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The Chair
Senate Foreign Affairs, Defence and Trade References Committee
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Senator Eggleston,

***Preliminary report on
Procurement procedures of Defence capital projects***

The Australian Association for Maritime Affairs (AAMA) thanks the Committee for the opportunity to comment on its Preliminary report on *Procurement procedures of Defence capital projects*. Because the initial chapters of the Preliminary Report are essentially historical, albeit that they are essential reading to explain the current situation, this AAMA response will attempt to confine itself to Chapter 8 – Key areas for future consideration, and then only to those aspects that appear to be of particular relevance to Australia's maritime interests.

The AAMA feels that a key to any general solution may lie in the *final* part of Chapter 8, “Additional remarks”, dealing with findings of the Collins Class Sustainment Review. It is wholly unsurprising that there was a “failure to recognize fully what they were taking on”; the project was totally new. That raises a fundamental point.

New capability projects *have* to start with something akin to scribbles on the backs of envelopes. The Committee might care to reflect on the probable reactions if Australia attempted something as important but challenging as the WW II Manhattan Project on the basis of a single letter, albeit signed by Albert Einstein! Risk is inherent in major Defence projects, which have to start at the limits of current technological possibilities to have any chance of ensuring a reasonable operational life for the capability and/or keeping ahead of any potential enemy. The challenge for projects is to identify, manage and, if possible, minimise the risks.

To secure the funding to permit even just the exploration of the possible real costs of a new Defence project, some attempt has to be made at the outset to guesstimate the final costs and the probability that the new capability can be achieved. Much of the current poor reputation of Defence project management can be ascribed to subsequent comparisons, often trumpeted by the media and often for party political or inter-Service rivalry purposes, between the initial guesstimates and the refined costs, which may not become apparent until 20 or so years later.

No matter how much study has been undertaken prior to starting to implement a major project, it is only in implementing it that all of the challenges and obstacles become apparent.

There are three practical project management responses which the AAMA believes should be considered for major new Defence capability projects:

- a. Differentiate in project terms, particularly for approval and review purposes, between the R&D/design and the construction/implementation phases.
- b. Be prepared to cancel a project without ascribing blame, if it has become unachievable as currently formulated and/or an alternative way forward has emerged to achieve the capability;
- c. Unless a completely new capability is required, the evolutionary development of a current capability is preferable to starting from scratch *if it can do the job*.

The first point – differentiating between design and construction in project terms – should allow much of the really challenging and time consuming R&D and design aspects of a major new capability project to be undertaken before committing serious resources. Different skills and resources are required in each of those phases so separating them should not create difficulties; the challenge would be to move seamlessly from R&D/design to production. It is for consideration that the different phases could be given quite separate project names, just to emphasise their separation.

The second point – being prepared to cancel projects and accept failure without ascribing blame – may seem almost unachievable, given the combative nature of Australian politics and, in particular, politicians. The problem can probably be partially combatted by education and relative openness, if the politicians in power at the moment are prepared to take that risk, and by separating the R&D and design elements from construction and implementation in project terms. The effort put into R&D and design even for a cancelled project will probably not be wasted; the knowledge gained should allow the Government to evaluate better any alternative approaches, like buying off-the-shelf.

The third point – evolutionary development, where possible, is less risky than starting again from scratch – seems to be a very good starting point for many Defence projects.

Shipbuilding

The AAMA is concerned that the interim report does not seem to address the importance of maintaining a national shipbuilding industry.

It needs to be recognised that warships are inherently different to primarily single-purpose and physically small Defence “platforms” like fighter aircraft or tanks or trucks. Warships can often be repaired after even quite severe damage, they generally have longer in-service lives, they can often be modernised or have their role changed during their service life, and they usually contain numerous discrete sets of equipment which need to be maintained, replaced and generally kept up to date irrespective of the age of the platform, although the increasing use of modular weapons and sensor systems *may* ease the design and shipbuilding challenges associated with upgrading them. Those differences between warships and most other Defence equipment may require the maintenance of at least a limited ship *design* capacity in Australia, as well as ship *construction*.

These points are relevant to considerations of maintaining an Australian ship/submarine building capability. The AAMA recommends that the Committee, in any subsequent hearings, explores whether it is possible to repair battle damage or undertake major maintenance on warships without an Australian shipbuilding capability, and that it advises the Government and the Parliament in those terms.

In association with that line of inquiry, however, the Committee might care to investigate whether a fully-fledged Australian ship design capability is really necessary to allow the Australian ship building industry just to build, maintain and repair Australian warships. A vestigial Australian ship design capability might be all that is required to check and verify design concepts and proposals for new capabilities, and to make modifications or repairs to current ships and submarines.

If maintaining an Australian shipbuilding industry is essential, as the AAMA believes it is, then that needs to be recognised as a separate and vital Defence capability, additional to the operational capabilities of the plat-

forms it produces, and organisationally unrelated to particular Defence projects. Such an industrial capability requires a reasonably steady flow of work to maintain the necessary expertise and the investment in shipbuilding and repair facilities. Quite how the maintenance of that national shipbuilding industry capability should be funded separately to projects to deliver particular ships or submarines to Defence would need to be explored at length; Finance would almost certainly have views on the appropriate mix of public and private funding and the ownership of the shipbuilding facilities!

The Committee should also note that maintaining a steady flow of ship (or submarine) building work reduces technical risk. The stop-start-stop approach to warship building projects of recent years creates risk. It does that by freezing a design (and any inherent, perhaps not yet detected, design faults), then building the requisite number of ships as quickly as possible to minimise immediate project costs, only to repent at leisure and wait for the rectification capabilities to become available, probably only when the initial building program winds down.

Other matters raised at Chapter 8

Most of the other issues raised at Chapter 8 relate to project personnel and organisational structures. The AAMA can make only the following general observations on such matters:

- a. If anyone is even *thinking* about changing the current Defence project management organisation structures, they should reflect first on the comments made by the Committee, at Chapter 1, about the debilitating effect of too many Defence reviews. It is for consideration that good, motivated and well trained personnel with initiative can achieve good results *despite* organisational frustrations, whereas frequent changes to organisations almost always de-motivate even the best people and create delays.
- b. As stated in the AAMA's original submission to this inquiry, the need to include good personnel with current operational experience in the management of projects seems to require that, at the very least, the separate components of projects be kept relatively short. No ambitious commander, with aspirations for higher operational command, is likely to accept willingly a posting to a project which may take decades before the outcomes of their personal contributions can be measured.
- c. The AAMA is not convinced that the Chapter 8 focus on correcting the “process” is the best way to achieve the desired outcome, unless the desired outcome is a simply a tick from the Auditor-General for the use of correct processes.
- d. If anyone thinks that they can obtain “A holistic view of the entire process and its component parts” from the “strategic guidance” as currently expressed within Defence, in a way that provides practical guidance for Defence project management personnel, the AAMA would very much like to see that addressed in the Committee's final report. Most Defence “strategic guidance” seems very carefully drafted to *avoid* clarity (and thus any risk of saying too much, or giving offence to other nations if leaked!).

With those caveats, the AAMA agrees with most of the dot-points and suggestions about goals that were made by the Committee at Chapter 8. The problem is going to be implementing them without creating yet more delays, frustrations and unintended consequences. It may perhaps be better to improve the current structure and processes incrementally, giving each change time to settle down.

Recommendations

The AAMA recommends that the Committee:

- a. examines the possibility of splitting all major projects into, at least, a separate design and R&D phase, and a project construction and implementation phase, with separate approval points, and perhaps project names, for each phase;
- b. examines how best to allow for the prompt cancellation of projects that are not going more or less to plan, preferably while still in the design and R&D phase;
- c. recommends to the Government that all avenues for the evolutionary development of existing defence capabilities be examined before deciding to start to develop a new capability from scratch;
- d. examines whether it is possible to repair battle damage or undertake major maintenance on warships without an Australian shipbuilding capability;
- e. if that is not possible, recognises that shipbuilding is a vital national defence capability, organisationally separate from any ongoing shipbuilding projects themselves;
- f. examines whether a fully-fledged Australian ship/submarine *design* capability is essential and, if not, seeks to establish how much it would cost if adopted to some lesser level, as an “optional extra”; and
- g. recognises that maintaining a steady flow of ship or submarine building work reduces project risk when compared with the stop-start-stop approach of some recent projects.

Richard Griffiths
Chair
Australian Association for Maritime Affairs