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PRIME MINISTER

NIMROD

You read Mr Younger's paper over the weekend. There is now a Cabinet Office brief. Also a Policy Unit note.

The game has changed a bit since the paper and the brief were written. Not for the first time, GEC have submitted a last minute offer. Mr Younger will circulate a note overnight (now received and in folder). But the main points are likely to be as follows.

Last week GEC said that they needed six more months to see whether they could ever reach the Minimum Initial Operational Capability (MIOC), particularly in the two key areas of the capability of the radar when looking towards land and its tracking capability. They offered a fixed price contract of £375 million to achieve a sub-MIOC standard.

Now they suddenly find they have solved the key problems and can offer a fixed price contract to full MIOC standard. After all that's gone before, the temptation to say "oh yeah" is pretty strong.

Mr Younger will recommend:

- (a) that we go ahead and explore the American options; but
- (b) we do not cancel the GEC contract now, but continue negotiations in parallel with GEC, to make them take 50 per cent of the risk of completing the contract to full MIOC standard (ie if they fail, they would be liable for up to 50 per cent of £255 million. This is the development as opposed to the production cost.);

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- (c) a final decision would be postponed until 31 July when we would be in a position to assess the available US options and weigh them against whatever progress GEC have by then made towards proving that they have cracked the problems and can deliver to full MIOC standard;
- (d) that work between now and end July should be funded on a 50/50 basis, with GEC being able to recoup their share if the project goes ahead.

This does not greatly affect the recommendation in Mr Younger's original paper. Clearly we must explore the American option. The only point in question is whether GEC will accept the terms proposed by Mr Younger. If not, the recommendation is that we cancel the contract now.

*Accountant*  
*Duty Clerk*

*RF* CDP

11 February 1986

SLHAJN





CE/BUP

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PRIME MINISTER

NIMROD AIRBORNE EARLY WARNING AIRCRAFT

Since circulating my memorandum OD(86)2 on the Nimrod airborne early warning (AEW) aircraft, I have received a further offer from GEC Avionics Ltd (GAV).

2. Without waiting until the end of July, they are ready to offer now a fixed price contract for development substantially to achieve the Minimum Initial Operational Capability (MIOC), including the two key features of the capability of the radar when looking towards the land from over the sea and its tracking capability. After allowing for the consequential production expenditure, the total cost of achieving the standard now on offer would be just over £400M (£255M for development; £95M for consequential production; £52½M VAT) beyond the £882M (at 1985-86 average outturn prices) that we have already spent or committed. The maximum risk that the company are prepared to take is 15% of the development costs.

3. This means that GAV have suddenly made us now the offer that last week they were saying they could not provide until the





end of July: such a sudden change of approach does not enhance  
my confidence in the soundness of their position.

4. I do not believe that this latest offer affects the strong  
case for now approaching US companies and the NATO authorities  
to assess the cost and other implications of alternative ways of  
providing an AEW capability. GAv are still offering a limited  
solution at substantial cost. We need to know more about other  
options. Equally, for the reasons given in paragraph 15 of my  
memorandum, I remain reluctant to cancel the project before we  
have established the cost of the alternatives, which will take  
us some six months.

5. Two questions therefore arise: how are we to handle the  
interim funding of the project while all the options are  
assessed and what should be our stance on the acceptability of  
the proposals now made by the company to reach the MIOC, as a  
basis for a British solution to the requirement? In addition to  
the normal process of seeking to negotiate a reduction in the  
price quoted, I believe that we should tell the company that, if  
they are to remain in contention for this requirement, they must  
commit themselves now to bearing much more of the financial  
risk, both for the expenditure (approaching £60M) in the period  
while we are analysing the options and more fundamentally for  
the whole of the development expenditure (£255M) to reach the  
MIOC. In my view, we ought to require GEC to demonstrate their  
belief in their ability to achieve on time the proposals in





their latest offer and its competitiveness with American alternatives by asking them to agree that:

a. GEC and HMG will each bear 50% of the spend on the whole programme over the next six months. In the event that HMG then decides to terminate the programme, GEC's share will not be refunded. In the event that we proceed with the programme, GEC will have the opportunity to recoup their share if they complete the programme satisfactorily as in b. below;

b. For completion of the whole programme, including interim expenditure, they will be paid in full only if they meet the MIOC to time; if they do not succeed, they will be responsible for 50% of the development expenditure of £255M.

I propose to instruct the Chief of Defence Procurement to negotiate personally with the Managing Director of GEC on that basis.





Recommendation

6. For tomorrow's OD discussion, I therefore make the following revised recommendations:

a. I should immediately put in train the approaches to American companies and the NATO authorities needed to define alternative ways of providing an AEW capability;

b. I should instruct the Chief of Defence Procurement to negotiate with GEC on the basis described in paragraph 5. If we cannot reach agreement with GEC, the Nimrod AEW project should be terminated forthwith;

c. I should inform Parliament by an oral Statement of the way forward;

d. I should report back to the Committee when alternative options have been costed and assessed.

7. I am sending copies of this minute to the other members of OD, to Kenneth Clarke and John Wakeham, and to Sir Robert Armstrong.

C.Y.

Ministry of Defence

11th February 1986



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B.07321

PRIME MINISTER

cc Sir Robert Armstrong

FLAG A Nimrod Airborne Early Warning Aircraft (OD(86)2)  
Meeting of the Defence and Oversea Policy Committee  
on 12 February at 10.00am

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Background

In his memorandum, the Defence Secretary describes the course of the Nimrod Airborne Early Warning Aircraft project since the decision to proceed with full development was made in 1977 at a then estimated cost of £856m at today's prices and with first delivery in May 1982. The present position is that the project will cost about £1300m (according to industry) for an aircraft with an avionics capability which is reduced from what we had wanted and itself may not be achieved. In 1978 our European NATO Allies decided to buy eighteen Boeing E3A (AWACS) aircraft, which were delivered between February 1982 and April 1985 within cost estimates.

2. The Defence Secretary recommends that approaches to three American companies (Boeing, Grumman and Lockheed) and NATO authorities should be made, to define alternative ways of providing the required Airborne Early Warning (AEW) capability. As regards Nimrod, he recommends that GEC should be given six months to establish their ability to meet the minimum requirement for the avionics and that the project should be terminated now if GEC will not bear the whole of the continuing liability meanwhile.

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3. The need to talk to US companies seems clear. Indeed it is arguably surprising that we have taken so long to reach the point of decision on this. But there are many implications. The Defence Secretary does not deal in any depth with three critical factors:-

a. Budgetary considerations: the Defence Secretary says in paragraph 10 of his paper only that purchase of US aircraft could demand resources above those allocated in the defence budget to Nimrod.

b. Industrial implications, where a workforce of over 1,000 is directly involved.

c. Presentational aspects: after such an extended and troubled development phase, a difficult balance has to be drawn between giving a public justification for seeking alternative solutions and damage to the reputation of a major section of the British industry.

4. All members of the Committee are expected to attend the meeting. The Paymaster General, the Chief Whip and the Chief of Air Staff (Air Chief Marshal Sir David Craig), representing the Chief of the Defence Staff who is overseas, have also been invited to attend.

The Issues

5. The main issues before the Committee are: .

a. whether the importance of meeting the operational requirement set by the RAF and the shortcomings of the Avionics, developed by GEC, make it essential to seek alternative solutions from US industry, against the background of the industrial implications for this country;



b. if so, whether meanwhile the Nimrod option should be kept open (despite the Defence Secretary's recommendation) as a fall-back in face of possible resource difficulties within the defence budget and as a means of increasing competitive pressure on US bidders;

c. how the Committee's decision can best be presented to Parliament and to the public.

Handling

6. You should invite the Defence Secretary to introduce his memorandum.

7. You may wish to direct discussion to cover the following main issues:-

a. The operational requirement

The work is at present directed towards achieving the Minimum Initial Operational Capability (MIOC). Is this level of capability, which falls short of the required specification, adequate? What level of improvement does it give over our existing Shackleton AEW aircraft? Is the RAF's full specification comparable with that laid down by NATO and is there confidence that AWACS could meet it? (The Defence Secretary and the Chief of Air Staff.) Is there any substance in the criticism in the press that some of the difficulties in development have arisen from changes in the RAF's specification? (Chief of Air Staff)



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b. Shortcomings in the Avionics


The Defence Secretary's memorandum (paragraph 12) pinpoints the two key elements in achieving the full MIOC: improving the capability of the radar when looking towards land from over the sea and its tracking capability. GEC are reported as claiming that these can be overcome by the introduction of a new computer and a newly developed signal processor.

Is it the view of the Ministry of Defence that the GEC design is incapable of sufficient improvement? If so, how far can this be attributed to inadequate Project Definition undertaken before full development was launched in 1977? (Defence Secretary and Chief of Air Staff)

c. Industrial factors

It is understood that a workforce of just over 1,000 is engaged directly on this project, some 500 at GEC Avionics, Hemel Hempstead and most of the remainder at British Aerospace at Woodford, Manchester and Chadderton. Would the termination of the project mean the closure of GEC's Hemel Hempstead plant? Would other UK companies, which are subcontractors on the project, be seriously affected? (Defence Secretary) On the face of things, Nimrod appears to exemplify how defence R and D ought not to be conducted. Enormous amounts of money, and a major tranche of skilled manpower, have been devoted to an attempt to maintain an independent capability in an area where there seems to be little prospect of military exports or civil spin-off; and the attempt appears to have failed. If the project were terminated, would the skilled manpower be absorbed by GEC either on other defence






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work or on improving their civil/export business (very desirable from the standpoint of the UK economy)? Or would the resources be released for use elsewhere in the economy? If so, how easily would they be absorbed? (It has been a consistent theme of discussions in MISC 110 and MISC 119 that questions of this kind are not sufficiently addressed in reaching decisions on defence development/procurement issues.) The Defence and Trade and Industry Secretaries should be pressed for answers to these questions.

d. Budgetary issues

Can no estimate, however tentative, be made of the costs of buying AWACS or another American system?  
How much money could be found in the defence budget, once the cost of a terminated Nimrod programme was paid? (It is understood that the cost of £900m, quoted in paragraph 10 of the Defence Secretary's memorandum, is made up of about £780m already spent and £120m estimated termination costs.)  
Should we not decide whether we can afford a US aircraft before we abandon Nimrod? That would enable us to reassure our allies that we would still be acquiring an effective AEW capability. It is understood that GEC have just put forward a revised offer, details of which the Defence Secretary proposes to circulate as quickly as possible today: could it form the basis of an acceptable compromise for keeping the project in being, at least until alternative solutions have been costed?



  
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e. Proposed approach to US companies

Are difficulties foreseen in purchasing AWACS on the same terms as it has been supplied to other NATO members? Would the approach be on the basis of the RAF's original specification? Has thought been given to the prospect of buying into the NATO purchasing arrangements, particularly in respect of shared support equipment and facilities? Would we approach all three US manufacturers, so as to gain negotiating leverage against each? Would we try to arrange for British companies to supply subsystems and components? Would it be open to BAe and GEC to compete against the Americans with a revised Nimrod AEW offer? Could we encourage BAe to bid on the basis of fitting US avionics into a suitable airframe, either produced or owned by the UK (Airbus, VC10, Hercules)? Is there any prospect of purchasing jointly with the French, who are apparently considering AWACS, and thus getting a better price (a joint purchase using Airbus might be attractive to them)? What are the prospects for substantial offset from the US under any of these arrangements? (Defence Secretary)

f. Presentation

The Defence Secretary proposes in his memorandum (paragraph 17d) that he should inform Parliament by oral statement of the way forward. You will wish to invite him to elaborate on the substance and timing of a statement. How could the length of time taken to reach such a decision be justified? How could the damage to GEC's reputation be contained?



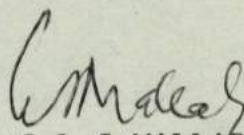
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How far can the potential for more productive use of the scarce scientific resources engaged in the Nimrod project be used to combat criticism? Could any inadequacies in the early stages of the programme, notably project definition undertaken before 1977, be helpfully deployed in the Defence Secretary's oral statement? (Defence Secretary) As to timing, would the Defence Secretary wish to ascertain GEC's willingness to undertake the next six months of work on acceptable terms before or after making his proposed statement? (Defence Secretary)

Conclusion

8. Subject to the discussion, you could guide the Committee to:

- a. decide whether approaches should be made to American companies and the NATO authorities to define alternative ways of providing an AEW capability;
- b. decide whether, as proposed by the Defence Secretary, GEC should be given six months to establish their ability to meet the MIOC and the project should be terminated if the company will not bear the whole of the continuing liability meanwhile;
- c. agree the form and timing of the presentation of the Committee's decision to Parliament and the public.

  
C L G MALLABY

11 February 1986



66665 to 00 (86) 2 (CMD)

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PRIME MINISTER

NIMROD

You may like to have a look at the attached paper - to be taken by OD on Wednesday - over the weekend. I think you will approve the conclusions, viz:

- (a) explore American options
- (b) ~~SEC~~ be told they can have 6 months more, but only at their expense
- (c) if they don't accept, we cancel Nimrod now.

CDD

Charles Powell

7 February 1986



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11 February 1986

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Nimrod cost estimates (in 1985/6 pounds) have risen from £856m in 1977 to £1,300m today, whilst the in service date has been pushed back from 1984 to around 1990. This is for a Minimum Initial Operational Capability (MIOC) standard that can only track a quarter of the number of targets originally specified in ASR400.

If GEC's latest promises are to be believed, then achieving MIOC should cost £400m on top of the roughly £900m already committed on Nimrod. To take the equipment from MIOC to ASR400 standard would take perhaps another three years, and could cost a further £200m, but might easily be £500m more, (the last 10% of performance often costs more than the rest put together).

By contrast purchasing American AWACs - which would meet most of ASR400 - might cost less, (estimates range from £600m to £1200m compared to the extra £600m-900m needed for Nimrod), deliver guaranteed performance, and could be in service to the full operating standard by 1990 rather than 1993. Given GEC's track record, and subject to more precise cost figures, the AWAC looks the safer commercial decision. But politically it is a minefield.

It is astute to test GEC's faith in their product by requiring them to fund more of the risk (rather than just £10m). But given their performance to date, and their behaviour so far over such commitments, it may well be that GEC don't believe they can get to MIOC or if they can, don't believe they can deliver the system for the £400m quoted.

GEC have already suffered tremendous damage because of Nimrod and they may want a way out. If the Government's

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terms could be described as sufficiently unreasonable this would give them the opportunity. GEC might also see this as a chance to damage our non-interventionist industrial policy which is increasingly applying the brakes to the GEC gravy train.

We recommend that:

- i. US bids must be sought. This keeps the pressure on GEC and will allow the Government to take informed decisions.
- ii. Until the political climate is easier we should delay insisting GEC take more of the risk. This will give time for negotiations with GEC, and also for the US to make preliminary bids before we finally call GEC's bluff.

*P. Scola*

PP PETER WARRY

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