

# THE FLEET VIEW OF HABITABILITY IN WARSHIPS

BY

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## **Introduction**

In reality, it is for the new Capability Manager, working for DCDS(EC) in the Centre, to define the habitability requirements for new-build warships, as advised by the principal stakeholders, which include CinCFleet and the Second Sea Lord. The Capability Manager will, of course, need to consider these habitability requirements against the yardsticks of affordability and practicality.

This article will touch on the scope of habitability issues, outline some of the key habitability requirements, and look in more depth at the FLEET aspirations for accommodation arrangements.

## **Scope of Habitability Issues**

Whilst the aim is to concentrate the main points on surface warships, it is worth emphasising that CinCFleet operates a wide range of different platforms and even deploys a significant number of Royal Marines.

If considering the perspective of a pilot, observer or aircrewman in the Fleet Air Arm, they would be particularly concerned about:

- Noise
- Vibration,
- The ergonomics of their working area
- The supply of oxygen
- Heating and even air conditioning.

On the other hand, they would be flying in the knowledge that mission lengths were normally measured in a handful of hours — and that they would be partially compensated for the less than ideal working conditions by flying pay.

If they were a member of the Royal Fleet Auxiliary, they would be going to sea in a relatively large ship, with the expectation of a single berth cabin and a tour length of just 4 months.

The perspective of the submariner is again different. The boat can deploy, submerged, for significant lengths of time, often measured in months. The great majority of the ship's company watchkeep 'one in two'. Space is limited, with many men required to 'hot bunk' and, living and working in close proximity to other members of the crew, privacy is at a premium. The supply of fresh food lasts between 10 and 14 days, exercise facilities are severely limited, as are laundry and drying facilities — and the use of anti-perspirants is forbidden. The atmosphere is necessarily carefully controlled, and there is a need for constant monitoring of radiation levels. Opportunities to communicate with home are severely curtailed, NAAFI facilities are minimal, and life is particularly difficult for smokers. Compensation is limited to the knowledge of belonging to an elite, to the additional pay and, on those rare occasions when they are alongside in other than a naval port, to accommodation in local hotels.

Warships, on the other hand, have more space and usually reasonable access to the fresh air. Whilst older ships are relatively small with high manning levels, the trend with modern ships is for larger hulls and lean manning. Deployments are limited to a maximum of 9 months, more normally 6 to 7 months, and regular port visits are programmed. Mail is reasonably regular and, depending on the ship's mission and equipment fit, telephone calls home can be made and e-mail exchanged.

### **Habitability Requirements – Positive Retention Factor**

Habitability standards at sea today clearly vary widely from older classes of ship (such as the LPDs and Type 42s) to the more modern AORs and the LPH, and, in the submarine field, between S Boats and T Boats. The reasons for these differing standards can easily be explained to the ships' companies concerned, and there is a recognition that older ships will inevitably lag behind the latest habitability standards as incorporated in new-build ships.

However, today's youths, and those we hope to recruit tomorrow, have different expectations to their predecessors. Bluntly, the habitability standards of the majority of the current classes of warship at sea today must now be viewed as sub-standard.

It is important, therefore, that, in future classes of warship, the habitability standards achieved are seen to be a positive retention factor — or at least not a negative retention factor.

This would mean, for instance, a move away from the traditional messdeck towards single, double, and quadruple berth cabins with en suite or adjacent heads and bathrooms.

Of crucial concern, significant attention must be paid to the ease of keeping living areas in particular, and the ship in general, clean. With large, lean-manned ships, this aspect cannot be emphasised enough — and there is almost certainly much to be learned from other navies as to how this issue might best be addressed.

### **Habitability Requirements – Accommodation Flexibility**

There is a requirement to ensure that the accommodation provided at build is inherently flexible. This is to provide for the unforeseen, but inevitable, changes

to a ship's role and manning levels over a life of routinely 20 years but possibly out to 50 years. There is also the need to cater for the wide range of visitors that require accommodation, varying from squadron staff through to members of Parliament and from potential recruits through to exchange personnel from affiliated regiments.

This involves building in, at the design stage, a sensible margin for growth in accommodation, galleys, store rooms and recreation spaces. A balance, of course, must be struck between having many small, but empty, cabins and a smaller number of larger and better utilized cabins. One option might be to provide a traditionally styled messdeck to cater for short periods of overload, perhaps doubling as a recreation space at other times.

There is also the requirement to cater for the needs of varying proportions of males and females in a ship's complement, with access to heads and bathrooms, and other issues of privacy, necessitating particular consideration. Indeed, with the Service now required to face up to the prospect of openly gay personnel serving at sea, the ultimate goal must be single berth cabins for all sea-going personnel. It will, however, be some decades before such an aspiration would be practical.

#### **Habitability Requirements – Maintenance of the Aim**

In considering sensible habitability improvements, it is essential that the purpose of the warship be not overlooked. The aim is not to design and build a floating hotel, but rather to deploy a platform capable of deterring and if necessary defeating a potential foe.

This means that consideration must be given to the provision of adequate 'smart' damage control arrangements, and the ease of access to machinery and to essential systems must be considered. Access must also be maintained to bulkheads (for boundary cooling) and to the ship's side (for leak stopping).

Also, care must be taken in the selection of materials to minimize fire risks and to reduce the production of toxic gases. Similarly, the use of material that splinters or fragments must be avoided.

#### **Accommodation Standards and the Provision of Living Spaces**

Having briefly stated that warships are not meant to be pleasure cruisers, the following might be achievable in a modern, new build and lean-manned warship.

As mentioned before the need for single, double, quadruple or even 6 berth cabins, with a consequent move away from the traditional messdeck arrangements. Heads and bathrooms should either be en suite or adjacent.

Cabins should routinely be fitted with telephones, desks, adequate (even generous) stowage space, good lighting, wash basins, good air conditioning, preferably to each bunk, with steps taken to minimize condensation. Cabins should be sited clear of noisy machinery and sources of undue vibration.

I personally consider that all cabins should have a comprehensive Information Systems suite installed. Typically, this should be connected to a ship-wide NavyStar infrastructure allowing the transfer of e-mail throughout the ship and, via NavyLink, to sites ashore. This would also give access to the ship's intranet, providing access, for example, to Daily Orders, ship's Standing Orders, visit routines, the ship's filing system, and Books of Reference. Under certain conditions, it would be desirable to provide access to the Internet, not just for the more generally accepted opportunities that that would represent, but for the exchange of e-mail with friends and relatives. The IS system could also be used as a conduit for television, video and the SRE to be piped into cabins.

Larger, lean-manned ships also provide opportunities for the provision of other facilities that recognize the fact that a warship can be 'home' to the ship's

company for extended periods. One downside of providing ‘cabins for all’ is that the sense of community or ‘ethos’ of a ship can be damaged. It is important therefore that facilities are provided where people can meet and mix informally. This could be catered for by the provision of suitably equipped recreation spaces such as bars and also separate sitting out areas for quieter pursuits. Other dedicated facilities such as a gym, laundry facilities, drying rooms and a cyber café should also be considered — and the needs of smokers must not be overlooked.

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