRY OF DEFENCE WHITEHALL LONDON SW1A 2HB

TELEPHONE 01-218 9000
DIRECT DIALLING 01-218 2111/3

MO 26/7/3L

24th July 1986

Prime Minister
You will wish to note the proposed timing of the Nimrod decision
CDP 30/7.

Dear John,

AIRBORNE EARLY WARNING

P X 3.

In my letter of 20th May, I undertook to write again, after we had received the firm price offers in our AEW competition, about the likely timing of a decision.

As you know, I decided last month to allow Grumman time to formulate an offer of a "Hawkrod" solution - putting the radar and electronics of their main E2C ("Hawkeye") proposal into a Nimrod airframe, and as a result I extended the deadline for the submission of the firm price offers by all contenders until 7th July. We have now received offers from a total of seven contractors, including GEC Avionics (GAv), Boeing, Lockheed and Grumman; and work has begun on the complex task of evaluating the financial data and bringing both acquisition costs and assessments of life cycle costs to a common basis so that bids may be compared.

The Rt Hon John MacGregor OBE MP

My officials are aiming to bring the results of their evaluation - technical as well as financial - before my Department's Equipment Policy Committee (EPC) in mid-September. Given the importance and sensitivity of the ultimate decision, I believe it would be wrong to aim for an earlier date, for we must allow enough time for all the options to be evaluated thoroughly. Moreover, I believe that we should allow GAv the full six months from 3rd March to fulfil their obligation in the agreement reached with them on 25th February "to demonstrate to the Ministry the current state of development of the Mission System Avionics and the features it contains".

EPC consideration in mid-September will, I hope, enable me to put a recommendation to colleagues by the end of that month.

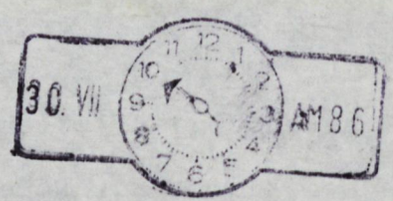
I am copying this letter to the Prime Minister, to other OD colleagues and to Sir Robert Armstrong.

Yours ever,

George

George Younger

Procurement: DEFENCE A&T



SECRET and STRICTLY PERSONAL

2

MINISTRY OF DEFENCE
MAIN BUILDING WHITEHALL LONDON SW1A 2HB
Telephone 01-218 2193 (Direct Dialling)
01-218 9000 (Switchboard)

PERMANENT UNDER-SECRETARY OF STATE
SIR CLIVE WHITMORE K C B C V O

19th June, 1986.

PUS/V86/627
(1/10)

MS Prime Minister
I asked Clive Whitmore for his comments on a number of the points put to you by Arnold Weinstock. This is the result.

Dear Charles,

NIMROD

In your letter of 10th June you asked for my views on a number of points which had been raised with the Prime Minister. Taken in order they are as follows:-

CDP 20/6

i. GEC have demonstrated new data processing techniques in the laboratory using previously recorded radar data. But they will not be in a position to test these new systems in the air with actual radar inputs until later this year.

ii. GEC will have to complete the contract at a fixed price because we have imposed that as a condition of the competition. But on the basis of what we know at present (and GEC have not yet submitted their final technical proposals) the view here is that there is still a significant technical risk associated with their ability to complete the contract in a reasonable timescale.

iii. I believe that this comment is unfounded. The project management staff in London are in day-to-day touch with GEC, while Peter Levene and David Craig recently visited GEC at Hemel Hempstead for a half-day briefing on the state of the project given by Jim Prior, Jack Pateman (the Managing Director of GEC Avionics) and their staff. GEC have also been told that we will take full account of any technical information and trials results that they make available to us right up to the last day of their 6-month trial period. The RAF have a very pressing operational requirement for an AEW system to allow them to discharge their primary role of providing air defence for the United

SECRET and STRICTLY PERSONAL

Kingdom. They would be delighted to take the Nimrod AEW into service at the earliest possible date if it can be made to work satisfactorily; and if Nimrod is the winner in the competition we are now running, that is what will happen.

iv. In making their initial submission Grumman pointed out that, in addition to their E2 Hawkeye aircraft, there might be a very cost-effective solution to be found by fitting their existing radar and computing system into our existing Nimrod airframes. We thought that this proposal deserved further examination and asked for a full proposal. Grumman could not provide this until 7th July. Jim Prior protested last week that this was giving Grumman an undue advantage over GEC and the other competitors whose final bids had been due in on 16th June; and so to ensure even-handed treatment for all the bidders, 7th July was set as the date for the submission of everybody's final fixed prices. The position was explained in the House of Commons by John Lee at Question Time on Tuesday of this week.

[I gather that GEC are satisfied with this].

... You also asked for an overt account of progress on the Nimrod project and the possible alternatives. I attach short notes on the known contenders, but you will appreciate that until we receive the final submissions on 7th July, it is impossible to give any indication of the likely outcome of the competition.

Yours ever,

Peter Thorne.

C. D. Powell, Esq,
PS/Prime Minister,
10 Downing Street,
London, SW1.

NOTES ON AEW COMPETITION CONTENDERS

As currently demonstrated the GEC mission system in the Nimrod AEW aircraft is a long way from meeting the RAF requirement because the system becomes overloaded when the radar is pointing towards land and is unable to establish and display aircraft tracks with any consistency. GEC are working on various improvements, including the use of a new computer. It is unlikely that a system which begins to approach the RAF requirement could enter service before the end of 1988. The overall technical risk with this system is still high.

2. The Boeing E3 AWACS is already in service with the USAF and the NATO AEW force in Europe, and the Grumman E2 Hawkeye AEW aircraft with the USN. Technical risk for both these systems is very low.

3. The Lockheed Orion and Grumman Nimrod proposals both use the E2 Hawkeye radar mounted in an alternative airframe. The technical risk with these systems is presently assessed as being lower than with the GEC system but higher than with the Boeing E3 AWACS and the Grumman E2 Hawkeye aircraft.

4. In addition incomplete and non-compliant bids have also been received from Airship Industries (for an airship without a radar) and MEL (for a radar without an aircraft). Technical risk would be very high.

SECRET AND STRICTLY PERSONAL

10 DOWNING STREET

10 June 1986

From the Private Secretary

Dear Clive,

NIMROD

The Prime Minister had a discussion this evening with someone closely involved in the Nimrod project in the course of which a number of points were made which are hard to evaluate from here. In particular:

(i) It was suggested that GEC had made major strides in recent weeks towards overcoming the problems with the radar and the computers for Nimrod;

(ii) that there was no doubt now that GEC could complete the contract in a reasonable timescale and at a fixed price.

(iii) that the MOD/RAF were very reluctant to get acquainted with the work done by GEC: indeed seemed determined that the contract should <u>not</u> now go to GEC; and, as part of this,

(iv) had recently extended the deadline for revised tenders to accommodate Grumann who had an untried proposal to instal their equipment in the Nimrod aircraft.

It would be very helpful to have, on a strictly personal basis, your views on these points. I would not, however, want this letter to be shown to anyone else in MOD or the conversation to which it refers revealed. At the same time it might be helpful to have an overt account of progress with the Nimrod project and with possible alternatives to it for the Prime Minister's information.

Yours ever,

(CHARLES POWELL)

Sir Clive Whitmore, K.C.B., C.V.O.

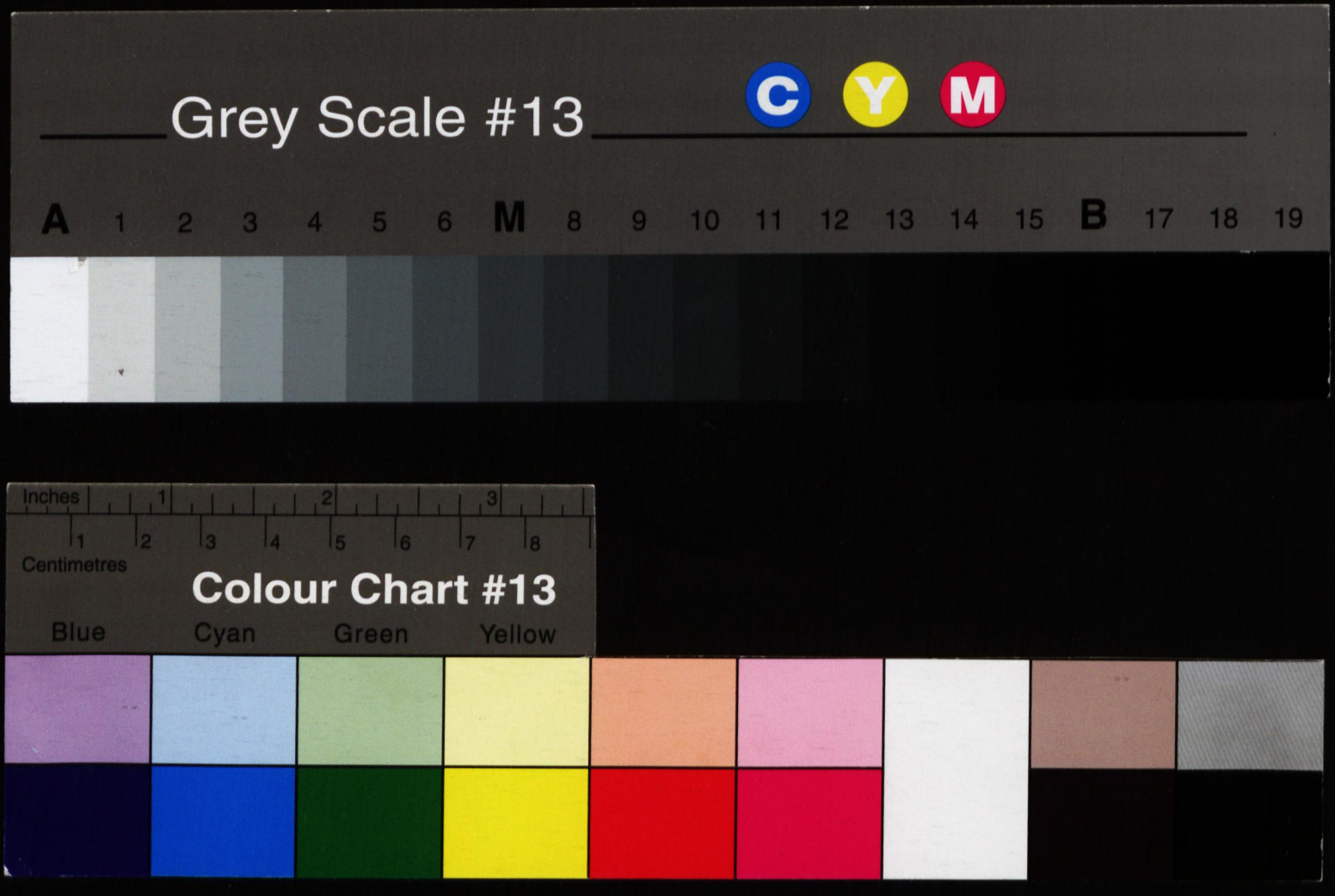
SECRET AND STRICTLY PERSONAL

PART 3 ends:-

CST to SS/MOD 30.5.86

PART 4 begins:-

CDP to Sir C. Whitmore. 10.6.86


Grey Scale #13
C
Y
M
A 1 2 3 4 5 6 M 8 9 10 11 12 13 14 15 B 17 18 19
Inches
Centimetres
Colour Chart #13
Blue
Cyan
Green
Yellow