

SECRET



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COUNTERMEASURES TO EXOCET

1. The only details we have of the attack carried out by ARA Super Etendards on the Fleet yesterday are on the attached sheet. As a result of this attack on HMS SHEFFIELD on 4 May the following notes on possible countermeasures to EXOCET are forwarded.

2. CHAFF

a. When evidence of a developing ASM threat is detected targetting may be countered or delayed by the deployment of chaff, for confusion purposes, by either 4.5" chaff dispensing shells or helicopter dropped chaff skilllets.

b. Chaff D. Providing warning of an imminent EXOCET attack is obtained Chaff may be deployed, from the 3" RIS, in a distraction role. It is essential that the chaff has bloomed to provide an effective radar echoing area before the EXOCET missile homing radar is activated. If the chaff blooms after the missile head radar has acquired the target the chaff will have no effect. The results of extensive modelling at ASWE on the optimisation of chaff deployment and subsequent ship manoeuvre have been passed to CINCFLFLT.

c. Active Jamming. EXOCET has a home on jam capability, and shipborne jamming of the missile homing radar is not recommended. Effective jamming of the missile can be provided by the use of LYNX aircraft fitted with ARI 23165. This equipment will exploit the home-on-jam capability of the missile and would deflect an EXOCET from a target even after the missile had acquired and locked on to that target. VCNS will recall that he approved the provision of ARI 23165 to CORPORATE forces and, following urgent trials and installation work, the equipments have been made available to CINCFLFLT and these will be fitted and available in TG helos about 20 May.

3. HARD KILL WEAPONS

a. SEADART. Sea Dart is not effective against EXOCET due both to detection range/reaction time limitations with a fast sea-skimming

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target and the fact that the fuse/warhead combination is still optimised against aircraft and is not capable of being effectively triggered by a missile of EXOCET characteristics.

b. SEAWOLF. If approaching EXOCET is visible on TV, a GWS 25 ship will engage in TV Mode. SEAWOLF has a single shot capability against EXOCET for intercept at 3 km. In bad visibility, the radar mode can be used, but lethality will be very low. SEAWOLF has limitations against sea skimmers which are the subject of current improvement programmes. Advice has been sent to the Fleet on how "best to use" SEAWOLF.

c. SEACAT and 4.5 inch Guns. SEACAT has a low probability of defeating EXOCET and this is reduced further due to difficulties with height control at low altitude. Improvements are in train for this and these should be with the Fleet from 10 May onwards. The 4.5 inch gun also has a very low chance of achieving a kill. Both these systems should be regarded as "last ditch" defences without much assurance of success. The fitting CIWS (such as Vulcan Phalanx in ILLUSTRIOUS) will provide some capability which will be a significant advance on any close-in system we have at present.

#### CONCLUSION

4. Ship launched EXOCET is a very potent missile; the air launched version is even more of a threat. Countermeasures can be taken but are all dependent on sufficient warning of missile launch. This can only be certain if AEW aircraft are available to the CTG.

5. In the absence of such an aircraft there can be no certainty of the Task Group being able to deploy the correct countermeasures. However, the intelligence assessment is that only 5 AM 39 missiles were supplied to the ARA. Two of these and possibly three now appear to have been fired. The radius of action of an ETENDARD carrying AM 39 is about 420 nm (Port Stanley is 400 miles from the nearest air base on the mainland).

6. In summary, it has been recognised for some time that air-borne EXOCET posed a major threat to the Task Group and considerable effort has been expended at ASWE and elsewhere in devising the means to counter it. However, it is clear that without warning of attack the likelihood is that defences will remain inadequate.

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5 May 82

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## DSC TELEPHONED OPERATIONAL

## MESSAGE FORM

1. Time Message Received 1825Z 4 May
2. Message received from ACOS(O) CINCFLANT
3. Message received by DNOT
4. Text of Message \_\_\_\_\_

## A. 041649Z from CTG 317.8

1. Harrier lost to AAA while attacking Goose Green at 041610Z May (NAIC: already reported by ACOS(O))

## B. 041629Z from CTG 317.8

1. Damage caused by an air launched Exocet not reported. Initial analysis reveals following facts:

041412Z Sheffield reported internal explosion  
Sheffield reports OOW saw 2 Exocet / 1 hit / 1 Exocet hit ship stbd. side in vicinity MCO  
2 aircraft detected after missile release

041439Z Yarmouth reported possible missile overhead going towards main body

041441Z Alacruity reported splash astern

2. Consider 2 possibly 3 Exocet fired by low flying Super Etendards. No warning achieved despite airborne CAP on threat bearing.

3. Sheffield underway on even keel. Fire fighting assistance being provided. Total casualties unknown.

5. Distribution:

PSO/CDS

COSSEC

DS11 (responsible for further distribution to AUS(DS), Resident Clerk)

SCPL (responsible for VCDS(P&amp;L) and/or ACDS(DIC

Navy Ops

Army Ops

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CNS

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CGRM

DNOT

DUTY CAPT

NSAG COORD  
(to be shown)

DS5

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