

Portugal



MO 26/9/18

MO 11/10/10

A.S.C. 12/11

h-a.

RECORD OF A MEETING BETWEEN THE SECRETARY OF STATE
FOR DEFENCE AND THE PORTUGUESE VICE PRIME MINISTER
ON WEDNESDAY 10TH NOVEMBER 1982 AT 0900

Present:

The Rt Hon John Nott MP
Secretary of State for Defence

HE Senhor Freitas Do Amaral
Vice-Premier and Minister of
Defence

Mr N J Beaumont
Head of DS 12

HE Senhor Joao C L C de Freitas-
Cruz
Portuguese Ambassador

Miss J E Ridley
APS/Secretary of State

Senhor Carlos Pardal
Secretary of State for Defence

Senhor Cortez-Real
Chef de Cabinet to Vice-Premier

1. After an initial exchange of courtesies the Secretary of State asked what was the Portuguese perception of the way ahead for Spain after the recent elections. Professor Freitas Do Amaral said that he believed Gonzales would be more moderate in power than he had seemed before the election although doubt must remain about Spanish entry into NATO. He believed that Suarez still had influence and would encourage Spanish entry. The two main internal problems would be terrorism and separatism which were in a sense linked. It was by no means clear whether these problems would be exacerbated or resolved under the new Government. Military unrest might also be a problem although the election result would not necessarily provoke further trouble since the Armed forces are simply anti-democracy and not just anti-socialist. He believed that if the Government were to fail the whole nation would have failed and that could have repercussions for the Iberian peninsula.

2. Professor Freitas Do Amaral described progress on the changes in the Portuguese constitution. Although a two thirds majority in the Parliament had been necessary to revise the constitution in fact 78 per cent had voted in favour. The revolutionary period was now officially closed since all references to the revolution



had now been expunged from the constitution. The Armed forces were now constitutionally dependent on the executive, not the revolutionary council, and again a two thirds majority had been needed to bring this about which meant that even the Socialists had supported the change. The judicial system should be in action from the beginning of the year and again it had been established with a two thirds majority in Parliament. He believed therefore that the whole system of Government, being broad based, would have widespread support.

3. The Secretary of State thanked the Portuguese Government for its help during the Falklands crisis and said that the use of Portuguese air space had been invaluable. He understood how difficult it had been for Portugal with its connections in South America to support us in this way and he was very grateful. Professor Freitas Do Amaral said that Portugal had only played the part to be expected from an ally and asked whether, as an ally, she would be informed of the lessons learned. The Secretary of State said that of course NATO would be told about the lessons which would affect Alliance, strategy and tactics but there were difficulties over blanket release of all the very detailed information on equipment performance. The sum of the analyses was an extremely sensitive document which would be very revealing to the Warsaw Pact should it come into their hands. The document could not, therefore, be widely circulated. However allies who hold or were interested in particular equipments would be given data on performance. The forthcoming White Paper would also be circulated around NATO and this would contain less sensitive information about the equipment used. The Secretary of State then explained in broad terms the UK's intention to replace equipment that was lost during the operations and explained that this would be funded separately from the 3 per cent NATO commitment.

4. In answer to an enquiry from the Secretary of State Professor Freitas Do Amaral said that the Portuguese frigate programme was running into serious difficulties. The decision not to purchase the Rolls Royce Olympus engine had regretfully been taken because the fuel consumption of the engine made it a very expensive choice. Portugal had therefore looked for a different way in which the UK might contribute to the programme and Lynx helicopters had seemed a good option. They would not ask for six helicopters but only for three plus some additional equipment items, bringing the total aid requested to some \$48.156M. He would leave a memorandum explaining the composition of this package (attached). The Secretary of State explained how difficult it was for the UK to provide gifts in this way because there was no military aid budget. Any gift of new equipment, such as Lynx helicopters, would mean cutting back on our own defence programmes but of course we would do our very best to make credit terms attractive - as we tried to on the Rolls Royce engines for the frigates. Professor Freitas Do Amaral described briefly the history of the frigate project: how NATO as a whole had agreed to the project and to multi-national participation but that when bilateral talks were started countries would not agree to



contribute. The United States and the smaller countries in NATO had already made some contribution leaving the UK and FRG as the main participants yet to agree on anything concrete. The Secretary of State said that the Government would give the Portuguese proposal further consideration. Professor Freitas Do Amaral then explained that he had a fresh proposal to make. If the Portuguese were to buy the Rolls Royce Olympus engine for the frigates their fuel consumption would cost some 30 per cent more than the combination of US and German engines they currently planned to fit. He would leave a memorandum (attached) explaining the basis on which the calculations had been made. He hoped that the UK might make an annual subsidy in the provision of fuel equal to the additional cost of running the Rolls Royce engine, that is, some \$52M over the 22-year life of the frigates. The Secretary of State said that he would consider this proposal urgently and would let the Defence Minister have an answer at the forthcoming NATO meetings. Professor Freitas Do Amaral stressed that the Portuguese needed an answer soon if the frigate programme were not to founder completely.

5. The Secretary of State concluded the meeting by mentioning that the UK was embarrassed by the poor state of the Saladins earmarked for Portugal and would hope to refurbish them as soon as possible. Professor Freitas Do Amaral thanked the Secretary of State for this assurance.

6. The meeting ended at approximately 0945.

Ministry of Defence

12th November 1982

JK

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		PS/FCS (Mr Bone)

MEMORANDUM ON THE HELICOPTERS AND UK SUPPLIED ITEMS
FOR THE PORTUGUESE FRIGATES PROGRAM

The initial Ad Hoc Group plan did not consider the helicopters for the ships. The requirement is for two helicopters per ship. The total of six helicopters amounts to a very significant figure that can not be left out of the plan.

On the revised plan proposed by Portugal it was considered that the contribution of the helicopters would be split, three to UK and three to Portugal.

The alternatives for the origins of the helicopters contemplated were:

- 1) - USA, Sea Sprit (Lamps I)
- 2) - UK, Naval Lynx
- 3) - Italy, Augusta Bell AB 212 ASW
- 4) - France, Naval Dauphin II, 365F

The preference went to the first two types, the ones found on board the NATO naval vessel operating on the area where the Portuguese frigates will also operate. This preference is maintained even considering the much higher costs of the two first types of helicopters face to the other two competitors. (Diferences of about 80%)

As mentioned above the plan prepared by Portugal contemplates UK supplied helicopters. Tenders were obtained from Westland Helicopters Limited detailing the extent of supplies and the cost with alternative solutions for the configurations.

Regarding the Helicopters the positions are:

<u>UK comparticipation required</u>	Thousands of US \$
- Helicopter facilities on the ship (part).....	70
- Helicopter	10.000
- Spares, tools, manuals and training	2.014
Total per ship	12.084
For three ships	36.172
Extra Deliveries	2.000
Total for three ships	38.172

<u>Portuguese comparticipation</u>	
- Helicopter	10.000
- Spare, tools, manuals and training	2.000
Total per ship	12.000
Total for three ships	36.000

Besides the helicopters some additional items are also required as UK comparticipation:

Items	Prices Thousands of US \$
- SEWACO parts	2.590
- Radiac	54
- Windows, side lights, wipers	66
- Bathythermograph	40
- Spares, tools, manuals	550
Total for one ship	3.300
For three ships	9.900
Extra deliveries	84
Total for three ships, besides the helicopters	9.984
Total for three ships; with helicopters	48.156

November 3, 1982

M E M O R A N D U M

This Memorandum and attached tables deal only with fuel consumption to be expected for the Portuguese Navy new frigates.

Four equipments are considered, two for cruising speeds and two for speeds above cruising, namely:

a) For cruising:

- MTU Diesel, from Germany (RFA)
- Tyne Gas Turbine, from the United Kingdom

b) For speeds above cruising:

- GE LM 2.500 Gas Turbine from the U.S.A.
- Olympus Gas Turbine from the United Kingdom

The bases for the calculation are stated in the tables. It can be seen from Table 1 that two extreme modes of operation were considered:

- Peace with ships operating 73% of the time with cruising engines and 27% with the higher power engines.
- Crises with 33% of the operational time with cruising engines and 67% with the higher power engines.

For powers below 5.400 SHP, for the case of the Tyne cruising gas turbines, it was considered the operation of the ships on a single shaft in order to reduce the fuel consumption. Thus the ships would be operated on a single shaft 53% and 25% of the time respectively in peace and in crisis periods.

The specific fuel consumption figures shown on Table 1 were taken from the information made available to the Portuguese Navy for standard conditions of temperature, humidity and pressure.

The operating times per year, 1.300 hours in peace and 1.800 hours during crisis, are very conservative.

The yearly per ship fuel consumption calculated in Table 1 are used in Table 2 for the estimation of the total fuel consumptions and corresponding costs for three ships during their life cycle.

Here again the span of life for the ships is very conservative, reduced to only 22 years.

The important aspect of the fuel costs in the future was covered in the calculation shown on Table 2 considering a constant relation of 1.035 between the Fuel Price Index and the Discount Rate used.

Besides the calculations for the basic extreme situations, peace and crisis, an intermediate one was tabled for a mix of 80% of peace and 20% at crisis during the span of life of the ships.

The considerations that follow are for this intermediate situation. For the extreme conditions of peace and crisis similar consideration can be readily made by observation of Table 2.

The calculation shown on expected economy obtained with the MTU Diesel engines over the Tyne Gas Turbine of the order of 20.500 tons of fuel corresponding to a cost of about 17 millions of USA dollars; the GE LM 2.500 shows a saving over the Olympus of about 62.700 tons of fuel with an estimated cost saving of 52 millions USA dollars.

FUEL CONSUMPTION

PER SHIP PER YEAR

POWERS B H P	% WORK. TIME		SPEC. FUEL CONS. GR/BHP/HOUR		TONS FUEL PER SHIP PER YEAR			
					PEACE:1.300 HR/Y		CRISIS:1.600 HR/Y	
	PEACE	CRISIS	MTU	TYNE	MTU	TYNE	MTU	TYNE
700	6	5	185	400(1)	10,1	21,8	10,4	22,4
1.010	3	3	180	373(1)	7,1	14,7	8,7	18,1
1.940	4	5	167	287(1)	16,8	29,0	25,9	44,6
3.360	20	6	160	241(1)	139,8	210,5	51,6	77,8
5.400	20	6	156	216(1)	219,0	303,3	85,0	117,6
10.000	20	8	160	221	416,6	574,6	204,8	282,9
TOTALS	73	33			808,8	1.153,9	386,4	563,4
	PEACE	CRISIS	G E	OLYMPUS	G E	OLYMPUS	G E	OLYMPUS
14.290	6	12	239	355	266,4	395,7	655,7	974,0
19.770	6	11	219	304	337,7	468,8	762,0	1.057,8
26.620	7	12	194	261	469,9	632,3	991,6	1.334,0
35.020	6	15	184	246	502,6	672,0	1.546,5	2.067,6
51.000	2	17	175	222	232,1	294,4	2.427,6	3.079,6
TOTALS	27	67			1.808,7	2.463,2	6.383,4	8.513,0

BASIC HYPOTHESIS:SPEC. FUEL CONSUMPTION FOR STANDARD WEATHER CONDITIONS
LIMITED OPERATIONS TIME

NOTE: (1) specific fuel consumption for operation on a single shaft 53% of the time in peace, 25% of the time during periods of crisis.

FUEL CONSUMPTION
THREE SHIPS, 22 YEARS

Systems	Tons of Fuel			Thousands of USA Dollars		
	Peace	80% peace 20% crisis	crisis	Peace	80% peace 20% crisis	crisis
MTU	53.381	47.805	25.502	44.313	39.685	21.170
- TYNE	76.157	68.362	37.184	63.221	56.750	30.868
GE	119.374	179.760	421.304	99.096	149.225	349.739
OLYMPUS	162.571	242.428	561.858	134.956	201.248	466.418
TOTAL SAVINGS	65.973	83.225	152.236	54.768	69.088	126.377

BASIC ASSUMPTION: SHIPS ENTERING SERVICE BEGINNING 1989
 FUEL AT US\$390 IN 1981
 CAPITAL ASSETS PRICING MODEL:
FUEL PRICE INDEX = 1.035
 DISCOUNT RATE
 HANDLING CHARGES
 RESIDUES, SPILAGES
 AND LOSSES = 10%