JOHN F SIMMONS
MARINE CONSULTANT

Dr J Carter
Sectional Committee Secretary
Coastwatch Inquiry
Joint Committee of Public Accounts and Audit
PARLIAMENT HOUSE CANBERRA 2600

Dear Dr Carter

In response to your letter on behalf of the Committee, dated of 21 September 2000, attached is a paper covering each of the questions in the order asked.

Yours sincerely

John F. Simmons

20 October 2000

118 MT VERNON DRIVE – KAMBAH ACT 2902 – AUSTRALIA
TELEPHONE 02 6296 1223 – FACSIMILE 02 6296 4324
EMAIL jfsimmo@canberra.teknet.net.au

ATTACHMENT

Resources for Coastwatch operations

Q1 "In your opinion, what sort of vessel would be needed to undertake extended patrols in the Southern Ocean?"

A1 The Australian Defence Studies Centre organised a conference on the subject "Policing the Offshore Zones - Problems and Prospects", it was held in Canberra in April 1997. At that conference AFMA presented a paper entitled, "Policing Australia's Offshore Estate - Fisheries A Valuable Resource". Following is a short extract from the Patrol Vessel Requirements section of that paper.

To meet these requirements three classes of vessel may be required.

Class 1: *Capable of operations in remote areas.*

Requirements: *Vessel must be ice capable and have a range sufficient to operate to Heard and McDonald Islands and Antarctic and be sea capable in force 8 weather conditions.*

Armament: *Vessel is required to have low level offensive armament sufficient to protect boarding parties on board hostile 40-70 metre Fishing Vessels.*

Boarding Craft: *Vessel will require 2 large rigid inflatables, (preferably stern launched) however designed to be capable of being launched and retrieved in moderate to rough conditions.*

The AFMA submission and transcript of evidence to the Committee do not indicate any diminution to those user requirements so I have used them as the basis for a little research to help answer the question.

As a basis for my research, I used the hostile vessel range of 40-70 metres quoted above but keep in mind that length is only a very crude indication of likely seakeeping ability. As a result of some Internet surfing I suggest the Committee visit the following sites to see the sorts of vessel being used in Antarctic waters.

http://www.greenpeace.org/marine/mvas.html
http://www.marine.csiro.au/franklin/index.html
http://www.marine.csiro.au/Ssurv/index.html
http://www.skipsteknisk.no/onnuri.html
http://www.royal-navy.mod.uk/static/content/464.html
http://www.royal-navy.mod.uk/static/content/467.html
http://www.nerc-bas.ac.uk/public/info/shackleton.html
http://www.newzeal.com/steve/Ships/braveheart.html
http://www.poal.com.au/html/Mar2.html

In my opinion the least expensive viable option is a 50 metre steel, single screw, Commercial Vessel, similar to the RV Franklin (shown on the CSIRO website), but without the research equipment. The definition of a Commercial Vessel in the Australian Uniform Shipping Laws Code includes government vessels not under the control of the Minister for Defence. I see two options for crewing such a vessel. It could have a civilian crew and Special Personnel (as defined in the USL Code) to carryout the regulatory functions, or the crew could be trained and authorised to carry out the regulatory functions themselves.

The other end of the scale would be a 79.9 metre steel, twin screw, Naval Vessel similar to the 81 metre RN Castle Class (see the Royal Navy website). The vessel could be built to comply with relevant commercial regulations and naval regulations where there are no commercial equivalents. The 1.1 metre reduction in length is suggested because some commercial regulations change significantly at 80 metres. The advantages of the extra metre are unlikely to justify the extra costs of construction, operation and maintenance. Crewing as above or by Navy.

The marginal cost/marginal utility point between these two extremes will be determined by the extent to which the AFMA requirements are to be satisfied. (see AFMA opening statement, 8 September 2000, last paragraph of the transcript under the heading Surface Response Assets).

Q2 "Do civilian vessels have the capability you describe?"

A2 Yes. At the hearing on 8 September, in response to a question from Mr Cox, AFMA acknowledged that the 74 metre vessel Cape Grafton is suitable, but would ideally include helicopter capability. I would be interested to know the purpose of the helicopter so I could suggest some questions the Committee might like to ask AFMA and Navy with a view to considering the practicability.

As well as the Cape Grafton, there are the CSIRO vessels referenced above and others operated by P&O Maritime Services. The obvious issue is their availability when required. AFMA security issues may make the acquisition of suitable vessels difficult, but not impossible.

Q3 "How much would it cost to build such a patrol vessel or convert a civilian vessel to the task?"

A3 I suggest the Committee ask CSIRO how much it cost to build the Franklin and to refit the Southern Surveyor which it acquired second hand. Although both events occurred some years ago, CSIRO should be able to provide estimated replacement costs if they are accrual accounting.

If CSIRO cannot provide the figures, I suggest the Committee ask P&O Maritime Services for ballpark figures as they operate the vessels for CSIRO.

Q4 "What additional costs are imposed by arming a civilian vessel?"

A4 The Defence Sea 1444 - Patrol Boat Replacement Project - Ship Requirements Document - RFT No. NPB01_2000, issued 17 May 2000, proposed the following weapons fit:

1 x MSI DS30B 30 mm stabilised main gun, installed on the fore deck;
2 x M2HB .50 calibre machine guns, with mounts on each side of the bridge deck;
2 x F89 Minimi light support weapons, with swing mounts on each bridge wing;
2 x Remington 870 pistol-grip shotguns;
7 x AUSTEYR F88 rifles; and,
12 x 9 mm pistols.

The Department of Defence should be able to give the Committee estimates of the current acquisition costs for each of the above weapons.

The cost for installing a main gun of the above type with ancillary systems including secure stowage and protection for ammunition, etc. is likely to be in the order of $150,000 in a new ship.

The cost for installing mounts and secure stowage for the machine guns and ammunition, etc. is likely to be in the order of $10,000.

The cost for installing mounts and secure stowage for the light support weapons and ammunition, etc. is likely to be in the order of $10,000.

The cost for installing secure stowage for the remaining weapons and ammunition, etc. is likely to be in the order of $10,000.

This begs the question, which of the above weapons is needed to satisfy the requirements AFMA set out in its opening statement on 8 September 2000 (see last paragraph of the transcript under the heading Arming and Training).

I would like the opportunity to convince the Committee that offensive weapons are neither appropriate nor necessary for enforcement of fisheries regulations.

Comment

I doubt that there is a long-term need for any vessel to police Southern Ocean fisheries. I respectfully suggest that the Committee ask the Australian Bureau of Agricultural & Resource Economics (ABARE) to assess the continuing viability of the Southern Ocean fisheries. The trends in world diesel fuel and lube oil prices and other economic issues are likely to solve the problem. No doubt they will have difficulty obtaining accurate data from foreign sources but one suspects ABARE is good enough to assess whether there is likely to be more or less exploitation of the resource over the foreseeable future.

Q5 "Would you expand on your comments by discussing the difference between military and non-military standards of construction?"

A5 The standards for design, construction, operation and maintenance of military vessels are determined by the Defence Chiefs and their delegates in consultation with ADF and civilian personnel. They may decide to use military standards, Commercial Vessel standards, or a combination of both.

Commercial Vessels must comply with legislation and statutory regulations. In addition, reputable owners elect to comply with the rules and regulations of a major classification society such as, Lloyds Register of Shipping, the American Bureau of Shipping, Det Norske Veritas and others. Owners may self-impose even higher standards of design and construction to optimise through life costs.

Given that an owner may have a vessel built to higher standards than the statutory requirements one may ask why ADF Vessels are not required to comply with all statutory requirements. The answer is that in some areas they need to use lower standards. For example, lighter structures so the vessel will go faster, lower standards of crew accommodation to fit more crew into the available space.

Size for size, military vessels invariably cost more than non-military vessels in spite of some of their standards being lower. The major contributing factor is the tendency for navies world wide to cram as much machinery, equipment and personnel as possible into any given space. This is driven by a philosophy that naval vessels should have 100% redundancy built in.

I respectfully recommend that Committee Members read the New Patrol Boats - Ship Requirements Document - RFT No. NPB01_2000. dated 17 May at http://www.dao.defence.gov.au/magd/Dgswsb/opeg/rpb/rpb.htm I am told that there are minor changes but no plan to release a new version in the near future. When reading the document consider the obvious flow-on effects of the difference between military and non-military crew size demonstrated below.

RFT No. NPB01_2000 (Extracts)	NON-MILITARY (Typical)
The bridge **shall** be designed for the following crewing in the conduct of normal peacetime surveillance:	The bridge would be designed for operation by the minimum statutory crew, a 2 crew bridge team per watch.
Commanding Officer, Officer of the Watch, Quartermaster (helmsman), Communications sailor, and Engineering Officer of the Watch.	All the functions would be undertaken by the two crew bridge team, supplemented by the Master when undertaking complex operations.

RFT No. NPB01_2000 (Extracts)	NON-MILITARY (Typical)
Note: *Tenderers are to advise the minimum NPB complement, and their skills, to enable safe transit of the NPB over a 24 hour period assuming a 3 watch system with each Officer of the Watch standing a total of 8 hours per day (2 x 4 hours).*	The statutory minimum crew to satisfy the note opposite is 3 deck officers and 3 engineer officers, operational area unlimited.
The number of crew required for normal operations, including the crew needed for steaming parties, boarding parties and seaboat crews, **shall not** exceed 20 persons.	Additional crew to help carryout the functions of the vessel would be negotiated between representatives of AMSA, the Owner and the Employees. Probably 3 general purpose crew and an additional deck officer, so the master would not have to stand a watch. Total 10 persons.
Combined mess/recreation spaces **shall** be provided for each of the following: officers, senior sailors, and junior sailors.	The mess and recreation spaces would not be combined but there would not be separate spaces for different ranks.
The NPB **shall** be provided with normal (non-austere) accommodation for:	Normal commercial vessel standards of accommodation for:
Commanding Officer 1 Officers 8 Senior Sailors 4 Junior Sailors 16	Master 1 Officers 6 General Purpose Crew 3 Special Personnel - say 4
The Commanding Officer **shall** be provided with a separate cabin.	The Master would be provided with a separate cabin.
No more than 2 Officers **shall** be accommodated in each Officer's cabin	Each Officer would be provided with a separate cabin.
No more than 2 Senior Sailors **shall** be accommodated in each Senior Sailor's cabin.	General Purpose Crew would share 2 berth cabins.
No more than 4 Junior Sailors **shall** be accommodated in each Junior Sailor's cabin.	Special Personnel/Passengers would share 2 berth cabins.

A5 Continued.

The Committee might also like to consider the comparative personnel costs. Defence has a computer program (CEVAM) that enables the details of any ADF billet to be entered and it will calculate the dollar value of the incumbent's employment package. It also has a method to calculate the charge-out rate for all ADF and civilian ranks. Customs does not, to my knowledge, have such a program but since it was one of the first government agencies to adopt accrual accounting it should be able to provide equivalent figures. These figures could then be applied to the above crew complements and the cost differential per vessel calculated.

Management within Coastwatch

Q6 "You describe a communications system which is present in all well-functioning organisations--do you have evidence that this is not the present situation for communications within Coastwatch?"

A6 The system I described was introduced into Coastwatch as part of its establishment within Customs, with one notable exception. Where I used the word "headquarters" Customs uses the words "central office" which is notable because my wording would shift the psychology towards one of less regional autonomy. That is something regional people abhor but which I am convinced is essential for well-functioning national organisations.

Do I have evidence to the contrary - let me put it this way, I would not have suggested strengthening the regime if it had consistently worked well in the past. As for the present, I can only go by hearsay, and as for the future, human nature is unlikely to change. How well the system functions at any given time will depend on the character and personality of the managers in Canberra and the Regions. That is why, in answer to the second question from Senator Watson I said, in part

I cannot see in a machinery of government sense that you, the government or parliament, can do anything that is going to significantly improve that. The improvements in the surveillance side are going to occur with management. Managers change from time to time, things will change and go up and down, but it will go on alright.

I respectfully take the liberty of elaborating on that response. Great care was taken in choosing Admiral Shalders, an Officer on the way up, to take charge of Coastwatch. However, if he continues to do a good job, as one expects, then the organisation will not be in the political limelight when it comes time for him to be replaced. Therefore, there will be no political imperative to replace him with a military officer of the Admiral's calibre. It would be better to replace him with a suitable public servant than with an unsuitable military officer.