

LOOSE MINUTE

D/NLC/1/9/78

Sec. VCNS  
Head of DS4

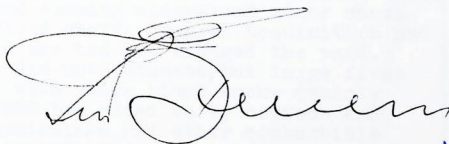
Copies to: Naval Secretary  
DG Ships  
DGW(N)  
DGFSP&S  
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DGST(N)  
AUE(NS)  
AUE(NP)  
DNW

Board of Inquiry - HMS SHEFFIELD

Reference: D/NLC/1/9/78 of 15 September 1982.

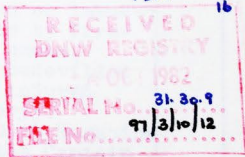
Draft submission to the Admiralty Board attached. (Typed in final to save time, but we will re-type if need be). I would be grateful if you would let me have telephone clearance, or amendments.

2. Two points:
  - a. I have provided a summarised narrative, drawn from different parts of the report, because I found the one in the report difficult to follow on first reading.
  - b. We will of course fill in the blank references.
3. Access sheets included.



T.M.P. STEVENS  
Head of NLC  
NA 218 7584MB.

30 September 1982



STAFF IN CONFIDENCE

ENC. ✓

Minute Sheet No. 1

Reference D/NIC/1/9/78

Minutes and Brief Details of Enclosures

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1 SL

M 1

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This submission invites the Admiralty Board to take note of CINCFLT's report and the Board of Inquiry proceedings on the loss of HMS SHEFFIELD, placed opposite.

2. This submission contains initial comments by MOD staffs. All reports on ship losses are separately being fed into the Lessons Learnt studies, and will also be reflected as necessary in the Falklands White Paper. This and the other Boards of Inquiry on ship losses are cross-sections of particular experience in the Falklands Operation, and it is in the Lessons Learnt studies that they will be drawn together and each seen in context.

Narrative

3. On pm 4 May SHEFFIELD was on Air Defence Screen in calm fair weather, at Defence Watch routine. There had been apparent ESM-induced false alarms, and at that time SHEFFIELD rated submarine threat higher than air threat. A very professional Super Etendard raid developed 2½ hours after sunrise. It was identified by GLASGOW at 1356Z but not immediately identified by SHEFFIELD. SHEFFIELD was hit by a single Exocet at 1403Z on the starboard side, leaving a large hole and causing widespread minor shock damage. She had not fired chaff; target acquisition had not been successful and she had not engaged the raid. The warhead apparently did not detonate, but large fires broke out immediately, with thick black smoke (mainly from propellant and DIESO but added to by noxious and toxic products from furnishings and other combustible material) which caused early and almost complete loss of fighting capability. The firemain was breached on impact; the fire gained quickly, and determined attacks by fire-fighting parties were driven back by heat and smoke. ARROW and YARMOUTH provided boundary cooling, bedevilled by spurious torpedo alarms. 20 men died, 26 injured (all reported to be making satisfactory recovery). At 1750Z, with fire still spreading, the Sea Dart Magazine at risk, and risk in the tactical situation, the Captain ordered abandon ship. SHEFFIELD was towed to the edge of the TEZ, where on 10 May in deteriorating weather she shipped water and sank in 1000 fathoms. (Photographs Annexes K & N).

Board of Inquiry Proceedings

4. Board of Inquiry conclusions and recommendations are in the main report and Annexes A & B to the proceedings.

/Main....

M 1 - contd

Main points from conclusions are:

- a. Loss of firemain was crucial; but there were deficiencies in fire-fighting arrangements and equipment and lack of cohesive control of fire-fighting. Improvements in habitability had been made at the expense of fire-fighting and damage control considerations ( )
- b. The evidence bears out shortcomings in Type 42 self-defence capabilities against such an attack (A2, p16).
- c. There were shortcomings in key personnel in the Operations Department; the CO and First Lieutenant lacked in-depth experience (A5, paras 39-45).
- d. Training doctrine must stress the need for vigilance and for instant full reaction to first indications of attack. ( )
- e. There are doubts about the ability of some equipment (eg. main computer) to resist shock damage.
- f. There were fine examples of bravery; also high skill in ship-handling by ARROW and YARMOUTH.
- g. The order to abandon ship was sound.

CINCFLEET's Report

5. CINCFLEET fully agrees the recommendations and conclusions. He agrees that SHEFFIELD was not fully prepared for the attack, highlights the need for point defence system in the same ship as SAM, and requires further investigation on the effects of improved habitability on Damage Control. He stresses the need for COs to be appointed with background and experience, has decided that no disciplinary action is merited in individual cases, and particularly praises the conduct of the WEO Lieutenant Commander WOODHEAD and his computer room crew. He attaches comments on main action required and action he is taking.

Advice of MOD Staffs

6. At this stage preliminary advice has been sought from staffs to indicate the main lines of follow up.

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Minute Sheet No. 2

Reference D/NIC/1/9/78

*Minutes and Brief Details of Enclosures* M 1 - contd.

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7. The Naval Staff advise that the question of Air Defence improvements to the Type 42 Destroyer is under urgent examination by the Naval Staff and PE. The aim is to decide on a package of improvements for this class of ship so that they may be announced in the Autumn Defence White Paper. There are serious difficulties in fitting the necessary improvements to the Type 42 within the current level of dockyard resources available following the decisions in Cmd 8288. The Operational Capabilities Study Group is examining various ways in which these ships may be given a weapon update. Much will depend on the capacity retained at Portsmouth in the long term, the availability of alternative resources, and on work currently in hand to assess how the overall work packages can best be dovetailed into the current naval programme without a massive loss of ship availability.

8. DNW adds that the necessity of layered air defence has always been well known, as no one layer can hope to eliminate all attacking aircraft or missiles. The sea skimming missile presents a particularly dangerous and difficult threat. The counter requires good low-level surveillance and tracking sensors and quick-reaction, accurate hard and soft kill weapon systems operating in conjunction. Thus the provision of successive layers in the same platform is highly desirable where room to fit is available. Ideally an AAW ship should be equipped with Medium Range SAM and Point Defence System (either PDMS or CIWS) as well as soft kill equipments. DNOR is examining ways in which this can be achieved in the Type 42. DNW also advises :

- a. CINCFLEET is somewhat optimistic in the 909 acquisition times achievable with ADAWS 4 Edition 30 software (para 12a). It would be more accurate to say that the new software provides potential for markedly improved acquisition times, but the actual times achieved will depend to a great extent on operator training and expertise ( )
- b. While the fitting of filters to UAA1 does reduce interference from SCOT, they also severely degrade UAA1 detection of a large number of Soviet threat radars. Thus such filters must be made switchable ( )

9. DC-N advises that, with regard to simulation of 909 Low Level Acquisitions, the Fleet Software Support Team is undertaking a programme of work to produce a more realistic simulator for use in AAW training in the Operations Rooms of Type 42 Destroyers. Ferranti have been invited to produce the software for this simulator, but due to a shortage of programming resources and a need to give priority to urgent changes to Operational Programmes, it will not enter service until late 1984. (Proceedings Annex A, Paragraph 4).

10. DG Ships advises that,

- a. A working group has been established within Ship Department to ensure that all recommendations relevant to ship design and equipment arising out of Falklands reports are investigated and that the necessary action is taken.
- b. The lessons learnt on Damage Control and Firefighting, with particular emphasis on the effect of smoke, are being addressed by the NBCD Committee under the chairmanship of DNW. A number of urgent actions have already been taken regarding smoke curtains and boundaries, breathing apparatus, emergency life saving apparatus, additional fire pumps, thermal imagers, miners' lamps etc. (Proceedings Annex B Paragraphs 5-11 and CINCFLLEET Annex A Paragraph 9).
- c. On Resilient Mounts, the first of class shock trial planned in SHEFFIELD was cancelled due to the unsatisfactory cable entry arrangements of the computer suite. In the other Batch 1 Type 42s this difficulty was improved by more careful installation, but it was not until the Batch 2 ships that the computer suite could be redesigned and a satisfactory arrangement produced. Shock trials are planned in LIVERPOOL in early 1983, and the Ship Department is keen that these trials should not be deferred. (Proceedings Annex B Paragraph 12 and CINCFLLEET Annex A Paragraph 5).
- d. He particularly supports CINCFLLEET's views about habitability and Damage Control. Due to financial and other inexorable pressures, the priority accorded to his has declined in recent years: the trend needs to be reversed and Damage Control restored to its proper level level of importance. The habitability requirements in ships with particular respect to panelling and the flammability and toxicity of furnishings and other materials are being reviewed. Considerable changes are being considered in new designs starting with the Type 23 Frigate but the scope for retrospective action in existing ships (Proceedings Annex B Paragraph 13 and CINCFLLEET's Annex A Paragraph 6) is limited.

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Minute Sheet No. 3

Reference D/NLC/1/9/78

*Minutes and Brief Details of Enclosures*

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- e. Action has been taken to replace unbacked Formica panelling with Melamine Plastic Laminate sandwich (CINCFLEET's Annex A Paragraph 7).
11. DGNMT advises that:
- a. The NBCD Training Panel has the matter of mandatory firefighting PJT in hand: an effective solution may involve central monitoring by CENTURION on behalf of CINCNAVHOME (CINCFLEET's Annex A paragraph 10).
- b. The basis of complementing for the short range anti-sea-skimming missile systems, and NBCD complementing, will require further study by Naval Staff/DGNMT after all the reports have been received and analysed. (CINCFLEET's Annex L paragraph 33).
- c. Regarding onboard trainers and simulators:
- (i) The report highlights the need for these to be installed and actively used. The ship's operational readiness would have been enhanced if more use had been made of the computer training tapes and VTR, particularly on passage to the TEZ; and if a more complete suite of onboard training aids had been available for Command and individual continuation training.
- (ii) This report invests the provision of onboard training aids and simulators with an even greater urgency than hitherto, a matter which has been pursued by the NSTG for some time. Already some onboard trainers have been fitted as a result of OPERATION CORPORATE and this is now being followed up by use of the underspend.

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- (iii) The specific recommendation about adequate simulation for 909 Low Target acquisition is being actively pursued with the PE, as is the provision of 'federated trainers' which will give the Command much wider scope for maintaining a high state of operational readiness in the absence of aircraft and submarines and in conditions of radio silence.  
( )

12. The Naval Secretary could not disagree with CINCFLEET's view that it was unfortunate that officers with the Commanding Officer and First Lieutenant's background should be serving in SHEFFIELD concurrently. However, it is relevant that the First Lieutenant, who had passed the Ship Command Exam, had joined in April 1981 prior to the ship's post refit BOST, had been well reported on by the previous Commanding Officer some six months in post, and been selected for promotion to Commander in December 1981. Since the discussions between the Naval Secretary and Commander-in-Chief Fleet's staff at the turn of the year, referred to in CINCFLEET's report, the Naval Secretary has been actively pursuing the policy of making every effort to fit Commanding Officers and Executive Officers to appointments relevant to their previous experience, and he is reviewing his current practice to establish whether further improvements can be made.

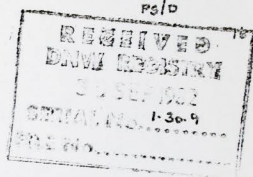
13. DGNPS fully agrees with the criticisms on use of PVC/plastic materials, unbonded formica and flammable linings, and does not dissent from the recommendation that use of such materials be minimised. Ships may take on a more austere appearance internally but this need not degrade basic habitability standards - space, facilities and support services.

14. DN Sy is taking action to write off classified material.



DN Plans  
 DNOR  
 DSNM  
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 Head of DS5

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BOARDS OF ENQUIRY : COMMENT BY THE NAVAL STAFF

You will be aware that Boards of Enquiry into Corporate losses and the overlays by the CinCFleet are currently being circulated by NLC on a restricted "need to know" basis. Because of this restriction which is necessary in view of the many sensitive areas involved, some of you may have seen bits of the reports, and others none at all where your comment would be valuable. It is therefore important that we prescribe a modus operandi for dealing with each enquiry so I will undertake to pass to you relevant sections for your comment which should be channelled back through me for co-ordination by my office. Subsequently when VCNS has approved your comments they will be passed to NLC as a composite package under my signature on behalf of the Naval Staff and our Secretariat.

2. I hope this helps to clarify a somewhat cloudy picture. If you have already transmitted direct to NLC please re-direct to me (and switch yourself back to the stand-by mode!).

30 Sep 82

- *J. C. Baird-Murray* -  
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 Secretary/VCNS  
 MB 6107 6534 MB