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PRIME MINISTER

HARM and ALARM

Your meeting on Tuesday is to discuss:-

- a) Whether we buy HARM or ALARM.
- b) When an announcement should be made.

The Defence Secretary favours ALARM, as does the Industry Secretary (Mr. Baker will be representing him). The Chief Secretary is not disposed to agree and has asked for a meeting.

Some of the points at issue are brought out in the attached CPRS brief.

You are also aware of the points made to me by John Peyton.

I attach a telegram from Sir Oliver Wright which deals with the likely repercussions in the United States of a decision to opt for ALARM. In paragraph 6 he suggests that we try to devise a package deal to put to the Pentagon - if they turned it down, we should have stronger grounds for buying British.

On the timing of any announcement, the Defence Secretary favours an early statement. The Foreign Secretary is against an announcement before Williamsburg and the Chief Secretary supports him on this point.

A-JL.

16 May 1983

SECRET

+ a brief  
from  
Sir R  
Armstrong

PRIME MINISTER

HARM and ALARM

Your meeting on Tuesday needs to discuss:

- (a) whether we buy HARM or ALARM
- (b) when an announcement should be made.

On the two competing equipments, the Defence Secretary favours ALARM, as does the Industry Secretary (Mr. Baker will be representing him at your meeting). The Chief Secretary is not disposed to agree and asked for a meeting.

You are also aware of the points made to me by John Peyton.

On the timing of any announcement, the Defence Secretary favours an early statement. The Chief Secretary wants to avoid an adverse reaction in the United States just before Williamsburg. The Foreign Secretary is against an announcement before Williamsburg.

ASC

16 May 1983



JSL.

I attach the material of  
the CSI's briefing as we  
agreed for your  
information.

JG.

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remainder of this brief, I note the main points to make, and add some defensive points meeting some of Mr Heseltine's specific arguments.

#### MAIN POINTS TO MAKE

##### Operational Requirement

- (i) MOD's Operational Requirements Committee attached great importance to earliest possible in-service date.
- (ii) Considerable risk of slippage in ALARM. MOD's Defence Equipment Policy Committee endorsed MOD experts' assessment that BAe programme too compressed; and should be extended by perhaps 2 years to have some credibility as HARM (ie in-service date of ALARM August 1989, compared with September 1986 for HARM).

##### Cost Comparison

- (i) Risks unsymmetrical. BAe fixed price bid in principle secures our position against cost increases. But slippage would cost BAe some £60-70 million. Likely to seek every possible opportunity to overturn the fixed price, and would use any minor modification as excuse to do so. MOD officials believe that BAe would be successful in this, not least because inevitable that RAF's requirement will change as threat develops.
- (ii) Fixed price contract most unusual for such risky work. We would be paying BAe independently of their achievement. What happens if product is unsatisfactory? PAC bound to take an interest. (Example: MOD paper attached to Mr Heseltine's letter mentions that a fixed price for one of the specification changes has yet to be agreed. ALARM cannot engage radars operating in low frequency ranges. Modification may be expensive, and will certainly be technologically demanding. A fixed price for this element risks either our being charged too much (BAe's risk premium) or inevitable pressure in due course to reopen the contract.)
- (iii) HARM price may not be certain (since depends on US Government's price and exchange rate). But good chance that it will be less than MOD's estimates (since pressure on TI in US have caused them to suggest modifications that could reduce unit price by 20%).

/ (iv)

- (iv) Summary: Expected cost of 750 missiles:  
 HARM: £235 million or less  
 ALARM: £389 million minimum, possibly £460 million

#### Defence Programme

- (i). Both missiles exceed RAF's LTC provision (Table 2, Annex A of MOD's paper). But ALARM exceeds it much more. Moreover, extra costs of ALARM fall in early years (£21m, 61 million, 57 million, 50 million in 4 years 1983-84 to 1986-87 respectively; because of contract arrangements, payments profile independent of achievement).
- (ii) Extra costs mean less for other projects, ie less defence capability. RAF will be starved of funds for other defence suppression projects (they are most concerned about the short range anti-radiation missile, SRARM, which could be more important to them in the 1990s than the larger HARM/ALARM).

#### Cost-Effectiveness

- (i) Extra cost of ALARM is not only waste of resources and damaging to defence capability in itself. It leaves Tornados without effective defences for extra 3 years. Why invest £6½ billion in Tornado (GRI only, figure excludes air defence variant) if we do not then protect it? Similarly its weapon systems (eg nearly £0.7 billion on JP233, the runway cratering weapon).

#### Jobs

- (i) Damaging effect on long term competitiveness of protecting British firms. Jobs created or saved in aerospace offset sooner or later by losses elsewhere.
- (ii) But HARM Co-production could also mean substantial jobs at modest premium, and in relatively depressed areas. (Details in Annex B to brief; Co-production jobs concentrated in Birmingham and North West.)
- (iii) Money saved (£200 million or so) would be spent on other defence projects which would directly or indirectly help jobs elsewhere.

#### Technology

- (i) We acknowledge the need to maintain some technological expertise in homing head and guided missile technology. But this could be achieved by feasibility and technology demonstrator work on other / projects.

projects. The precise 1990's threat is unknown. By keeping our options open now we would be in a much better position to exploit the opportunities (eg world wide market for SRARM likely to be much greater than HARM/ALARM).

(ii) This programme would be much cheaper (even £5 million a year could go a long way, although we do not have any precise feel for the figures). Mr Heseltine's reference, picked up by Mr Baker, to alternative means of sustaining the technology being expensive, is misleading.

(iii) We are sceptical of MOD's claim that these technologies are "essential". Last year an MOD review concluded that only a handful of industrial capabilities were essential to retain on military-strategic grounds (nuclear warheads and propulsion; internal security, cryptographic and electronic intelligence equipment).

(iv) If these technologies are essential, why did we invite competitive bids? We should be looking for some division of labour within the Western Alliance (Mr Pym quote).

#### The US Reaction

(i) There is certain to be an adverse reaction in the US. An excuse that "this was not a normal competition" would hold little water. We have heard that this project is being seen as a test case. TI are themselves a powerful lobby.

(ii) We would risk undermining the efforts of Ministers (eg Mr Pattie) the Embassy and our US supporters (including Casper Weinburger and General Bernard Rogers) who have warned Congress that its attitude is damaging relations with Europe.

(iii) There are other major UK projects at risk from a more protectionist Congress attitude. Perhaps most important is the choice of the BAe Hawk for the USN's VTX advanced trainer programme (decision on development due in the Autumn). Also at risk are the Rolls Royce Pegasus engine for the advanced Harrier/AV8B (many in Congress and the USAF have always opposed the project) and a wide range of UK equipment suppliers (Martin Baker, Marconi, Ferranti, Lucas, Smiths Industries, Dowty).

(iv) Timing particularly awkward in view of imminence of Williamsburg. How could PM defend choice of ALARM?

/ DEFENSIVE POINTS



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Covering SECRET

Qa 06366

To: MR COLES

16 May 1983

From: JOHN SPARROW

HARM or ALARM?

I attach a copy of a CPRS collective brief for the Prime Minister's meeting tomorrow. If the Prime Minister approves, you might wish to supply copies to the other participants in the meeting. None has been circulated from here other than to Sir Robert Armstrong.

Att

## HARM OR ALARM?

Note by the Central Policy Review Staff

1. The Secretary of State for Defence supported by the Minister of State for Industry wishes to purchase the UK missile ALARM in preference to the US HARM as a defence suppression weapon for the RAF. The Chief Secretary does not agree that the balance of argument favours ALARM.
2. HARM is offered in two forms, but HARM CoProduction is clearly better than HARM FMS. For an additional cost of £19 million, HARM CoProduction would provide at least 3,500 UK project man-years over eight years - a cost per job per annum of £700. As there is no difference in in-service dates between HARM FMS and HARM CoProduction, the choice for Ministers is between HARM CoProduction and ALARM.
3. In making their choice, Ministers will wish to consider -
  - (a) The Military Implications - the Secretary of State for Defence states that the latest studies predict that Tornado attrition rates in the Central Front will at least double between 1985 and 1990 without defence suppression weapons. The Chief Secretary suggests that the most likely in-service-date for ALARM could be August 1989 compared with September 1986 for HARM. If a three year delay is a real possibility, are the military risks acceptable, both for deterrence and in a potential conflict, particularly as the cheaper option of HARM would close this gap?
  - (b) The Technological Implications - the Secretary of State for Defence considers that it is vital to retain our indigenous homing and guidance expertise and that this justifies the extra cost of ALARM. The Chief Secretary queries whether a decision to purchase HARM, coupled with a combination of work on the short range anti-radiation missile and supporting technology, may not be a more cost-effective option. Could the £134 million cost saving in buying HARM be more effectively spent on alternative technology or would the UK be unwise to rely on US technology for defence suppression systems for use against the Warsaw Pact?



(c) Employment and US Reaction - in considering employment prospects, what impact would alternative spending of the £134 million ALARM premium have on UK jobs as well as the UK employment provided by the HARM CoProduction option? What are the prospects for UK defence sales in the US if ALARM is chosen?

(d) Timing - Does a decision need to be taken now or is more information required on the US approach to a second generation HARM for the 1990s and on UK access to this technology? Is UK/US collaboration on a future system following an initial purchase of HARM an option for further consideration?

Cabinet Office

16 May 1983

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TO IMMEDIATE F C O

TEL NO 1346 OF 15 MAY 1983,

INFO IMMEDIATE MODUK, CABINET OFFICE.

ANTI-RADAR MISSILE

HARM / ALARM.

1. I UNDERSTAND THAT A DECISION IS SOON TO BE TAKEN ON THE PURCHASE OF ANTI-RADAR MISSILES, WITH THE CHOICE LYING BETWEEN AN EXISTING AMERICAN SYSTEM (HARM) TO BE MANUFACTURED LARGELY IN THE UK, AND A BRITISH AEROSPACE SYSTEM (ALARM) WHICH HAS YET TO BE DEVELOPED. YOU MAY LIKE TO HAVE A VIEW FROM HERE ABOUT THE AMERICAN DIMENSION.

2. WE HAVE AN EXTREMELY BROAD AND COOPERATIVE RELATIONSHIP WITH THE AMERICANS IN THE DEFENCE FIELD, AND HAVE INVESTED A GREAT DEAL OF CAPITAL IN LOBBYING WITHIN THE ADMINISTRATION AND CONGRESS FOR THE TWO-WAY STREET. WE HAVE ARGUED FIRMLY THAT EACH SIDE SHOULD BE WILLING TO BUY FROM THE OTHER WHEN THE R AND D HAS BEEN SPENT, AND A PRODUCT EXISTS WHICH MEETS THE MILITARY REQUIREMENT. ON THE UK SIDE WE HAVE MOST RECENTLY PUT THIS FORWARD IN PROMOTING THE SALE OF SEARCHWATER RADAR AND THE ICS3 NAVAL COMMUNICATIONS SYSTEM. OVER THE YEARS WE HAVE SUCCEEDED IN BRINGING THE WIDE IMBALANCE IN PURCHASES DOWN TO A MUCH MORE RESPECTABLE RATIO OF 2:1, WITH THE GAP LIKELY TO NARROW FURTHER WITH THE IMPACT OF AV8B AND HAWK. IN RECENT YEARS, THANKS TO A HARD AND CONTINUING SLOG BY MEMBERS OF THIS EMBASSY AND BY VISITING MINISTERS AND OFFICIALS, WE HAVE BEEN ABLE TO TURN ROUND A NUMBER OF DECISIONS IN OUR FAVOUR, SUCH AS THE MARTIN BAKER EJECTION SEAT AND THE THREAT OF RESTRICTIONS ON IMPORTS CONTAINING SPECIALTY METALS. THERE IS A GREAT DEAL AT STAKE FOR US HERE.

3. IN THE CASE OF HARM, THE MANUFACTURERS, TEXAS INSTRUMENTS, HAVE RECOGNISED THE EMPLOYMENT IMPLICATIONS FOR HMG BY TEAMING WITH LUCAS AEROSPACE TO ENABLE THE COMPLETE MISSILE, EXCEPT THE SEEKER, TO BE MADE IN THE UK, A MOVE WHICH HAS BEEN WELL PUBLICISED.

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4. IN THE LIGHT OF ALL THIS, A DECISION TO OPT FOR THE ALARM SYSTEM WOULD CERTAINLY NOT PASS UNNOTICED HERE. IT WOULD GIVE A DISPROPORTIONATE AMOUNT OF GRIST TO THOSE IN THE CONGRESSIONAL APPROPRIATIONS COMMITTEES WHO REGULARLY PRESS PROTECTIONIST DECISIONS ON THE ADMINISTRATION AND WOULD WEAKEN THE HANDS OF OUR FRIENDS IN CONGRESSIONAL ARMED SERVICES COMMITTEES WHO FIGHT FOR THE TWO-WAY STREET. WE WOULD NEED TO BE ABLE TO DEFEND SUCH A DECISION ON ITS MERITS AND WE SHOULD NEED VERY CONVINCING TECHNICAL AND COST ARGUMENTS, AS WELL AS TIME, TO TRY TO PREPARE THE GROUND WITH PEOPLE IN THE PENTAGON AND ON THE HILL.

5. THERE IS A PARTICULAR POINT AS REGARDS OPINION ON THE HILL. SENATOR TOWER, IN WHOSE BASKET WE HAVE MANY EGGS, IS FROM TEXAS, WHERE HARM IS MANUFACTURED. AN ADVERSE DECISION BY US COULD PLACE HIS LOYALTY TO THE TWO WAY STREET UNDER CONSIDERABLE STRAIN AND PUT HIM IN A DIFFICULT POSITION IN HIS OWN STATE, WHERE HE FACES A DIFFICULT, RE-ELECTION NEXT YEAR.

6. THESE FACTORS POINT CLEARLY TOWARDS A DECISION TO OPT FOR THE EXISTING US SYSTEM. BUT I RECOGNISE THAT THERE WILL BE STRONG ARGUMENTS POINTING IN THE OTHER DIRECTION. ONE POSSIBLE WAY OF GETTING OVER THIS MIGHT BE TO TRY TO DEVISE A PACKAGE TO BE PUT TO THE PENTAGON. WE COULD DISCUSS OUR PROBLEM FAIRLY FRANKLY WITH THEM, AND INDICATE A READINESS, FOR REASONS OF INTEROPERABILITY, COST-EFFECTIVENESS, RATIONALISATION OF R AND D EXPENDITURE ETC TO SEEK TO PURCHASE HARM, PROVIDED FOR EXAMPLE MARCONI WERE GIVEN A FAIR OPPORTUNITY TO PARTICIPATE IN DEVELOPMENT OF THE IMPROVED SEEKER HEAD FOR THE US NAVY. IF SUCH AN OFFER WERE REFUSED, WE SHOULD OBVIOUSLY BE ON STRONGER GROUND FOR DEVELOPING A NATIONAL PRODUCT.

WRIGHT

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