

VIG



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MO 36

12th November 1982

Jean Prime Minister.

You asked for my comments on a memorandum you had received which is critical of the Defence Ministry in general and the naval programme in particular. I do not think anything is to be gained from responding to the personal criticism of politicians, civil servants and Service officers contained in the memorandum; there is no answer to general rebukes. I am sure that Lord Mountbatten was a very successful officer but he was grappling with very different problems to those we face today, not least a less pressing demand on resources and a much less intensive technological challenge.

Let me then leave the rhetoric and answer the specific points in the memorandum. We do not have the resources to explore the potential offered by every new development and area of technology, and common prudence dictates caution in the too ready abandonment of tested parts. Thus, although I sometimes get frustrated in the field of naval procurement, it is still true that we were among the first to adopt nuclear propulsion, in the use of glass reinforced plastic for larger hulls and, as was so well demonstrated in the Falklands, with the Sea Harrier and the only effective anti-missile missile system in the world, SEA WOLF. More recently, the STING RAY

The Rt Hon Margaret Thatcher MP



lightweight and the new heavyweight torpedoes now under development will employ technology several years ahead of their competitors. This is no bad record - and does not really support the charge that the Ministry of Defence is unreceptive to new ideas. As with any large organisation, the Department needs pushing from the top but it takes up realistic new concepts with enthusiasm.

On the design of the new Type 23 frigate, the Royal Navy are broadly content with the latest proposals - and I think they are right. An important objective in this ship has been to enhance the ratio of weapons to ship "platform", all within a strict unit cost budget. Yarrow Shipbuilders, who have the design contract, are being encouraged to come up with their own ideas for achieving the required performance at lower costs. We have commissioned an independent agency (Y-ARD) to carry an objective and critical examination of the design. Thornycroft Giles and Associates, sponsors of the S90 proposal, are also being given the opportunity to validate their claims that our requirements for this frigate could be met and more cheaply with a wide-bodied ship design built by a private consortium and their proposals have already been discussed at some length with my staff. Geoffrey Pattie is strongly representing the merits of S90 but, having listened to the arguments in its favour, I find myself in agreement with the scepticism of all my expert advisers on the suitability of this design.

On submarines, the German IKL 2000 design, which we have examined, does not meet the operational requirement against which our own Type 2400 submarine is being developed. Again, Geoffrey Pattie has represented the arguments in favour of the German submarine but I found the naval arguments against it quite overriding. Its sensor fit is not considered adequate for effective surveillance in a highly hostile environment such as the North East Atlantic; it has a very simple "swim out" torpedo discharge system with elementary storage and handling, making salvo fire difficult;



and the crew would be hard put to maintain the surveillance role effectively and maintain equipment throughout a long patrol. On the basis of cost information available to us on the German boat, there is little difference in first-of-class costs compared with the 2400. In the case of follow-on orders the German boat would be about one-third cheaper - but mainly as a result of the limitations of its weapon systems. The claims of higher performance for it are, therefore, misleading.

Turning to torpedoes, the lightweight STING RAY has just completed its final deep water contract acceptance trials with production warshot torpedoes. Both the Royal Navy and the Royal Air Forces asked to have early weapons made available for the Falklands and all available stock was deployed some six months before the planned in-service date. There are some minor delays to the programme principally as a result of this diversion of equipment but STING RAY was on a war footing ahead of schedule and no doubt played its part as a deterrent to submarine operations. Our confidence in STING RAY's capability against the assessed threat was endorsed by the House of Commons Defence Committee in June 1981 (House of Commons Paper 218) when its development potential, to which my official quoted in the memorandum was clearly referring, was also recognised.

As the source of the memorandum's cost figures for the heavy-weight torpedo are not given, it is difficult to evaluate them. You will recall the decision taken by OD in September last year in favour of the Marconi option for this torpedo (since named SPEARFISH) after a hard fought competition with the US contender. The figure of £460 million mentioned in the memorandum approximates to that included for the United States weapon in the cost comparisons examined by OD which, over a 20-year life and on the cash flow over the early years of the programme, gave a small edge to the United States proposal. OD decided on all the factors that had to be



considered in favour of a British buy and we were able subsequently to negotiate with Marconi to eliminate the cash flow differential. We obtained a good fixed price contract from Marconi for the development and initial production of STING RAY and SPEARFISH and so will be protected under the contract from real price increases. I have grave doubts whether we would have achieved similar protection in the case of the Gould proposals. We shall be seeking in due course similarly keen prices for follow-on production orders to meet our long term training and warstock needs.

With regard to the HAP/OTTO motor developed by Sundstrand, we acknowledge that the fuels have their attendant hazards, but these will be taken fully into account in stringent design requirements to ensure safety. The new subsidiary company, Marconi Underwater Systems Ltd, was formed from those elements of Marconi which produced STING RAY. MUSL will also develop and produce SPEARFISH and its management structure will strengthen the technological base and allow experience on STING RAY to be applied directly to SPEARFISH. The new company has incidentally recently achieved a major export order of the older TIGERFISH torpedo to Brazil.

Finally, let me comment on the criticism of our procedures. We have been making a sustained effort to improve the effectiveness of management in defence. Major improvements are in hand in particular in the area of financial management and control. In our equipment plans, it is always difficult to strike the right balance between quantity and quality when we are dealing with a very sophisticated threat and of course we are not perfect. Changes are needed to some of the ways in which we do our business - and these changes are being made, for example, in the role of the Chief of the Defence Staff, and the central military staffs and the streamlining of equipment requirement procedures. The major reforms proposed in our procurement procedures by the Fisher Report which are now in train may be relevant to some of the criticisms



in the memorandum. But the truth is that most programmes take a long time to bring to fruition because of their complexity and the need to get value for money - not because of unavoidable delay in the system.

I am not complacent, but I would certainly not share the memorandum's blanket condemnation of the Ministry of Defence - and I think that the support provided by the staffs both Service and Civilian during the Falklands crisis, when innovation was very much to the fore, should not be overlooked in any assessment of the Department's performance.

*Cons ever
John.*

John Nott

17 November 1982

MEMORANDUM BY CAPTAIN MOORE

The Prime Minister has seen your Secretary of State's letter of 12 November (and the short manuscript letter which accompanied).

Mrs. Thatcher is most grateful to Mr. Nott for this very thorough examination of the points made in Captain Moore's memorandum. She has asked me to say that she entirely agrees with the comments in the last paragraph of Mr. Nott's letter of 12 November.

ASZ

Richard Mottram, Esq.,
Ministry of Defence.



10 DOWNING STREET

Prime Minister

Would you like me to pass your
thanks to Mr. Nott for the
very thorough examination of the
points in Captain Moore's
memorandum and say that
you entirely agree with the
last paragraph of his (typewritten)
letter?

Yes please
A.F.C. $\frac{15}{4}$
ms



12th Nov.

Dear Prime Minister.

Capt. Moore's memorandum was put round the Department without his name being mentioned.

You should know that nobody who saw the memorandum had any doubts that it came from Moore. The arguments have been put by him many times - and are rather unique to him.

Yours ever - John.



FWS

EM

10 DOWNING STREET

From the Private Secretary

20 October, 1982

Following your meeting with the Prime Minister yesterday, I enclose, as promised, a copy of the letter which the Prime Minister has received from Captain John Moore, Editor of Jane's Fighting Ships.

The Prime Minister sent this on a personal basis to the Defence Secretary a few days ago.



Field Marshal Sir Edwin Bramall, G.C.B., O.B.E.,
M.C., A.D.C. Gen.,

EM

SUBJECT

FIVE

cc Master
of's



cc: IG

10 DOWNING STREET

THE PRIME MINISTER

Personal Minute

No. M7/82

PERSONAL

SECRETARY OF STATE FOR DEFENCE

Dear John

I enclose a note which I have received from Captain John Moore, Editor of Jane's Fighting Ships, who is a neighbour of Ian Gow. I think that these comments, coming from such an expert source, have to be taken seriously; and you will see that John Moore has been in touch with Geoffrey Pattie. May I leave it to you to follow up these points in whatever way you think most effective, protecting the source.

If there are any comments you want to let me have in due course on the points made by John Moore, I should be very interested to see them.

Yours ever

Margaret

19 October, 1982

RM



cc: IG
MO

10 DOWNING STREET

THE PRIME MINISTER

19 October, 1982

Dear Captain Moore.

Thank you for your letter of 1 October about potential economies in naval procurement.

As you know, this is a subject in which I am closely interested and I found our earlier conversation on this subject most valuable.

I am very grateful for these further comments, and also for your offer of help at any time.

Yours sincerely

Captain John E. Moore, R.N.

Raymond Storer

RM

cc: Mr. Gow

PRIME MINISTER

LETTER FROM THE EDITOR OF
JANE'S FIGHTING SHIPS

I gather that there was not an opportunity for you to hand Captain Moore's letter to Mr. Nott when you met him the other evening.

I now attach a reply to Captain Moore and a personal letter under which you could send Captain Moore's letter, if you think fit, to the Secretary of State for Defence.

F.R.B.

15 October 1982



10 DOWNING STREET

THE PRIME MINISTER

Thank you for your letter of 1 October about potential economies in naval procurement.

As you know, this is a subject in which I am closely interested and I found our earlier conversation on this subject most valuable.

I am very grateful for these further comments, and also for your offer of help at any time.

Captain John E. Moore, R.N.



10 DOWNING STREET

THE PRIME MINISTER

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If there are any comments you want to let me have in due course on the points made by John Moore, I should be very interested to see them.

Rle

PRIME MINISTER

cc Mr Gow

LETTER FROM CAPTAIN JOHN MOORE

Ian Gow has handed me the attached letter to you from Captain John Moore, Editor of Jane's Fighting Ships, and has told me the background.

I suggest that we might handle this most tactfully and at the same time try to ensure that something happens, in the following way.

I suggest that you might hand the letter to the Secretary of State for Defence when you see him this afternoon. Ian tells me that he mentioned to Mr Nott last week that he had heard from John Moore, and that Mr Nott is sympathetic. You could ask Mr Nott to handle the letter in such a way that it does not get in the hands of those in the Ministry of Defence who would suppress it and may-be try to create trouble for Captain Moore.

If you wish, I could then send a personal copy of the letter to Clive Whitmore: if you would like me to do so, perhaps you would mention this also to Mr Nott. A spare copy of Captain Moore's letter is attached for you to hand to Mr Nott: I will be putting a reply to Captain Moore in your box.

R.R.B.

14 October 1982



FERB

10 DOWNING STREET

13th October 1982

Thank you very much for your letter of 3rd October, with which you enclosed a letter dated 1st October addressed to the Prime Minister.

I apologise for not having written earlier, but I was away in Brighton for the whole of last week.

I have handed your letter to the Prime Minister and she will be replying to you separately.

I am very glad to see that you have sent a copy to Geoffrey Pattie direct.

Thank you so much for all the trouble which you have taken about this.

IAN GOW

Captain John Moore RN

JANE'S YEARBOOKS

JANE'S FIGHTING SHIPS

from the Editor
Captain John E. Moore, R.N.

Elmhurst
Rickney
Nr. Hailsham
Sussex BN27 1SF, England

Telephone 0323 763 294

Your reference

our reference

date 3rd October 1982

My dear Ian,
On Jane's advice I am sending this to No. 10 as it seems unlikely that you are going to see much of Hankham in the next week or so. It is the result of whittling away at a whole stack of briefs which I had prepared - the result really, I'm afraid, contains more questions than answers but that is inevitable in such a condensation.

The outcome of this is no more than an indication of the scale of the problem with which Geoffrey is struggling, with, if the Naval Staff are to be believed, precious little help from T.T. I realise how very difficult it must be for someone with so little experience of such a vast field of technicalities to hoist in the implications of what is being done. At the same time, being strictly parochial, the Navy is in a situation of the gravest danger at the moment and conservative attitudes, entrenched interests and plain pig ignorance

are merely compounding the problem. I think Beaffrey is probably the only one of the five ministers who sees this with total clarity.

I mention "a number of like-minded people" in my letter to the P.M. Between us we have built up a formidable dossier of waste and extravagance running into hundreds of millions of pounds - this is why the "quantity versus quality" cry has become such anathema to me. At the moment I am working on a paper for the Americans on future technological trends in the Soviet navy. I appreciate the vast difference between their budget and ours; what fills me is their continuing capacity for innovation, born of mental activity and acuity. Similar ability is available in many parts of our own country but is tramped down by official opposition and apathy. ~~As a~~ A small example is the matter of providing adequate equipment for the Special Boat Service of the Royal Marines. The so-called "new" diving set devised by the Experimental Diving Unit costs about ^{£1,000} a third more than a more efficient set available from a small Hexham firm. Also from this firm is a riding submersible which is causing considerable interest abroad - unfortunately the men of Hexham are not allowed to discuss this vehicle with the possible users in the SBS because they are not "approved" by the E.D.U. Heaven knows how much has been spent on official development over the last twenty years.

JANE'S YEARBOOKS

JANE'S FIGHTING SHIPS

from the Editor
Captain John E. Moore, R.N.

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Sussex BN27 1SF, England

Telephone 0323 763 294

3.

Your reference

our reference

date 3 October 1982

but the likely outcome is a vehicle running into millions of pounds. The absurd thing is that in 1966 when I needed such a vehicle for GBS raids from submarines in my Singapore squadron I found the Royal Engineers, the Admiralty materials laboratory, the Admiralty Underwater Weapons Establishment and the E.D.U. showing varying degrees of interest. But nothing was available so we went back to the depot ship, took a couple of out-dated torpedoes, changed the gearing and batteries, fitted some navigational kit and had what we needed - rudimentary but operational. Total cost - two old torpedoes plus about £800. Today a small raid, if it used what may eventually be produced from official sources, would be operating what has become little less than a mini-submarine and would be putting at risk millions of pounds. However if

● The Hexham machine, were it adopted, would cost £65,000 plus £3,000 for frills such as satellite navigation. As you know the better firms of yacht fitters provide remarkably inexpensive navigational equipment - I bet there has been little effort by the official establishments to find out what is available from such sources. Finally, so far as the Hexham firm is concerned, all the development costs have been from their own funds.

Thank you, Ian, if you've got this far. There are so many areas where the same objections are, I believe, valid - sonar, towed arrays, radar, fuel, mine-countermeasures, aircraft support to mention only some. "We can't afford them" they say. Of course we could if those concerned got off their backsides, forgot their pride and used the very great capabilities of our country to the full. We could again have not only the best but the biggest navy in Europe.

P's ever

John

P.S. I'm sending a copy of the brief to Geoffrey
P.P.S. The Hexham diving set is selling like hot cakes.

JANE'S YEARBOOKS

Robin Butler

JANE'S FIGHTING SHIPS

from the Editor
Captain John E. Moore, R.N.

Elmhurst
Rickney
Nr. Hailsham
Sussex BN27 1SF, England

Telephone 0323 763 294

Rt. Hon. M. Thatcher MP
10 Downing Street
LONDON
SW1

Your reference

our reference

date 1 October 1982

Dear Prime Minister,

At the suggestion of Ian Gow I am enclosing a note on the present state of affairs regarding the navy. This covers only a few points but does, I hope, demonstrate that there are considerable savings to be made without any loss of efficiency. There are many other areas in which equivalent, and frequently better, equipment could be obtained at less cost than current or planned contracts. One of the main problems in this respect is that the existence of such equipment is often not known in the Ministry and manufacturers, both large and small, find it difficult to discover a point of entry. Even when they succeed in giving an explanation of their products, too often they find themselves pre-empted by one of the large monopolies whose alternative equipment may well be obsolescent or even obsolete. A lead time of ten to twelve years from the inception to completion of a class of ship or type of weapon system (a period which the Ministry expects to increase in the future) results in built-in obsolescence as the speed of technological advance accelerates. I am confident that Geoffrey Pattie is aware of all these problems and great comfort comes from knowing of his most refreshing approach despite the opposition, apathy and ignorance which delay his projects.

I do have a number of like-minded people who are very ready to help at any time and if I can be of any service in the future it would be a great privilege.

Yours sincerely,

John Moore

J.E. Moore,
Captain, RN.

The Ministry of Defence is a mess. It has been so since Mountbatten left it in 1965. It was designed by him and the position of CDS fitted him perfectly. He dictated the Ministry's operation and none has been able to do that since. In the confusion of committees, registries and ad hoc working parties which today are responsible for our security the politicians have to cope with a mass of unexpected technicalities but are aware of financial stringencies, the uniformed members know of some of the technicalities but little of finance while the majority of civil servants (except for the special few) have no professional knowledge of defence matters, are sometimes expert in a small band of technicalities and have a varying knowledge of financial affairs. The actual Headquarter's figures, although at first sight absurd, demonstrate in some measure the problems of assimilation of what is probably the most complex welter of technicalities faced anywhere in the Government -

5 Government ministers, 2800 uniformed people and 12500 civil servants.

One of the results of this situation is that all processes are slowed down, obsolescence is up-dated and new ideas are unwelcome. Unfortunately the speed of decision making compares unfavourably not only with commercial organisations but also with the two largest navies in the world. One of the great dangers in our present system is that, due to the comparatively short tenure of office of both politicians and service people, various adages become accepted doctrine - "2500 tons is the least warship displacement to carry a helicopter", "anti-submarine attacks will be made from ahead", "speed needs length". Perhaps the most insidious is the "quality versus quantity" chant. None of the first three has any factual basis but the last is not only misleading

but undermines any attempts to achieve modernisation in the fleet at an acceptable cost. In all current major naval requirements there are considerable savings to be made if modern ideas were adopted - at the same time, with no reduction of quality more ships, submarines and equipment could be made available. For example:-

Frigates The S90 design, a private venture, has currently received grudging acceptance as a competitor against the British Shipbuilder's/Bath Type 23 design. The claims for the S90 - greater payload, longer range, possibly higher speed, equal if not better sea-keeping qualities than the Type 23 - are based on sea trials of smaller, similar ships. It has taken several years and considerable ministerial support to get this far. Two, and possibly two and a half, S90s for the price of a Type 23 appear attractive, particularly as the S90 consortium wants to build at Chatham.

Submarines The last Controller visited West Germany to investigate the claims of the I.K.L./Howaldtswerke submarine designs. On the basis of a sea trial in a Type 209 boat his advisers recommended no further interest. The 209 is a smaller design than that required by the R.N. However, the I.K.L./H.D.W. Type 1500 ordered by India and their Type 2000 being considered by Australia both meet the requirements to which the British Type 2400 is being designed. The significant facts are that both the German designs are of higher performance than the Type 2400, require two thirds the crew of that design and would cost less than half the price of Type 2400. An agreement exists for the German designs to be built in the UK under licence.

Torpedoes Stingray is now running its preliminary deep range trials and, even in its present format, is probably still a long way from Fleet acceptance. On 17 March 1981 Mr Mumford (AUS Mat (Navy)) remarked in evidence to the Defence Committee "If we decide to move towards a faster and deeper diving torpedo than Stingray which we may need ourselves in the 1990." With new designs of Soviet submarines likely in the near future maybe we need those attributes now.

As the American Gould package of £460 million for the Mark 48 mod 5 heavyweight torpedo was turned down in favour of the Marconi proposition it now appears that we have a bill of £1.2 thousand million for this new weapon. There is evidence to suggest that there is no proven Otto/HAP propulsion system currently available for this torpedo and if the Sundstrand turbine proposed for it is produced a number of chemists on both sides of the Atlantic have expressed doubts about the safety of the proposed fuel, a mixture of Otto fuel and HAP (Hydroxylamine and Perchloric acid). At the same time there is some confusion in certain areas as to why the heavyweight torpedo computer and software is apparently being produced by a different subsidiary of Marconi than that which produced the Stingray package. One of the advertised advantages of the Marconi offer was that Stingray experience would be utilised in the heavyweight.

Capt. J.E. Moore, RN
September 1982