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

Dear Kathleen,

Submission –
Inquiry into Defence Procurement Procedures

The Australian Association for Maritime Affairs (AAMA) thanks the Committee for the opportunity to make a submission to the Committee's inquiry into Defence procurement procedures.

The AAMA's role is to generate greater public awareness of maritime affairs and their significance to Australia. Obviously Defence procurement procedures, as they affect Australia's maritime forces and industries, are a significant aspect of that role.

The Committee will be aware that the AAMA is a small organisation, without the resources to conduct formal research, particularly into Defence matters which may involve classified material. As the Committee is doubtless also aware, with only one month to make any submissions, there has been little opportunity to canvas issues widely.

The following issues and recommendations are therefore raised for the Committee to consider pursuing in its inquiry.

General Observations

Centrallised Procurement

There are some kinds of defence procurement which lend themselves very obviously to centralised procurement processes. Contracts for the re-supply of many common-use items and services that are needed by more than one Service are examples. Toilet paper is one mundane but easily understood example.

Logically, however, this common-use objective that lends itself to stand-alone Defence procurement processes and organisation becomes less compelling for the procurement of one-off, single Service capabilities, like a class of submarines or some types of aircraft, like strategic bombers.

At present, having the Defence Materiel Organisation (DMO) as a stand-alone component of the Defence procurement processes requires the Service which will eventually have to use the capability to enter into legal agreements and arguments with DMO throughout the life of the project, all of which are then superimposed on the relationship which DMO may have with the various contractors who are supposed to be delivering the operational capability. On the other hand, the financial control which needs to be exerted over the work of the DMO seems to set up equivalent barriers and tensions with the rest of the Department of Defence.

Under the current structure, the DMO has to act as if it is a separate department within the Department of Defence. That is probably not helpful.

Procurement Staff within DMO

Most defence procurement requires the input of some operational experience. Even ordering cans of baked beans requires some experience in the field of the acceptable size, shape and weight of the can for the intended use.

While there is an argument for staffing any procurement agency, centrallised or decentallised, with specialised, career procurement personnel, there is another argument that, at least for major new systems and capabilities, the need to anticipate future, frequently changing, in-service operational requirements demands a regular turnover of the ADF personnel in the procurement team. Their problem, of course, is that postings to procurement projects may be seen to be detrimental to their normal career prospects.

Similarly, evolving changes to Defence procurement policies and procedures also appear to require at least some rotation of even specialised civilian procurement personnel, while the ever-present need to deter corruption also points in that direction. Another problem with having relatively permanent civilian procurement staff working with ever-changing uniformed personnel is that the perception, at least, can develop that the civilian staff really run the project.

One solution that seems to have been tried is to post uniformed personnel to projects for the final years of their active service or during reserve service. The disadvantages, including a probable lack of current operational experience and a perception, at least, that the uniformed personnel are not “high-flyers”, seem significant.

Frankly, there does not seem to be any ideal organisational solution to these personnel issues. The best that can be suggested is to post good, well-trained and personally willing people to project teams.

Project Size and Timescale

A project that takes 20 years from concept to delivery and will then shape the very nature of the Service which operates it will need many changes of project personnel, all with ideas to contribute, all with opinions on project actions that may have been undertaken decades previously, but all creating friction which will further delay the completion of the project.

That operational capability may then have to remain in service for a further 20-30 years while the surrounding operational environment continues to evolve.

All of that is without considering the effects of domestic political, foreign policy and economic changes on the project’s aims during the period of operational service, and the interaction with all of the above of continuing scientific and technological

developments. Many decisions taken early in large Defence projects can have quite unforeseen consequences in the decades leading up to delivery of the capability.

If too much is at stake in any one project the inevitable result is a tendency by those defining the operational requirement either to "gold-plate" or over-complicate the originally desired capability, or fit "for-but-not-with" and then take decades to fit the necessary weapons or sensors, by which time technological changes will probably make it increasingly difficult to back-fit, for example, 2020 technology into a 1990s-designed platform.

A possible philosphical solution is discussed below.

Smaller and Sooner May Be Better

If issues such as project personnel turnover and changing operational requirements appear insoluble when taken together with long project lead times, then perhaps they are an argument against the current procurement strategy of trying to run major capability projects where the particular capability will still be in service 40-50 years after project conception, during which time it will be the *only* example of that capability in ADF service. A way of overcoming that problem might be to run more but smaller, shorter projects. For example, instead of seeking to replace *all* fighter aircraft, or all tanks, or many frigates *en bloc* every 20-30 years or so, run smaller, partial replacement projects every 8-10 years.

As well as creating major budgetary timing problems, large "block-buster" "all the operational eggs in one basket" projects to replace or introduce new Defence capabilities may actually inhibit technological development. Too much may be at stake to risk experimentation at the outset of a major Defence procurement, so improved versions of "tried and true" designs become the instinctive preference of planners. The problem is that what is "tried and true" today will be 30 years or more old by the time that capability retires from ADF service.

Having more but smaller projects, with less riding on them operationally, should permit shorter project approval processes and the risks associated with new technologies should be more acceptable. Smaller projects would, hopefully, lessen Cabinet approval and budget programming concerns, speeding the approval processes and reducing the changes of project personnel during the project delivery phase.

Together, these arguments suggest that Australia should be running more, shorter and smaller Defence projects with faster approval processes.

Use "Team B" Checks

To reduce the risk of project planning going off on politicians', senior officers' or even project team members' individual "frolics", perhaps more use could be made of "Team B" structures. "Team B" means having a small team of suitably qualified personnel administratively outside the main project structure and tasked with shadowing and checking the assumptions and decisions of the primary project team at key stages in the project's development.

Right now, the nearest that the ADF has to Teams B seem to be the individuals who work for the Australian Strategic Policy Institute, who cannot be made privy to all the considerations involved in many projects' planning, and other Government departments, notably Finance, when they respond to Cabinet papers, often by

challenging project details, like operational requirements, about which they are usually not qualified.

Addressing the issues raised by a Team B should provide ready answers to any logical questions raised later by outside agencies, and can be provided expeditiously without the main project team being thrown into hasty research, possibly delaying the project.

What should be the aim of the procurement processes?
Probably the strongest arguments that can be made in favour of the present Defence procurement processes seem to be that the current processes, because they take so long:

a. delay the expenditure of money, and

b. diffuse personal responsibility for the eventual outcome – even the Minister and Government of the day cannot be held responsible for the outcomes of decisions made by others decades earlier!

The AAMA is not sure that those should be the objects of the exercise and, even if they are legitimate aims during times of peace, the ADF has not been "at peace" since the late-1980s. As the Committee will be aware, capability delays can have very serious national implications in war and it is the ADF personnel who are operating them at the time who have the most at stake.

The AAMA therefore recommends that the Committee determine exactly what it wants the Defence procurement process to achieve.

Ship Building, Repair and Maintenance

Ship *building* is a major national defence capability in its own right, quite separate from the ships and submarines it produces.

In peace, the same skills and facilities are used for both ship building and for repair and maintenance. In war, apart from finishing major vessels already on the stocks, the existing ship building capacity is largely switched from the design and construction of new major ships and submarines, which probably will not be finished before the war ends, to the repair and modification of those that were in service or building at the outbreak of the war, with design and new construction confined largely to smaller vessels.

Occasionally arguments are raised that Australia should not bother with indigenous ship (or submarine) building, but should purchase "off the shelf". Leaving aside the fact that no "off the shelf" purchase of a *current* foreign capability is likely to meet Australia's *future* maritime operational requirements, the Committee will doubtless recognise that if there is no Australian ship *building* capacity in peace, there will be very little or even no capacity to maintain or repair our ships in time of war. One way or another, and noting that Australia is an island, that would probably become a very short war indeed!

With the possible exception of an overseas build for the first of a class of ships, Australia's strategic situation probably demands that its ships be built in Australia.

That, in turn, demands that naval ship building projects go hand in glove with developing the local ship building industry.

Development of Australia's ship building industry is an incremental process and can be seriously dislocated by projects which require massive investment followed by periods without work, or if there is an unduly long gap between ordering successive ships. The work needs to be spread evenly.

The Navy's *Anzac* class frigates appear to be an excellent example of the problems associated with running block-buster ship building projects referred to earlier in this submission.

The ships were based on a German design developed in the 1970s. The Australian project began officially in the mid-1980s (although preliminary staff work had begun several years earlier) and last of the class was commissioned only in 2006. It can be confidently expected that efforts will need to be made to keep at least some of the *Anzacs* in commission until at least 2026.

During the 20(+) years between the project's inception and completion, new operational requirements arose, requiring the upgrading of the *Anzacs'* air defence and anti-ship missile systems. The upgrades, of course, had to be accommodated within the pre-existing constraints of the ships. In addition, other technological capabilities, for example wave-piercing catamarans, started to come into service in some other navies, which may render the *Anzac* class frigate concept obsolete before the final ship is 20 years old in 2026 but, of course, those options could not be considered because of commitments to the *Anzac* project.

Had the initial project been for just four frigates, with a further four to come in a later project, it might have been possible to leave until about 1995-2000 any decision on whether to build more *Anzacs,* or improved *Anzacs,* or some new design to reflect naval warfare as it seems likely to be fought in the mid-2020s. Block obsolescence of the *Anzacs* in the early- to mid-2020s (coincident with the phasing out of the *Collins* class submarines) seems likely to lead to severe financial programming problems.

The potential benefits to the ship building industry of having ships at least built in smaller batches seem obvious.

For several decades, Australian naval ship building has proceeded in fits and starts, building multiple ships or submarines of a single type as quickly as possible, often without allowing sufficient time between first-of-class and subsequent units to incorporate lessons learned. Particularly if Australia then purchases a batch of ships overseas, as with the FFG program, the ship building skills involved then disperse until the next block obsolescence occurs, when facilities have to be re-created and skills re-learned. The disadvantages of this approach have become very apparent and include:

- the national risks associated with the block obsolescence of whole classes of ship and therefore their operational capabilities (for example the loss of area anti-aircraft defence at sea when the last of the DDGs paid off in 2003);
- given the 20 year lead time currently required for ship building, it may be impossible to prepare for even a foreseen war;
- "lumpy" budgeting, which leads to increased demands for studies and scrutiny, which leads to more delays in the procurement approval processes;

- a tendency to "gold-plate" the operational requirements because there probably won't be another similar building program for up to 20 years, adding to costs and, therefore, adding further to delays in the approval processes;
- no appetite for trialling those advanced technologies which may be necessary to maintain operational capability until the end of the life of the last of the units;
- the loss of ship building skills and workforce between projects; and
- in some cases, the permanent loss or diversion of the ship yard or facility in the period between one Defence project and the next.

A continuous surface ship building program, of the order of one new hull per year spread across two yards would probably maintain a fleet of 20 major ships as well as the associated skills and industry investment. With two yards available, the tempo could be increased in times of looming danger, as long as raw materials had been ordered and training could be provided.

A production rate of two submarines every three years from a single yard would probably maintain the proposed force of about 12 submarines while also maintaining the unusual boat design and building skills needed.

Whether this ship building capacity should be privately or Government owned is arguable. On the one hand, private ship builders will try to rip the Government off but keep a tight grip on costs. On the other hand, Government shipyards seem, historically, unable to contain their costs, particularly labour costs and, because they are not as driven by profits, have a tendency to over-invest. Both can be kept under control to some extent by effective auditing.

As long as there is some element of competition, ie a minimum of two shipyards, private ownership will probably be cheaper than public ownership but if the work load cannot support two competing private shipyards there seems to be little benefit in private ownership.

Rather than create further political arguments about public-v-private ownership, thus delaying useful changes in Defence procurement processes and, worse, to naval ship building projects, the AAMA suggests to the Committee that the current ship and submarine building ownership arrangements be left as is.

Richard Griffiths
Chair