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Weapons of Mass Construction

Australian naval shipbuilding

By Mark Thomson

It's been more than three years since the government announced plans to acquire eight new major ships for the Navy. But knowing what you want is one thing, and knowing how to get it is another. Despite three years of analysis and deliberation, the government has still not decided how to engage Australia's naval shipbuilding industry in the venture.

As time runs out to meet the schedule for the first vessel, industry players have been positioning themselves for a share of the \$8 billion at stake. Unable to find a solution in Canberra, the government has hired a merchant banker, John Wylie, to advise on how to proceed. He's due to report back at the end of March. The government is relying on Mr Wylie to come up with an answer. Defence has already begun the process of choosing designs for the first two classes of ship.

The situation wasn't always this uncertain. Back in September 2002, the Department of Defence released a 219-page industry sector plan for naval shipbuilding and repair (NSR). The plan proposed creating a single shipbuilding entity that would have a monopoly over all future work, but with a high level of subcontracting to engage competitive pressure. The argument was simple: there wasn't enough work to support more than one prime contractor, so the government needed to intervene and rationalise the industry to protect its



HMAS Anzac © Defence Dept.

own interests. Although it was never spelt out, the proposed outcome was clear: a new mega-shipyard would be built next to the Collins submarine construction site in South Australia which would consolidate ship modules built at existing yards in other states.

Not everyone thought we should turn our backs on the 15 years of private-sector competitive naval shipbuilding that followed the privatisation of the Australian defence industry in the late eighties. In fact, ASPI anticipated Defence's sector plan and released a report stressing the perils of intervening to create a monopoly, and arguing strongly for continued competition. As it happened, the government chose not to act on Defence's highly interventionist plan, and since then the issue has been in the too-hard basket.

The Wylie review is, at least in part, an attempt to side-step the Defence proposal

and find a way ahead that is more in tune with the government's free-market inclinations. But make no mistake; this is going to be a hard one for the government, and for several reasons.

Why is it so difficult?

To begin with, there's the problem of what to do with the Commonwealth-owned Australian Submarine Corporation (ASC), which built the Collins Class submarines. The government is eager to sell ASC to the private sector, but the corporation has a wealth of expertise that would be valuable to anyone bidding for future naval shipbuilding. This creates a dilemma. Should the government sell ASC before asking for bids for the next round of construction projects, or should it offer the corporation for sale as part of a package including one or more of the future projects? Whatever happens, the government will be eager for ASC to play a role in future naval projects, if only to help sustain the corporation's skilled workforce that maintains the Collins submarines.

To complicate matters further, there are unresolved intellectual property issues between the government and Kockums, the Swedish designers of the Collins submarines. This hampers any sale of ASC, because an unknown liability might arise if Kockums takes legal action in the future. Until this is sorted out, it will be difficult for the government to move ahead on the ASC sale.

Then there's the political reality that the NSR industry is spread across the continent, with major facilities in every mainland state except Queensland. Key among these are Tenix, based in Victoria and Western Australia, which ran the highly successful Anzac Class frigate project; and ADI, based in Sydney and Newcastle, which delivered the equally successful Mine Hunter project. Awarding billion-dollar construction contracts will inevitably create winners and losers, especially now that existing projects are drawing to a close in several yards. It's make-or-break time. The fact that this is an election year will only draw this issue into sharper focus in the coming months—just when the government says it will be outlining the way ahead.

The diversity and low production runs in the shipbuilding schedule are another problem. In the 1990s, Australia built 22 major naval platforms spread across three classes. In the next batch of work there will be eight major platforms across five classes. This dramatically reduces economies of scale from an average of more than seven vessels per class last decade to fewer than two per class in the future, thereby driving up costs and making domestic construction less cost-effective.

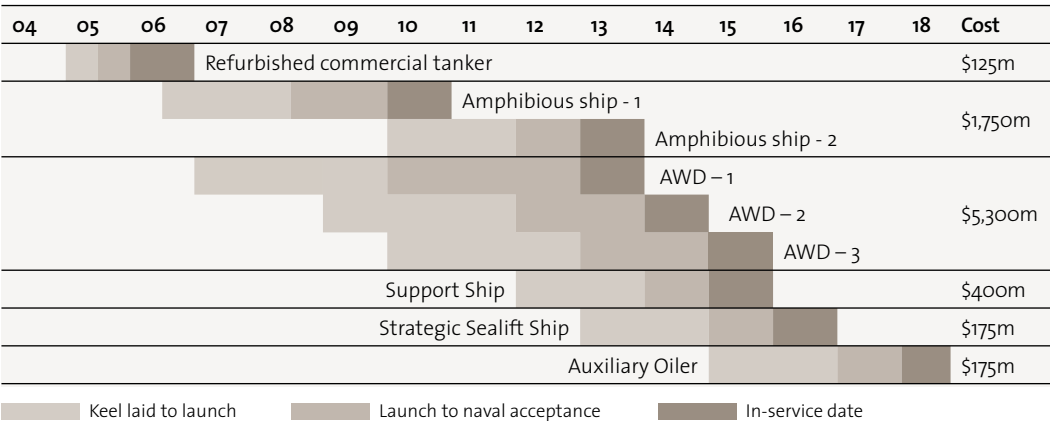
Meanwhile, what appeared to be a small field of potential contenders for the projects has grown substantially with two credible new entrants. If media reports are correct, the engineering giant Leighton Holdings is stalking ASC, and has gone so far as to secure intellectual property rights for the Collins direct from Kockums. Whether the government sees this as an answer to its prayers, or too clever by half, remains to be seen. The Western Australian high-speed vessel builder Austal has also been cited in the media as a potential bidder for ASC. Austal recently beat out the traditional defence shipbuilders to win a \$300 million contract for Navy's new patrol boats. And Austal, along with Tasmanian firm Incat, has been making big inroads into the lucrative US market for high-speed military vessels.

Finally, the ghost of projects past—the Collins submarines—still haunts the government. Whatever happens, they will want a strong assurance that the big delays, additional costs and substantial political embarrassment of the Collins are not repeated in future projects.

What are the options?

There's been a real change in sentiment since the release of the 2004 Defence Capability Plan (the shipbuilding components of which are sketched in Figure 1). Previously, industry believed there wasn't enough shipbuilding work to sustain more than one prime contractor. But it's now accepted that there's enough work for two, given that the revised plan includes a 22% increase in spending and a more compressed construction schedule. In any case, it looks like the government has rejected Defence's NSR sector plan, and the Minister has said as much.

Figure 1 Indicative naval construction schedule 2004 - 2018



Sources: The Australian Naval Shipbuilding and Repair Sector Plan, Department of Defence (September 2002) and Defence Capability Plan 2004-2014, Department of Defence (February 2004). Prices represent mid-point of ranges given.

In practice, all the government has to decide is how to proceed for the two projects slated for this decade. Anything beyond that is wishful thinking.

The first project is for two amphibious vessels more than twice the size of the vessels they will replace. They will displace around 25,000 tonnes, so new infrastructure will probably be needed to build them, and at around \$875 million each they won't be cheap.

The second project is for a new class of three Air Warfare Destroyers (AWD). These will be the most complex surface vessels ever to be built in Australia, and 'expensive' is too modest a word to describe them. At around \$1.75 billion each, they are more than worth their (6,000 tonne) weight in pure silver.

Like it or not, the way the government proceeds with these first two projects will shape the NSR industry sector. It must decide whether to deliberately restructure the sector in the process, or simply take what the market delivers once the dust has settled.

If the government intervenes, the most obvious path would be to establish a duopoly that would support future competition for the remaining projects. The difficulty would lie in deciding on a mechanism to award the initial work and thereby create the two major players. There are several ways that this might be done:

- *Sole-source the work to the two firms most able to do it, with ASC being amalgamated with, or sold or otherwise given to, the chosen AWD builder.* The AWD project having the greater need for ASC's design and engineering skills.
- *Offer the two packages of work separately. Once again, ASC would end up being tied to the AWD project.* This approach might result in one firm winning all the work, in which case the government could demand that the successful bidder give substantial work to the losing candidate(s) in a leader-follower work sharing arrangement.
- *Sole-source the initial AWD work to ASC, and let the existing players compete for the amphibious ship project.* ASC could then be offered for sale, either before or after the final contract for the AWD is signed. To ensure that a duopoly results, it would be necessary to exclude the corporation (and its buyer) from bidding for the amphibious vessel project.

In one way or another, all three of these approaches entangle the future of ASC with the awarding of contracts for new construction. This does not have to be the case.

The government could simply offer ASC for sale to the highest competent bidder who

can guarantee that the skills needed to maintain and develop the submarines will be kept viable. ASC would then go to one of the existing shipbuilders or to a new entrant to the sector. In either case, the next step would be to offer the two new projects for tender. No doubt the existing shipbuilders and their state government landlords would scramble to pull together competitive packages, as would any new entrants. If it wants to, the government could still use the mechanisms discussed above to block the formation of a monopoly.

In any case, the government will need to decide whether to mandate the location and method of construction of the new vessels. Possibilities include a central common user facility at a particular place, or dispersed module construction to share the work around the country. Both options are worth considering, provided the choice is driven by straight cost effectiveness or by the strategic imperative to support the Navy's two-ocean basing by retaining the ship repair and maintenance skills that it needs. Naval shipbuilding is too expensive an undertaking to pander to vested interests—even in an election year.

We have no way of guessing what Mr Wylie will suggest as the way ahead. But if he's looking for an approach, here's one:

Step 1. Sort out the intellectual property issues with Kockums (Leighton appears to have shown that this is possible, although we don't know what the cost to be passed on to the government is) and sell ASC to the highest competent bidder that can assure through-life support for the Collins submarines.

Step 2. Make very sure that Australian construction is good value for money, given dwindling economies of scale, and keep the domestic firms on their toes by retaining the option of overseas construction.

Step 3. Offer the two projects for tender and let competitive forces shape the outcomes as far as possible. The more the government intervenes, the more it will bear responsibility for supporting the winners. A duopoly is better than a monopoly, but if the government creates the duopoly, two firms could end up believing they are *entitled* to a steady supply of work.

Step 4. Contain cost and schedule risk by limiting the changes made to existing designs, especially in the case of the AWD project. This, as much as anything else, will drive the success or failure of future naval construction in Australia.

Further reading:

The Australian Naval Shipbuilding and Repair Sector Strategic Plan, Department of Defence, September 2002, (www.defence.gov.au/dmo/msd/sectorplan.cfm)

Setting a Course for Australia's Naval Shipbuilding and Repair Industry, ASPI Policy Report, August 2002 (www.aspi.org.au/uploaded/pubs/aspi_shipbuilding.pdf).

Where to now for naval shipbuilding and repair? Speech by Mark Thomson at Pacific 2004 International Maritime Conference (www.aspi.org.au/pdf/Pacific2004_MT.pdf).

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