

The Senate

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Economics

References Committee

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Part III

Future of Australia's naval shipbuilding industry  
Long-term planning

July 2015

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# Senate Economics References Committee

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## **Acronyms and abbreviations**

ADF	Australian Defence Force
AMWU	Australian Manufacturing Workers' Union
ANAO	Australian National Audit Office
AOR	Auxiliary Oiler Replenishment
ASC	ASC Pty Ltd, formerly Australian Submarine Corporation
ASPI	Australian Strategic Policy Institute
ASW	anti-submarine warfare
AWD	Air Warfare Destroyer
CEO	Chief Executive Officer
DCP	Defence Capability Plan
Defence	Australian Defence Organisation
DMO	Defence Materiel Organisation
DMTC	Defence Materials Technology Centre
DSME	Daewoo Shipbuilding and Marine Engineering
FADT	Senate Foreign Affairs, Defence and Trade References Committee
FFG	Guided Missile Frigate
FMI	First Marine International
HMAS	Her Majesty's Australian Ship
LHD	Landing Helicopter Dock ship
MOTS	Military-off-the-shelf
RAN	Royal Australian Navy
RFT	Request for tender
ROM	Rough order of magnitude
SME	Small and medium sized enterprises

TKMS ThyssenKrupp Marine Systems

UK United Kingdom

US United States of America

# Executive summary and recommendations

This report is the committee's third on the future of Australia's naval shipbuilding industry. Although the committee's first and second reports dealt with the tender process for the navy's new supply ships and the pre-tender process for the future submarines respectively, the committee also made findings applicable to the broader topic of Australia's future shipbuilding industry. In this report, the committee builds on its earlier findings and recommendations.

## New supply ships

The committee accepts that in many cases a limited tender may be the most sensible, strategically prudent and cost-effective means of acquiring capabilities for the Australian Defence Force. It is firmly of the view, however, that, wherever possible, options under consideration should include Australian defence industry participation as well as thorough assessments of the economic and strategic benefits of domestic involvement.

In this regard, the committee believes that the limited tender process for the new supply ships failed to adequately account for the potential for Australian industry involvement. Indeed, the committee remains concerned that the process neither adequately nor holistically assessed the economic and strategic imperatives of such an acquisition. The committee is also concerned that Australian industry was given no formal opportunity to engage with the process. This limited the depth of understanding in relation to contributions that the Australian defence industry could make to such a project.

In the committee's view, the process the government adopted has damaged industry confidence and harmed the Australian Defence Organisation's (Defence) relationship with Australia's defence industry.

## Recommendation 1

paragraph 2.34

**The committee reaffirms recommendation 1 from its initial report that the tender process for the two replacement replenishment ships:**

- **be opened up to allow all companies, including Australian companies, to compete in the process; and**
- **make clear that a high value will be placed on Australian content in the project.**

## Future submarines

Despite the announcement that Defence would conduct a competitive evaluation process, the committee remains deeply concerned that this process falls short of a truly rigorous procurement process for the largest and most complex defence program in Australia's history—the future submarines.

Evidence given during Budget Estimates in June confirmed that the competitive evaluation process was not designed to deliver three competitive contract options; would not produce accurate costs and build schedules; nor would the resulting designs be of a 'mature' nature.

Evidence was also presented during Budget Estimates that Japan's involvement in the process to acquire the future submarines is based on political imperatives rather than merit. This is concerning given that the government has restricted the potential involvement of Australian industry, and other international bidders, on the basis that the competitive evaluation process was a merit-based process. Evidence clearly indicates that this is simply not the case.

While the committee agrees that timeliness is an important consideration, it remains strongly of the view that the government's decision not to undertake a competitive tender is poorly-considered and highly risky. Noting the strategic importance of the future submarines, the complexity of the undertaking and the costs involved, the committee believes that further caution in conducting the tender is warranted.

The committee is also concerned by recent reports that the government is considering the acquisition of eight submarines instead of 12. The 2009 and 2013 Defence White Papers outlined the strategic rationale for the quantum of vessels. Navy confirmed recently at Budget Estimates that the threats underpinning this strategic assessment had not diminished.

In a speech to the Australian Submarine Institute in March this year, the Minister for Defence said that '[b]y 2030, half of the world's submarines will be in Australia's broader strategic region'. Evidence given to this inquiry by submarine experts reaffirmed the need for 12 submarines to provide an effective submarine force. The committee is particularly concerned that a potential reduction in the number of future submarines from 12 to eight does not reflect the strategic realities that the Defence Minister has recently acknowledged, nor would it result in an effective force to meet both current and future challenges.

It is also the view of the committee that eight submarines will not provide the certainty that industry requires to ensure that the economic value of this project is optimised.

Based on evidence given by expert submariners and industry, the committee is of the view that an acquisition process that is competitive, allows for maximum participation from prominent submarine builders and is complete by the end of 2016 would ensure that the first of 12 future submarines would be in the water by the middle of the next decade.

Noting this, the committee makes the following recommendations:

**Recommendation 2** **paragraphs 3.83–3.87**

**The committee recommends that the government adopt the following procurement process to acquire 12 future submarines:**

- a twelve to eighteen month procurement process, involving a Request for Proposal, followed by a Request for Tender;
- invite the most prominent and relevant submarine designers to participate in the process, encompassing Germany, France, Japan and Sweden;
- conduct a Funded Project Definition Study; and
- down-select two submarine builders to provide full design definition and fixed priced contract bids.

The committee also reaffirms recommendation three from its report on future submarines that:

**Given the weight of evidence about strategic, military, national security and economic benefits, the committee recommends that the government require tenderers for the future submarine project to build, maintain and sustain Australia's future submarines in Australia.**

**Also, given the national significance and complexity of the project to acquire the future submarine, the committee recommends that the government establish a Naval/Submarine Construction Authority as a 'non corporate Commonwealth entity with appropriate industry and defence expertise and authoritative leadership to deliver the future submarine'.**

**The committee recommends further that Defence heed and apply the lessons learnt from the AWD regarding the transfer of knowledge and those of the Collins Class submarine about the consequences of being a parent navy to the future submarines.**

### **Air Warfare Destroyers (AWDs)**

It is clear from the evidence presented to the committee that the source of the AWD project's problems can be attributed to a poor understanding and inadequate analysis of cost and schedule, and poor or inadequate management at the Alliance and Commonwealth level. From the beginning, decision-makers failed to appreciate the difficulties in transferring the design work to Australia, where industry was trying to meet demands created by fitting out the Landing Helicopter Dock ship (LHD) and starting on a 'first of class' vessel. There are clear lessons to be learned from the AWD project. It is important to note that a number of factors that affected productivity were outside the control of the people working on the ships. Two systemic issues identified by experts such as Dr John White are that the project was starting from scratch, and the lack of long-term strategic planning.

The committee is deeply concerned that the government has not released either the Winter Report, or the more recently conducted comprehensive cost audit of the AWD, even in an abridged form. The committee calls on the government to release these documents as a matter of urgency to assist industry and subject matter experts to understand and learn from their findings.

### **Recommendation 3**

**paragraph 4.68**

**The committee recommends that the Australian Government provide the committee with a copy of the 'forensic audit' of the AWD program.**

**The committee also repeats its recommendation contained in its first report that the government release the report of the independent review of the AWD program (also known as the Winter Report).**

**The committee understands that it may be appropriate for a public version of both documents to be released with classified material removed.**

### **Continuous build**

One of the most important observations presented to the committee is that industry can only produce when the government purchases—that the industry 'cannot be competitive if it has no work'. The committee understands that Australia's defence industry cannot survive a 'stop-start' order book: that it needs a consistent and reasonably predictable local workload to be sustainable and competitive. In the committee's view, it is unacceptable for the government, as sole customer, to criticise the industry for poor performance when many of the problems originate from a lack of government foresight, and the 'feast and famine' cycles inflicted on industry.

While the predicted gap in shipbuilding activity, sometimes referred to as the 'Valley of Death', is now closer than it was at the time the committee tabled its first report, the committee remains of the view that the government could and should be doing more to maintain a viable naval shipbuilding industry in Australia. Witnesses have suggested maximising Australian content in the construction of the new replenishment ships, as well as bringing forward the construction of the Pacific patrol boats and the future frigates.

The committee understands that the 2015 Defence White Paper will state the government's priorities for major naval acquisitions. The committee, however, believes that important decisions have already been delayed for too long and the government should give clear and certain indications of its intentions to acquire the future frigates, and to maximise Australian content in the new supply ships.

### **Recommendation 4**

**paragraph 5.59**

**The committee recommends that the Australian Government take measures immediately to reverse the perilous downturn in Australia's naval shipbuilding industry, reduce the impact of the 'Valley of Death' and enable a program of continuous build by:**

- **mandating a hybrid build for the first Auxiliary Oil Replenishment Ship and an onshore build for the second;**
- **mandating that all 12 of the future submarines be built in Australia;**

- **fast tracking the build of the Pacific Patrol Boats and the replacement of the Armidale Class Patrol Boats; and**
- **bringing forward the construction of the Future Frigates.**

### **Strategic naval shipbuilding plan**

The committee underscores the importance of the government keeping the Australian defence industry informed of its future naval requirements so it can align its planning, investment and research and development to meet Defence's long-term needs. Without doubt, there is a need for Defence to take a more coherent and strategic approach to planning its major naval acquisition programs and to consult with industry when planning. The committee strongly supports the call for a long-term strategic plan, which should be developed within the context of Australia's broad national strategic framework and take account of how best to:

- optimise the use of Australian small and medium enterprises (SMEs) and overseas subsidiaries established in Australia;
- build on existing infrastructure and encourage future investment in people, facilities and research and development to ensure that Australian shipyards and their complementary supply chains are prepared to participate in and support Australia's naval shipbuilding industry;
- provide the Australian defence industry with a clearer sense of Defence's future plans, priorities and intentions, providing industry with the confidence to invest in Australia's naval ship building industry for the long term and to make informed and better targeted investment decisions;
- smooth the 'peaks and troughs' that have characterised Australian naval shipbuilding; and
- maintain a constant base load of work that would sustain a viable naval shipbuilding industry in Australia.

The proposed enterprise-level Naval Shipbuilding Plan should complement the Defence Investment Plan and provide a certain and reliable indication of Defence's future acquisition program, with sufficient information to enable the Australian defence industry to deploy resources with confidence. Based on previous reports and the evidence before this inquiry, the committee makes the following recommendation.

#### **Recommendation 5**

**paragraph 6.35**

**The committee recommends that the 2015 White Paper is prepared in such a way that all procurement proposals are costed and scheduled realistically, and informed by the need to have a continuous build program for naval ships.**

**The committee understands that, following the release of its 2015 Defence White Paper, the government will also publish a Defence Investment Plan and an enterprise-level Naval Shipbuilding Plan.**

**The committee recommends that both documents take note of the evidence provided in this report about the importance of having a continuous build program that will sustain a viable naval shipbuilding and repair industry. Further that both documents, provide:**

- **a schedule of anticipated timelines for the construction and delivery of all Defence Capability Plan (DCP) projects, with continuity of production the paramount feature;**
- **a discussion about the nation's future strategic capability requirements that identifies the industrial capabilities deemed to be strategically important and Defence's expectations for Australia's naval shipbuilding industry;**
- **an assessment of the nation's existing shipbuilding and repair facilities, including the shipbuilding supply chain, and predicted investment needs;**
- **a comprehensive statement providing accurate and reliable information on Defence's future plans for its naval acquisition program that goes beyond ten-year projections;**
- **a detailed explanation on the acquisition schedule indicating the reasoning behind it and the major factors influencing demand flows; and**
- **reliable cost estimates.**

**The committee recommends the establishment of an ongoing naval shipbuilding industry advocate to work with the Australian Government and the shipbuilding industry, including supply chain and SMEs. The shipbuilding industry advocate should advise Defence and industry during the development of the Defence Investment Plan and Naval Shipbuilding Plan.**

## **Industry investment**

Significant capital investment has already been made in the Australian shipbuilding industry to develop requisite infrastructure and skills—this is consistent with the establishment of any industry on such a scale. Evidence presented to the committee suggests that this capital expenditure has been considered and efficient. With the infrastructure and skills now available, the industry is ready to transition from an investment phase to a production phase.

The committee is concerned that efforts to denigrate Australia's shipbuilding capabilities have focused upon the conflation of fixed capital expenditure investments and marginal production costs. This has artificially inflated the reported costs of ship unit production, rather than capitalizing the fixed investments separately. These inflated figures have subsequently been circulated, forming the basis for arguments against the efficiency of Australia's domestic shipbuilding industry.

Having reached the threshold of capital investment required to establish the industry, the committee is firmly of the view that the returns on investment from future shipbuilding projects will continue to grow. The committee also notes, however, that



the Commonwealth Government is the industry's only effective client and, consequently, it has total control over demand factors. The government's failure to ensure sustainable demand through steady and predictable ship orders significantly undermines the industry's competitive position and the loss of the substantial capital investments.

Evidence to the committee demonstrates that the current processes for assessing the economic value of domestic shipbuilding projects are unsophisticated and flawed. Basic cost-based analysis does not fully capture the economic value of domestic shipbuilding, as shipbuilding expenditure has an economic multiplier effect: every dollar spent generates a level of economic expansion beyond the nominal value of the expenditure. This is in stark contrast to the loss of economic value when the government purchases overseas.

The committee also notes that the risk factors associated with currency fluctuations (including systematic currency depreciation) are significantly intensified when making overseas ship purchases. This issue is particularly pertinent given the Reserve Bank's publicly stated objective to depreciate the Australian dollar. A strong, sovereign, domestic shipbuilding industry hedges the government against market instability—particularly when shipbuilding contracts generally extend across multiple years and economic cycles.

#### **Recommendation 6**

**paragraphs 7.21–7.22**

**The committee recommends that, given requisite capital investments have already occurred, and as the industry's only effective client, the Australian Government adopt an approach to domestic shipbuilding that ensures sustainable demand in order to realise returns on these investments.**

**The committee also recommends that, during the development of the forthcoming Strategic Naval Shipbuilding Plan, the Australian Government ensure that the Plan recognises the holistic economic value of any domestic shipbuilding project. It is the strong view of the committee that the Plan must also acknowledge the economic multiplier effect of domestic shipbuilding, including that expenditure generates a level of economic expansion beyond its initial value.**



# Chapter 1

## Introduction

1.1 On 25 June 2014, the Senate referred the matter of the future of Australia's naval shipbuilding industry to the Senate Economics References Committee for inquiry and report by 1 July 2015. The term of reference for the inquiry is straightforward yet comprehensive in its coverage—the future sustainability of Australia's strategically vital naval ship building industry.

### Conduct of inquiry

1.2 The committee advertised its inquiry on its website and in *The Australian* seeking views directly from a range of people interested in the future of Australia's naval shipbuilding and repair industry. In addition, the committee wrote to, and invited submissions from, shipbuilders, suppliers, unions, professional associations and individuals engaged in the shipbuilding industry such as engineers and architects as well as academics and economists. The committee also invited state governments and relevant Commonwealth government departments to lodge written submissions.

### Submissions and hearings

1.3 The committee received 38 submissions, eight supplementary submissions as well as additional information, which are listed at Appendix 1. The committee also received over 250 brief messages supporting strongly Australia's naval shipbuilding industry and urging the government to ensure that the future submarines would be built in Australia. In all, the committee held eight public hearings. The following were held in 2014:

- 21 July in Canberra, which concentrated solely on the tender for the navy's two new supply ships;
- 30 September in Canberra, which focused on the acquisition of the future submarines;
- 8 October in Newcastle;
- 13 October in Melbourne; and
- 14 October in Adelaide.

1.4 The committee also held three hearings in 2015 on 19 February in Canberra; 6 March in Melbourne; and 14 April in Adelaide. A list of witnesses is at Appendix 2.

1.5 It is also worth noting that during the main round of estimates hearings in late May/early June 2015, two Senate committees took evidence on matters that relate to this inquiry, including a comprehensive examination of representatives from the ASC on progress with the Air Warfare Destroyers (AWDs). The committee has drawn on this evidence in order to provide information on recent developments.

1.6 References to the committee Hansard are to the proof Hansard and page numbers may vary between the proof and the final Hansard transcripts.

### ***Site visits***

1.7 The committee also undertook site visits to shipbuilding and Defence facilities. In Melbourne, the committee visited the BAE Systems Williamstown dockyard and, accompanied by Captain Craig Bourke and Mr Bill Saltzer, toured BAE facilities including the plate shop, panel line and profile cutter, a module hall, blast and paint, the dry dock and slipway. The committee also inspected the Landing Helicopter Dock (LHD) ships at Nelson Pier.

1.8 In Adelaide, committee members visited the AWD Systems Centre, where they were briefed by Mr Warren King, CEO, Defence Materiel Organisation (DMO), Mr Peter Croser, AWD Program Manager and Commodore Steve Tiffen, General Manager Stakeholder Engagement. Committee members met Mr Roger Duffield, AWD Platform System Coordinating DAR and toured ASC's AWD shipyard to see progress on construction of AWD Ship 01 and Ship 02.

1.9 Committee members then visited ASC North, where Commodore John Chandler provided an introductory briefing. Members toured the shipyard to view maintenance reforms and work being carried out on the submarines. They inspected a Collins class submarine. To conclude the visit, ASC CEO, Mr Stuart Whiley, provided an ASC presentation and was available to answer questions.

### ***First report, Part I—tender process for navy's new supply ships***

1.10 As part of this broad inquiry into Australia's naval shipbuilding industry, the committee resolved to inquire into the tender process for the Royal Australian Navy's (RAN) new replenishment ships as its first order of business. The committee's decision was prompted by the government's announcement on 6 June 2014 that it had given approval for Defence to conduct a limited competitive tender between Navantia of Spain and Daewoo Shipbuilding and Marine Engineering of South Korea (DSME) for the construction of two replacement Auxiliary Oiler Replenishment (AOR) ships. The then Minister for Defence, Senator the Hon David Johnston, explained that the decision to exclude Australian companies from the tender and involve only two overseas companies was due to: the urgent need to replace the vessels and avoid a capability gap; the current low productivity of shipbuilders involved with the AWD project; and value for money considerations.<sup>1</sup>

1.11 During this inquiry into the acquisition of the AORs, the committee considered the strategic importance of the replenishment or supply ships to the

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1 'Minister for Defence—Boosting Australia's maritime capabilities', Media Release, 6 June 2014, <http://www.minister.defence.gov.au/2014/06/06/minister-for-defence-boosting-australias-maritime-capabilities/> (accessed 4 August 2014).

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Australian Navy; the capacity of Australian industry to build the ships; and the contribution that such construction could make to sustaining Australia's naval shipbuilding industry. Evidence taken on the tender process for the new supply ships highlighted a number of concerns. They related to the lack of contestability and competition in the proposed limited tender, the lack of industry engagement in the process undertaken so far and the absence of long-term strategic planning that led to the decision.<sup>2</sup>

1.12 In particular, the committee found that Defence had not consulted industry or encouraged open discussion about possible Australian engagement with the project. Indeed, it appeared as though local shipyards were shut out of all consideration. In this regard, the committee formed the view that Defence should have consulted local shipyards and allowed them to present their case when it came to building the supply ships in Australia. The committee was not convinced that the government's choice of a limited tender involving only two companies was the best way to obtain the necessary information to proceed to second pass.<sup>3</sup>

1.13 The committee also believed that the way in which the decision for a limited tender was taken and announced was a significant blow to Australian industry. The absence of consultation was at odds with Defence's stated industry policy objectives, which seek to promote competitive, collaborative and innovative industry in Australia.<sup>4</sup>

1.14 Overall, the committee concluded that decisions, such as the acquisition of the supply ships, were extremely important for both defence capability and for the sustainability of defence industry in Australia. These critically important decisions involve huge amounts of taxpayers' money and have long-term implications for the navy's future procurement strategies and, importantly, its capability. In the committee's view, such decisions should be well considered, based on sound research and analysis, and informed through close consultation with industry. The committee recommended that the tender process for the two supply ships be opened up to allow all companies, including Australian companies, to compete in the tender and, furthermore, to make clear in the tender documents that a high value would be placed on Australian content in the project.<sup>5</sup>

1.15 The committee tabled its first report on the tender for the navy's new supply ships on 27 August 2014. The report is available on the committee's website.

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2 Senate Economics References Committee, Part 1, *Future of Australia's naval shipbuilding industry: Tender process for the navy's new supply ships*, August 2014, p. 98.

3 Senate Economics References Committee, Part 1, *Future of Australia's naval shipbuilding industry: Tender process for the navy's new supply ships*, August 2014, pp. xii–xiii and 93–98.

4 Senate Economics References Committee, Part 1, *Future of Australia's naval shipbuilding industry: Tender process for the navy's new supply ships*, August 2014, p. 98.

5 Senate Economics References Committee, Part 1, *Future of Australia's naval shipbuilding industry: Tender process for the navy's new supply ships*, August 2014, pp. xiii and 98.

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*Second report, Part II—acquisition of future submarines*

1.16 Shortly after presenting its first report, the committee's focus was drawn to developments regarding the future submarine project. The statement by the Foreign Minister in August 2014 that discussions with Japan had included the possibility of purchasing 'entire submarines' fuelled public speculation that the government planned to break its commitment to build 12 submarines in Adelaide. The major concern centred on the possibility that the government was about to make pre-emptive decisions that would effectively shut down potential and viable avenues for acquiring the submarines and would again opt for a limited tender. Questions were also raised about the effects that such a decision would have on the future of Australia's shipbuilding industry and the overall success of the future submarine project. Rather than subside, talk of a possible agreement with Japan to acquire submarines for the Australian Navy, without a genuine competitive process, persisted.<sup>6</sup>

1.17 In light of these developments, the committee resolved on 25 September 2014 to hold public hearings to further investigate the various statements and assumptions about the future submarine project. As noted earlier, the committee held public hearings in Canberra on 30 September; Newcastle on 8 October; in Melbourne on 13 October; and in Adelaide the following day, where it took evidence on the future submarine project.

1.18 Given the seriousness of the matter and the thrust of the evidence being gathered, the committee resolved on 28 October 2014 to present its findings to the Senate in the form of a second report that was dedicated to the future submarines. The committee took this step because it feared that critically important decisions were about to be made without adequate public consultation and, moreover, without a fair, proper and transparent competitive tender process.

1.19 In this second report, the committee recognised the immense national importance of the future submarine project and of every decision relating to the project. The committee highlighted the vital importance of having ideas and proposals thoroughly tested and assumptions about the future submarines objectively and critically assessed by competent personnel in order to provide government with the

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6 See for example, Minister for Defence—Transcript—Interview with Tony Jones, 'Lateline', 27 August 2014, <http://www.minister.defence.gov.au/2014/08/27/minister-for-defence-transcript-interview-with-tony-jones-lateline-3/>; ABC News, 'Japanese submarine experts visit Adelaide, sparking fears for shipbuilding future', 27 August 2014, <http://www.abc.net.au/news/2014-08-27/japanese-delegates-spark-fears-submarine-future/5699076>; 'Johnston plays down SA submarine fears', 27 August 2014, <http://www.news.com.au/national/breaking-news/sa-govt-fears-over-submarine-project/story-e6frfku9-1227038567300>; Minister for Defence—Transcript—Interview with Justin Smith, 2UE Drive, 9 September 2014, <http://www.minister.defence.gov.au/2014/09/09/minister-for-defence-transcript-interview-with-justin-smith-2ue-drive/> (accessed 27 September 2014); ABC News, 'Soryu submarine deal: Japanese insiders warn submarine program will cost more, hurt Australian jobs', <http://www.abc.net.au/news/2014-09-15/japanese-concerns-over-submarine-deal/5743022> (accessed 27 September 2014).

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best possible advice. In its view, open and informed debate would confer much needed transparency on government decisions; it would allow genuine scrutiny of government decisions and provoke robust and informed analysis. Such a process would also be a means of garnering public, industry and multi-partisan political support for the proposed acquisition. Overall, the committee asserted that the decision to acquire the future submarines was a decision in the national interest and should be owned by Australians.

1.20 The committee's second report was intended to start this process of much needed transparency and informed debate on the acquisition of the future submarines. On presenting this report, the committee encouraged all those interested in the purchase of the future submarines to assess critically the evidence taken by the committee and to agitate for a more open and inclusive process. The committee's principal recommendations were that the government:

- not enter into a contract for the future submarine project without conducting a competitive tender for the boats, including a funded project definition study;
- begin this competitive tender immediately;
- ensure a submarine capability gap is avoided;
- given the weight of evidence about the strategic, military, national security and economic benefits, require tenderers for the future submarine project to build, maintain and sustain Australia's future submarines in Australia;
- formally and publically rule out a military-off-the-shelf (MOTS) option for Australia's future submarines; and
- strengthen and build a more collaborative relationship with Australia's Defence industry and engender a co-operative environment in which industry is encouraged to marshal its resources in support of a broader Australian shipbuilding industry capable of acquiring and building a highly capable fleet of submarines.<sup>7</sup>

1.21 The report is available on the committee's website.

1.22 To date, the government has not responded to the committee's recommendations on the future submarines but has announced significant developments including the government's intention to conduct a competitive evaluation process. This matter is discussed thoroughly in chapter 3.

### ***Part III—the future of naval shipbuilding in Australia***

1.23 This third report on the future of Australia's naval shipbuilding further develops and expands on the findings of its first and second reports but looks beyond the acquisition of the supply ships and submarines. In this third report, the committee

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7 Economics References Committee, Part II, *Future of Australia's naval shipbuilding industry: Future submarines*, November 2014, p. ix.

examines developments since it tabled its second report in November 2014, including the publication of a number of major studies—*Keeping Major Naval Ship Acquisitions on Course: Key Considerations for Managing Australia's SEA 5000 Future Frigate Program* and *Australia's Naval Shipbuilding Enterprise: preparing for the 21<sup>st</sup> Century*.<sup>8</sup> The Acquisition and Technology Policy Center of the RAND Corporation produced both reports and the Australian Department of Defence sponsored the work.<sup>9</sup>

1.24 Other developments since November 2014 include: tabling of the government's response to the committee's first report on the new supply ships; the appointment of a new Minister for Defence in December 2014; the announcement that Defence would conduct a competitive evaluation process for the future submarines; and importantly the completion of an independent audit of the AWD project.<sup>10</sup> The government has also made a number of significant announcements that have a direct bearing on the future of naval shipbuilding in Australia. For example, on 25 March 2015, the Minister announced the development of an enterprise-level Naval Shipbuilding Plan.<sup>11</sup>

## Structure of the report

1.25 Although the committee's first and second reports dealt with the tender process for the navy's new supply ships and the pre-tender process for the future

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- 8 Schank, John F., Mark V. Arena, Kristy N. Kamarck, Gordon T. Lee, John Birkler, Robert Murphy and Roger Lough. *Keeping Major Naval Ship Acquisitions on Course: Key Considerations for Managing Australia's SEA 5000 Future Frigate Program*, Santa Monica, CA: RAND Corporation, 2014, [http://www.rand.org/pubs/research\\_reports/RR767](http://www.rand.org/pubs/research_reports/RR767) (accessed 18 May 2015); Birkler, John, John F. Schank, Mark V. Arena, Edward G. Keating, Joel B. Predd, James Black, Irina Danescu, Dan Jenkins, James G. Kallimani, Gordon T. Lee, Roger Lough, Robert Murphy, David Nicholls, Giacomo Persi Paoli, Deborah Peetz, Brian Perkinson, Jerry M. Sollinger, Shane Tierney and Obaid Younossi, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21<sup>st</sup> Century*, Santa Monica, CA: RAND Corporation, 2015, [http://www.rand.org/pubs/research\\_reports/RR1093.html](http://www.rand.org/pubs/research_reports/RR1093.html) (accessed 30 June 2015).
- 9 In September 2014, the Government commissioned RAND to conduct a detailed review of the Australian naval ship building industry. According to the Minister for Defence, the report is one of the most detailed studies undertaken into the Australian naval shipbuilding industry. Department of Defence Ministers, Minister for Defence—Release of the RAND Corporation report, 16 April 2015, <http://www.minister.defence.gov.au/2015/04/16/minister-for-defence-release-of-the-rand-corporation-report/> (accessed 18 May 2015).
- 10 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (accessed 18 May 2015). Department of Defence Ministers, Minister for Defence—Minister Andrews welcomes Defence appointment, 21 December 2014, <http://www.minister.defence.gov.au/2014/12/21/minister-for-defence-minister-andrews-welcomes-defence-appointment/> (accessed 18 May 2015).
- 11 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (accessed 18 May 2015).



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submarines respectively, the committee also made findings applicable to the broader topic of Australia's future shipbuilding industry. By necessity and for completeness, the committee provides a brief summary of its earlier findings where required in this third report and builds on them in order to explore fully a number of key aspects of Australia's naval shipbuilding industry. The report comprises 7 chapters including this introduction. In summary:

- Chapter 2—considers the government's response to the recommendations made in the committee's first report, which provides a solid platform for further exploration of matters such as competitive tendering and the role, importance and sustainability of Australia's naval shipbuilding and repair industry;
- Chapter 3—assesses developments in the acquisition process for the future submarines, including a number of government announcements on the progress made on the competitive evaluation process;
- Chapter 4—looks at Australia's naval shipbuilding and repair industry—its productivity, including an assessment of the various audits on the performance of the AWD project, implementation of the third reform strategy, the critically important supply chain, and the training and recruitment of the workforce;
- Chapter 5—examines the impending gap in ship production, whether it is inevitable and/or the extent to which it could be mitigated or overcome including the consequences of the current downturn in production for Australia's naval shipbuilding workforce and for the future of naval shipbuilding in Australia;
- Chapter 6—focuses on the need for a national strategic naval shipbuilding plan, comparing government announcements, stated commitments and key policy documents (white papers, Defence Capability Plan and the announced enterprise-level Naval Shipbuilding Plan) with the day-to-day experiences in the shipyards;
- Chapter 7—brings together the findings contained in parts I and II of its reports and in this third report and presents its final recommendations.

1.26 While this report is intended to be a standalone document, by necessity it draws heavily on the evidence taken from its two earlier reports. To avoid duplication but to give coherence, the committee, where relevant throughout this report, provides some background to the committee's findings contained in these earlier reports.

## **Acknowledgements**

1.27 The committee thanks all those who assisted with the inquiry, especially those who made written submissions and attended the committee's public hearings.



## Chapter 2

### Government response to committee's first report

2.1 On 6 June 2014, the government announced that it had given approval for Defence to conduct a limited competitive tender between Navantia of Spain and Daewoo Shipbuilding and Marine Engineering of South Korea (DSME) for the construction of two replacement Auxiliary Oiler Replenishment ships (AOR).<sup>1</sup> Based on the evidence, the committee found that there were no significant impediments preventing the ships being built in Australia. In this chapter, the committee notes and considers the government's response to the committee's first report on the tender process for the new replenishment ships.

#### First report—tender process for new supply ships

2.2 Although the committee had only started its inquiry into the future sustainability of Australia's naval ship building industry, its consideration of the proposed tender process for the supply ships [SEA 1654–3] highlighted a number of concerns. They related to the lack of contestability and competition in the limited tender for the two ships, the insufficient level of industry engagement in the process so far and the absence of long-term strategic planning that led to the decision. As such, the committee recommended that:

- the tender process for the two replacement replenishment ships be reopened to include Australian companies;
- the tender must make clear that a high value would be placed on Australian content in the project; and
- the government undertake open tender processes for any future naval acquisition.

#### Government response

2.3 The government tabled its response to the committee's findings in April 2015. In its response, the government disagreed with the committee's recommendation to re-open the tender and allow Australian companies to tender. It explained that the schedule, the cost effects of an Australian build and the imperative to replace HMAS *Success* in the 2021–22 timeframe were the key determinants in reaching the decision to go off-shore.

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1 'Minister for Defence—Boosting Australia's maritime capabilities', 6 June 2014, <http://www.minister.defence.gov.au/2014/06/06/minister-for-defence-boosting-australias-maritime-capabilities/> (accessed 4 August 2014).

### ***Timing and schedule***

2.4 According to the government, navy's highest priority was to replace both HMA Ships *Sirius* and, in particular, *Success* because the vessels were 'essential enablers of operational capability'.<sup>2</sup>

2.5 In this context, the government dwelt on the fact that the construction of the supply ships in Australia would extend the production schedule, making it highly unlikely that the delivery of the first ship would meet the required in-service date to replace *Success*. This delay in construction could pose the real risk of a gap developing in navy's capability to deploy combat power. The government also indicated that, given the lead time to commence construction of an Australian build, a decision to conduct an open tender would have no effect on impending job losses in Australian shipyards. To support this contention, the government cited a number of examples of the time taken to arrive at the construction stage:

Experience with AWD and the ANZAC Ship Projects and more recently the Canadian Joint Support Ship (JSS) Project (two supply ships for the Canadian Navy) suggests five to six years is required from the initial approach to industry for a design through to the contract award and 'cut steel'. For example:

- The initial Risk Reduction studies for AWD were commenced in early 2004, yet construction did not start until January 2010.
- Designs for the ANZAC Ship Project were tendered in 1986, with Defence selecting Blohm+Voss (Germany) as the designer. Work (cut steel) started approximately six years later in March 1992 (Note: production started well before the detailed design was completed in September 1993, resulting in significant rework). Although delivered in March 1996, HMAS ANZAC was not accepted into naval service until mid-2000.
- In November 2010, Canada announced a decision to commence design studies through release of a Request for Proposal to Navantia and TKMS [ThyssenKrupp Marine Systems of Germany] for the JSS Project. The JSS specification is closely aligned with that produced for

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2 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I - Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [1], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

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SEA 1654–3 [project to acquire two replenishment ships]. The JSS build contract is currently scheduled for December 2016.<sup>3</sup>

2.6 According to the government, these extended schedules for the construction of supply ships were associated with 'the requirement to adapt the design and where appropriate the shipyard facilities to achieve productivity gains associated with larger block construction'. Based on such factors, it concluded that:

...Australian industry would be unable to deliver the capability sought by SEA 1654–3 prior to 2022–23; whereas unsolicited proposals from Navantia and DSME for an offshore design and build suggest 2019–20 delivery is achievable.<sup>4</sup>

2.7 The government also drew attention to the costs of keeping *Success* operational. It noted that Defence had commenced a program, being undertaken by companies in Australia, to improve *Success's* materiel state and was allocating around \$365 million to sustain the ship to financial year 2021–22 (forecast Initial Operational Capability of the first replacement ship). Furthermore, the government stated:

Activities to sustain *Success* even further past its planned withdrawal from service, to accommodate an open tender process, are yet to be assessed. However, due to the obsolescence of equipment fitted to HMAS *Success*, these activities are likely to come at a considerable cost above what has already been committed.<sup>5</sup>

2.8 The committee understands fully the essential role that navy replenishment ships have in supporting naval deployments and the strategic imperative to purchase replacement ships to avoid a capability gap and to stem the continuing high costs of

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3 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [2], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015). The JSS project will deliver two ships with an option for a third. The ships are intended to provide core replenishment capabilities, plus added capacity for limited sealift and support to operations ashore and enable a Naval Task Group to remain at sea for extended periods of time. See National Defence and the Canadian Armed Forces, 'Joint Support Ship (JSS)', <http://www.forces.gc.ca/en/business-equipment/joint-support-ship.page> (accessed 15 June 2015).

4 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [2], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

5 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [1], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

maintaining the current ageing vessels. The urgency of this situation highlights the need for government to have a realistic and practical long-term capability plan.

2.9 It is worth noting that no-one denied that navy needs replenishment ships to service the rest of the fleet and that their replacement is overdue. Even so, a few witnesses had proposals that, in their view, would maintain the afloat support capability and not cause significant delay to the acquisition of the vessels. Indeed, a number of witnesses put forward proposals that could address this potential shortfall in capability but without having to resort to a limited tender.

2.10 Importantly, it should be remembered that no-one suggested that the vessels be built entirely in Australia. At least two unsolicited proposals for a hybrid build were tendered to government.<sup>6</sup> For example, BAE Systems informed the committee that it had submitted an unsolicited proposal to government in September 2012 setting out a hybrid build program, with part of the ship built overseas and part of the ship built in Australia.<sup>7</sup> Referring to BAE's joint proposal together with Navantia, Mr William Saltzer, BAE Systems, informed the committee in April 2015:

Nobody in Australia has a design for a replenishment ship. We thought together with Navantia that the same solution that we created on LHD, a hybrid build, would be an ideal solution for the replenishment ships as well and it would allow us to put work into Australian industry as well as into Spanish industry, quite frankly, because they would build the hull, just as they did on LHD.<sup>8</sup>

2.11 BAE estimated that the additional time required to produce the replenishment ships according to its proposed hybrid model would be approximately six months.<sup>9</sup> In effect, the hybrid proposals were intended to address the potential shortfall in capability and negate the need for a limited tender.

2.12 In its response, however, the government noted:

Preliminary analysis of unsolicited proposals from Navantia/BAE, Navantia and DSME indicate an approximately 40 percent cost premium, compared with a full offshore build, if 40 percent of the build was undertaken in Australia. Noting that the specific details of the unsolicited proposals remain commercial-in-confidence, Defence has not quantified the

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6 See, for example, Mr Christopher Burns, Chief Executive Officer, Defence Teaming Centre, *Proof Committee Hansard*, 21 July 2014, p. 42.

7 *Submission 9*, p. 1.

8 *Proof Committee Hansard*, 14 April 2015, p. 18.

9 *Submission 9*, p. 2.

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additional cost premium associated with fully building the supply ships in Australia.<sup>10</sup>

2.13 The decision to conduct the limited tender effectively dismissed outright the unsolicited proposals for a hybrid build in Australia that endeavoured to address some perceived concerns about current capacity in Australia and possible capability gap. These solutions not only remain untested but, as mentioned on a number of occasions, sent an unfortunate message to Australian defence industry.

2.14 Overall, the committee was concerned that the strategic and economic imperative to acquire the vessels led to a decision that effectively closed off options before they were given any due consideration and prevented a more open, competitive and, indeed, fairer process. There was never a genuine attempt to test the economic and strategic merit of the hybrid proposals or the cost premium to build in Australia. Furthermore, as noted in the committee's first report, the disregard shown to Australian industry through this limited tender process, the lack of consultation and engagement by the Australian Defence Organisation (Defence) with Australian industry stood in stark contrast to Defence's stated industry policy. There have been no developments since then to persuade the committee otherwise.

### *Industry's capacity*

2.15 To support the grounds for a limited tender that excluded Australian companies, the government cited a 2007 report by a UK company, Appledore International, which undertook an assessment of Australia's capacity to construct the forward section of the Landing Helicopter Dock ship (LHD). In addition, it referred to another report commissioned by Defence—a 2013 report by an internationally recognised consultancy within Royal Haskoning DHV, First Marine International (FMI), which conducted an assessment of the Australian shipyards' capacity to support construction of the supply ships. According to the government's response, the conclusions from both reports supported the contention that:

Australian Shipyards currently do not have the capacity to build these ships at similar productivity levels to those achieved during the construction of the Spanish Supply Ship Cantabria without making a significant investment in infrastructure, which is unlikely to be amortized over a two ship build.<sup>11</sup>

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10 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, pp. [2–3], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

11 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [2], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

2.16 The government's response also noted that Defence SA had previously advised that:

...upgrade options (to support construction of the supply ships) for the shiplift include a \$20m upgrade for lift capacity increase, a \$50m upgrade for lift and length capacity increase and up to a \$175m upgrade for the shiplift to be useful for sustainment of any naval ship.<sup>12</sup>

2.17 In its response, the government acknowledged that there would be some return on investment in facilities for future sustainment of the ships. Referring to experience gained on the ANZAC Ship Project, the government suggested, however, that productivity saving associated with learning curve effects including facilities upgrades would not be realised with a two-ship build.

2.18 The government's response has not swayed the committee from its initial findings about the importance of holding an open tender for the supply ships and the capacity of Australian shipyards to build the vessels. In its response to the committee's recommendation, the government introduced no new evidence nor did it produce convincing analysis that would support its decision to limit its tender to two suppliers and to deliberately exclude Australian companies from participating.

2.19 The committee stands by its findings that an open tender would have allowed matters, including the amount of investment required to upgrade current facilities and the long-term benefits of this investment, to be fully explored and contested. Thus, while the committee acknowledges that there are currently shortfalls in the capacity of Australian shipyards to construct a large AOR as contemplated in the Defence Capability Plan (DCP), the deficiencies are not insurmountable. With some investment, local major shipyards could be upgraded to meet the challenge. Furthermore, the initial upfront costs for the improvements should not be considered in isolation but with a view to the long-term benefits, especially when such infrastructure could be regarded as a fundamental input to capability.

### *Australian content*

2.20 In its first report, the committee also looked at the much broader economic benefits that accrue from a local build or Australian involvement in the production of a naval vessel. They included the development and maintenance of a highly skilled workforce, the benefits that innovation brings to the wider economy and the economic and employment growth that flow from investment in research and development.

2.21 The committee also recognised the importance of having the skills base, experience and local know-how necessary to support navy's vessels through their

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12 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [2], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).



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operational life. This self-reliance is central to Australia's national interests. Taking account of the myriad advantages in having Australia build its naval ships in-country, the committee urged the government to place a high priority on maximising Australian content in the acquisition of the supply ships.

2.22 Accordingly, the committee recommended that Defence become actively engaged in encouraging and supporting Australian industry to explore opportunities for Australian industry involvement in naval shipbuilding. The committee made this recommendation because it could see great potential for Australian industry to become involved as subcontractors in the replenishment ship project. The government agreed in principle to the committee's recommendation.

2.23 In its response to the committee's recommendation that a high value be placed on Australian content in the tender, the government informed the committee that Defence sought to influence the designer's commitment to Australian content through the 'commonality' requirements set out in the Risk Reduction Design Study statement of work.<sup>13</sup> It informed the committee:

The ship design shall investigate commonality with equipment currently in service, or planned to be in service in the Royal Australian Navy.

- This may include areas of commonality leading to lower life-cycle costs, such as with training requirements, through life support (including sustainment) and other areas that would contribute to lowering the cost of ownership of the capability.<sup>14</sup>

2.24 The government also responded to the committee's recommendation for Defence to become actively involved in encouraging and supporting Australian industry to explore opportunities in the construction of the replacement replenishment ships. The government agreed in principle with this recommendation and identified such prospects including but not limited to:

- design and installation of C4I systems;
- specialist Integrated Logistics Support (ILS) Systems; and

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13 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I - Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [3], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

14 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I - Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [3] [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

- development and support of RAN specific 'support products'.<sup>15</sup>

2.25 The government explained further:

Overall, decisions on industry options will consider Value for Money assessments and the trade-off between enhancing local industry capability and the delivery of the required capability on time and within budget.

In accordance with Defence's Australian Industry Capability policy, Defence continues to encourage and support Australian industry. Prospects for Australian content in Project SEA 1654–3 will be further developed during the preparations leading up to the release of Requests for Tender for both the Prime Acquisition and Sustainment contracts. It is expected that both designers will engage with Australian industry during the development of their responses to the Prime Acquisition and Sustainment RFTs [request for tender].<sup>16</sup>

2.26 Despite these assurances, the committee feels compelled once again to underscore the importance of the government making every effort to maximise Australian content in the construction of the two supply ships. This means going beyond statements of commitment to putting in place practical and effective measures to achieve this goal.

2.27 Importantly, the government and Defence must be seen to be actively encouraging and supporting Australia's defence industry and earn industry's trust that the government will stand by its stated commitments. At the moment, however, the government and Defence have failed to secure that trust. As shown repeatedly in the committee's first report, Australia's defence industry was bitterly disappointed with, and confused by, the government's decision to exclude Australian companies from the tender process for the new supply ships. Mr Christopher Burns, Defence Teaming Centre, captured industry's sense of dejection when he spoke of a sector that wanted to be recognised and respected for its significant role in the development and delivery of ADF 'military capability and the preservation of the nation's sovereignty'. He referred to an industry that was looking for:

...the opportunity to compete under the construct of holistic whole-of-life benefit to the nation and on a level playing field, where the lowest price is not the determinant of value for money; an industry that would rather collaborate and partner with government and Defence than be subjected to

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15 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I - Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [4], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

16 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [4–5], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

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orchestrated campaigns to discredit it in order to justify going offshore to acquire low-risk hardware at the cheapest price.<sup>17</sup>

2.28 The way in which the government and Defence have managed the tender process so far has had a demoralising effect on Australia's defence industry and runs counter to their stated defence industry policy—in fact their actions have neither encouraged nor supported the industry.

*Open tenders*

2.29 The committee also argued in favour of having an open tender process for future major naval acquisitions. Defence disagreed with this recommendation. It noted that:

Without the ability to limit tenders through the use of the Commonwealth Procurement Rules there is a potential that the cost of tendering for industry will increase. This is a constant concern expressed by industry in relation to DMO procurement. Procurement strategies are developed on a case-by-case basis in consideration of the global market and the ability of industry to deliver the capability that is required on time and on budget. The ability to limit tenders is also paramount to Commonwealth National Security, with sensitive capability requirements and considerations being classified, and specifically quarantined from non-allied nations.<sup>18</sup>

2.30 It noted that the Pacific Patrol Boat replacement, which was planned to be a tender limited to Australian Industry, would be affected should the government adopt a policy that would require open tender processes for naval acquisitions. Defence stated further that:

An inability to use limited tender will also impact interoperability and the ability for the Commonwealth to meet international obligations. Specifically, we would be unable to draw on Government to Government procurement arrangements for supply of naval weapons, and communications systems.<sup>19</sup>

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17 *Proof Committee Hansard*, 21 July 2014, pp. 40–41.

18 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [4], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

19 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [4], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

## **Conclusion**

2.31 The committee accepts that in many cases a limited tender may be the most sensible, strategically prudent and cost-effective means of acquiring capabilities for the Australian Defence Force. It is firmly of the view, however, that wherever possible options under consideration should include Australian defence industry participation as well as thorough assessments of the economic and strategic benefits of domestic involvement.

2.32 The committee believes that the limited tender process for the new supply ships failed to adequately account for the potential for Australian industry involvement. Indeed, the committee remains concerned that the process neither adequately nor holistically assessed the economic and strategic imperatives of such an acquisition. The committee is also concerned that Australian industry was given no formal opportunity to engage with the process. This limited the depth of understanding in relation to contributions that the Australian defence industry could make to such a project.

2.33 In the committee's view, the process the government adopted has damaged industry confidence and harmed Defence's relationship with Australia's defence industry.

### **Recommendation 1**

**2.34 The committee reaffirms recommendation 1 from its initial report that the tender process for the two replacement replenishment ships:**

- **be opened up to allow all companies, including Australian companies, to compete in the process; and**
- **make clear that a high value will be placed on Australian content in the project.**

2.35 In the following chapter, the committee turns to the acquisition of the future submarines and considers further this principle of openness, competitiveness and fairness in the tender process as it related to these boats.

# Chapter 3

## Future submarines

3.1 The committee dealt exclusively with the tender process for the future submarines in its second report, which was tabled in November 2014. In this report, the committee expressed grave concerns about the direction being taken to acquire the submarines and urged the government not to enter into a contract for the future submarine project without conducting a competitive tender, including a funded project definition study.

3.2 Also, as noted in its second report, the committee was concerned about Australian industry being ignored, even quarantined, from the process so far.

3.3 Although the government is yet to respond to the committee's recommendations in its second report, there have been a number of recent significant announcements indicating that the government is continuing down a path that would prevent rather than promote openness and competition in tendering. In this chapter, the committee looks carefully at these statements and their implications for the future submarines and more broadly the naval shipbuilding industry as a whole.

### Defence White Paper—2009

3.4 In the 2009 Defence White Paper, the government indicated its intention to replace and expand the current fleet of six Collins class submarines with a more capable class of submarine. This project to acquire the submarines would be a multi-billion dollar undertaking requiring very long lead-times for project development, acquisition and entry into service.<sup>1</sup>

#### *Schedule and design capability*

The White Paper indicated that this major design and construction program for the future submarines would span three decades, and be 'Australia's largest ever single defence project'.<sup>2</sup> Given the long lead times and technical challenges involved, the White Paper argued that the complex task of capability definition, design and construction must be undertaken without delay.<sup>3</sup> According to the White Paper, the

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1 Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, Defence White Paper, 2009, paragraph 1.14, [http://www.defence.gov.au/whitepaper/2009/docs/defence\\_white\\_paper\\_2009.pdf](http://www.defence.gov.au/whitepaper/2009/docs/defence_white_paper_2009.pdf) (accessed 8 August 2014).

2 Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, Defence White Paper, 2009, paragraph 9.3.

3 Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, Defence White Paper, 2009, paragraph 9.6.

government had decided that the boats were to be assembled in South Australia and would be conventionally-powered.<sup>4</sup>

3.5 To ensure the project's success, the government stated that it would need to engage with a number of overseas partners during the design and development phase. In particular, the government noted its intention 'to continue the very close level of Australia–US collaboration in undersea warfare capability', which, in its view, would be crucial in the development and through life management of the future submarine.<sup>5</sup>

### **Defence Capability Plan**

3.6 Details of the capability Defence was seeking to acquire from the acquisition of the 12 submarines specified in the White Paper were then translated into a more concrete proposal in the Defence Capability Plan (DCP) 2012. The future submarine project entered the DCP as SEA 1000. The DCP confirmed the government's intention that the future submarines would be assembled in South Australia.

3.7 The DCP anticipated that a staged acquisition process would be undertaken to acquire this capability and the government would on multiple occasions consider the project as information was gathered that facilitated government decision-making.<sup>6</sup>

3.8 Phases 1 and 2 of SEA 1000 would entail the design, build and delivery of 12 conventionally-powered submarines as well as infrastructure and integrated logistic support requirements. At the time of its publication, the DCP indicated that all options from military-off-the-shelf to a new design were being examined. Indeed, during the early stages of the program the following 4 options were being explored:

- Option 1—a military-off-the-shelf (MOTS) submarine modified to conform to Australian legislative requirements;
- Option 2—a MOTS submarine with a combat system of Australia's choosing that would be aligned pretty much to the combat system methodology used for the Collins class today;
- Option 3—an evolved Collins; and
- Option 4—broadly termed a new design.<sup>7</sup>

3.9 The 2013 Defence White Paper reaffirmed the government's intention to have 12 future submarines assembled in South Australia and again ruled out of

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4 Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, Defence White Paper, 2009, paragraphs 9.3 and 9.5.

5 Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030*, Defence White Paper, 2009, paragraph 9.8.

6 Department of Defence, *Defence Capability Plan, public version 2012*, p. 206, <http://www.defence.gov.au/publications/capabilityplan2012.pdf> (accessed 17 October 2014).

7 See Rear Admiral Gregory Sammut, Head, Future Submarine Program, DMO, *Proof Committee Hansard*, 30 September 2014, p. 35.

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consideration a nuclear-powered submarine capability to replace the Collins Class fleet. It did note, however, that the project would now focus on options 3 and 4 with further investigations into options 1 and 2 suspended. It also recognised that the future submarine program represented 'a true nation building endeavour' which presented both challenges and significant opportunities for Defence and Australian industry. It argued that to complete the program successfully, the government would need to support the Australian naval shipbuilding industry to develop and maintain a workforce 'skilled in a wide range of specialist activities'.<sup>8</sup>

## **Election and new government**

3.10 In the lead-up to the 2013 general election, the then Shadow Minister for Defence visited ASC and said that the Coalition was committed to building 12 new submarines in Adelaide.<sup>9</sup> The Coalition's Defence Policy made clear that, within 18 months of winning the election, it would make the decisions necessary to ensure that Australia would not experience a submarine capability gap. It also gave assurances that the work on the replacement of the current submarine fleet would centre around the South Australian shipyards.<sup>10</sup> The Coalition won the election.

## **New or evolved design**

3.11 In April 2014, the newly appointed Minister for Defence, the Hon Senator David Johnston, reminded a conference on submarines that before the last election, he gave his support to Defence's charted course for the Future Submarine program—the suspension of investigations into options 1 and 2 and more detailed investigation of options 3 and 4.<sup>11</sup> The May 2014 Portfolio Budget Statement confirmed that work would proceed on options 3 and 4.

3.12 But by mid-year, the certainty evident in the 2009 and 2013 white papers and the 2013 election campaign pronouncements about an Australian build began to dissipate. In July 2014, at an industry and defence conference, the minister acknowledged that there was significant debate around the future submarine and

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8 Department of Defence, *Defence White Paper 2013*, paragraphs 8.46–8.50 and 12.53–12.54, [http://www.defence.gov.au/whitepaper/2013/docs/WP\\_2013\\_web.pdf](http://www.defence.gov.au/whitepaper/2013/docs/WP_2013_web.pdf) (accessed 20 October 2014).

9 Press Conference, 8 May 2013, <http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22media%2Fpressrel%2F2715770%22> (accessed 30 June 2015).

10 The Coalition's Policy for Strategic Defence, p. 4, <http://www.liberal.org.au/our-policies> (accessed 17 October 2014).

11 ASPI, *The submarine choice*, Perspectives on Australia's most complex defence project, September 2014, p. 10. The conference, which was called, 'The Submarine Choice' brought together a 'group of distinguished speakers to discuss the reasoning behind, and the options for, Australia's most expensive and complex defence project—the replacement of the Collins class submarine fleet.

whether it should be built in Australia. He suggested that this debate must consider the cost, risk and schedule as well as the benefits of the different options.<sup>12</sup>

### **Speculation about Japanese submarine**

3.13 On 26 August 2014, a delegation of Japanese defence science technicians visited ASC, Osborne in South Australia. Mr Stuart Whiley, Interim CEO, ASC, informed the committee that DMO wanted to demonstrate to the Japanese the capability Australia had in-country in terms of the ASC facility and workforce.<sup>13</sup>

3.14 This visit by 18 Japanese dignitaries cast doubt over the government's stated intention to build the submarines in Adelaide. Media reports suggested that the visit had heightened fears that the Australian Government was contemplating building the future submarines overseas. For example, the South Australian Defence Industries Minister, the Hon Martin Hamilton-Smith, wanted to know whether the visit 'signalled a back down from the Coalition's election promise to build the submarines in Adelaide' and was urgently seeking an explanation from the Australian Government.<sup>14</sup>

3.15 In response to a question without notice seeking clarification on the government's intention with regard to the possibility of buying Japanese submarines, the Minister for Defence, told the Senate on 27 August 2014 that 'We are not ruling in or out anything here'. According to the minister there were only three places that Australia could approach for the design of a new submarine—France; Germany; and Japan.<sup>15</sup> Speculation continued to mount, however, about the possible decision to purchase the future submarines from Japan without an open competitive tender process.<sup>16</sup>

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12 'Minister for Defence—'Defence and Industry Conference 2014', Adelaide Convention Centre, 29 July 2014, <http://www.minister.defence.gov.au/2014/07/29/minister-for-defence-defence-and-industry-conference-2014/> (accessed 4 August 2014).

13 *Proof Committee Hansard*, 14 October 2014, p. 27.

14 ABC News, 'Japanese submarine experts visit Adelaide, sparking fears for shipbuilding future', 27 August 2014, <http://www.abc.net.au/news/2014-08-27/japanese-delegates-spark-fears-submarine-future/5699076> (accessed 27 September 2014). Evidence taken by the committee suggested that the delegation comprised 18 Japanese visitors. See *Proof Committee Hansard*, 14 October 2014, p. 1–2.

15 Questions without Notice, Defence Procurement, *Senate Hansard*, 27 August 2014, p. 41.

16 See for example, *Adelaide Advertiser*, 'Japanese subs could sink the budget', 10 September 2014; *Australian Financial Review*, 'Germans undercut Japan subs', 11 September 2014; *Daily Telegraph*, 'Don't torpedo this strategic industry', 12 September 2014; *Adelaide Advertiser*, 'Japanese subs deal will leave nation "at risk"', 13 September 2014; and Hugh White, the *Age*, 'What lies beneath: the real reason for Japan subs', 16 September 2014.



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## Committee's findings in second report—open tender

3.16 In its second report, the committee detailed at length the history of the future submarine project starting with its debut in the 2009 Defence White Paper, its entry into the DCP as SEA 1000 and confirmed in the 2013 White Paper. Having considered the activities of the government, the committee was concerned that the government was not only backing away from its commitment to build the submarines in Adelaide but that there would be no open, competitive tender. In the following section, the committee looks at developments in the tendering process for the future submarines since it tabled its report on this matter in November 2014.

### *Government's response*

3.17 As noted in the previous chapter, the government disagreed outright with the committee's recommendation that the government require an open tender process for any future naval acquisitions. The government stated that it supported open tendering whenever it was assessed as 'the best procurement method available to attain the core principle of achieving value for money for the Australian taxpayer'.<sup>17</sup>

3.18 In its second report, the committee drew attention to the emphatic and overwhelming support for a competitive process to select Australia's future submarine. Witness after witness agreed that decisive action must be taken to start the tender for the future submarines but insisted there was time for a truly competitive process where all proposals from tenderers could be tested and their claims validated.

3.19 Witnesses mounted numerous and compelling reasons for holding a competitive tender for the future submarines. But importantly, in their collective view, a competitive process was the only way that the government could ensure that Australia secured a conventionally-powered submarine that would meet the nation's unique requirements at a reasonable price for Australian taxpayers.

3.20 Witnesses outlined a process and timeline for a competitive tender to acquire the future submarines that would be effective and:

- challenge assumptions, interrogate assertions, question and compare proposals and finally allow specialist engineers and technicians to test and evaluate the tenderers' claims to ensure that the capability proposed was deliverable;
- place tenderers under competitive pressure so that they develop an optimal solution for Australia;

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17 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [3], [http://www.apf.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.apf.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

- stress test the costings associated with the proposals, compare costings to ensure value for money and pro-actively manage the risks associated with the proposals;
- ensure that the integration of other desired systems (particularly the combat system) was compatible with the proposed designs; and
- provide the means to give priority to an Australian build for the submarine and to maximise Australian content in the construction and through-life support of the boats.

3.21 Evidence, both before tabling its first report and since, recognised that Australia requires international partners to assist in the design to build a world-class submarine. Further, a competitive tender was the only way to ensure that Australia had access to the very best technology and was assisted by capable and reliable partners who shared Australia's commitment and ambitions. Based on this evidence, the committee remains firm in its view that anything short of this process would be folly and place the future submarine at unnecessary risk.

3.22 Although the government is yet to respond formally to the committee's findings in its second report, the government did refer to this project in its response to the committee's report on the new replenishment ships. In the case of the future submarine program, the government argued that an open tender process which involved approaching all submarine producers was 'clearly not an option'. It explained:

A formal request for tender to design and build the future submarine would be a lengthy process. It would involve extensive work to fully define submarine specifications against which competitors would then have to develop detailed designs that could be evaluated for performance and then priced with any degree of reliability.<sup>18</sup>

3.23 More recently, Mr David Gould, General Manager Submarines, DMO, indicated that he was not aware of any nation that 'goes to an open tender for a submarine'. He maintained that normally:

...even for a submarine that is a very close derivative of an existing design, you would expect a country to go through a very rigorous shortlisting process before they actually put it out to tender. Normally, after having made a selection of a designer, there is still an ongoing process of completing, perfecting and changing the design before a final contract is let.

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18 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [3], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

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I am not saying it has never happened. It was tried, so far as I understand, in the early stages of the Collins program and failed.<sup>19</sup>

3.24 Moreover, according to the government, this open tender process would take 'at least five years before reaching the point of selecting the international design partner'. In contrast, the government referred to its proposed competitive evaluation process that would be expected to run for at least 10 months after which the international partner would be selected.<sup>20</sup>

3.25 The committee has no understanding of how the government arrived at this unsubstantiated figure of 'at least five years' to complete an open tender for the future submarines, which contradicts the evidence presented in the committee's second report indicating there was time for a robust competitive tender process.

3.26 Thus, while the committee acknowledged that decisive action must be taken to get the process moving, it agreed with the contention that there was time for a competitive process where all proposals could be tested and claims validated. Indeed, Dr John White underscored the value of an open competitive process. He informed the committee:

The discipline of a well-structured competitive tendering process for major Defence assets has a solid track record for achieving the best value for money outcomes in recent naval projects such as the ANZAC Frigate and Minehunter projects.

Indeed the principle of open tendering has its roots in Australian Competition and Defence policy.<sup>21</sup>

3.27 In his view, a viable acquisition strategy over a tightly controlled timeframe was possible and supported his proposition by setting out a detailed schedule for such a competitive process.<sup>22</sup>

### **Commitment to build 12 submarines**

3.28 It should be noted that toward the end of February 2015, the Prime Minister raised doubts about acquiring the promised 12 submarines when he stated:

Now, sustainment alone on the basis of an eight submarine as opposed to a 12 submarine fleet will produce an ongoing 500 additional jobs. So, one

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19 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 53.

20 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [3], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

21 *Supplementary submission 21*, p. [1].

22 *Supplementary submission 21*, pp. [1–2].

way or another, there is going to be more submarine jobs here in South Australia.<sup>23</sup>

3.29 Many in the industry were concerned that the government was backing away from its commitment to build 12 submarines.<sup>24</sup> For example, the Hon Mr Hamilton-Smith, South Australian Minister for Defence Industries, referred to the Prime Minister raising 'the probability of building 8 submarines not 12, while making no commitment to an Australian build'.<sup>25</sup> Importantly, a number of specialists argued that 12 submarines would be prudent in order to provide 'at least one additional, operational submarine for other, concurrent tasks such as Task Group support at closer ranges or for ASW [anti-submarine warfare] force training'. In this regard, Rear Admiral Peter Briggs (Rtd) and Commodore Terence Roach (Rtd) maintained that allowing for the rule of three, Australia would require a total force of at least 12 submarines. The rule of three is based on the operational cycle requirement of three submarines—one will be in maintenance/refit, one will be training/preparing for a deployment and one will be available for deployment or deployed. They stated:

Twelve submarines is the minimum force size to enable Australia to sustain one deployed at long range in a demanding but practical cycle, provide one operational submarine available for other tasking and have some capacity for ASW training or other contingencies.<sup>26</sup>

3.30 The Submarine Institute of Australia (SIA) also indicated that at least 12 submarines were required.<sup>27</sup>

3.31 Importantly, in its second report, the committee detailed the integral role of the submarine fleet to Australia's national security. For example, the SIA stated that submarines were the only means available to allow the Australian Government to exert consistent influence along the full length of Australia's sea lines of

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23 Prime Minister, 20 February 2015, Transcript of the Prime Minister, The Hon. Tony Abbott MP, Joint doorstep interview with Mr Matt Williams MP, Federal Member for Hindmarsh, Adelaide, [http://parlinfo.aph.gov.au/parlInfo/download/media/pressrel/3676080/upload\\_binary/3676080.pdf;fileType%3Dapplication%2Fpdf](http://parlinfo.aph.gov.au/parlInfo/download/media/pressrel/3676080/upload_binary/3676080.pdf;fileType%3Dapplication%2Fpdf) (accessed 25 June 2015).

24 Peter Briggs, 'Future submarine: hybrid or Australian fitout?', *The Strategist*, ASPI, 16 February 2015, <http://www.aspistrategist.org.au/future-submarine-hybrid-or-australian-fitout/> (accessed 23 June 2015). Peter Briggs is a retired RAN submarine specialist, submarine commanding officer and past president of the Submarine Institute of Australia. See also, ABC News, 'Submarine program: Japan, France, Germany to compete for build process; Government promises hundreds of local jobs' updated 21 Feb 2015, <http://www.abc.net.au/news/2015-02-20/japan-france-germany-to-compete-for-submarine-build/6159834> (accessed 24 June 2015).

25 Martin Hamilton-Smith MP, Minister for Investment and Trade, Minister for Defence Industries, Minister for Veterans' Affairs, 'Federal Government's past promises a distant dream', 20 February 2015, <http://www.martinhamilton-smith.com.au/News/tabid/98/ID/3682/Federal-Governments-past-promises-a-distant-dream.aspx> (accessed 24 June 2015).

26 *Submission 17*, pp. 17–18.

27 *Submission 22*, p. 6.

communication.<sup>28</sup> Clearly, according to Rear Admiral Briggs, there are 'sound strategic, personnel and industrial reasons why we should build at least 12 and move to a continuous-build program'.<sup>29</sup>

3.32 Since the Prime Minister made his statement on 20 February 2015 suggesting the possibility of acquiring eight submarines, there has been no firm recommitment to build 12 submarines.

3.33 In the following section, the committee considers the government's proposed competitive evaluation process.

### Competitive evaluation

3.34 In early 2015, the government announced the acquisition strategy for the future submarine program. As noted earlier, this program is the largest Defence procurement program in Australia's history and represents an investment in the order of \$50 billion in Australia's security.<sup>30</sup>

3.35 On 8 February 2015, the Prime Minister stated that the government had always intended to have 'a competitive evaluation process' for the acquisition of the future submarines.<sup>31</sup> The following day, he noted that Australia wanted the best possible deal for the nation and the competitive evaluation process was 'exactly what you'd expect from a Government'.<sup>32</sup> The next day, on 10 February 2015, the Minister for Defence explained:

Notwithstanding much recent commentary, there are more effective and efficient ways to run a competitive evaluation process for complex capabilities such as submarines than just open tender.<sup>33</sup>

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28 Commander (Retired) Frank Owen, Secretary, SIA, *Proof Committee Hansard*, 30 September 2014, p. 1.

29 Peter Briggs, 'Future submarine: hybrid or Australian fitout?', *The Strategist*, ASPI, 16 February 2015, <http://www.aspistrategist.org.au/future-submarine-hybrid-or-australian-fitout/> (accessed 23 June 2015).

30 Australian Government, Budget 2015–16, *Defending Australia and its National Interests*, 2015, Department of Defence, p. 6, <http://www.defence.gov.au/Budget/15-16/2015-16-Brochure.pdf> (accessed 9 June 2015).

31 Prime Minister of Australia, the Hon Tony Abbott MP, Transcript, Interview with Chris Uhlmann, ABC News, 8 February 2015, <http://www.pm.gov.au/media/2015-02-08/interview-chris-uhlmann-abc-news> (accessed 18 May 2015).

32 Prime Minister of Australia, the Hon Tony Abbott MP, Transcript, Press Conference, Parliament House, 9 February 2015, Canberra, <http://www.pm.gov.au/media/2015-02-09/press-conference-parliament-house> (accessed 18 May 2015).

33 The Hon Kevin Andrews MP, Minister for Defence, 'Australian Submarine Corporation' Media Release, 10 February 2015, <http://kevinandrews.com.au/latest-news/2015/02/10/australian-submarine-corporation/> (accessed 18 May 2015).

3.36 This reference to a competitive evaluation process generated much confusion about what such a process would entail. Observers were seeking a working definition that would clarify the meaning of this phrase.<sup>34</sup> On 11 February 2015, the Prime Minister offered the following explanation:

There is quite a difference between an open tender and a competitive evaluation process. They're both competitive processes but an open tender is there for anyone and the last thing we would want to see is a Russian company, for argument's sake, bidding to produce an Australian submarine. It is standard defence procurement procedure for very sophisticated items of equipment to have a competitive evaluation process between selected tenderers but certainly we would encourage the Australian Submarine Corporation to be part of this competitive evaluation process.<sup>35</sup>

3.37 Within the fortnight, the Minister for Defence announced further details of the competitive evaluation process to be undertaken by Defence. The process was intended to provide 'a pathway for Australian industry to maximise its involvement in the program, whilst not compromising capability, cost, program schedule or risk'.<sup>36</sup> As part of the competitive evaluation process, Defence would seek proposals from potential partners for:

- pre-concept designs based on meeting Australian capability criteria;
- options for design and build overseas, in Australia, and/or a hybrid approach;
- rough order of magnitude (ROM) costs and schedule for each option; and
- positions on key commercial issues, for example intellectual property rights and the ability to use and disclose technical data.<sup>37</sup>

3.38 On Defence's advice, the government also endorsed a set of key strategic requirements for the future submarines:

- range and endurance similar to the Collins Class submarine;
- sensor performance and stealth characteristics that are superior to the Collins Class submarine; and

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34 See, for example, Andrew Davies, 'When the government says "competitive evaluation tender process"', *The Strategist*, ASPI, 11 February 2015.

35 Joint Doorstop Interview, Murrumbateman, 11 February 2015, Murrumbateman, New South Wales, Prime Minister, Treasurer, Minister for Agriculture, <http://www.pm.gov.au/media/2015-02-11/joint-doorstop-interview-murrumbateman> (accessed 18 May 2015).

36 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

37 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

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- the combat system and heavyweight torpedo developed jointly between the United States and Australia as the preferred combat system and main armament.<sup>38</sup>

3.39 At that time, and based on work completed by Defence, three countries emerged as potential international partners—France, Germany, and Japan. According to Defence, the three countries had 'proven submarine design and build capabilities' and were currently producing submarines. They were to be invited to participate in the competitive evaluation process that would 'assess their ability to partner with Australia' to develop a future submarine that meets Australia's capability requirements.<sup>39</sup>

3.40 Also, according to the government, Defence would soon be holding industry briefings to inform Australian industry about the process and how they could engage with potential international partners. In addition, an expert advisory panel would also be appointed to oversee the competitive evaluation process.<sup>40</sup>

### *Australian content*

3.41 According to the announcement, the government expected that significant work would be undertaken in Australia during the build phase of the future submarine including combat system integration, design assurance and land based testing. This would result in the creation at least 500 new high-skill jobs in Australia, the majority of which would be based in South Australia. Defence would invite potential international partners to seek opportunities for Australian industry participation in the future submarine program.<sup>41</sup>

3.42 Soon after the announcement, Mr Whiley told the committee that ASC was open to working with any potential submarine designer and builder and further that ASC had had informal conversations with three companies—Swedish SAAB, and the

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38 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

39 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

40 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

41 Department of Defence Ministers, Minister for Defence—Strategic direction of the Future Submarine Program, 20 February 2015, <http://www.minister.defence.gov.au/2015/02/20/minister-for-defence-strategic-direction-of-the-future-submarine-program/> (accessed 18 May 2015).

French and German companies about the future submarines. He explained, however, that ASC did not have a grasp of what the companies were proposing. He informed the committee that ASC had not had that level of detailed conversations because it was waiting on advice from government to understand what the requirements were so that it could make 'appropriate choices at that time based on the requirements' and how they should be met.<sup>42</sup> He explained that once ASC had that understanding it could engage with some of the other parties but at the moment everything was 'speculative'.<sup>43</sup>

3.43 The committee took further evidence two months after the government announced that it would conduct a competitive evaluation. Confusion about what this process entailed, however, was still apparent. Mr Glenn Thompson, Australian Manufacturing Workers' Union (AMWU), told the committee that the first thing that should happen is for the government to clarify the process around the future submarine program. He stated:

We are still effectively in limbo, and thousands of jobs in Adelaide are still hanging in the balance around the government not having made a commitment on an Australian build of future submarines. The government needs to make clear that the build will occur in Australia and that the process underway is a genuine one that does not favour one of the three options over the other.<sup>44</sup>

3.44 In June 2015, Senator the Hon Mathias Cormann, Minister for Finance, described the process as 'a proper competitive evaluation process', which involved assessing the relative merits, strengths and weaknesses of each potential option.

### ***Probity framework***

3.45 A probity framework applies to the competitive evaluation process and the personnel involved in the process will be subject to that framework including matters such as conflicts of interest and confidentiality. As an example of how Defence would manage a conflict of interest, Mr Harry Dunstall, Acting CEO, DMO, explained:

...we would normally point to provisions in our conditions of tender along the lines that bids must not be prepared with the assistance of individuals who have previously or in recent times worked with the Commonwealth. We would then write to the tenderer and suggest to them, 'You have to meet that requirement, that condition of tender. We will be expecting you to provide evidence as to how you do that. We would be interested to understand how you can do that given that you are now proposing to employ the particular individual.'<sup>45</sup>

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42 *Proof Committee Hansard*, 19 February 2015, p. 23.

43 *Proof Committee Hansard*, 19 February 2015, p. 24.

44 *Proof Committee Hansard*, 14 April 2015, p. 1.

45 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 48.



3.46 According to Mr Dunstall, the department has post-separation employment policies that it would 'expect people to comply with when they are taking up employment following their departure from the organisation'.<sup>46</sup> The Australian Government Solicitor has been appointed the probity adviser.<sup>47</sup>

### *Expert panel*

3.47 An expert advisory panel has been appointed to oversee the process including to ensure its probity and the maintenance of confidentiality in relation to all sensitive information received during the process, and to manage any conflicts of interest.<sup>48</sup> The role of the panel of experts is to provide assurance to the government on the soundness of the competitive evaluation process: that the conduct of the process is 'defensible from a probity and accountability perspective'. The panel is also to provide assurance that the participants are treated 'fairly and equitably in accordance with Commonwealth legislative and policy requirements'.<sup>49</sup>

3.48 The Minister for Defence explained that the panel's oversight was to provide the government and the public with confidence that the process would robustly address all relevant factors. It would allow the government 'to balance important considerations, for acquisition and through life support, including capability, cost, schedule, and risk'.<sup>50</sup>

3.49 On 5 June 2015, the minister announced that the following members had been appointed to the advisory panel:

- Professor Donald Winter, a former Secretary of the United States Navy;

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46 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 48.

47 Mr Dunstall, Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 48.

48 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (accessed 18 May 2015) and Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, pp. 46 and 48.

49 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (accessed 18 May 2015). Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, pp. 126–128 and Question on Notice No. 2113—SEA 1000 Competitive Evaluation Process—Panel, Senator Xenophon asked the Minister representing the Minister for Defence on 7 April 2015, [http://www.aph.gov.au/Parliamentary\\_Business/Chamber\\_documents/Senate\\_chamber\\_documents/qon/question?number=2113&parliament=44](http://www.aph.gov.au/Parliamentary_Business/Chamber_documents/Senate_chamber_documents/qon/question?number=2113&parliament=44) (accessed 9 June 2015).

50 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (accessed 18 May 2015).

- The Honourable Julie Anne Dodds Streeton, a former Justice of the Federal Court of Australia;
- Mr Ron Finlay, one of Australia's leading infrastructure specialists with very extensive legal experience; and
- Mr Jim McDowell, a member of the First Principles Review team with very extensive Defence experience.<sup>51</sup>

3.50 The minister appointed the members of the panel from candidates proposed by the Department of Defence.<sup>52</sup> Collectively, the members brought with them experience in complex military acquisition programs, legal and probity matters, and major projects.<sup>53</sup>

### *Criteria—competitive evaluation process*

3.51 Defence informed the Senate that the common evaluation framework to assess the participants' proposals under the competitive evaluation process included the following criteria:

- Platform system criteria—used to evaluate the pre-concept designs and determine their ability to meet key capability requirements.
- Combat system criteria—used to assess the ability of participants to integrate the combat system and heavyweight torpedo jointly developed by Australia and the United States into the future submarine.
- Cost and schedule criteria—used to assess affordability and the acceptability and appropriateness of proposed timeframes for delivery of the future submarine.
- Project management criteria—used to assess plans by which the program will be executed. Design and safety management criteria have been developed to determine how the proposed design process would accommodate technology insertions and meet Australian legislative safety requirements.

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51 Department of Defence Ministers, 'Minister for Defence—Expert Advisory Panel on the Future Submarine Competitive Evaluation Process', 5 June 2015, <http://www.minister.defence.gov.au/2015/06/05/minister-for-defence-transcript-expert-advisory-panel-on-the-future-submarine-competitive-evaluation-process-5-june-2015/> (accessed 10 June 2015).

52 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 46. See also Mr Gould, Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 93.

53 Department of Defence Ministers, 'Minister for Defence—Expert Advisory Panel on the Future Submarine Competitive Evaluation Process', 5 June 2015, <http://www.minister.defence.gov.au/2015/06/05/minister-for-defence-transcript-expert-advisory-panel-on-the-future-submarine-competitive-evaluation-process-5-june-2015/> (accessed 10 June 2015).

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- Australia's sovereign ability to sustain the future submarine—assessed through sustainment criteria and the proposed level of Australian industry involvement would also be evaluated.
  - Build strategy criteria—used to assess the method of build and associated facilities requirements while crewing and training criteria would consider the ability to implement Australia's preferred crewing concept, habitability and training requirements.<sup>54</sup>

3.52 The adequacy of the intellectual property arrangements, technology access, commercial arrangements and ability to achieve Australia's sovereign support requirements would be assessed under commercial and government criteria. The participants' appreciation of program risks and their management would also be assessed.<sup>55</sup> The Minister for Defence indicated that weightings would not be applied to any of the selection criteria.<sup>56</sup>

3.53 The committee is unsure of the extent to which through-life support, maintenance and upgrades are to be evaluated in this competitive evaluation process, particularly in light of the strategic importance of self-reliance in keeping these vessels operational and at the cutting edge of technology. Indeed, as highlighted in its first report, the costs and effectiveness of keeping the future submarines operational and enhancing their capability as technology advances should be central to any consideration. Given the experiences of the Collins Class submarines, the committee is of the view that this evaluation should require the contenders to detail what their design would be to meet the top level requirements and essential specifications and standards needed to maintain and operate the submarines in Australia.

3.54 Also, given that weightings would not be applied, the committee is similarly, unsure about the priority to be afforded to maximising Australian content. Indeed, the committee suggests that this competitive evaluation should be premised on an Australian build. In other words, the request for proposal should be seeking details on the proposed preliminary design for the future submarines that would show how the

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54 Answer to Question on Notice No. 2112—SEA 1000 Competitive Evaluation Process—Criteria and Strategic Considerations, Senator Xenophon asked the Minister representing the Minister for Defence on 7 April 2015, [http://www.aph.gov.au/Parliamentary\\_Business/Chamber\\_documents/Senate\\_chamber\\_documents/qon/question?number=2112&parliament=44](http://www.aph.gov.au/Parliamentary_Business/Chamber_documents/Senate_chamber_documents/qon/question?number=2112&parliament=44) (accessed 9 June 2015).

55 Answer to Question on Notice No. 2112—SEA 1000 Competitive Evaluation Process—Criteria and Strategic Considerations, Senator Xenophon asked the Minister representing the Minister for Defence on 7 April 2015. [http://www.aph.gov.au/Parliamentary\\_Business/Chamber\\_documents/Senate\\_chamber\\_documents/qon/question?number=2112&parliament=44](http://www.aph.gov.au/Parliamentary_Business/Chamber_documents/Senate_chamber_documents/qon/question?number=2112&parliament=44) (accessed 9 June 2015).

56 Answer to Question on Notice No. 2112—SEA 1000 Competitive Evaluation Process—Criteria and Strategic Considerations, Senator Xenophon asked the Minister representing the Minister for Defence on 7 April 2015. [http://www.aph.gov.au/Parliamentary\\_Business/Chamber\\_documents/Senate\\_chamber\\_documents/qon/question?number=2112&parliament=44](http://www.aph.gov.au/Parliamentary_Business/Chamber_documents/Senate_chamber_documents/qon/question?number=2112&parliament=44) (accessed 9 June 2015).

tenderer would meet Australian requirements and provide an indicative price for an Australian build. This requirement would not preclude the tenderer from submitting an indicative price for an overseas or hybrid build. But, consistent with the committee's recommendation, the preferred choice should be a local build.

### ***Purpose of the competitive evaluation process***

3.55 Essentially, the purpose of the evaluation is to choose a design for the future submarines and a build partner for Australia. To date, Defence have preselected three entities backed by their governments and who, according to Mr Gould, are well qualified by their pedigree to go through the complete design and build process. Defence have provided the three contenders with a very specific set of documentation. He explained that Defence have:

...asked them a series of very specific questions based on the performance requirements that we have, questions about our industrial approach, questions about their commercial approach, and the degree of industrial involvement they would see happening in Australia to bring out, first of all, what is the quality of their understanding of the relationship between the technical and performance requirements of the design and how much adaptation of designs they would start with and have to do. What we expect to do, having selected somebody, is to go into the detailed design in concert with them.<sup>57</sup>

3.56 The three contenders must now undertake pre-concept designs that meet these 'very specific mission and performance requirements'. Mr Gould noted that:

These are not final designs; they are pre-concept designs. It requires them to produce options for builds that have previously been discussed in different ways. It requires them to release rough order of magnitude costs and particularly the basis on which those rough order of magnitude costs have been assembled and their positions on the key commercial issues. There is a very specific set of contract deliverables in there. The companies are on contract to do that. The way in which they have to engage in the process has been set out in terms of workshops, meetings, progressive evaluation and the way in which the answers to the contract deliverables are actually produced and given to the project team. So it is not vague; it is very, very specific.<sup>58</sup>

3.57 Although the tenders would contain time lines and dollar figures, they would 'not be fixed for the full program'—they would provide a 'rough order of magnitude' for the schedule and the cost. As Mr Gould indicated, the design would not be sufficiently mature to fix the cost and timescale:

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57 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 53.

58 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 60.

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To try and fix either of those things at that point would be basically asking the companies to mislead us. The design will not be sufficiently mature in any of those circumstances for them to do that. What the cabinet will get is an analysis of the merit of partnering in the long-term with one of the three contenders.<sup>59</sup>

3.58 Mr Gould expanded further:

None of the contenders have suggested to me that they would be in a position at that point to have developed a design to the point of maturity where they could commit to a complete production of the contract. They understand very well that the normal process in their own countries of going through this sort of program is to produce a concept design to the point where they have an outline solution to the technical tenders in the program, and then to work very closely with their client to take that design through and make the appropriate trade-offs of cost, capability and time to produce a program of which there can be good assurance about the outcome.

...What we need to do here is to make sure that we can engage, unencumbered by competition, with the lead design partner to make sure that we produce an outcome which is understood by the Commonwealth, which produces the right trade-offs of cost and capability for the Commonwealth, and which we can be assured will produce an outcome in a timescale that we understand and at a cost that we understand.<sup>60</sup>

3.59 For the committee, the numerous references to the maturity of the design raises some alarm bells. One of the most telling lessons from previous major builds, from evidence before this committee and the most recent RAND report is the emphasis on ensuring that the design is sufficiently mature before committing to the design and builder. This matter is discussed later in this chapter.

***Schedule for competitive evaluation process***

3.60 The government anticipated that the competitive evaluation process would take approximately ten months, that is, have the bids by the three potential partners finalised by the end of 2015. Following this process, the National Security Committee, which would typically involve the Prime Minister, the Treasurer, the Minister for Defence, the Minister for Finance and the Minister for Industry, would take account of 'all sorts of factors' and arrive at a decision. At the end of the process, the government would judge the best way to proceed. Senator Cormann stressed:

But fundamentally and ultimately what will drive our decision is obtaining for Australia the best possible submarines for the best possible defence and

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59 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 91.

60 Foreign Affairs, Defence and Trade Legislation Committee, Estimates, *Proof Committee Hansard*, 1 June 2015, p. 92.

national security outcome at the best possible price and subject to these objectives to maximise Australian industry involvement.<sup>61</sup>

### *Engagement with prospective partners*

3.61 In the meantime, ASC was engaging with all the potential international partners—Germany, France and Japan—to assess who might be able to help Australia achieve the best possible value.<sup>62</sup> This engagement was consistent with ASC position as 'a very significant stakeholder' and government business enterprise that would be involved in some way in the procurement and maintenance of the next generation of submarines. According to the Minister for Finance, ASC's participation was to ensure that it and prospective partners could understand each other's capabilities, requirements and opportunities to partner'.<sup>63</sup>

3.62 Indeed, representatives from France, Germany and Japan have visited ASC over recent months.<sup>64</sup> In April 2015, Mr Andy Keough, General Manager, Business and Strategic Development, ASC, informed the committee that while the competitive evaluation process was specifically between the government and the three invited to participate, ASC was working with those parties.<sup>65</sup> He explained that a German delegation had visited the ASC and the engagement was not just with TKMS. He noted that the meetings involved a broader range of representatives from German industry, science and technology. He indicated that ASC would also meet and talk with the French company and some of their delegates, as well as attend a conference in Japan and in due course meet the Japanese delegation.<sup>66</sup>

3.63 Subsequently, Mr Whiley informed the committee that a Japanese delegation had visited ASC on 26 May 2015 and were to visit Henderson the following day, 'generally to see our capability and understand what we may have to offer in terms of their proposal'. The Japanese delegation comprised different agencies—the Japanese Ministry of Defense, representatives from Mitsubishi Heavy Industries, and representatives from Kawasaki Heavy Industries. Mr Whiley thought there were in the order of about 19 participants in the forum.<sup>67</sup>

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61 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 69.

62 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 49.

63 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 48.

64 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 47.

65 *Proof Committee Hansard*, 14 April 2015, p. 7.

66 *Proof Committee Hansard*, 14 April 2015, p. 7.

67 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 47.

3.64 According to Mr Keough, the overseas delegations that had visited the shipyard had given 'very favourable' feedback' both directly to ASC and to other parties. Mr Keough informed the committee that:

Certainly, as to the facilities we have put down there and the capital investment we have made, some of those parties have been very impressed to see that capital investment and to see how we have been able to use that for greater outcomes and productivity.<sup>68</sup>

3.65 Mr Keough stressed, however, that ASC was proceeding 'politely and carefully'. He explained:

...before we start into this, there is an enormous amount of work that needs to be done from a legal probity perspective that we are working on at the moment to make sure that we respect the process, understand the process and follow the process.<sup>69</sup>

3.66 Mr Whiley explained that for the competitive evaluation process, ASC had been instructed to make sure that it was open and fair across all the three recipients.<sup>70</sup> ASC had a small team that was working on the process with the CEO, the chairman, the board and all the executives 'very closely attuned' to what was going on in the competitive evaluation process.<sup>71</sup>

3.67 The Minister for Defence was also actively engaged in consultation with the three countries. For example, during the third week in April 2015, the minister met his French and German counterparts and industry leaders to discuss their involvement in the competitive evaluation process, emphasising the need to maximise Australian industry participation.<sup>72</sup> On 23 April 2015, he attended a bilateral meeting with Minister for Defence, Dr Ursula von der Leyen and later toured ThyssenKrupp Marine Systems shipyards.<sup>73</sup> The following day, he spoke with his French counterpart,

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68 *Proof Committee Hansard*, 14 April 2015, p. 13.

69 *Proof Committee Hansard*, 14 April 2015, p. 8.

70 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 49.

71 *Proof Committee Hansard*, 14 April 2015, p. 8.

72 Department of Defence Ministers, Minister for Defence—Visit to Germany, France, Belgium and the United Kingdom, 21 April 2015, <http://www.minister.defence.gov.au/2015/04/21/minister-for-defence-visit-to-germany-france-belgium-and-the-united-kingdom/> (accessed 18 May 2015).

73 Department of Defence Ministers, Minister for Defence—Bilateral meetings in Germany, 23 April 2015, <http://www.minister.defence.gov.au/2015/04/23/minister-for-defence-bilateral-meetings-in-germany/> (accessed 18 May 2015).

Minister for Defence Jean-Yves Le Drian and toured the Direction des Constructions Navales Services (DCNS) shipyards.<sup>74</sup>

### *Adequacy of tender process*

3.68 The committee notes that at the end of this competitive evaluation process, an international partner will be selected based on the criteria described above. The committee is concerned, however, that to select just one contender at this early juncture may be premature and that the government should consider proceeding with two tenderers who would then further refine their proposals and develop their design to a more mature stage. To support the committee's findings, it refers to the recent RAND study which recommended, *inter alia*:

- selecting a mature design at the start of the build and limiting the amount of changes once production begins;
- the necessity of ensuring a well-integrated designer, builder and supplier team; and
- ensuring there is visionary leadership provided by company management.<sup>75</sup>

3.69 Also, in its second report, the committee detailed some of the potential complications in selecting a Japanese designer. The committee takes this opportunity to reiterate some of these concerns, which include language barriers, the lack of experience in, and Japanese political sensitives around, exporting military technology and differences in industrial culture and organisational processes. The recent experience with Navantia that produced their drawings in Spanish is a timely reminder of the pitfalls in knowledge transfer. In contrast to the Japanese, Germans are very experienced as are the French to some degree in exporting Defence technology.

3.70 Furthermore, the committee notes the importance of the Australian Government moving away from government-to-government discussions with Japan to an Australian government-to-commercial-entity discussions with Kawasaki and Mitsubishi and whether it is to be one company or a joint enterprise.

3.71 The short-listing to two contenders after the initial 10-month evaluation process would allow them time, during the next stage, to develop and offer full design definition and fixed price contracts for an Australian build with overseas options as a

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74 Department of Defence Ministers, Minister for Defence—Ministerial visit to France—24 April 2015, <http://www.minister.defence.gov.au/2015/04/24/minister-for-defence-ministerial-visit-to-france-24-april-2015/> (accessed 18 May 2015).

75 See, for example, Department of Defence Ministers, Minister for Defence—Release of the RAND Corporation report, 16 April 2015, <http://www.minister.defence.gov.au/2015/04/16/minister-for-defence-release-of-the-rand-corporation-report/> (accessed 18 May 2015). For copy of Rand report, *Australia's Naval Shipbuilding Enterprise: preparing for the 21<sup>st</sup> Century*, [http://www.rand.org/content/dam/rand/pubs/research\\_reports/RR1000/RR1093/RAND\\_RR1093.pdf](http://www.rand.org/content/dam/rand/pubs/research_reports/RR1000/RR1093/RAND_RR1093.pdf) (accessed 9 June 2015).



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comparator. Thus, importantly, Defence would require a price for defined, through-life support. Indeed, the tenderers would need to demonstrate that the submarines would be totally supportable within Australia without reliance on overseas supply chains. The committee believes that this approach is important because it would make the designer and the builder think exactly about what it takes to maintain, service and provide the spares to the submarines for a defined period—10 or 15 years.

3.72 It may also be worthwhile for the government to consider establishing a Naval/Submarine Construction Authority as a 'non corporate Commonwealth entity with appropriate industry and Defence expertise and authoritative leadership to deliver the future submarine'.

3.73 Finally, the focus of this inquiry, in particular, has been on the tender process for the new supply ships and the future submarines. It has highlighted the importance of having a robust, open and competitive tender process to ensure that Australia selects the best design and build partner to acquire the future submarines. There have been a number of previous reports that have delved deeper into Defence tender and contracting processes for major acquisitions that went to critically important matters such as the need for the early engagement of industry and timely test and evaluation processes. The 2012 FADT References Committee report on procurement procedures for Defence capital projects gave special attention to the future submarine and the committee notes in particular recommendation 16.<sup>76</sup>

## Conclusion

3.74 Despite the announcement that Defence would conduct a competitive evaluation process, the committee remains deeply concerned that this process falls short of a truly rigorous procurement process for the largest and most complex defence program in Australia's history.

3.75 Evidence given during Budget Estimates in June confirmed that the competitive evaluation process was not designed to deliver three competitive contract options; would not produce accurate costs and build schedules; nor would the resulting designs be of a 'mature' nature.

3.76 Evidence was also presented during Budget Estimates that Japan's involvement in the process to acquire the future submarines is based on political imperatives rather than merit. This is concerning given that the government has restricted the potential involvement of Australian industry, and other international bidders, on the basis that the competitive evaluation process was a merit-based process. Evidence clearly indicates that this is simply not the case.

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76 Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012, recommendation 16. See Appendix 3 at the end of this report on the future of Australia's naval shipbuilding industry for the recommendation in full.

3.77 While the committee agrees that timeliness is an important consideration, it remains strongly of the view that the government's decision not to undertake a competitive tender is poorly-considered and highly risky. Noting the strategic importance of the future submarines, the complexity of the undertaking and the costs involved, the committee believes that further caution in conducting the tender is warranted.

3.78 The committee is concerned by recent reports that the government is considering the acquisition of eight submarines instead of 12. The 2009 and 2013 Defence White Papers outlined the strategic rationale for the quantum of vessels. Navy confirmed recently at Budget Estimates that the threats underpinning this strategic assessment had not diminished.

3.79 In a speech to the Australian Submarine Institute in March this year, the Minister for Defence said that '[b]y 2030, half of the world's submarines will be in Australia's broader strategic region'. Evidence given to this inquiry by submarine experts also reaffirmed the need for 12 submarines to provide an effective submarine force. The committee is particularly concerned that a potential reduction in the number of submarines to be acquired from 12 to eight does not reflect the strategic realities that the Defence Minister has recently acknowledged, nor would it result in an effective force to meet both current and future challenges.

3.80 It is also the view of the committee that eight submarines will not provide the certainty industry requires to ensure that the economic value of this project is optimised.

3.81 Based on evidence given by expert submariners and industry, the committee is of the view that an acquisition process that is competitive, allows for maximum participation from prominent submarine builders and is complete by the end of 2016 would ensure that the first of 12 future submarine would be in the water by the middle of the next decade.

3.82 Noting this, the committee makes the following recommendations:

### **Recommendation 2**

**3.83 The committee recommends that the government adopt the following procurement process to acquire 12 future submarines:**

- **a twelve to eighteen month procurement process, involving a Request for Proposal, followed by a Request for Tender;**
- **invite the most prominent and relevant submarine designers to participate in the process, encompassing Germany, France, Japan and Sweden;**
- **conduct a Funded Project Definition Study; and**
- **down-select two submarine builders to provide full design definition and fixed priced contract bids.**

**3.84** The committee also reaffirms recommendation three from its report on the future submarines that:

**3.85** Given the weight of evidence about strategic, military, national security and economic benefits, the committee recommends that the Australian Government require tenderers for the future submarine project to build, maintain and sustain Australia's future submarines in Australia.

**3.86** Also, given the national significance and complexity of the project to acquire the future submarine, the committee recommends that the government establish a Naval/Submarine Construction Authority as a 'non corporate Commonwealth entity with appropriate industry and defence expertise and authoritative leadership to deliver the future submarine'.

**3.87** The committee further recommends that Defence heed and apply the lessons learnt from the AWD regarding the transfer of knowledge and those of the Collins Class submarine about the consequences of being a parent navy to the future submarines.



# Chapter 4

## AWD—Project of concern

4.1 When announcing the limited tender for the new supply ships, the Minister for Defence made a direct link between the decision to restrict the tender to two overseas shipbuilders and the productivity of local shipyards. Indeed, he cited the 'current low productivity of shipbuilders involved in the AWD program and value for money considerations' as two of three reasons for proceeding with the limited tender.<sup>1</sup> At that time, he made his meaning clear when he said 'Australian industry must be internationally competitive and meet international productivity benchmarks'.<sup>2</sup> References to poor productivity in Australian shipyards also cast a shadow over an Australian build for the future submarine and, indeed, for the future of Australia's naval shipbuilding industry.

4.2 There is no doubt that a number of Australia's major naval ship acquisitions have experienced serious problems leading to cost and schedule overruns, many of which should have been avoided, or at the very least anticipated and managed better.<sup>3</sup> Indeed, both the sustainment of the Collins Class Submarines (added November 2008) and AWD (added June 2014) are on the projects of concern list. Projects of concern are those acquisition projects or sustainment activities identified as having very significant risks or issues relating to schedule, cost and capability.<sup>4</sup> In this chapter, the committee's main focus is on the performance and productivity of Australian naval shipyards in particular on the AWDs. But firstly, the committee provides a brief update on productivity improvements in the Collins Class submarine sustainment program.

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- 1 'Minister for Defence—Boosting Australia's maritime capabilities', Media Release, 6 June 2014, <http://www.minister.defence.gov.au/2014/06/06/minister-for-defence-boosting-australias-maritime-capabilities/> (accessed 4 August 2014).
  - 2 'Minister for Defence—Transcript—Naval shipbuilding announcement, CEA Technologies, Canberra', 6 June 2014, p. 6, <http://www.minister.defence.gov.au/2014/06/06/minister-for-defence-transcript-naval-shipbuilding-announcement/> (accessed 4 August 2014).
  - 3 The Senate Foreign Affairs, Defence and Trade References Committee chronicled the history of poor performance of a number of Defence's major acquisitions. See Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012, chapter 2.
  - 4 Department of Defence, Departmental Procurement Policy Instruction NO 14/2011, 23 August 2011, [http://www.defence.gov.au/dmo/multimedia/dppi\\_14\\_11-9-3995.pdf](http://www.defence.gov.au/dmo/multimedia/dppi_14_11-9-3995.pdf) (accessed 1 May 2015). It notes that 'Where a project has been identified through the Early Indicators and Warnings framework and has undergone a diagnostic Gate Review, a submission may be made to Government recommending that the project be listed as a Project of Concern. The decision to identify an acquisition project or sustainment activity as a Project of Concern is a decision made by Government'.

4.3 In its second report, the committee noted the poor performance record of the sustainment program for the Collins Class submarine but also the significant improvements that have been made. Evidence taken since then confirms that improvements in this program continue. According to Mr Andy Keough, ASC:

Prior to Coles [Mr John Coles undertook a review of the sustainment of the Collins Class] there were concerns about productivity and outcomes of submarine performance. Even before Coles came in there was a lot of work done. We engaged with DMO to bring in an expert consultant to assist us. It was jointly funded by ASC and the DMO. He shone a light on some of the issues we had there, particularly in terms of low labour utilisation. From that point of time seeing those problems, we then started addressing some of those issues through clarifying the roles and responsibilities, and Coles then built on the back of that through further changes to the roles and responsibilities and setting up an enterprise arrangement where the Navy, ASC and DMO came together under the submarine enterprise to improve the outcomes of the program.

...

Coles in his report in March 2014 noted the remarkable turnaround. We are on track to obtain what he defined as being world-class benchmark performance in the 2017 time frame. The major enabler for that was a change to the maintenance routines for the submarines. We moved from a shorter operating period to now a 10-year operating cycle with a two-year deep-level maintenance activity. Prior to Coles those deep-level maintenance activities had been greater than three years, and now we are halfway through delivering the first submarine under that new operating regime for a two-year time line. We are currently just ahead of schedule on that.<sup>5</sup>

4.4 The committee also mentioned in its second report some of the changed work practices and investment in infrastructure that has produced much improved performances. Indeed, Mr Keough stated that much of the 'remarkable turnaround' with the program being on track to achieve world-class benchmarks in 2017 had been achieved through capital investment.<sup>6</sup>

4.5 The construction of the maintenance tower was one of the most significant innovations. This infrastructure has enabled the deep level maintenance of the Collins to be done much more effectively and much more quickly.<sup>7</sup> According to Mr Keough the level of investment for the maintenance support tower and the diesel test facility was in the order of \$20 million.<sup>8</sup> ASC has also relied on engineering delegations, as Mr Keough explained:

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5 *Proof Committee Hansard*, 14 April 2015, p. 7.

6 *Proof Committee Hansard*, 14 April 2015, p. 9.

7 *Proof Committee Hansard*, 14 April 2015, p. 13.

8 *Proof Committee Hansard*, 14 April 2015, p. 13.

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We have done an engineering review of the maintenance periodicity, which in some cases meant that we were doing a job every 12 months, and we have showed through analysis that we can safely extend the period for those tasks from 12 months to 15 months. The 24-month tasks we have shifted to 30 months. The 60-month tasks we have moved to 72 months. They are things that do not relate to people's idea of productivity, but ultimately they allow us to optimise the maintenance whilst maintaining the reliability and the capability of the submarines and achieving better outcomes for the program.<sup>9</sup>

4.6 Without doubt, these reforms have produced significant improvements in productivity in the sustainment of the Collins Class submarine. In recent months, however, attention has been on the performance of the AWD project. In the following section, the committee provides some context taken from its first report before considering recent developments with the AWDs.

### **AWDs**

4.7 The AWD project is being delivered through an alliance-based contracting arrangement between ASC AWD Shipbuilder Pty Ltd, Raytheon Australia Pty Ltd and the government, represented by the DMO. This project—to acquire three Hobart AWDs and their support system—is one of the largest Defence procurement projects in Australia and is intended to form a critical element of the ADF's joint air warfare defence capability. It received first pass approval in 2005 and second pass in 2007. The three ships are being built in Australia.

4.8 In 2010, signs of trouble surfaced in this key acquisition program. At this time, difficulties were encountered in relation to the engineering and construction of some of the first AWD hull blocks. To address this problem, block work was reallocated between BAE, Forgacs and Navantia and the Alliance Operational Schedule was amended. On 6 September 2012, following stakeholder review and support for the time-line extension and resource considerations, the then Minister for Defence announced that the AWD schedule would be re-baselined.<sup>10</sup> This measure would extend the period of work for the Alliance and its partners, including the shipyards in Adelaide (ASC) and Newcastle (Forgacs). According to the minister the revised project plan would:

- reduce peak demand on project critical resources and facilities and project risk;
- not increase the cost of the project nor result in the loss of any jobs; and

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9 *Proof Committee Hansard*, 14 April 2015, p. 13.

10 Australian National Audit Office, Report No. 12 2013–14, *2012–13 Major Projects Report*, December 2013, p. 153, [http://www.anao.gov.au/~media/Files/Audit%20Reports/2013%202014/Assurance%20Report%2012/AssuranceReport-2013-2014\\_12.pdf](http://www.anao.gov.au/~media/Files/Audit%20Reports/2013%202014/Assurance%20Report%2012/AssuranceReport-2013-2014_12.pdf) (accessed 6 August 2014).

- very importantly, help retain skills in the naval shipbuilding industry.<sup>11</sup>

4.9 The re-baselined construction schedule was intended to help the Navy reduce the demands and risks associated with accepting into service two major capabilities (LHDs and the AWD) at around the same time.<sup>12</sup>

4.10 It is worth noting that at this time one of the challenges for the contractor was starting production for the AWDs from a cold start and with a reduced workforce. Further, the Melbourne BAE Systems shipyard was stretched, working on two major projects at the same time—steel blocks for the AWDs and the superstructure and integration of the LHDs.<sup>13</sup>

4.11 Mr William Saltzer, BAE Systems, referred not only to the significant challenge presented by the cold start, but problems with the drawings from Navantia, which were produced to build ships in Spain. Firstly, he explained what the cold start meant in practice:

...in Adelaide you had a brand new shipyard that was created to produce AWDs and a workforce to be built. They had no previous history or experience in building warships in Adelaide, so they had to go at it from a cold start. In Williamstown, the last Anzac frigate was delivered in the early 2000s—I think it was 2004. We did not start building AWD blocks and LHD blocks until 2010. In the interim, we had only a couple of small patrol boats to build and our workforce went down to a very small number, so when it came to the amount of work we had to do on AWD and LHD, we had to ramp back up to about 1,300 people. That was the cold start concept. It means you have to bring in and rejuvenate a workforce, retrain people, get everybody used to working on ships again, get your planning processes down and go through a whole regeneration of the industry, essentially.<sup>14</sup>

4.12 Secondly, Mr Saltzer pointed to the difficulties encountered with the transfer of knowledge from the Spanish shipyard to Australia. He noted that drawings in any

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11 'Minister for Defence, Minister for Defence Materiel and Minister for Finance and Deregulation—Joint Media Release—Air Warfare Destroyer update', 6 September 2012, <http://www.minister.defence.gov.au/2012/09/06/minister-for-defence-and-minister-for-defence-materiel-joint-media-release-air-warfare-destroyer-update-2/> (accessed 4 August 2014).

12 'Minister for Defence, Minister for Defence Materiel and Minister for Finance and Deregulation—Joint Media Release—Air Warfare Destroyer update', 6 September 2012. The re-baselined schedule meant that the delivery dates for the ships would be for HMAS *Hobart* (AWD01)—March 2016; HMAS *Brisbane* (AWD02)—September 2017 and HMAS *Sydney* (AWD03)—March 2019.

13 The Hon. Stephen Smith MP, Minister for Defence, Media Release, 'Changes to Air Warfare Destroyer Construction Program', MIN663/11, 26 May 2011, <http://www.defence.gov.au/minister/Smithhttp.cfm?CurrentId=11862> (accessed 2 January 2012). The minister stated clearly, 'The Melbourne BAE Systems shipyard remains stretched, working on two major projects at the same time—steel blocks for the Air Warfare Destroyers and the superstructure and integration of the Landing Helicopter Dock Ships'.

14 *Proof Committee Hansard*, 14 April 2015, p. 22.



shipbuilding program have to be customised, to be workable, according to the build strategy, the equipment and the levels of training and knowledge of the workforce that is going to actually build them. In his view:

One of the mistakes in AWD was that it was not built in to the very front end of the program—to have that kind of transfer of technology, that transfer of knowledge capability, built into the front end of the contract. If you are not careful, you are going to do the same thing on submarines and you are going to do the same thing on future frigate. You have got to get the shipyards in Australia that are going to be involved with those ships throughout their life involved from day one in the design, in the production and into the in-service support.<sup>15</sup>

4.13 Concerns about the project, however, did not abate.<sup>16</sup> On 18 December 2013, the Minister for Finance announced that, since the Coalition had assumed government, he had received detailed briefings from key stakeholders associated with the AWD program. In his assessment, there were 'clearly issues associated with this important program' and he foreshadowed the establishment of an independent review.<sup>17</sup> The review was intended to give government an independent perspective on all the issues with the program and to make some recommendations on the best way to proceed.<sup>18</sup>

4.14 On 25 February 2014, the Minister announced the appointment of former United States Secretary of Navy, Professor Don Winter, and former Transfield chief, Dr John White, to conduct jointly the independent review of the AWD program.<sup>19</sup>

4.15 While this review was underway, the Australian National Audit Office (ANAO) released its performance audit report on 6 March 2014 on the AWDs. The report, which was highly critical of the performance of the project, drew widespread

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15 *Proof Committee Hansard*, 14 April 2015, pp. 22–23.

16 See for example, Sarah Martin, *The Australian*, 'Fears of further delays to the nation's biggest defence project', September 18, 2013, <http://www.theaustralian.com.au/national-affairs/policy/fears-of-further-delays-to-the-nations-biggest-defence-project/story-e6frg8yo-1226721296385> (accessed 6 August 2014).

17 'Minister for Finance and Minister for Defence—Coalition committed to the efficient delivery of the Air Warfare Destroyer programme', 18 December 2013, <http://www.minister.defence.gov.au/2013/12/18/minister-for-finance-and-minister-for-defence-coalition-committed-to-the-efficient-delivery-of-the-air-warfare-destroyer-programme/> (accessed 4 August 2014).

18 'Minister for Finance and Minister for Defence—Joint Press Conference—Review of the Air Warfare Destroyer program', 4 June 2014, p. 1, <http://www.minister.defence.gov.au/2014/06/04/minister-for-defence-and-minister-for-finance-joint-press-conference-review-of-the-air-warfare-destroyer-program/> (accessed 4 August 2014).

19 Senator the Hon. Mathias Cormann, Minister for Finance and Senator the Hon. David Johnston, Minister for Defence, Joint Media Release, 'Review of the Air Warfare Destroyer Program', MC 6/14, 25 February 2014, [http://www.financeminister.gov.au/media/2014/mr\\_2014-06.html](http://www.financeminister.gov.au/media/2014/mr_2014-06.html) (accessed 4 August 2014).

media and industry attention.<sup>20</sup> It noted cost overruns and delays in shipbuilding aspects of the program. In respect of costs, the ANAO found that the current estimated cost in excess of the Target Cost Estimate stood at \$302 million. Moreover, the ANAO suggested that this estimate should be treated with caution and the cost increase was 'likely to be significantly greater'.<sup>21</sup> Turning to delays, the ANAO reported:

The delivery schedule for the three DDGs was revised in September 2012 and is now some 15 to 21 months later than the original delivery schedule (for ship 1 to 3).<sup>22</sup>

4.16 On 4 June 2014, the Minister for Finance and the Minister for Defence released a one-page summary of the findings of the Winter report, which listed the causes for cost and schedule growth, identified options for improvement and one key recommendation.<sup>23</sup>

4.17 In the joint media release accompanying the publication of this summary, the Minister for Finance referred to the Auditor General's finding of a \$300 million cost overrun with the AWD project. The minister announced that the government would implement remedial action over the coming months designed to get the AWD program back on track. In the minister's words, the implementation of the proposed reform strategy would ensure that the AWD program 'delivers this vital defence capability

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- 20 See for example, Professional Engineers Australia, 'Minister must boost engineering capacity on the AWD and SEA1000 projects to stop cost blowouts', <http://www.professionalsaustralia.org.au/groups/engineers/advocacy/?id=3060> and Engineers Australia, 'Audit critical of Air Warfare Destroyer project', 6 March 2014, <http://www.engineersaustralia.org.au/news/audit-critical-air-warfare-destroyer-project> and HIS Jane's Weekly, 'Australian government auditor slams AWD programme management', 5 March 2014, <http://www.janes.com/article/34998/australian-government-auditor-slams-awd-programme-management> and *Financial Review*, 'Audit Slams \$8bn warship project', 6 March 2014, [http://www.afr.com/p/national/audits\\_slams\\_bn\\_warship\\_project\\_KBbPO0n4lw02A79hEUQW-DN](http://www.afr.com/p/national/audits_slams_bn_warship_project_KBbPO0n4lw02A79hEUQW-DN) (accessed 6 August 2014).
- 21 ANAO, Audit Report No.22 2013–14, Performance Audit, *Air Warfare Destroyer Program*, Department of Defence, Defence Materiel Organisation, Australian National Audit Office, paragraphs 23 and 24, [http://www.anao.gov.au/~media/Files/Audit%20Reports/2013%202014/Audit%20Report%2022/AuditReport\\_2013-2014\\_22.pdf](http://www.anao.gov.au/~media/Files/Audit%20Reports/2013%202014/Audit%20Report%2022/AuditReport_2013-2014_22.pdf) (accessed 6 August 2014).
- 22 ANAO, Audit Report No.22 2013–14, Performance Audit, *Air Warfare Destroyer Program*, Department of Defence, Defence Materiel Organisation, Australian National Audit Office, paragraphs 23 and 24.
- 23 Media Release, Senator the Hon Mathias Cormann, Minister for Finance and Senator the Hon David Johnston, Minister for Defence, 'Putting the Air Warfare Destroyer Program Back on Track', MC 56/14, 4 June 2014, <http://www.financeminister.gov.au/media/2014/0604-air-warfare-destroyer-program.html> (accessed 14 May 2015).

effectively and efficiently'.<sup>24</sup> The findings of the Winter report initiated a second round of reforms to improve productivity.

### The Winter report

4.18 In its first report, the committee recommended that the government make the Winter report public but the government disagreed, arguing that the release of the report:

...could damage the commercial interests of the Commonwealth, as its contents relate to a range of sensitive commercial negotiations that are currently underway. The Government considers the report is highly sensitive in relation to current and future shipbuilding tenders and negotiations.<sup>25</sup>

4.19 The committee also wrote to the minister on 27 October 2014 requesting access to the report. The committee explained to the minister that it believed the Winter report would assist it in its inquiry into the future of Australia's naval shipbuilding industry. Indeed, as spelt out in the committee's first report, although the information on the Winter report released by the minister was sketchy in detail, it was used to damage the reputation of ASC and, overall, Australia's naval shipbuilding industry. A thorough understanding of the findings would not only have helped the committee in its deliberations but have provided industry with a vital source of information. In this regard, Mr Christopher Burns, Defence Teaming Centre, stated:

Until the report is released and the statistics are tested, it has no validity and should not be used by the government as a means to question the productivity of Australia's shipbuilding industry. The industry is keen to understand and address the issues raised in the White-Winter review. The government should release the report as a matter of priority.

Apparently the White-Winter review claims massive cost blow-outs in the project. The most reliable figure quoted—a guesstimate—in the media is \$360 million over budget in an \$8.5 billion project. That is a little over four per cent. As the minister has highlighted, well-established shipyards overseas regularly experience cost blow-outs of 50 to 60 per cent on first of class construction of new designs.<sup>26</sup>

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24 'Minister for Finance and Minister for Defence—Joint Press Conference—Review of the Air Warfare Destroyer program', 4 June 2014, <http://www.minister.defence.gov.au/2014/06/04/minister-for-defence-and-minister-for-finance-joint-press-conference-review-of-the-air-warfare-destroyer-program/> (accessed 4 August 2014).

25 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. [4], [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

26 *Proof Committee Hansard*, 14 April 2015, p. 26.

4.20 Mr Burns noted that the bulk of the AWD's productivity issues were 'directly attributable to the government's involvement in establishing the project and imposing delays on the project'. He then observed that while overseas colleagues were bemused by the Australian government's public criticism of the shipbuilding industry, the comments did 'nothing to enhance the morale of the workforce or the credibility of our industry in the global marketplace'.<sup>27</sup>

4.21 The committee's request for access to the Winter report was not a whim. This report appeared to be a crucial factor shaping the government's decisions on the future of a number of major naval acquisitions. Understandably, the report may well contain commercial-in-confidence or other sensitive material. Appreciating the sensitivity of this information, the committee, when requesting access to the document, suggested that if the government were unwilling to provide a full and complete copy of the report, that the minister consider providing a copy of the report with classified information removed.

4.22 The minister has not engaged with the committee to reach agreement on making an abridged version available. It is also worth noting that a committee member, Senator Nick Xenophon, has made a number of requests, through the Senate, for the minister to produce the document but, again, to no avail.

4.23 Given the weight that the government attached to this report, particularly its implications for the future of naval ship building in Australia, the committee was staunchly of the view that defence industry deserved to know more about the details of, and analysis underpinning, the Winter report's findings. The committee again requests that the government provide the committee with a copy of this document.

### **Reform strategy**

4.24 When announcing the findings of the Winter report, the government indicated that it would adopt its recommendations in principle.<sup>28</sup> Accordingly, the government intended to engage commercial and legal advisers immediately to assist in implementing the reform strategy, indicating further that:

We are committed to working collaboratively and constructively with all stakeholders to ensure we realise both the national security benefits as well

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27 *Proof Committee Hansard*, 14 April 2015, p. 26.

28 'Minister for Finance and Minister for Defence—Joint Press Conference—Review of the Air Warfare Destroyer program', 4 June 2014, <http://www.minister.defence.gov.au/2014/06/04/minister-for-defence-and-minister-for-finance-joint-press-conference-review-of-the-air-warfare-destroyer-program/> (accessed 4 August 2014).

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as the long term benefits of this program for the Australian shipbuilding industry in the most cost-effective and efficient way possible.<sup>29</sup>

4.25 Within two weeks of this announcement, the Minister for Finance announced that, following a competitive procurement process, the government had appointed key expert advisers to assist with the implementation of a reform strategy. They were Greenhill & Co Australia Pty Ltd as commercial adviser and Ashurst Australia as legal adviser. They were to start without delay to ensure that the government's objectives for the AWD reform strategy were achieved.<sup>30</sup> To improve shipbuilding productivity at the shipbuilder ASC and its subcontractors BAE Systems, Forgacs and Navantia, measures under the reform strategy were to:

- insert an experienced shipbuilding management team into ASC urgently; and
- after augmented shipbuilding capacity has been put in place, pursue the reallocation of blocks between shipyards to make the AWD program more sustainable.<sup>31</sup>

4.26 The Minister for Defence noted that this proposed remedial action was the third remediation cycle for this program.<sup>32</sup> In the minister's words, the implementation of the reform strategy would 'ensure that the Air Warfare Destroyer Program delivers this vital defence capability effectively and efficiently'.<sup>33</sup>

### *Interim arrangements*

4.27 On 9 December 2014, the minister also announced that BAE Systems, Navantia SA and Raytheon Australia would take on increased roles in the AWD

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29 Media Release, Senator the Hon Mathias Cormann, Minister for Finance and Senator the Hon David Johnston, Minister for Defence, 'Putting the Air Warfare Destroyer Program Back on Track', MC 56/14, 4 June 2014, <http://www.financeminister.gov.au/media/2014/0604-air-warfare-destroyer-program.html> (accessed 14 May 2015).

30 Joint Media Release, Senator the Hon Mathias Cormann, Minister for Finance and Senator the Hon David Johnston, Minister for Defence, MC 60/14, 19 June 2014 <http://www.financeminister.gov.au/media/2014/0619-advisers-appointed-air-warefare-destroyer-program.html> (accessed 14 May 2015).

31 'Minister for Finance and Minister for Defence—Joint Press Conference—Review of the Air Warfare Destroyer program', 4 June 2014, <http://www.minister.defence.gov.au/2014/06/04/minister-for-defence-and-minister-for-finance-joint-press-conference-review-of-the-air-warfare-destroyer-program/> (accessed 4 August 2014).

32 'Minister for Finance and Minister for Defence—Joint Press Conference—Review of the Air Warfare Destroyer program', 4 June 2014, <http://www.minister.defence.gov.au/2014/06/04/minister-for-defence-and-minister-for-finance-joint-press-conference-review-of-the-air-warfare-destroyer-program/> (accessed 4 August 2014).

33 Joint Media Release, Senator the Hon Mathias Cormann, Minister for Finance and Senator the Hon David Johnston, Minister for Defence, MC 60/14, 19 June 2014 <http://www.financeminister.gov.au/media/2014/0619-advisers-appointed-air-warefare-destroyer-program.html> (accessed 14 May 2015).

program for an interim period. Their increased involvement was intended to 'drive immediate improvements in shipbuilding performance'. The minister explained further:

This focus on resolving outstanding productivity issues will ensure opportunities to improve performance for the duration of the project are maximised.

The outcomes of this interim period will also inform the Government's considerations on the Australian naval shipbuilding industry in the context of the 2015 Defence White Paper.

This interim period marks a turning point in the performance of ASC and its partners on this important project and will help renew confidence in the future of Australia's shipbuilding industry.<sup>34</sup>

4.28 The AWD Alliance Industry Participants—ASC Shipbuilder and Raytheon—would continue to be responsible for the construction and delivery of the three destroyers. According to the ministers, they were:

...committed to working collaboratively and constructively with all stakeholders to ensure we realise both the critically important national security benefits of this program as well as its long term benefits for the Australian shipbuilding industry in the most efficient and effective way possible.<sup>35</sup>

4.29 Ms Jane Halton, Secretary, Department of Finance, explained that the interim arrangements were to gain an understanding of the extent of financial exposure and to allow a re-baselining of the project.<sup>36</sup>

4.30 As part of that reform process, the ASC board recruited Mr Mark Lamarre, as Interim Chief Executive Officer, ASC Shipbuilding. According to the minister, Mr Lamarre brought significant shipbuilding experience to Australia. He came from the United States naval shipbuilder Bath Iron Works and had 25 years of shipbuilding experience, in several senior management roles. In addition, contributors from BAE Systems, Navantia and Raytheon augmented the capability of the ASC. In the

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34 Joint Media Release, Senator the Hon. Mathias Cormann, Minister for Finance and Senator the Hon. David Johnston, Minister for Defence, 'Additional Shipbuilding Expertise to be Inserted into the Air Warfare Destroyer Program', MC 133/14, 9 December 2014, <http://www.financeminister.gov.au/media/2014/1209-shipbuilding.html> (accessed 14 May 2015).

35 Joint Media Release, Senator the Hon. Mathias Cormann, Minister for Finance and Senator the Hon. David Johnston, Minister for Defence, 'Additional Shipbuilding Expertise to be Inserted into the Air Warfare Destroyer Program', MC 133/14, 9 December 2014, <http://www.financeminister.gov.au/media/2014/1209-shipbuilding.html> (accessed 14 May 2015).

36 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, pp. 60–61.

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minster's view these measures have produced some improvements, 'in productivity and across various other indicators'.<sup>37</sup>

4.31 In May 2015, Mr Lamarre referred to a five-point plan for improving shipbuilding in South Australia, which included increasing shipbuilding experience and some changes in senior management at ASC. He noted in particular the experience brought in from Navantia and BAE to provide 'specific short-term support, especially in the areas of engineering, planning, production, implementation and tests'.<sup>38</sup> Recognising the importance of having the right people in the right places, he noted:

We currently have the former director of planning from Bath Iron Works, who has 33 years' experience. The former vice president of operations is joining us in two weeks. He was at Bath for over 40 years. We have a gentleman who was the former VP of support systems at HII Ingalls, who is the other Egis shipbuilder in the United States. So we are really building the largest team of Egis experience shipbuilders that we have here in Australia.<sup>39</sup>

4.32 As noted in the committee's first report, the government drew a connection between the findings of the Winter review and the decision to undertake a limited tender for the supply ships, which excluded Australian companies from tendering. It also used this report to warn Australian shipyards of the need to improve their performance.

## **Productivity**

4.33 In its first report, the committee detailed at length the significant problems experienced during the construction the first AWD, which demonstrated the challenges building a first-of-class vessel especially starting with a depleted workforce. Two major reports—ANAO and the Winter report—as well as assessments of the then CEO of DMO, Mr Warren King, identified major failings with this project. Indeed, this project highlighted the complexity of building a first-of-class naval combat vessel, the over optimistic assumptions about the preparedness of the Australian shipyards to take on the project and unanticipated complications in knowledge transfer. As Mr Martin Edwards, ASC Shipbuilding Chief Operating Officer, explained:

It is fair to say that there were some ambitious elements of the program, and, as to the translation of the design, we have found that taking it from a European shipyard which had not exported a design before into a new

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37 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 21.

38 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 21.

39 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 21.

environment has had its challenges. The impact of that was underestimated from the beginning, and it has been the source of a number of challenges for us in a program sense. So it has been a contributing factor to the outcomes we see in AWD.<sup>40</sup>

4.34 The reform strategy had only started in earnest by the time the committee was preparing its first report in August 2014. Even so, by that time, productivity improvements were already evident. Evidence provided since then continues to show significant improvements.

4.35 Indeed, as construction on ship 02 has proceeded, the experiences gained from the first ship have been applied to improve productivity performance on this second ship. For example, ASC now have a number of Navantia people working with personnel in the shipyard to help in the translation process. Mr Edwards explained further that was not just language translation:

...it is actually methods of work, processes and inferred knowledge they have in their shipyard and bringing that to the Australian context. So it has been one facet of the program. It is something we have had to deal with and overcome.<sup>41</sup>

4.36 In this regard, ASC brought in consultants to work out ways to ensure that tradespeople working on the ship have the right materials in the right configuration when they need them. According to Mr Edwards, with ship 01 ASC went through all the learning processes accompanying a first-of-class vessel—transitioning the design, mobilising shipyards around Australia, mobilising all the supply chain support elements and the workforce and learning the process of building these ships. He accepted that this learning process had taken a toll on productivity. With ship 02, however:

...we are seeing the improvement; we are seeing greater than 30 per cent cost performance improvement on the same stage of construction, and similarly we are seeing up to 15 per cent improvement on ship 3 when we compare the same stage of construction.<sup>42</sup>

4.37 Applying the lessons and experience from ship 01, ASC was now bringing work forward in the construction phase—doing things earlier. Mr Edwards explained that ASC's engineering organisation was 'learning to make materials more available at the right stage of construction, supporting all the things earlier on—not dissimilar to how the automotive industry would work'. He explained further:

We are focusing on some productivity work in our shipyard similar to what we did on Collins, which is supported by Denkin. We look at our workforce utilisation—improving that, improving our work pack fill rate, which is the

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40 *Proof Committee Hansard*, 14 April 2015, p. 14.

41 *Proof Committee Hansard*, 14 April 2015, p. 14.

42 *Proof Committee Hansard*, 14 April 2015, p. 8.



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supply of materials to the construction areas and all those elements that feed all the work to be done. We are seeing the benefits of those...we are working closely with the team, the alliance, and the reform team to try and improve that situation and to give greater certainty and outcome from a cost and schedule perspective.<sup>43</sup>

4.38 Mr Edwards detailed further the improved productivity with ship 02 and the changed work practices that are producing better performances:

...we install all the fittings, we install as much cabling and pipe as early as possible in the production process...getting to that earlier and in fact pushing that back to other areas of our supply chain in BAE and Forgacs. If that work is finished there it can be more efficient and effective.<sup>44</sup>

4.39 ASC was employing a simple metric called 135 or 138, which, when applied in practice, means if an hour of work is delayed until later in a production process it ends up costing more. Mr Edwards stated:

An hour of work in the fabrication facility, if it is translated to the common user facility, could cost you three times that, and if you eventually do that work in the water, it is up to five times that. That is the challenge. For the shipyards and the mature shipyards we try and bring that work forward to early in the construction process. The comment about outfitting on ship 2 earlier all relates to that—getting the work done as early as possible so it can be more productive and more efficient, and to reduce cost, obviously.<sup>45</sup>

4.40 Employing such improved work practices is paying dividends. Mr Edwards again referred to the boost in productivity, comparing work on ship 02 to ship 01 at the same stage of construction. Not only was ASC seeing a greater than 30 per cent improvement from a cost perspective with ship 02 but on top of that 'improvements in the order of 15 per cent at the same stage of construction' for ship 03.<sup>46</sup> He observed:

Added to that, we are getting the higher outfit levels which will give us benefit later on to actually see consistent performance and improvements in costs going forward. When we add to that the utilisation improvements we are making with our workforce which are about material availability, we now have that at greater than 85 per cent; our workforce utilisation has improved from around 30 per cent to 60 per cent; so we are seeing a doubling in those basic measures that demonstrate our workforce's capability to do the work. That is the benefit we see on ship 2, and now proceeding to ship 3.<sup>47</sup>

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43 *Proof Committee Hansard*, 14 April 2015, p. 8.

44 *Proof Committee Hansard*, 14 April 2015, p. 9.

45 *Proof Committee Hansard*, 14 April 2015, p. 9.

46 *Proof Committee Hansard*, 14 April 2015, p. 9.

47 *Proof Committee Hansard*, 14 April 2015, p. 9.

4.41 According to Mr Edwards, ASC had undertaken its own benchmarking in an endeavour to compare first-of-class for AWD with, for example, the Arleigh Burke program in the US. He informed the committee that:

We see a lot of similarities in cost profiles and the challenges on the program. So I am not entirely sure from where the source data comes for any comment about a premium or a 30 to 40 per cent premium. We are happy to work with DMO to compare that information. Invariably, there are start-up costs and mobilisation costs, and they are the things we see at the start of a program.<sup>48</sup>

4.42 Mr Saltzer, BAE Systems, similarly acknowledged that there was room for improvement when it came to productivity with the AWD program. He insisted, however, that BAE had demonstrated 'a significant amount of improvement'.<sup>49</sup> He stated that, based on independent assessments, BAE had achieved 76 man hours on the AWD blocks and even better on the LHD. He explained further:

It is about 70 right now. And that is just one metric, by the way. There are many metrics for productivity in shipbuilding. The compensated gross tonnage is really a very high-level gross metric, and it is an indication, but it is not the whole story. Any good shipbuilder will be tracking a whole number of metrics: how many metres of cables that we pull and how many man-hours it takes to pull those cables; how many metres we are installing on this ship and how many man-hours it takes to do that. A whole basket of measures exist that we measure all the time to monitor and identify areas where productivity is not what it should be, so that is where we need to go, act and adjust our processes and improve our procedures to make that productivity increase.

...

...we are where we should be according to predictions of productivity experts that have been brought in to analyse programs like AWD and LHD with regard to where we are in terms of continuous production, with regard to where we are in terms of having first-class builds and with regard to where we are in the future outlook for the industry that we have at the moment.<sup>50</sup>

4.43 In its first report, the committee referred to compensated growth tonnage as an indicator of the performance of Australian shipyards. It also noted the then Defence Minister's observation in June 2014 that the international benchmark was 60 man-hours per tonne, that Defence had set the benchmark for the AWD program at 80 man-hours per tonne, but it was running at 150 man-hours per tonne...<sup>51</sup>

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48 *Proof Committee Hansard*, 14 April 2015, p. 13.

49 *Proof Committee Hansard*, 14 April 2015, p. 19.

50 *Proof Committee Hansard*, 14 April 2015, pp. 19 and 22.

51 'Minister for Defence—Transcript—Naval shipbuilding announcement, CEA Technologies, Canberra', 6 June 2014, p. 11.

4.44 Importantly, based on First Marine International's (FMI) report, the committee noted in August 2014 that BAE had made substantial improvements; ASC had shown no demonstrable or noticeable improvement despite its efforts; and Forgas had deteriorated.

4.45 Evidence shows that BAE has continued on its course of performance improvement. Indeed, in April 2015, Mr Saltzer explained that FMI, which had provided reports to the AWD Alliance every year on productivity, suggested that by the time BAE got to ship No. 3, it should be producing blocks somewhere in the range of 80 man hours per compensated gross tonne. Mr Saltzer informed the committee that, by BAE's calculations, it was operating below 80; and further, the last time he checked, BAE was at 76, 'which is better than where we should be on ship No. 3'. In his words:

Is it as good as they are in the US at the moment? No. Why? Because the US has been in a mode of continuous production for more than 30 years...Ever since Ronald Reagan was president, that shipyard has had a continuous flow of activity on submarines and aircraft carriers without one day of gap. Here in Australia, our shipyard in Williamstown right now is facing three or more years of gap. It is not viable.<sup>52</sup>

4.46 Mr Saltzer also referred to the most recent FMI report on the AWD program which showed a 'drastic improvement' in productivity on pipe work going through the pipe shop. He explained that in this area and through a concentrated effort, BAE had improved productivity about five times over. He explained:

...by going into the pipe shop, completely reorganising it, revising all the processes that go through it, buying some new equipment so that we could have more efficiency out of the equipment that we were using, and training some of our people. We did a whole range of things, and it paid off in improvements in pipe productivity, to the point where we now are actually winning more pipe work on the AWD program, bidding it competitively to ASC and winning that work.<sup>53</sup>

4.47 There can be no doubt that BAE Systems through a concerted effort has lifted its productivity significantly. More generally, it should also be noted, as made absolutely clear in its first report, that a ship build becomes increasingly more productive with economies of scale: that performance improves as construction moves from ship 01 through subsequent builds.

4.48 Witnesses took the opportunity to again impress on the committee the importance of taking this steady improvement into account. For example, the South Australian Minister for Defence Industries highlighted the fact that a build becomes more and more productive for the second and third ship. He informed the committee:

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52 *Proof Committee Hansard*, 14 April 2015, p. 19.

53 *Proof Committee Hansard*, 14 April 2015, p. 22.

Those who would criticise the ASC and Australian industry and say that they are not sufficiently productive need to take into account that they were tooling up and gearing up to produce an air-warfare destroyer when we had not done something similar for a considerable period of time and we were, if you like, starting all over again, having closed the show up significantly many years before.<sup>54</sup>

4.49 Mr Lamarre, Interim CEO, ASC Shipbuilding, also drew attention to the improvements that had already been achieved between AWD ship 01 and ship 02, which was better than a 30 per cent improvement. He explained that progress on ship 02 was better than 40 per cent along. In his words:

Those are real savings in the bank. We have a trajectory that is heading in the right direction. I am very optimistic about what is going on there—that the plan that we are implementing is having an effect. We have seen this sort of separation between ship one and two since about June of last year [2014], and we are now building on that to ensure that we can continue to bank those savings and build on that for the future.

Ship three, in the block stage, the early stage of construction is coming in at 15 per cent below ship two. We are really starting to see some very significant separation of costs that are consistent and I would say comparable against any other major service combatant shipyard here that I have been exposed to.<sup>55</sup>

4.50 In his view, productivity on ship 03 was heading in the direction that would be comparable to other world-leading ships in the sense of costs.<sup>56</sup> He gave practical examples of where productivity gains had been made:

While we have a very keen and energised workforce who are driving for improvements, early on in the measurements we were finding that they were doing things that were compensating for management. So they were spending a lower percentage of their time basically doing productive work that is going to sail down the river with the ship. We have seen a 140 per cent improvement in that metric between July of last year [2014] to now.

We also measure discipline and performance to our plan of the week. What we found early on in the process is that only seven per cent of the time we were working the plan. For a variety of reasons you might work around the plan, because of availability of all those things that you need and you have to make an on-field call. Now that performance—actually working the plan that has been laid out—is up to 80 per cent, there is significant improvement in that metric as well. With work readiness, when it is time for tradesmen to conduct the work—do they have the correct paperwork, do

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54 *Proof Committee Hansard*, 14 April 2015, p. 25.

55 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 22.

56 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 22.

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they have everything that they need, is the ship in the position, is it ready for that work, has the predecessor work been done, and so on—we have gone from 48 per cent to 90 per cent on that metric. These are indicators that show that we are utilising our employees and supporting our employees much better than we have been in the past and as a result we are getting significant improvements.<sup>57</sup>

4.51 Likewise, Mr Wardell used the LHDs to underline the 'enormous' productivity gains made with subsequent builds:

...on the LHDs from ship 1 to ship 2, just in two ships...there has been a dramatic improvement in the quality and cost of the second ship...and the benefit of it has been huge.<sup>58</sup>

4.52 Mr Burns reminded the committee that the chosen AWD design had never been exported or built outside its home shipyard and then, to oversee the construction, an alliance was established that did not include the original ship designer.<sup>59</sup>

4.53 Mr Lamarre also noted that the business at ASC had been split into two separate business units to allow the organisation to 'focus solely on the submarine business and have specific leadership for that and broad oversight—as well as the same for shipbuilding'.<sup>60</sup>

4.54 On 14 April 2015, Mr Edwards, ASC, provided an update on progress with the AWDs. The first ship was more than 70 per cent complete, being prepared for launch and to undertake the final completion of its systems in readiness for sea trials. Seventeen of the 31 blocks for Ship 02 have been consolidated on the hardstand at the Common User Facility in Adelaide. Once ship 01 was launched, ship 02 would take its place to finalise its consolidation. Preparations were underway for the keel laying for ship 03.<sup>61</sup>

4.55 On 22 May 2015, ship 01 was launched, which marked a major milestone and provided an opportunity for the government to issue an update on the progress toward removing the AWD from the project of concern list. On this day, however, the Minister for Finance released the results of the 'forensic audit' on the AWDs. The minister's media release was titled 'Air Warfare Destroyer program still fixing

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57 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 22.

58 *Proof Committee Hansard*, 6 March 2015, p. 5.

59 *Proof Committee Hansard*, 14 April 2015, p. 26.

60 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 21.

61 *Proof Committee Hansard*, 14 April 2015, p. 8.

serious legacy issues' and gave prominence to cost and schedule overruns.<sup>62</sup> The committee now considers this cost review of the AWD program.

### **Comprehensive cost review or forensic audit**

4.56 On 15 November 2014, the government decided that a comprehensive cost review process would be undertaken by the AWD Alliance but also including BAE and Navantia that were already participating in the interim arrangements for the AWDs. During the second week in February 2015, the audit into the cost and schedule overruns of the AWD project got underway. It should be noted that the audit was conducted in the context of the reform process whereby interim arrangements were in place to help lift productivity and performance at the ASC shipbuilding business. According to the Minister for Finance, pending the findings of this audit the government could then 'make appropriate arrangements on a more permanent basis'.<sup>63</sup> The minister wanted to make 'absolutely perfectly crystal clear' that:

...the outcomes of the forensic audit were fully understood by ASC, because they have been an integral part of the process of putting that forensic audit together.<sup>64</sup>

4.57 The minister indicated that the AWD Alliance conducted the forensic audit in accordance with the appropriate standard, AS4817, on project performance measurement using earned value.<sup>65</sup> Mr Lamarre explained that ASC participated with other members of the alliance and with Navantia and BAE in the comprehensive cost review of the project. The audit looked at where the project stood to date with costs. It also considered what was left to be done and the risks and opportunities facing the completion of the project. He explained that the review was an alliance-generated document containing information confidential to some of the other parties. The review included:

...a more traditional cost-type scope view of the world that also took advantage of other shipbuilders who have activated ships, because we had only demonstrated so far in this program to the point where we were beginning to test the ship.<sup>66</sup>

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62 Joint Media Release—Minister for Defence & Minister for Finance—'Air Warfare Destroyer program still fixing serious legacy issues', 22 May 2015, <http://www.minister.defence.gov.au/2015/05/22/joint-media-release-minister-for-defence-the-hon-kevin-andrews-minister-for-finance-senator-the-hon-mathias-cormann-air-warfare-destroyer-program-still-fixing-serious-legacy-issues-22-ma/> (accessed 5 June 2015).

63 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, pp. 41 and 60.

64 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 58.

65 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, pp. 38 and 41.

66 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 39.

4.58 On 2 April 2015, Commonwealth departments received a briefing on the comprehensive cost review and within the fortnight a report was provided to government. Just over a month later, on 19 May 2015, the National Security Committee met and considered the outcomes of the forensic audit, along with recommendations on how to proceed as part of the reform strategy of the AWD.<sup>67</sup> Three days later, the government released information drawn from the audit and advice on how it would proceed.<sup>68</sup>

### *Findings of forensic audit*

4.59 The primary findings of the audit showed that as of 22 May 2015, the project was at least \$1.2 billion more expensive than its original budget and was running about 30 to 33 months behind for each of the three ships being built.<sup>69</sup> The Minister for Finance announced that the additional \$1.2 billion would have to be funded at the expense of other Defence acquisitions. Also noting the significant delays, he produced the following revised delivery dates for the three AWDs:

- Ship 1: Original delivery: December 2014—revised estimate: June 2017
- Ship 2: Original delivery: March 2016—revised estimate: September 2018
- Ship 3: Original delivery: June 2017—revised estimate: March 2020.<sup>70</sup>

4.60 As with the Winter report, the government has not released this comprehensive cost audit, even in an abridged form, to assist industry and subject matter experts understand and learn from its findings.

4.61 The Minister for Finance announced that the 'forensic audit' had been able to define the new baseline for the AWD project. Acknowledging the advances in capability that had been made under the interim arrangement at ASC, the minister

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67 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, pp. 42 and 60–61.

68 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, p. 42.

69 Senator the Hon Mathias Cormann, Minister for Finance, Transcript, 'Doorstop—Air Warfare Destroyer project', Perth, 22 May 2015, <http://www.financeminister.gov.au/transcripts/2015/0522-doorstop.html> (accessed 25 May 2015).

70 Joint Media Release—Minister for Defence & Minister for Finance—'Air Warfare Destroyer program still fixing serious legacy issues', 22 May 2015, <http://www.minister.defence.gov.au/2015/05/22/joint-media-release-minister-for-defence-the-hon-kevin-andrews-minister-for-finance-senator-the-hon-mathias-cormann-air-warfare-destroyer-program-still-fixing-serious-legacy-issues-22-ma/> (accessed 5 June 2015) and Joint Media Release, Senator the Hon Mathias Cormann, Minister for Finance and The Hon. Kevin Andrews MP, Minister for Defence, 'Air Warfare Destroyer Program—Still Fixing Serious Legacy Issues', MC 24/15, 22 May 2015, <http://www.financeminister.gov.au/media/2015/0522-air.html> (accessed 25 May 2015).

explained that, given the cost and schedule overruns, the government would be seeking to enter into a more permanent arrangement, to further build on these improvements.<sup>71</sup> To this end, the government would begin a limited tender process on 29 May 2015 that would seek 'proposals to either insert a managing contractor into ASC for the remainder of the AWD build or to further enhance ASC capability through a partnering arrangement'.<sup>72</sup> The work on the AWDs, however, would continue under the arrangement whereby personnel from BAE Systems, Navantia and Raytheon would keep going with their efforts to improve performance.<sup>73</sup>

4.62 The committee is disappointed with the overall tone of the announcement on 22 May 2015, which chose to focus on the cost and schedule overruns and failed to acknowledge or give due recognition to:

- the source of the AWD's problems including starting production from a cold start and with a reduced workforce and unanticipated complications in knowledge transfer;
- the well-recognised lower productivity performance on ship 01—a first-of-class;
- the dramatic improvements in productivity as construction has proceeded on ship 02 and 03; and
- the broader economic benefits that have derived from this Australian build.

4.63 At this point in the report, the committee believes it is important to take particular note of the main findings of the Winter report relating to the fundamental causes of the AWD's problems. In the review's assessment there were two direct causes for cost and schedule growth:

- the initial program plan for AWD development and production was unrealistic in its cost and schedule estimates; and
- the Alliance, as structured, composed and staffed, had been unable to effectively manage the AWD Program.

4.64 It also identified the following contributing causes:

- systems engineering on the AWD Program had been of limited effect;

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71 Senator the Hon Mathias Cormann, Minister for Finance, Transcript, 'Doorstop—Air Warfare Destroyer project, Perth', 22 May 2015, <http://www.financeminister.gov.au/transcripts/2015/0522-doorstop.html> (accessed 25 May 2015).

72 Joint Media Release, Senator the Hon Mathias Cormann, Minister for Finance and The Hon. Kevin Andrews MP, Minister for Defence, 'Air Warfare Destroyer Program—Still Fixing Serious Legacy Issues', MC 24/15, 22 May 2015, <http://www.financeminister.gov.au/media/2015/0522-air.html> (accessed 25 May 2015).

73 Finance and Public Administration Legislation Committee, Estimates, *Proof Committee Hansard*, 27 May 2015, pp. 46 and 55.



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- the AWD Alliance and ASC were unable to effectively manage the AWD block subcontractors; and
  - the oversight provided by the Commonwealth of Australia has been of limited effect.

4.65 Importantly, and relevant to this committee's inquiry, the review also considered systemic issues that could affect any other naval shipbuilding programs in Australia, and identified the following:

- the limited base of shipbuilding activity in Australia materially impacted the AWD Program; and
- the Commonwealth of Australia has not developed a long-term shipbuilding plan that can cost-effectively support the needs of the RAN, while sustaining the Australian industrial shipbuilding base.<sup>74</sup>

## Conclusion

4.66 It is clear from the evidence presented to the committee that the source of the AWD project's problems can be attributed to a poor understanding and inadequate analysis of cost and schedule, and poor or inadequate management at the Alliance and Commonwealth level. From the beginning, decision-makers failed to appreciate the difficulties in transferring the design work to Australia, where industry was trying to meet demands created by fitting out the LHDs and starting on a 'first-of-class' vessel. There are clear lessons to be learned from the AWD project. It is important to note that a number of factors that affected productivity were outside the control of the people working on the ships. Two systemic issues identified by experts such as Dr John White are that the project was starting from scratch, and the lack of long term strategic planning.

4.67 The committee is deeply concerned that the government has not released either the Winter Report, or the more recently conducted comprehensive cost audit of the AWD, even in an abridged form. The committee calls on the government to release these documents as a matter of urgency to assist industry and subject matter experts to understand and learn from the findings.

## Recommendation 3

**4.68 The committee recommends that the government provide the committee with a copy of the 'forensic audit' of the AWD program.**

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74 'Report of the Independent Review into the performance of the Hobart Class Air Warfare Destroyer Program conducted by Professor Donald C. Winter and Dr John White', 4 June 2014, <http://www.financeminister.gov.au/media/2014/docs/air-warfare-destroyer-program-review-0.pdf> (accessed 8 August 2014).

**4.69** The committee also repeats its recommendation contained in its first report that the government release the report of the independent review of the AWD program (also known as the Winter Report).

**4.70** The committee understands that it may be appropriate for a public version of both documents to be released with classified material removed.

# Chapter 5

## Continuous build

5.1 For many decades, parliamentarians, Defence personnel, representatives from Defence industries, peak professional bodies, such as engineers and naval architects, and subject matter experts, have been calling for a continuous naval shipbuilding program. Yet once again, the naval shipbuilding industry in Australia is experiencing a serious decline. In its first report, the committee raised concerns about an impending hiatus in ship production and, although the so-called 'valley of death' appeared imminent, the committee was not convinced that it was inevitable. Even at this parlous stage for the industry, there were possible solutions.

5.2 But on 31 March 2015, the Minister for Defence noted the gap between the completion of the AWD project and the start of the future frigate project. He announced that the 'valley of death', now could not be avoided and further that no decision the government could make at this stage 'could stop it'.<sup>1</sup>

5.3 In this chapter, the committee examines the impending gap in ship production, whether it is inescapable and/or the extent to which it could be mitigated or overcome. The committee considers the consequences of the downturn in production for Australia's naval shipbuilding workforce and for the future of naval shipbuilding in Australia.

### Warning signs

5.4 In its first report, the committee took evidence showing that Australia's naval shipbuilding industry was entering a period of slowdown in production after reaching a peak involving work on the LHDs and the ramp-up in production for the AWDs. Witnesses spoke of work finishing in three shipyards in 2015: BAE in Melbourne, Forgacs in Newcastle and Austal in Perth. Mr Thompson, AMWU, told the committee in July 2014 that work on the AWD would come to an end in Newcastle and in Melbourne in 2015 and finish in 2016 with the capacity of a number of shipbuilding yards already in decline.<sup>2</sup> He explained:

We have just recently had 110 skilled jobs come out of the Newcastle Tomago yard. Work on the destroyer will end in Adelaide in around 2019–2020 but will taper off dramatically in the years before. Work on the amphibious ship comes to an end in Melbourne in 2016 and production work on the future submarines will not seriously start until the mid-2020s.

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1 Department of Defence Ministers, 'Minister for Defence—Speech—ASPI Australia's Future Surface Fleet Conference', 31 March 2015, <http://www.minister.defence.gov.au/2015/03/31/minister-for-defence-aspi-australias-future-surface-fleet-conference/> (accessed 2 April 2015).

2 *Proof Committee Hansard*, 21 July 2014, p. 33.

But we do not have any details yet about that scheduling. Also we have not seen the new scheduling in relation to the ANZAC frigate replacement. We obviously welcome comments from Mr King [former CEO of DMO] in relation to the need for a rolling build on that project. If this were to be brought forward, it would not seriously start production until the 2020s.

All of that leaves a gap for several years, especially for the production workers who operate in this industry. The gap in Melbourne and Newcastle is from 2016 to 2022 and possibly longer. In Adelaide it will be from 2018 to 2022.<sup>3</sup>

5.5 Since taking evidence on the pessimistic outlook for Australia's naval shipbuilding in 2014, the committee considers recent developments and their implications for the future of the industry.

### Recent developments

5.6 In September 2014, the Department of Defence engaged RAND to undertake a series of materiel studies and analysis of Australia's naval shipbuilding industry. The purpose of this detailed review was to inform the development of an enterprise-level plan for naval shipbuilding for the government's consideration.<sup>4</sup> The government announced the release of this report on 16 April 2015.<sup>5</sup>

5.7 RAND's analysis of the future of Australia's naval shipbuilding industry indicated that a gap would occur between the end of the AWD production and the start of the future frigate program followed by another interlude around 2035, when production of the future frigate was expected to end.<sup>6</sup> It found that:

Without some way to lessen the gap between the end of the AWD program and the start of building the Future Frigate, the industrial base will have to ramp up its workforce from an almost negligible level to 2,700 skilled personnel in approximately eight years.<sup>7</sup>

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3 *Proof Committee Hansard*, 21 July 2014, p. 33.

4 John Birkler, John F. Schank, Mark V. Arena, Edward G. Keating, Joel B. Predd, James Black, Irina Danescu, Dan Jenkins, James G. Kallimani, Gordon T. Lee, Roger Lough, Robert Murphy, David Nicholls, Giacomo Persi Paoli, Deborah Peetz, Brian Perkinson, Jerry M. Sollinger, Shane Tierney and Obaid Younossi, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

5 Kevin Andrews Media Release, 'Minister for Defence—release of the Rand Corporation report', 16 April 2015, <http://www.minister.defence.gov.au/2015/04/16/minister-for-defence-release-of-the-rand-corporation-report/> (accessed 18 May 2015).

6 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, p. xxvii, 2015, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

7 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, p. xxviii, 2015, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

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### ***Downturn in production***

5.8 The downturn in production in the shipyards and the shedding of workers that had started in 2014 continued into 2015. Mr Saltzer, BAE, referred to statements about the looming valley of death. In his view, the laying off of a number of people in the Williamstown shipyard heralded the potential demise of the industry.<sup>8</sup> In April 2015, he informed the committee:

We have a workforce that consists of subcontractors, fixed term employees, permanent employees and so on. Our objective is to roll off subcontractors first, and we have probably rolled off about 150 over the last few months. We have also rolled off 12–13 permanent employees that we simply had no more work...LHD will be finished later this year and the AWD blocks that we have will be finished in early 2016...Right now I have got over 800 people working on LHD and I have got about 150 people building AWD blocks.<sup>9</sup>

5.9 Mr Saltzer noted that there was nothing on the order books after 2016 for naval shipbuilding and while BAE was still working in sustainment, there was no way it could absorb that type of a roll-off into its existing sustainment activity. According to Mr Saltzer, BAE had reached a point 'where we are making a very serious analysis of the viability of that shipyard'.<sup>10</sup>

5.10 The committee has noted the predicted and actual job losses from some of the primes. But, when considering the consequences of the anticipated downturn in naval shipbuilding activity, it is important not to forget the adverse effects on the critically important supply chain.

### **Supply chain**

5.11 Australia has a robust supply chain currently servicing Australia's major naval shipbuilding projects. Mr Tony Quick, Chairman, Defence Materials Technology Centre (DMTC), underscored the importance of the SMEs that comprise this supply network noting, in particular, that with shipbuilding 'a lot of the productivity is actually in the supply chain'.<sup>11</sup>

5.12 Similarly, Mr Edwards highlighted the importance of having a mature supply chain that supports industry in maintaining its progress and level of productivity. In his view, this network of large and small suppliers was 'pivotal to a complex program

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8 *Proof Committee Hansard*, 14 April 2015, p. 21.

9 *Proof Committee Hansard*, 14 April 2015, p. 21.

10 *Proof Committee Hansard*, 14 April 2015, p. 21.

11 *Proof Committee Hansard*, 6 March 2015, p. 13.

such as the AWD'.<sup>12</sup> Likewise, Mr Saltzer highlighted the critical role of the supply chain as a vital component of Defence industry.<sup>13</sup>

5.13 Importantly, this supply network extends beyond the local region to other states and overseas. A slowdown or cessation in production would have a significant effect on the supply chain.<sup>14</sup> According to the AMWU:

...if the valley of death came in there would be a significant impact on the supply chain...It would be our view that if there were a decision to wind down the industry there would be a direct correlation in the supply chain of companies that rely on Defence.<sup>15</sup>

5.14 But already, with naval shipbuilding activity tapering off, workers in the supply network are being shed. According to Shadbolt Engineering, its workforce has virtually gone from up to 100 people on the site at Williamstown with BAE to now six people.<sup>16</sup> Mr Scott McClymont, Alton Personnel Pty Ltd, had a similar story.<sup>17</sup> He informed the committee that at Williamstown his business had employed a maximum of 180 electricians, which has dropped down to 75.<sup>18</sup>

5.15 Dr Mark Hodge, DMTC, referred to the lumpy nature of Australian shipbuilding in Australia and was concerned about the 'drop-off' because of the loss of ability to have the cash flow that 'industry needs to keep its capability'.<sup>19</sup>

### ***Training and skilling the workforce***

5.16 Many witnesses impressed on the committee the time, energy and expense involved in training workers in the naval shipbuilding industry. They referred to the effort required by workers to acquire the knowledge, understanding and skills needed to effectively start-up production and to improve productivity for subsequent builds. Mr Wardell, Manager of Shadbolt Engineering, described the lengthy recruitment process:

From the time you apply to BAE to the time you actually get a job is about 10 weeks. That is just the process they go through. Being an SME, we take

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12 *Proof Committee Hansard*, 14 April 2015, p. 14.

13 *Proof Committee Hansard*, 14 April 2015, p. 21.

14 *Proof Committee Hansard*, 14 April 2015, p. 4.

15 *Proof Committee Hansard*, 14 April 2015, p. 4.

16 *Proof Committee Hansard*, 6 March 2015, pp. 1 and 3. Shadbolt Engineering has been involved in pipe installation, fabrication, hull components, block construction, fitting out, sheet metal work and mechanical trades and HVAC trades.

17 Alton supplies electrical labour on site and has done so since 1996 across nine of the Anzac frigates to offshore patrol vessels and the two LHDs. It has 80 employees with about 30 engaged full-time on the Defence new building program.

18 *Proof Committee Hansard*, 6 March 2015, p. 3.

19 *Proof Committee Hansard*, 6 March 2015, p. 12.

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a shorter time than that. You have to filter through an awful lot of people. We found this when we first started doing pipe welding on the site. To get nine copper nickel pipe welders, we would have conducted interviews and done welding trials in our factory for about 120 people. That gives you an idea of the sort of filtering you have to go through to get competent people. Obviously in the lower trades—the TAs and things like that—it is different. Once you have got someone then you have to train them to be useful on a shipbuilding site. They have to understand all the safety issues. For them to work on a block construction or on a ship, there are all sorts of rules and regulations and training which have to become second nature to them—things such as fire burning electrical cables with welding leads; those sorts of things. There are myriad things that people have to go through just to become efficient on the vessel.<sup>20</sup>

5.17 Mr Wardell informed the committee that for a company like Shadbolt Engineering, it costs about \$10,000 to have an employee up and running on the job. He noted that just to get the worker 'through the gate costs about \$7,000—just to have standing in overalls, ready to work'. According to Mr Wardell:

...by the time you do inductions, training and all that sort of thing. By the time you put them through a few EWP [elevated work platform] and other training exercises and a month or two of poor productivity because they are learning, and you get to a point where they are made redundant and walking out of the gate, you are seeing an investment of at least \$10,000 a person.<sup>21</sup>

5.18 Also highlighting the care, effort and time that SMEs take to engage and train workers for a shipbuilding project, Mr McClymont observed:

It probably took us five to six months to interview 180 people and get 180 people for BAE. The electrical project on a ship is different from any other project. Even after getting a competent electrician and putting him on a ship, their productivity probably does not get up to 100 per cent for five to six months. It is a long process, and that is evident from LHD1 to LHD2. The LHD1 build program was a lot longer than the LHD2. Electrical installation on LHD2 probably went 50 per cent under budget compared to LHD1.<sup>22</sup>

5.19 Mr McClymont explained further the specialist training involved for people working on naval ships:

For the specialist area that we are in, before anyone is ready to be let loose into a shipyard they really need to be protected in a workshop and looked after for the first 12 months. A shipyard can be a bit daunting for a young guy to be let loose in.<sup>23</sup>

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20 *Proof Committee Hansard*, 6 March 2015, pp. 3–4.

21 *Proof Committee Hansard*, 6 March 2015, p. 2.

22 *Proof Committee Hansard*, 6 March 2015, p. 4.

23 *Proof Committee Hansard*, 6 March 2015, p. 3.

5.20 Those engaged in the industry spoke not only of the time and effort taken to recruit and train workers, but the potential waste of these newly acquired skills. Referring to the estimated \$10,000 to have a worker job ready, Mr Wardell noted the effect on the industry and its workers if naval shipbuilding ceased:

If this industry is allowed to pass and shut down again, this is going to have a dramatic effect on the ability to do it again. It is costing millions—10, 20 and hundreds of millions in lost skill sets and training and opportunities for communities...When you are looking at 45 or 50 people, you are talking about an enormous amount of money. That is what the subcontractors, the supporters, of the likes of BAE are going through. I would hate to think what BAE are going through and what it is costing them.<sup>24</sup>

5.21 According to Mr Wardell, the Australian shipbuilding industry was 'finally getting the talent and the capacity to do world-class ships', but he was seeing it decay very quickly and fall away.<sup>25</sup> He noted the difficulty re-engaging highly skilled workers who leave the industry:

Most of those people will not come back into the industry unless there is some guarantee of continuity in the business. The good people will go and get other jobs. They will not walk away from secure, long-term jobs on the chance that there might be a year or two's work in a shipyard, no matter how much they love the job. This is going to devastate the industry and the capacity to rebuild.<sup>26</sup>

5.22 Mr McClymont captured the frustration and disappointment of those in the supply chain witnessing workers leave the industry, especially after so much effort to train employees:

Ever since October last year, we have been facing the problem that we have trained all of these people up and now they are starting to wander onto other secure jobs. For a company like mine, we are faced with turnover at the end of a project. If I was able to say to these guys 'There's another project coming along,' I would be able to retain them. I cannot retain on a short build program like the one that we have at the moment.<sup>27</sup>

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24 *Proof Committee Hansard*, 6 March 2015, p. 2.

25 *Proof Committee Hansard*, 6 March 2015, p. 2.

26 *Proof Committee Hansard*, 6 March 2015, p. 1.

27 *Proof Committee Hansard*, 6 March 2015, p. 6.



5.23 While noting the detrimental effect on his company if Australian shipbuilding went overseas, Mr Phillip Taylor, Taylor Bros Marine Pty Ltd, referred to the consequences for the wider community.<sup>28</sup> He explained:

This work filters down into areas of industry that are not available to us normally, and so it is really important. For places like Tasmania, which suffer from a lack of investment in all areas of industry, this is really important to us. We are in the ASC; we are about the third biggest contractor to the ASC. So we can see real benefits in continuing that hull build in that shipyard.<sup>29</sup>

5.24 Clearly, companies invest heavily in recruiting and training their workers. While some SMEs are not required to invest in capital equipment and related expenses to participate in a naval shipbuilding project, some do. For example, Mr Wardell explained that:

We have had to invest in equipment, machinery and, I have put in, training of people specific to the task. Just for the Williamstown site we probably purchased somewhere between \$200,000 and \$380,000 worth of stuff to enable us to do the tasks we have done. We have amortised that over the period of the project. That is fine. But as an investment, and what was spent on other suppliers in the Victorian economy, even small Shadbolt Engineering spent probably closer to half a million dollars just on being job ready.<sup>30</sup>

5.25 The committee recognises the contribution of SMEs and the vital role they have in Australia's naval shipbuilding industry. In the committee's view, their commitment to the industry should not be underestimated nor undervalued.

### ***Ramping up after a lull in production—the cold start***

5.26 The industry was equally concerned about the challenges presented when the time came to ramp-up construction after a drop-off.<sup>31</sup> Mr Edwards explained:

If we do not have a mature supply chain, then elements of that will restart as part of the program, similar to what we have had to do with AWD and

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28 Taylor Bros is a third generation family business established in Hobart in 1936 with a long history with defence ship building and ship repair. It specialises in the outfitting, accommodation outfitting, of the entire vessel. Currently, apart from its workshops in Hobart where the company pre-manufacture accommodation sections, Taylor Bros is working in Williamstown, Garden Island and ASC's yard in Osborne with an annual turnover in the defence sector of approximately \$7.5 million which employs around 30 full time employees. Its total contracts to the AWD project total over \$60 million & LHD project \$12 million. See *Proof Committee Hansard*, 6 March 2015, p. 3 and document tabled by Mr Phillip Taylor, 6 March 2015.

29 *Proof Committee Hansard*, 6 March 2015, p. 4.

30 *Proof Committee Hansard*, 6 March 2015, p. 5.

31 See, for example, Dr Mark Hodge, Defence Materials Technology Centre, *Proof Committee Hansard*, 6 March 2015, p. 12.

our block subcontractors and fabrications. We have had to restart those areas and bring their performance up to a level to support the program. That is something we have got to get the right balance on going forward. What we have seen from overseas and other industries is that they try to have a build cycle that will support industry and give it enough work to feed the ongoing build program.<sup>32</sup>

5.27 Mr Saltzer made a similar observation:

If the supply chain is not there to support the effort, then not only will you go through a need to reactivate the shipbuilder but you will need to reactivate the supply chain. And that will cost you even more money.<sup>33</sup>

5.28 But the cost is not only in recruiting and training workers but the lost productivity due to the industry entering a steep learning curve from a low base—management and workers starting from scratch without any momentum and with limited experience and corporate knowledge. For example, the *Future Submarine Industry Skills Plan* referred to international examples of where the erosion of skills between projects resulted in 'some very significant cost overruns on subsequent naval projects'. It then cited the recent Australian experience with the AWD and LHD programs and the detriment to the AWD project from having a 'cold start'.<sup>34</sup> It found:

The problems seen with the current shipbuilding projects in the last few years are the most direct result of having to rebuild Australian shipbuilding given its decline after the ANZAC and Collins projects...shipbuilding projects that start up after any such decline cost more: facilities have to be built or upgraded, and workers have to be recruited and trained. This also leads to schedule delays, cost over-runs, low productivity and issues with production that would have been avoided by an experienced workforce.<sup>35</sup>

5.29 The previous chapter detailed experiences with the AWDs as a most recent example of a naval shipbuilding project commencing from a cold start and the problems that can flow from that.

### **Need for continuity**

5.30 Clearly, from industry's perspective, a continuous build program would address the problems created by the stop-start pattern that has characterised Australia's shipbuilding industry. Indeed, the repeated cycles of feast and famine production have

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32 *Proof Committee Hansard*, 14 April 2015, p. 11.

33 *Proof Committee Hansard*, 14 April 2015, p. 21.

34 Department of Defence, *Future Submarine Industry Skills Plan*, March 2013, pp. 31 and 98.

35 Department of Defence, *Future Submarine Industry Skills Plan*, March 2013, p. 123.

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dogged naval shipbuilding in Australia for years.<sup>36</sup> In this regard, Austal, a global defence prime contractor and designer, argued that the government has a responsibility to create the environment that would 'provide Industry with the best opportunity to be as competitive as possible internationally'.<sup>37</sup> In its view:

A continuous build program would seem to be the simplest and most effective method to ensure efficiencies are achieved across the various build programmes. Not only does it offer productivity advantages, it also provides certainty for industry and hence the market and investors in the case of Australia's only ASX listed ship building company, Austal. Productivity efficiencies can also drive a more competitive Australian offer on a Government build program.<sup>38</sup>

5.31 Likewise, Engineers Australia maintained that continuity of work was 'essential for naval shipbuilding and sustainment costs to become internationally competitive'. In its view:

The importance of specialisation in this work has been seriously underestimated and there is a direct parallel between economies of scale for multiple asset builds and improving the productivity of a skilled work force through continuous work.<sup>39</sup>

5.32 Mr Wardell stressed that continuity was the key to the success of the industry. Acknowledging that other companies would respond positively to the incentives offered by having a constant and certain build program, he referred specifically to Shadbolt Engineering:

...in our case we would continue investment. We would be employing people even on the chance within our existing business for other scoped work so that we could take them into that business. We would build our business in such a way that it would be flexible to be able to go in and out of that industry, knowing we might be successful on various contracts within it.

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36 See for example, Mr Saltzer, BAE Systems, who noted 'Before the Anzac project in the 1990s, the exact same thing happened; the industry was brought down to nothing and then reactivated to build a whole fleet of new ships again. The same thing happened with AWD and LHD; when we started those projects the industry had to rebuild from almost nothing, and productivity was low as a result of that. Now we have gotten to the point where we are productive again because we have been spending the last six years building AWDs and LHDs, and where are we today? Facing the end of all work again'. *Proof Committee Hansard*, 14 April 2015, p. 17.

37 *Submission 28*, p. 1. Austal is a global defence prime contractor and a designer and manufacturer of defence and commercial ships. For more than 25 years, Austal has been a leader in the design, construction and maintenance of revolutionary ships for Governments, Navies and Ferry operators around the world. More than 250 vessels have been delivered in that time. Austal website, <http://www.austal.com/en/about-austal/Overview.aspx> (accessed 25 June 2015).

38 *Submission 28*, p. 2.

39 *Submission 33*, p. 9.

One of the things that I think is missing is sufficient work in that industry, particularly on a continuous basis, to foster good competitive processes. There are not enough Shadbolts, Altons and Taylor Bros out there. Over a 20- to 40-year build program, if you look at the amount of vessels that the government should be buying in the next 40 years, you need another five Shadbolts, two or three Altons and a couple more Taylor Bros to keep the pressure on and to keep standards, quality and performance up. If you do not have that, you are not going to get that competition, and we are not going to invest. Competition breeds innovation and constant improvement. You need to have those market forces driving it. Once off builds do not get it.<sup>40</sup>

5.33 In his view, 'if we want to save money in shipbuilding, we have to work continuously'.<sup>41</sup>

5.34 Moreover, witnesses were of the view that measures could be taken to address the current short-term downturn in naval shipbuilding activity. Mr Thompson, AMWU, stated bluntly that without a continuous build, the Australian shipbuilding industry was 'always playing catch-up' because the progress made 'is lost between projects'.<sup>42</sup> Mr Thompson referred to the minister's speech on 31 March 2015 and his reference to the inevitability of the 'valley of death'. He informed the committee that the AMWU had been urging the government to fill this void with a fourth AWD, as outlined in the 2013 White Paper, by accelerating the Pacific patrol boat tender process; reopening the tender for the Antarctic icebreaker and bringing forward the future frigate build.<sup>43</sup> He cited the list of naval ships to be acquired—the Pacific boats, the supply ships, future frigates and possibly the hydrographic vessels.

5.35 Mr Taylor looked to the future frigates as a solution. He suggested:

If three air warfare destroyers were to get more advanced and become a rapid build program and turn into another eight frigates, that, for Australian industry, would be amazing. Certainly for us it would be beneficial if those 30 people that we employ specifically on that program continued for another eight years beyond the AWD program. That does not seem much. It is only a drop in the ocean of what the whole program is, but for a little company down in Hobart it is quite substantial income, and there are a lot of people that feed off that...<sup>44</sup>

5.36 Raytheon Australia considered that should the government choose not to advance the frigate program, alternative proposals would be required to prevent the

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40 *Proof Committee Hansard*, 6 March 2015, p. 5.

41 *Proof Committee Hansard*, 6 March 2015, p. 2.

42 *Proof Committee Hansard*, 14 April 2015, p. 2.

43 *Proof Committee Hansard*, 14 April 2015, p. 2.

44 *Proof Committee Hansard*, 6 March 2015, p. 5.

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demise of naval shipbuilding and the loss of systems integration skills. It also referred to the acquisition of one or more additional AWDs noting:

...the option of a fourth AWD is not new and has existed since the Second Pass of the AWD program was achieved in 2007. In the absence of advancing the Future Frigate program there could be strong reasons to proceed with an incremental evolution of the AWD design.

Putting aside any workforce considerations, as is appropriate, additional AWD's would ensure that Australia could, with a higher degree of confidence, provide its lightly armed LHD's and other Afloat Support assets with the protection they require in contested environments. Such an evolved AWD design could also undertake an appropriate role in ballistic missile defence should the Australian Government choose to adopt such a requirement in its forthcoming Defence White Paper.<sup>45</sup>

5.37 The South Australian Minister for Defence Industries, the Hon Martin Hamilton-Smith, was of the view that Australia needed both submarine and frigate work to establish 'productive working relationships in a world-competitive shipyard to produce a continuous build of ships over the next 30 years'. He stated:

We need both submarine and frigate work to do that. I think any suggestion that you can, if you like, build frigates alone and have a sustainable shipbuilding industry but feed off the 12 submarines overseas is flawed.<sup>46</sup>

5.38 With regard to the proposed future frigates, the committee noted in its first report Mr Warren King's strong argument in support of an Australian build. Mr King suggested that if Australia structured the program well, 'we would actually be building them in this country at the same price that we could buy them anywhere else'. In his view, it would be a legitimate business, with a real strategic value that needs no additional budget investment to do it: no subsidies or similar assistance. According to Mr King, for the first time since Federation, Australia has 'an opportunity for a truly strategic shipbuilding capability'. He referred to the past 50 years of off and on constructions—Australia built the ANZACS but stopped; built *Success* but stopped; built two FFGs.<sup>47</sup> He stated further that should the government decide to build the future frigates based on the AWD hull, incorporating an Australian-made radar, then potentially the program could start at the point of learning efficiency achieved by the AWDs.<sup>48</sup> In other words, production would start much higher up the learning curve and the work and management practices, improved and refined on the AWD, would flow into the construction of the frigates. For example, as described in chapter 4, ensuring that materials and equipment are in place when a particular phase is ready to start, having a mature supply chain and workers and, importantly, management, job ready.

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45 *Submission 29*, p. 6.

46 *Proof Committee Hansard*, 14 April 2015, p. 25.

47 *Proof Committee Hansard*, 21 July 2014, pp. 23 and 26.

48 *Proof Committee Hansard*, 21 July 2014, p. 23.

5.39 Mr King explained this process of transitioning from the AWD to the future frigate. He noted that the AWD did not deliver when expected, so the last AWD construction was estimated to be sitting in the area of 2019–20. He explained that therefore, it was possible, depending on present and future governments, that the future frigate, if authorised and based on the AWD hull, could pick up and be 'the basis of a proper strategic shipbuilding industry'.<sup>49</sup> In his view, if the future frigate is based on the same hull as the AWD, 'we should be able to get to world's best practice around about ship 3, and with Australian radars and Australian technology in it'. He informed the committee that he had never seen a better opportunity to have 'a real strategic capability that is cost efficient, that no-one has to apologise for' and is of value to the taxpayer.<sup>50</sup>

5.40 In highlighting the importance of continuity in shipbuilding, he again stressed his view that the government's initial decision to look at the feasibility of reusing the AWD's hull with Australian radars and other equipment represented the 'best opportunity to deal with continuity'. He stated:

If decisions are made as it is proposed they will be, we could very much be in that place where we keep the continuity of work and keep those skills.<sup>51</sup>

5.41 The AMWU welcomed DMO's indications that it was looking at the feasibility of using the AWD platform for the replacement frigates. Mr Thompson added, however, that the union would want government to reiterate its position on this. Even so, according to Mr Thompson, the AMWU had concerns about being able to maintain the workforce built up over the life of the AWD project—some 3,800 skilled workers—until such time as a frigate project comes online.<sup>52</sup>

5.42 Mr Graeme Dunk, Australian Business Defence Industry, also noted that conceptually the frigate proposal was 'a good idea':

It is something we needed to have done years ago—actually commit to a long-term, ongoing rolling build of naval vessels of a similar type so that we can get good at it and do it at a globally competitive price.<sup>53</sup>

5.43 In July 2014, Mr Dunk observed, however, that at this stage, there was 'only a commitment to study the early stages of the frigate design'.<sup>54</sup> Mr Burns likewise thought that the future frigate proposal was a 'great solution' at this time and strongly supported it.<sup>55</sup> But he made the point that shipbuilders 'cannot go to the bank with a

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49 *Proof Committee Hansard*, 21 July 2014, p. 28.

50 *Proof Committee Hansard*, 21 July 2014, p. 30.

51 *Proof Committee Hansard*, 21 July 2014, p. 31.

52 *Proof Committee Hansard*, 21 July 2014, p. 35.

53 *Proof Committee Hansard*, 21 July 2014, p. 42.

54 *Proof Committee Hansard*, 21 July 2014, p. 46.

55 *Proof Committee Hansard*, 21 July 2014, p. 42.

prospect', noting also that industry had only heard about 'the prospect of a future frigate build'.<sup>56</sup> He indicated that work was already being lost and in the meantime:

There was no indication of when that future frigate program might commence and when we might see the cutting of steel. The problem for industry is that it has been very hard to go to the bank for the last six years, and time is running out for a lot of the SMEs out there.<sup>57</sup>

5.44 It is worth noting that in July 2014, the Minister for Defence informed defence and industry representatives that he wanted a continuous build but needed their help to fix the AWD and also design a future frigate program that follows on from the AWD with minimal industry disruption.<sup>58</sup> The minister indicated that further decisions on the future frigate would be taken in the context of the 2015 Defence White Paper.<sup>59</sup> It is now June 2015 and the White Paper is yet to be published. Meanwhile, naval shipbuilding companies in Australia and those in the supply chain witness the industry haemorrhage.

5.45 Importantly, as noted earlier, the time lapse between tendering for a project and arriving at construction can be significant. In the committee's view, if the future frigate project is to contain the impending slowdown in naval shipbuilding then decisive action must be taken now to start the project in earnest. The same applies to the Pacific patrol boat project.

5.46 BAE Systems agreed that the industry must be competitive and accountable for achieving competitive levels of productivity on existing and new shipbuilding projects.<sup>60</sup> Mr Saltzer made the point, however, that industry can only produce when the government purchases.<sup>61</sup> He observed:

...the industry cannot be competitive if it has no work, just as an athlete cannot be competitive if they do not practise and play their sport. With continuing work, productivity can continue to improve, and evidence of this abounds.<sup>62</sup>

5.47 Indeed, the committee has an abundance of evidence supporting the contention that Australia's shipbuilding industry needs a constant flow of work that is

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56 *Proof Committee Hansard*, 21 July 2014, p. 42.

57 *Proof Committee Hansard*, 21 July 2014, p. 42.

58 'Minister for Defence—Defence and Industry Conference 2014', Adelaide Convention Centre, 29 July 2014, <http://www.minister.defence.gov.au/2014/07/29/minister-for-defence-defence-and-industry-conference-2014/> (accessed 4 August 2014).

59 'Minister for Defence—Boosting Australia's maritime capabilities', 6 June 2014, <http://www.minister.defence.gov.au/2014/06/06/minister-for-defence-boosting-australias-maritime-capabilities/> (accessed 14 May 2015).

60 *Proof Committee Hansard*, 14 April 2015, p. 16.

61 *Proof Committee Hansard*, 14 April 2015, p. 16.

62 *Proof Committee Hansard*, 14 April 2015, p. 16.

able to sustain a viable naval domestic shipbuilding industry if it is to be competitive and productive. BAE Systems noted that a continuous and efficient production of naval vessels would benefit all parties, especially the Australian taxpayer. In Mr Saltzer's view, the navy would need many new ships and submarines over the coming years.<sup>63</sup> He stated:

A number of them should have been ordered already to replace vessels that are too old and are costing too much to maintain, but the fact that they have not should not be a reason to delay further. It should be a call to action now.<sup>64</sup>

5.48 Mr Quick, Chairman of DMTC, told the committee the issue was not whether Australia could build naval ships but how it could build ships productively. Again, the need for continuity was central to the solution. Mr Quick referred to the increase in productivity and diminishing costs as the construction of ship 2 and 3 proceed. From his perspective, the real challenge was how to start at a higher level of productivity.

What can you actually do with those critical skills that you could start to build up early enough so that those people are already down the learning curve. That practice is well established across a whole lot of industries, but we have not been doing that here. What we have done is we have waited until we have got to the end of the procurement process and then recruited the people, and they are starting at point zero. If we look at the skills that are critical to productivity and start driving those individuals, the supervisory staff, down the productivity learning curve, then we can actually be more productive.<sup>65</sup>

5.49 Noting that Australian shipbuilding was significantly more expensive with slightly longer schedules, the RAND report was of the view that Australian shipbuilding could perform better. Pointedly, it referred to the role of continuous building. For example, it found the production of naval warships in Australia involves a 30 to 40 per cent price premium over the cost of comparable production at shipyards overseas, but this cost could drop over time with 'steady production drumbeats and mature designs'.<sup>66</sup> Indeed, the RAND report suggested that with a constant production program that 'leads to a productive workforce', the premium could be cut by approximately half.<sup>67</sup>

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63 *Proof Committee Hansard*, 14 April 2015, p. 16.

64 *Proof Committee Hansard*, 14 April 2015, p. 16.

65 *Proof Committee Hansard*, 6 March 2015, p. 12.

66 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, pp. xxxviii–xxxix, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

67 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, p.149, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).



5.50 The RAND report noted that a sustained build program would help to develop and retain skilled workers, which would improve productivity. In its assessment, a continuous build philosophy avoids the all-too familiar boom-bust cycle for industry, allowing industry to maintain and train a skilled workforce. It reasoned that a continuity of work would also allow 'the shipbuilders to justify investments to achieve better productivity because there is a dependable, long-term cash flow'.<sup>68</sup> According to the RAND report, once productivity improves, schedules are likely to be more competitive as well. It suggested, however, that the needed improvements go beyond just more proficient workers and that many acquisition practices also have to improve. It suggested:

One necessary change is a much more rigorous approach to program execution to avoid the issues seen on the AWD program. These improvements include better integration between designers, builders, and suppliers; a mature design at the start of the build; and control of requirements and design changes once building begins.<sup>69</sup>

5.51 Although, the importance of moderating the peaks and troughs in shipbuilding activity was one of the most significant findings, the problems created by fluctuations in demand are well recognised. According to Mr Saltzer the boom-bust cycle was not a phenomenon unique to Australia. He argued, however, that it was unfortunate that:

...Australia has not learned from the lessons that have occurred in other countries. The US went through this, and over the last 30 years they have been doing continuous production—and that industry is rationalised. The UK went through the same problem. They have done the same thing. They have rationalised down to a level of capability that they have determined is important for their own strategic reasons, and that is where the industry sits—and, when work needs to be put into it, the government puts work into it.<sup>70</sup>

5.52 But, despite the unanimous recognition of the critical importance of maintaining a steady and reliable flow of naval shipbuilding work and the persistent call for a continuous build program, no concrete proposals or commitments have been made that would realise this objective. According to Mr Saltzer, BAE:

At present there are only two active requests for tender for shipbuilding projects, both of which were issued quite recently by DMO. One is for the SEA 1654 phase 3 replenishment ships, which is restricted to competition between one company in Spain and one company in South Korea. The other is for the Pacific patrol boats, which are to be built in Australia, but with a

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68 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, p. 132, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

69 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, p. 131, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015).

70 *Proof Committee Hansard*, 14 April 2015, p. 20.

projected contract award date of the first quarter of 2017, meaning a production start in late 2017 or even 2018.<sup>71</sup>

5.53 Referring back to the acquisition of the two supply ships, Mr Saltzer stated that there was no reason for not having Australian content in that project: that they were large oilers with a basic combat system and a set of communications. He reminded the committee that BAE was one of the prime naval shipbuilders that made an unsolicited proposal to Defence to do a hybrid build.<sup>72</sup>

5.54 In its first report, the committee noted the argument in favour of a hybrid build in Australia for the new replenishment ships in order to bridge the potential trough in shipbuilding activity. Although Defence was of the view that these ships were to be based on existing designs with minimal modifications to meet Navy's requirements, some witnesses saw opportunities for Australian industry to add value. As noted earlier, BAE had 'very brief discussions' with DMO executives in 2012 about its hybrid proposal which DMO 'never pursued'.<sup>73</sup> Mr Saltzer observed:

Now we are all the way in 2015 and those ships have not been bought yet. There is no contract for those ships yet. They have just issued the tender for it. They spent some time working with a Spanish company and a Korean company on risk reduction studies and they have just issued the tender for it. The only requirement for Australian content that I am aware of in those tenders is for the in-service support after the ships have been delivered.<sup>74</sup>

5.55 In his view, the opportunity was still there to ensure Australian content. He explained:

If the companies that are bidding for that project were given direction in the tender to include Australian content, I believe we could achieve that in some very cost-effective ways. In fact, I have pursued that idea together with Navantia and with a Korean company. We have had meetings with them offering the services we could perform in Australia—things like installation, integration, testing and trials of the combat and communication systems on those ships, which should be done in Australia anyway in my opinion.<sup>75</sup>

5.56 Mr Saltzer accepted that there were projects in the pipeline and talk about bringing forward projects—the supply ships, the patrol boats, the remaining work on the AWDs and the future frigates. While he appreciated comments on the government's intention to bring forward work and the studies going on in Defence on

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71 *Proof Committee Hansard*, 14 April 2015, p. 16.

72 *Proof Committee Hansard*, 14 April 2015, p. 17.

73 *Proof Committee Hansard*, 14 April 2015, p. 17.

74 *Proof Committee Hansard*, 14 April 2015, pp. 17–18.

75 *Proof Committee Hansard*, 14 April 2015, p. 18.

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the projects, he observed that, as a leading player in the industry in Australia, BAE did not see any activity that 'benefits our operation at this time'.<sup>76</sup>

### *Committee view*

5.57 One of the most important observations presented to the committee is that industry can only produce when the government purchases—that the industry 'cannot be competitive if it has no work'.<sup>77</sup> The committee understands that Australia's defence industry cannot survive a 'stop-start' order book: that it needs a consistent and reasonably predictable local workload to be sustainable and competitive. In the committee's view, it is unacceptable for the government, as sole customer, to criticise the industry for poor performance when many of the problems originate from a lack of government foresight, and the 'feast and famine' cycles inflicted on industry.

5.58 While the predicted gap in shipbuilding activity, sometimes referred to as the 'Valley of Death', is now closer than it was at the time the committee tabled its first report, the committee remains of the view that the government could and should be doing more to maintain a viable shipbuilding industry in Australia. Witnesses have suggested maximising Australian content in the construction of the new replenishment ships, as well as bringing forward the construction of the Pacific patrol boats and the future frigates.

5.59 The committee understands that the 2015 Defence White Paper will state the government's priorities for major naval acquisitions. The committee, however, believes that important decisions have already been delayed for too long and the government should give clear and certain indications of its intentions to acquire the future frigates, and of maximising Australian content in the new supply ships.

### **Recommendation 4**

**5.60 The committee recommends that the Australian Government take measures immediately to reverse the perilous downturn in Australia's naval shipbuilding industry, reduce the impact of the 'Valley of Death' and enable a program of continuous build by:**

- **mandating a hybrid build for the first Auxiliary Oil Replenishment Ship and an onshore build for the second;**
- **mandating that all 12 of the future submarines be built in Australia;**
- **fast tracking the build of the Pacific patrol boats and the replacement of the Armidale Class patrol boats; and**
- **bringing forward the construction of the future frigates.**

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76 *Proof Committee Hansard*, 14 April 2015, p. 19.

77 Mr William Saltzer, BAE Systems Australia, *Proof Committee Hansard*, 14 April 2015, p. 16.



# Chapter 6

## Long term national strategic plan

6.1 If Australia is to have a vibrant, innovative and internationally competitive defence industry, it must have a steady and reliable flow of work. The committee made this point in its first report drawing not only on evidence from its inquiry but on decades of experiences from both Australia and overseas. It further emphasised this fact in the previous chapter. Despite world-wide recognition, countries, including Australia, continue to struggle with planning and implementing a continuous naval shipbuilding program that would support their indigenous defence industry.

6.2 A national strategic naval shipbuilding plan is central to achieving this goal of maintaining a continuous stream of work for Australian shipyards. In this chapter, the committee endeavours to reconcile government statements and planning documents with what is happening on the ground in Australian shipyards.

6.3 So far the committee has produced evidence that is stark and incontrovertible: Australia has suffered the consequences of feast and famine cycles in naval shipbuilding, which means that industry struggles to survive during the downturn and then has to rebuild capacity after a lull in construction. The AWD is the most recent example that demonstrates clearly the need for a strategic approach to Australia's shipbuilding industry. In this particular instance, Australia, without proper planning, found itself in a situation where Defence needed to acquire concurrently the LHDs and replace the AWDs.<sup>1</sup> Indeed, the shipyard at Williamstown was stretched, working on two major projects at the same time—steel blocks for the AWDs and the superstructure and integration of the LHDs.<sup>2</sup>

6.4 There are numerous problems encountered when starting major shipbuilding projects, such as the AWD, from a cold start. They include the costs of finding, recruiting, training and retooling skilled workers, upgrading or cranking up disused or under-utilised infrastructure, re-establishing the critical supply network, and importantly, relearning lessons that normally would be part of the domain knowledge of a shipyard.

6.5 This is not to ignore the adverse consequences and wastage of skilled workers lost to the industry and idle infrastructure as demand tapers off after a peak in production. The committee has highlighted the leakage of skilled workers from the industry, the lost corporate knowledge and the detrimental effects that filter through the economy.

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1 Mr Warren King, *Proof Committee Hansard*, 21 July 2014, p. 32.

2 The Hon. Stephen Smith MP, Minister for Defence, Media Release, 'Changes to Air Warfare Destroyer Construction Program', MIN663/11, 26 May 2011, <http://www.defence.gov.au/minister/Smithtpl.cfm?CurrentId=11862> (accessed 2 January 2012).

6.6 The government and Defence have made commitments to supporting Australia's naval shipbuilding industry in key strategic documents—Defence White Papers, the Defence Capability Plan and Defence Industry Policy Statements. But, for many years, defence industry has criticised these documents as an ineffective means of providing assistance to the industry. In particular they provide no workable or practical solutions and, in some cases, pay no heed to maintaining a continuous flow of business.

### **Defence White Paper 2015**

6.7 The Prime Minister and the Minister for Defence announced on 4 April 2014, that Defence would produce a new Defence White Paper to be released in 2015. Defence white papers are key strategic documents that present the government's long-term strategic forecast and commitments for Defence including its future capability. Such documents have a critical role in providing guidance to government about Australia's long-term defence capability. They allow the government and community 'to understand the opportunities and challenges for Australia's future defence and security needs'. According to the Prime Minister, the 2015 Defence White Paper would be 'a whole-of-government product that reflects the Government's overall strategic, fiscal and broader policy priorities'.<sup>3</sup>

6.8 Following the release of the 2015 White Paper, Defence would publish a 10-year Defence Capability Plan and a Defence Industry Policy Statement.<sup>4</sup> Both documents should 'provide defence industry with greater certainty about the Government's key priorities and timeframes'.<sup>5</sup> In conjunction with the White Paper, the government will also publish a fully-costed 10-year Defence Investment Plan and an enterprise-level Naval Shipbuilding Plan. According to the government, together these policies and plans will ensure Australia has a sustainable and viable industry.<sup>6</sup>

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3 Australian Government, Department of Defence, '2015 Defence White Paper', <http://www.defence.gov.au/whitepaper/> (accessed 14 May 2015).

4 Department of Defence Ministers, Minister for Defence – Speech – RUSI Submarine Summit – 25 March 2015, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (18 May 2015).

5 Australian Government, Department of Defence, '2015 Defence White Paper', <http://www.defence.gov.au/whitepaper/> (accessed 14 May 2015).

6 Australian Government, Budget 2015–16, Defending Australia and its National Interests, 2015, Department of Defence, p. 2, <http://www.defence.gov.au/Budget/15-16/2015-16-Brochure.pdf> (accessed 20 May 2014).

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## Defence Capability Plan

6.9 The DCP is a 'classified and costed 10-year detailed development plan for Australia's military capabilities (including workforce requirements)'.<sup>7</sup> Defence also publishes a public version of the DCP designed to:

...provide industry with a synopsis of the projects including: confirmed scope; background; indicative schedule; Australian Industry opportunities; cost banding; and points of contact. The format of this Public DCP also introduces stakeholders to the concept of Program and Sub-Program management.<sup>8</sup>

6.10 Government approval for entry of projects into the DCP provides 'the foundation for subsequent capability work in Defence'.<sup>9</sup>

6.11 The DCP is one of the primary means whereby Defence has articulated its future naval shipbuilding demand and acquisition schedules. The DCP should provide industry with the assurances and guidance that allows businesses to plan with confidence.

6.12 For decades, defence industry has been calling for a strategic long-term naval shipbuilding plan on which industry could depend. For example in 2006, after a comprehensive examination of Australia's naval shipbuilding industry, including the cyclical flows in demand that characterise the industry, the Senate Foreign Affairs, Defence and Trade References Committee (FADT) found that:

...as naval shipbuilding is a monopsony market, the circumstances of industry players are substantially different to many other cyclical industry sectors. It is concerned that if Australian companies cannot survive and grow through peak and trough demand cycles, the capacity to meet defence's capability needs into the future will be reduced.<sup>10</sup>

6.13 The FADT committee also expressed concern that Defence did not fully accept how powerfully its demand scheduling shaped Australia's naval shipbuilding capacity and efficiency. It rejected the notion that measures could not be taken 'to moderate demand peaks and troughs more effectively without adversely affecting Defence capability'.<sup>11</sup>

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7 Department of Defence, *Defence Capability Development Handbook 2014*, paragraph 2.2.4, [http://www.defence.gov.au/publications/docs/Defence%20Capability%20Development%20Handbook%20\(DCDH\)%202014%20-%20internet%20copy.pdf](http://www.defence.gov.au/publications/docs/Defence%20Capability%20Development%20Handbook%20(DCDH)%202014%20-%20internet%20copy.pdf) (accessed 8 August 2014).

8 Department of Defence, *Defence Capability Plan*, public version 2012, p. 1, <http://www.defence.gov.au/publications/CapabilityPlan2012.pdf> (accessed 17 October 2014).

9 Department of Defence, *Defence Capability Development Handbook 2014*, paragraph 2.2.7.

10 Senate Foreign Affairs, Defence and Trade Committee, *Blue water ships: consolidating past achievements*, 7 December 2006, p. 264.

11 Senate Foreign Affairs, Defence and Trade Committee, *Blue water ships: consolidating past achievements*, 7 December 2006, p. 264.

6.14 At that time experts and commentators on defence procurement and those engaged in the defence industries were critical of the information made available through the DCP. They wanted accurate and reliable information on Defence's forward procurement plans: clearer guidance on the government's long-term plan. Moreover, they were looking for detailed information on the value placed on, and weight given to, Australian industry involvement; the industrial capabilities deemed to be strategically important, and the levels of funding likely to be available.

6.15 The concern with the quality and reliability of information available, particularly through the DCP, was also evident in the 2012 FADT committee report on Defence procurement for Defence capital projects. Again industry told the committee that key planning documents for industry such as the Defence White Paper and the DCP fell short in providing the level of certainty that industry required 'to be an effective partner in capability development'.<sup>12</sup> The evidence before this current inquiry reinforces those same messages of a decade ago and repeated just three years ago.

### **Need for long term plan**

6.16 Defence is the sole customer for Australia's naval shipbuilding industry and because of its dominance in the market is able to create policy settings to assist industry become more effective and competitive. As Austal observed:

Industry must, and can be competitive against international benchmarks, provided the government puts the right policy levers in place.<sup>13</sup>

6.17 Such measures include 'driving the most effective procurement plan to support capability and industry'.<sup>14</sup> Dr Mark Hodge, DMTC, was firmly of the view that Australia can build naval ships, but a framework or strategy has to be in place that ensures Australia has the skills and capability transfer mechanisms that are 'independent, or at least not specifically tied to, those feast and famine processes'.<sup>15</sup> He explained that if industry were not equipped with the skills and best practice programs in terms of productivity and access to technology to enable participation in the global supply chains when there is an upswing in production then it would 'not be in the game'.<sup>16</sup> He stated:

...while you might not know which designer is coming to build a particular ship, you might not know which prime or you might not know much about it, you do know it is going to be made of steel, you do know you are going to need to weld it and you do know you are going to need to drill holes in it. You know a lot about it. You know enough about it where there is an

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12 Senate Foreign Affairs, Defence and Trade Committee, *Procurement procedures for Defence capital projects*, Final report, August 2012, pp. 224–225.

13 *Submission 28*, p. 3.

14 *Submission 28*, p. 3.

15 *Proof Committee Hansard*, 6 March 2015, p. 12.

16 *Proof Committee Hansard*, 6 March 2015, p. 12.



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opportunity for a very marginal cost to invest through appropriate models to ensure that you are benchmarking your supply chain productivity and providing the opportunity to insert technology in a way that gives that supply chain a trajectory to tool itself up for when those opportunities come.<sup>17</sup>

6.18 Mr Wardell argued that for this industry to survive, it needs to have 10-year, 20-year plans. In his assessment, the industry cannot survive on the four-yearly cycle of one government to the next government. According to Mr Wardell, there has to be bipartisan agreement which allows for long term planning. He firmly believed that:

...if the government were to get its act together and put down a plan, it could foster competition between the likes of BAE and other prime contractors—Thales and SAAB or whatever—and if we could maintain continuity of work and benefit from the learning curves and the lessons learnt, the shipbuilding industry in Australia could be world class and very competitive. It is not going to take a lot to do it, but it cannot be done in a start-stop way.<sup>18</sup>

6.19 Along similar lines, Mr Saltzer, BAE, noted:

Ultimately, the government has to sit down and help us understand what their long-term plan is and what is strategically important to do in Australia, and the industry will rationalise around that. It does not make sense for us to go up to 8,000 or 10,000 people for a couple of years and then come down to zero to 500. It just does not make sense to do that. Get us to the point where we need to be, and allow us to produce without all the peaks and valleys, and the productivity, I guarantee you, will be there.<sup>19</sup>

6.20 In his view, the tender process for the Supply ships was an act of misgauging priorities:

...the government here needs to focus and decide on its priorities in terms of what is strategic for naval shipbuilding in Australia, and then to work with the industry to create that rationalisation that will be needed to support that level of capability. The fact is that we keep going back and forth to the idea that 'we have not done anything, so let's not do it on this ship,' and then the next ship comes along and you still say 'we have not done anything, so let's do it on the next ship that comes along.' It is an endless cycle with no result.<sup>20</sup>

6.21 Professor John Norris also spoke of the need to provide industry with certain guidance of future requirements to encourage investment in targeted areas. To his

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17 *Proof Committee Hansard*, 6 March 2015, p. 12.

18 *Proof Committee Hansard*, 6 March 2015, p. 2.

19 *Proof Committee Hansard*, 14 April 2015, p. 19.

20 *Proof Committee Hansard*, 14 April 2015, p. 21.

mind, "the certainty of ongoing orders" and investment in new technology remains an obstacle to productivity'.<sup>21</sup> He explained further:

To facilitate this approach the Australian shipbuilding industry needs adequate warning of the chosen design route so that it can explore the most productive manufacturing options. If overseas 'best practice' in shipbuilding is examined it is clear that significant productivity improvements could be made by employing automation, new welding processes, improved design tools and advanced metrology. These developments may need major investments to be made by the industry and this is only possible if there is a clear commitment to an ongoing Naval shipbuilding and sustainment program in Australia.<sup>22</sup>

6.22 The Defence Teaming Centre added its voice to the call for a strategic long-term naval ship building plan. Mr Burns stated:

These projects should be considered collectively in the context of a whole-of-government national shipbuilding vision and plan that has bipartisan support and is developed in collaboration with the crossbenches. Developing such a plan would not be an onerous or time-consuming task. Much of the data required already exists in the numerous studies and reviews of shipbuilding that have been conducted.<sup>23</sup>

6.23 Underlining the need for clarity and certainty from Defence, Mr Burns reinforced the argument that industry can only make investments based on a sound strategic Defence capability and acquisition plan. He told the committee that, from an industry viewpoint, the DCP had not been reliable for a number of years. Indeed, in his view, since 2009 industry had not been able to rely on the DCP because it has 'not been delivered, budgeted or funded'. He stated that industry still does not have a funded Defence capability plan at this time.<sup>24</sup> Put bluntly, if 'you do not know and you cannot rely on the plan, you cannot go to the bank and make your plans'.<sup>25</sup> He repeated his concern:

Industry cannot invest based on the Defence capability plan because it is not reliable and it is not funded and so a company cannot go to its bank and say, 'I need money to sustain myself in order to secure that project'.<sup>26</sup>

6.24 Mr Burns, was one of a number of witnesses who mentioned that the US, the UK and Canada have:

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21 *Submission 27*, p. [4].

22 *Submission 27*, p. [3].

23 *Proof Committee Hansard*, 14 April 2015, p. 27.

24 Mr Christopher Burns, Defence Teaming Centre, *Committee Hansard*, 21 July 2014, p. 45.

25 *Proof Committee Hansard*, 21 July 2014, p. 43.

26 *Proof Committee Hansard*, 21 July 2014, p. 46.

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...developed 30-year national shipbuilding plans agreed by all parties of government. They develop these plans with the realisation that, when you take a truly long-term perspective and consider the whole-of-life cost benefits to the nation, you appreciate the value for money and return on your investment if you partner with and commit to work with your national industrial base.<sup>27</sup>

6.25 Along similar lines, Mr Dunk referred to the Defence White Paper and the Defence industry policy statement, which, in his view, had never made a demonstrable link:

...between the strategic requirement to build ships and the strategic requirement to maintain them and the crossover in skills necessary to ensure that we can achieve the maintenance through shipbuilding. It may well be that shipbuilding in itself is a strategic requirement, but it is not listed as one as far as the government policy is concerned.<sup>28</sup>

6.26 Defence industry's ability to plan for, and invest in, people and facilities in order to partner with Defence to deliver future naval ships depends significantly on the information Defence makes available. Clearly, from industry's perspective, Defence's strategic planning documents do not instil confidence and fall far short in providing the certainty industry requires to commit resources to proposed future projects. Further, the strategic planning that underpins these documents lacks foresight and commitment resulting in volatility in demand and confusion about future intentions.

6.27 The urgent need to forestall a capability gap and undertake a limited tender for the two replenishment ships is evidence of this lack of planning. It should also be noted that the need to avoid a capability gap in the 2020s when the Collins Class is scheduled for retirement from service has placed the delivery of the future submarine under increasing pressure. In addition, the fact that the start of the construction of the AWDs overlapped with work on the LHDs, which created heavy demands on the Australian shipyards, also indicates a lack of foresight. Further, now there is the prospect of a gap in production between the AWDs and the future frigates, from which the industry is already suffering, as well as the anticipated lull around 2035.<sup>29</sup>

### **Government's policies and plans**

6.28 The government's decision regarding the limited tender for the replacement replenishment ships was announced simultaneously with its decisions to bring forward work to keep open the option of building the future frigates in Australia; an open

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27 *Proof Committee Hansard*, 14 April 2015, p. 27.

28 *Proof Committee Hansard*, 21 July 2014, p. 44.

29 See, for example, John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, p. xxvii, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (accessed 18 May 2015).

competition with Australian industry to construct the replacement Pacific patrol boats; and the development of an enterprise-level Naval Shipbuilding Plan as part of the White Paper 2015 process.<sup>30</sup> With regard to this plan, Defence informed the committee that the development of the White Paper and the enterprise-level Naval Shipbuilding Plan would:

...address issues associated with the Australian shipbuilding industry and develop a plan that aligns Defence capability requirements with industry capacity. The goal will be to ensure that the recapitalisation of the Navy over the coming decades can be undertaken in a way that ensures a cost-effective solution for Defence and provides Navy the assured capability and structure to fight and win at sea.<sup>31</sup>

6.29 In its 2015–16, Defence Budget Statement, the government stated that it would 'enhance its strong record of investment in Defence capability'. It noted further, a complete program of capital investment in new capabilities, including, as mentioned earlier, a detailed enterprise-level Naval Shipbuilding Plan, would accompany the 2015 Defence White Paper.<sup>32</sup> This shipbuilding plan, together with policies, is meant to ensure that Australia would have a sustainable and viable ship building industry. It is intended to:

- provide for the long-term future of the Australian naval shipbuilding industry; and
- provide greater certainty to industry about key priorities and timeframes.<sup>33</sup>

6.30 But as noted earlier, companies such as BAE and the many SMEs that support Australia's naval shipbuilding industry are already shedding jobs and, further, have little confidence that the government has a plan to help revive the industry.

6.31 Without doubt, there is a pressing need for the government to formulate a long-term strategic naval shipbuilding plan. This plan, however, must be credible, reliable and, of paramount importance, address the immediate problems confronting the industry. Defence industry wants a predictable and sustainable basis on which to plan ahead.

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30 Australian Government, Australian Government response to the Senate Economic References Committee report: Part I—Inquiry into the Future of Australia's Naval Shipbuilding Industry Tender Process for the Navy's New Supply Ships, p. 1, [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Naval\\_shipbuilding/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Naval_shipbuilding/Additional_Documents) (accessed 24 May 2015).

31 *Submission 35*, p. 6.

32 Australian Government, Budget 2015–16, *Defending Australia and its National Interests*, 2015, Department of Defence, p. 6, <http://www.defence.gov.au/Budget/15-16/2015-16-Brochure.pdf> (accessed 20 May 2014).

33 Department of Defence Ministers, Minister for Defence—Speech—RUSI Submarine Summit, 25 March 2015, <http://www.minister.defence.gov.au/2015/03/25/speech-rusi-submarine-summit-25-march-2015/> (18 May 2015).

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## Conclusion

6.32 Experts, analysts and commentators on naval shipbuilding as well as those engaged in the industry were critical of the quality and reliability of information made available through the DCP and other planning documents. Witnesses wanted a greater level of detail on Defence's forward procurement plans, certainty in their implementation and improved understanding of Defence's expectations of the industry. They were asking for detailed information on the value placed on, and the weight given to, Australian industry involvement, the industrial capabilities deemed strategically important, and the levels of funding likely to be available. Importantly, they wanted greater fidelity in project timelines. But, above all, they want to be able to plan ahead, confident that the proposed projects together with their projected costs and schedules were true indications of the government's commitment to deliver those projects.

6.33 The committee underscores the importance of the government keeping the Australian defence industry informed of its future naval requirements so it can align its planning, investment and research and development to meet Defence's long-term needs. Without doubt, there is a need for Defence to take a more coherent and strategic approach to planning its major naval acquisition programs and to consult with industry when planning. The committee strongly supports the call for a long-term strategic plan, which should be developed within the context of Australia's broad national strategic framework and take account of how best to:

- optimise the use of Australian SMEs and overseas subsidiaries established in Australia;
- build on existing infrastructure and encourage future investment in people, facilities and research and development to ensure that Australian shipyards and their complementary supply chains are prepared to participate in and support Australia's naval shipbuilding industry;
- provide the Australian defence industry with a clearer sense of Defence's future plans, priorities and intentions, providing industry with the confidence to invest in Australia's ship building industry for the long term and to make informed and better targeted investment decisions;
- smooth the 'peaks and troughs' that have characterised Australian naval shipbuilding; and
- maintain a constant base load of work that would sustain a viable naval shipbuilding industry in Australia.

6.34 The proposed enterprise-level Naval Shipbuilding Plan should complement the Defence Investment Plan and provide a certain and reliable indication of Defence's future acquisition program, with sufficient information to enable the Australian defence industry to deploy resources with confidence. Based on previous reports and the evidence before this inquiry, the committee makes the following recommendation:

## **Recommendation 5**

**6.35** The committee recommends that the 2015 White Paper is prepared in such a way that all procurement proposals are costed and scheduled realistically, and informed by the need to have a continuous build program for naval ships.

**6.36** The committee understands that, following the release of its 2015 Defence White Paper, the government will also publish a Defence Investment Plan and an enterprise-level Naval Shipbuilding Plan.

**6.37** The committee recommends that both documents take note of the evidence provided in this report about the importance of having a continuous build program that will sustain a viable naval shipbuilding and repair industry. Further that both documents, provide:

- a schedule of anticipated timelines for the construction and delivery of all DCP projects, with continuity of production the paramount feature;
- a discussion about the nation's future strategic capability requirements that identifies the industrial capabilities deemed to be strategically important and Defence's expectations for Australia's naval shipbuilding industry;
- an assessment of the nation's existing shipbuilding and repair facilities, including the shipbuilding supply chain, and predicted investment needs;
- a comprehensive statement providing accurate and reliable information on Defence's future plans for its naval acquisition program that goes beyond ten year projections;
- a detailed explanation on the acquisition schedule indicating the reasoning behind it and the major factors influencing demand flows; and
- reliable cost estimates.

The committee recommends that both plans recognise that a 10-year span is insufficient and should cover at least 20 years.

**6.38** The committee recommends the establishment of an ongoing shipbuilding industry advocate to work with the Australian Government and the shipbuilding industry, including supply chain and SMEs. The shipbuilding industry advocate should advise Defence and industry during the development of the Defence Investment Plan and Naval Shipbuilding Plan.

# Chapter 7

## Defence industry

7.1 In its second report, the committee recommended that the government strengthen and build a more collaborative relationship with Australia's defence industry. It urged the government to engender a co-operative environment in which industry is encouraged to marshal its resources in support of a broader Australian shipbuilding industry capable of acquiring and building a highly capable fleet of submarines.<sup>1</sup> The committee made this recommendation because it could see great potential for Australian industry to become involved as subcontractors in the replenishment ship project.

7.2 As part of the 2015 May budget, the Minister for Defence announced that:

The Government is prepared to invest in the skills and knowledge base of the Australian naval ship building industry, and is prepared to commit to a long-term investment to make sure this important industry enjoys a future in Australia and these critical skills are maintained.<sup>2</sup>

7.3 The First Principles Review, released 1 April 2015, acknowledged that the outputs of Defence industry should be viewed as a Fundamental Input to Capability and be integrated into the acquisition life cycle. It stated that this approach could:

...well mean a more imaginative use of a small number of potential contractors early in the process or the extension and use of already existing collaborative mechanisms (such as rapid prototyping, development and evaluation) at the very early stages of requirements development.<sup>3</sup>

7.4 Both statements should give hope to defence industry that the government and Defence are fully committed to ensuring that Australia has a vibrant, productive and engaged industry into the future. The committee's firm conclusion, however, in both its first and second reports was that the government and Defence, contrary to their stated position, were not enthusiastic or even active in promoting and supporting defence industry: that the government was not a strong advocate for the domestic shipbuilding industry.

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1 Economics References Committee, Part II, *Future of Australia's naval shipbuilding industry: Future submarines*, November 2014, p. ix.

2 Department of Defence Ministers, Minister for Defence—Budget 2015: Defence Budget Overview, 12 May 2015, <http://www.minister.defence.gov.au/2015/05/12/minister-for-defence-budget-2015-defence-budget-overview/> (accessed 18 May 2015).

3 Australian Government, *First Principles Review, Creating One Defence*, David Peever and First Principles Review Team, 2015, <http://www.defence.gov.au/publications/reviews/firstprinciples/Docs/FirstPrinciplesReviewB.pdf> (accessed 19 May 2015).

7.5 Indeed, in part 1 of its report, the committee expressed its concern about the relationship between the Defence procurement element in Defence and defence industry. This concern remains. As Mr Saltzer, BAE, explained:

You have got to have cooperation. When it comes to major defence projects, especially things like submarines and warships, you have got to have a real cooperation between the government and the industry that is going to support it. Because they have to take those ships not only from design through to construction but throughout their entire life when they will be upgraded, refit, modified et cetera.<sup>4</sup>

7.6 In the previous chapters, the committee highlighted the importance of defence industry as a vital partner in developing and building Defence's capability. The committee, however, also noted industry's disappointment and frustration with what it perceives as a lack of support for, and recognition of, its contribution to naval shipbuilding. It has referred to industry's concerns about the downturn in production, and the absence of a strategic naval shipbuilding plan that would provide industry with some hope for the future.

### **Economic benefits of local builds**

7.7 In its first and second reports the committee outlined the benefits of having a domestic naval shipbuilding and repair industry including the broader economic gains, innovation, and importantly, the strategic imperative of self-sufficiency in maintaining and upgrading its fleet. The committee does not seek to repeat or duplicate the evidence that unequivocally demonstrated these advantages. It does, however, want to respond briefly to the uncritical attention that was given to the finding in the recent RAND report that:

...relative to U.S. shipbuilding costs, the premium for ships entirely built in Australia ranges from 30 percent to 45 percent. For ships built partially in Australia, this premium is lower. Combatants (frigates and destroyers) seem to have a consistent premium of around 30 percent to 40 percent. The premium for amphibious ships is lower, but it is still some 12 percent more than a U.S. basis.<sup>5</sup>

7.8 Firstly, the RAND report made absolutely clear that this premium could be reduced significantly with a continuous build and the gains in productivity that flow

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4 *Proof Committee Hansard*, 14 April 2015, p. 21.

5 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, p. xxxv, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015). The RAND study concluded that, 'Overall, the three benchmarking methods indicate a modal premium of about 30 to 40 percent for naval warships built entirely in Australia. This perceived premium, it should be noted, can be significantly influenced by foreign exchange rates, and any consideration of foreign or domestic build must take into consideration currency exchange factors and risks'.



from such a policy approach.<sup>6</sup> It also recognised, as the committee has done in its previous reports, the benefits from a local build—employment, innovation, incentives and opportunities for SMEs to grow and, importantly, strategic self-sufficiency by minimising dependence on foreign sources.

7.9 The committee is not convinced by assessments that dismiss the economic benefit from a vibrant domestic shipbuilding industry. Mr McClymont explained some of the flow-on benefits for the economy from just one SME in the supply chain:

I have employed quite a lot of electricians and I have done an estimate of wages over a two-year period, and we paid \$26.5 million in wages. That is money you are going to take out of the general community, so that is going to effect the general community. One hundred and eighty people were employed on that project. What is going to happen to those 180 people? Are they going to go back onto the dole and drag more money out of the general community? I think the effect is more on the general community than on an individual organisation. Yes, we will survive, but people will obviously lose their jobs and have to go onto other benefits. There is not enough work in Victoria to keep them all employed.<sup>7</sup>

7.10 In respect of money returned to the government through taxation and other mechanisms, Mr Burns explained that the 2012 study in the UK for the Royal United Services Institute showed that '36 per cent was returned to the government for defence work undertaken in Britain'. He reasoned:

While tax structures may be different in Australia, a similar figure could realistically be expected. With these considerations in mind, there is no premium if it is stated as being 30 to 40 per cent. And finally, such comments only serve to reinforce in people's minds both in Australia and offshore the self-defeating idea that Australian industry is inefficient and essentially not up to the job.<sup>8</sup>

7.11 Mr Dunk also referred to the 2012 UK study that found 36 per cent of Defence money contracted into the UK was returned to the government. He did not think that Australia had conducted a comparable study noting that:

If you look at the money from a Defence budget point of view, then \$1 billion spent in Australia is the same as \$1 billion spent offshore. It is money that comes out of the Defence budget. So, in the Defence budgetary sense, there may well be some additional money that comes out of the

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6 John Birkler et al, *Australia's Naval Shipbuilding Enterprise: Preparing for the 21st Century*, Santa Monica, CA: RAND Corporation, 2015, pp. xxxvii and 123, [http://www.rand.org/pubs/research\\_reports/RR1093](http://www.rand.org/pubs/research_reports/RR1093) (access 18 May 2015). The RAND study noted that the premium could be reduced if the following changes were made: engage in a continuous-build strategy; improve acquisition practices to have more-mature designs at the start of construction and to minimize change during construction and encourage industry to shift to a continuous-improvement culture. p. 146.

7 *Proof Committee Hansard*, 6 March 2015, p. 4.

8 *Proof Committee Hansard*, 14 April 2015, p. 28.

Defence budget to do this work. What is not factored in is the amount of that Defence budgetary spend which flows back into the government coffers. In that sense, what we are talking about here is an accounting mechanism to ensure that the Defence budget can take into account the money that flows back into government coffers from doing the activity in Australia. If that accounting mechanism can be put into place, then the problem goes away.<sup>9</sup>

7.12 Referring to the dividends to government through taxes, the Hon Mr Martin Hamilton-Smith, the South Australian Minister for Defence Industries, stated that:

...by the time you add in income tax, payroll tax, GST, the benefits flowing through the economy of having a vibrant shipbuilding industry, and you then weigh in the cost of having to provide funds to soften the collapse of the shipbuilding industry and having more people on the dole, when you look at the entire offering you are infinitely better off...<sup>10</sup>

7.13 There are also the opportunities for Australian SMEs to grow and to innovate through the opportunities opened up by working with overseas companies with subsidiaries operating in Australia. Mr Wardell provided a practical example:

Five or six years ago, we were a backyard engineering company and now we consider ourselves to be a tier 2 engineering-contracting business, operating in potentially three states of Australia. We are very sophisticated. We are partnering with BAE in bids for LAN 400 and other projects they have. We are engaged in their global supply chain. That sort of opportunity for a company like Shadbolt Engineering would not have happened if you did not have a BAE doing what it is doing in Australia. There is an enormous drag-on effect with an industry like the naval shipbuilding industry. It brings technologies and the need to upskill our industries, and that filters down. We have gone to our suppliers and made sure they have got QA systems and quality control programs.<sup>11</sup>

7.14 It is very hard to place a value on the role of naval shipbuilding in securing a strong industrial base in Australia supported by a skilled workforce making a positive contribution to the economy. But, as noted in the first report, naval shipbuilding is not purely an economic, research and development or job creation activity, it is above all a defence activity with national security its foremost concern. In this regard, a healthy, vibrant and competitive indigenous naval shipbuilding capacity is central to Australia's national interest. Most countries are more than willing to pay a price premium for this security.

7.15 The committee notes that this inquiry has been conducted in an environment of significant macro-economic adjustment. The concerted efforts by the Reserve Bank

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9 *Proof Committee Hansard*, 14 April 2015, p. 29.

10 *Proof Committee Hansard*, 14 April 2015, p. 24.

11 *Proof Committee Hansard*, 6 March 2015, p. 2.

of Australia to depreciate the Australian dollar have been largely successful (since the inquiry was initiated in June 2014, the trading price of the Australian dollar has fallen from US\$0.94 to US\$0.77 at the time of writing). It would be remiss of the committee not to acknowledge that any currency depreciation—deliberate or otherwise—significantly weakens the economic argument for overseas ship purchases. The committee notes, for example, that the Chief Executive Office and Managing Director of Austal, Mr Andrew Bellamy, recently opined that claims of a 40 per cent 'cost premium' for local Australian builds were a myth. Given the long-term nature of any shipbuilding contract, a sovereign, domestic shipbuilding industry significantly reduces the economic risks associated with currency fluctuation and international market movements.

## **Conclusion**

7.16 Significant capital investment has already been made in the Australian shipbuilding industry to develop requisite infrastructure and skills—this is consistent with the establishment of any industry on such a scale. Evidence presented to the committee suggests that this capital expenditure has been considered and efficient. With the infrastructure and skills now available, the industry is ready to transition from an investment phase to a production phase.

7.17 The committee is concerned that efforts to denigrate Australia's shipbuilding capabilities have focused on the conflation of fixed capital expenditure investments and marginal production costs. This has artificially inflated the reported costs of ship unit production, rather than capitalizing the fixed investments separately. These inflated figures have subsequently been circulated, forming the basis for arguments against Australia's domestic shipbuilding industry efficiency.

7.18 Having reached the threshold of capital investment required to establish the industry, the committee is firmly of the view that the returns on investment from future shipbuilding projects will continue to grow. The committee also notes, however, that the Commonwealth Government is the industry's only effective client and, consequently, it has total control over demand factors. The government's failure to ensure sustainable demand through steady and predictable ship orders significantly undermines the industry's competitive position and the loss of the substantial capital investments.

7.19 Evidence to the committee demonstrates that the current processes for assessing the economic value of domestic shipbuilding projects are unsophisticated and flawed. Basic cost-based analysis does not fully capture the economic value of domestic shipbuilding, as shipbuilding expenditure has an economic multiplier effect: every dollar spent generates a level of economic expansion beyond the nominal value of the expenditure. This is in stark contrast to the loss of economic value when the government purchases overseas.

7.20 The committee also notes that the risk factors associated with currency fluctuations (including systematic currency depreciation) are significantly intensified

when making overseas ship purchases. This issue is particularly pertinent given the Reserve Bank's publicly stated objective to depreciate the Australian dollar. A strong, sovereign, domestic shipbuilding industry hedges the government against market instability, particularly when shipbuilding contracts generally extend across multiple years and economic cycles.

## **Recommendation 6**

**7.21 The committee recommends that given requisite capital investments have already occurred, and as the industry's only effective client, the Australian Government adopts an approach to domestic shipbuilding that ensures sustainable demand in order to realise returns on these investments.**

**7.22 The committee also recommends that during the development of the forthcoming Strategic Naval Shipbuilding Plan, the Australian Government ensure that the Plan recognises the holistic economic value of any domestic shipbuilding project. It is the strong view of the committee that the Plan must also acknowledge the economic spill over and multiplier effect of domestic shipbuilding, including that expenditure generates a level of economic expansion beyond its initial value.**

**Senator Sam Dastyari  
Chair**

# Senate shipbuilding inquiry dissenting report

1.1 The Economics References Committee report, *Naval Shipbuilding — Part III*, repeats many errors of the previous two reports and therefore is not supported by Coalition Senators.

1.2 The report is undermined by two key oversights. The first is its failure to consider the role of the Competitive Evaluation Process' Expert Advisory Panel. The panel has a direct bearing on the outcomes of this project and to that end, the unquestionable standing of its appointees should have been considered. The second significant oversight is in respect of recent commitments by the Prime Minister and Defence Minister in relation to the implementation of a Continuous Build Program.

1.3 Both oversights significantly undermine the value of this report, and these issues must be given due consideration in the formulation of the Committee's final report.

1.4 Coalition Senators support the Government's position that defence procurement decisions should not compromise Australia's defence capabilities so as to meet economic development objectives.

1.5 Decisions about the next generation of submarines need to be made on the basis of what is best for our national security and the Australian Defence Force – not what is best for a particular region or what might be best for a particular company in Australia. Of significant concern is that the Committee has not made a clear commitment to this crucial principle.

1.6 Labor's delays to the Future Submarine Program have put time constraints on when decisions must be made and we are now subject to the risk of a security and capability gap for Australia's defence force. Over the six years of the previous government, Defence spending dropped to levels not seen since 1938 – a cut or deferral of some \$16 billion.

1.7 For these reasons and for those enunciated herein, the Coalition questions the extent to which this report adds value to the debate on Australia's future naval shipbuilding program.

## **Recommendation 1**

1.8 The Coalition's view is that while defence acquisitions like the supply ship program should occur with due consideration being given to maximising Australian industry benefits, that consideration cannot negate either defence capability imperatives or the assurance of the reasonable expenditure of public money.

1.9 Navy needs these replenishment ships urgently. They are a vital Defence capability and we face a capability gap if we do not act now.

1.10 The advocacy of a local build is undermined by the economies of scale enjoyed by foreign shipbuilders and delivery time implications of an indigenous build due to Labor's defunding of Defence in general and its inaction in shipbuilding programs specifically.

1.11 No Australian shipyard has the capacity to build the supply ships without substantial funding for new infrastructure. Currently, shipyards are struggling to build ships a third of that size.

1.12 The report disingenuously attributes alleged damage to industry confidence and the industry's relationship with the ADO to the actions of this government. That is disingenuous given Labor's historic defunding of Defence and its shipbuilding programs to an extent that saw major acquisitions left idle for up to six years.

1.13 That defunding means not only does Defence face reduced timeframes to produce crucial defence infrastructure, Australia also lacks relevant infrastructure to make that a realistic option with due consideration to speed and cost.

## **Recommendation 2**

1.14 The report claims that evidence was heard confirming the Competitive Evaluation Process was not designed to deliver three competition contract options. No evidence has been heard that confirms this.

1.15 The appointment of a CEP Expert Advisory Panel that includes no less than a former High Court Judge and Secretary of the US Navy, whose terms of reference are to ensure the adherence to due process, is evidence the report is wrong.

1.16 The report asserts the alleged primacy of a Japanese bid. However, this is a claim based on gossip rather than evidence. That the CEP is overseen by a highly credentialed Expert Advisory Panel refutes this claim.

1.17 The report involves itself in gossip and conjecture in respect of the size of the Future Submarine fleet. Indulging such uninformed gossip demotes the standing of the Committee. That the report attaches commercial consideration to the size of the fleet, rather than a strategic or operational imperative, betrays a level of ignorance that cannot pass unnoted and certainly cannot be endorsed.

1.18 The report fails to note calls for a procurement process for such a strategically and technologically sensitive project simply cannot be open to all comers as to do so would constitute a significant threat to security.

1.19 The Coalition opposes this recommendation.

1.20 The report fails to realise that the size and nature of the Future Submarine fleet are considerations determined on the basis of Navy advice and strategic considerations that reside well outside of the brief of the Committee.

1.21 The report fails to acknowledge the time frame imperatives that now apply to the Future Submarine Program and the Competitive Evaluation Process as a result of Labor's six years of inaction in respect to this crucial Defence capability.

1.22 Owing to Labor's neglect, there now exists is a very real risk of Australia's submarine capability going offline for a period before the Future Submarine fleet becomes available, if this acquisition is delayed further.

1.23 The report reaffirms Recommendations 3 from the earlier report, *Future of Australia's naval shipbuilding industry - Future submarines*, in respect to which the Coalition reaffirms its response:

- The draft report calls for an Australian build at all costs. This could give rise to national security outcomes being compromised by a prioritisation of industry policy over defence policy and it could force the taxpayer to underwrite an economically uncompetitive project.
- While we want to see the Future Submarine contract awarded to Australian shipbuilders, it must also be the result of a competitive tender process and it must be awarded on merit. This will ensure that Navy receives a fit for purpose product of the highest standard while Australian taxpayers receive the best possible value for money.
- The committee heard evidence from Dr John White that an open tender was the best way to stress test claims by manufacturers that they are able to meet Navy's requirements while constituting the responsible expenditure of taxpayers' money.
- It is therefore both unwise and entirely unnecessary to compel that special consideration be given to Australian-based tenderers. Recommendation 3 effectively relegates national security policy to second place behind industry policy.
- Recommendation 3 also compels government to commit to an Australian based sustainment programme even though the Prime Minister is already on the record doing exactly that.

1.24 The Coalition opposes this recommendation.

### **Recommendation 3**

1.25 The release of the documents referred to and the form in which they may one day be released is a matter for Government and the Committee commits significant overreach in issuing these demands.

1.26 The Coalition opposes this recommendation.

### **Recommendation 4**

1.27 The report's comments in respect to a Continuous Build Program are made obsolete by recent public statements by the Minister for Defence and the Prime Minister and therefore the inquiry must revisit this issue.

1.28 The Coalition opposes this recommendation on the basis that it must be reviewed in light of Government policy.

### **Recommendation 5**

1.29 The upcoming Defence White Paper is the Government's most important guidance on long-term defence capability. It will allow the Government and community to understand the opportunities and challenges for Australia's future defence and security needs. It will be a whole-of-government product that reflects the Government's overall strategic, fiscal and broader policy priorities. The Defence White Paper is being developed in a deliberate and methodical manner.

1.30 The report commits gratuitous overreach by making extensive prescriptive recommendations in respect of a White Paper document that has not been released and is not in and of itself the business of the Inquiry to examine in such specific terms.

1.31 The report offers speculation in respect to future Defence planning documents and the Coalition elects not to countenance such speculation.

### **Recommendation 6**

1.32 The recommendations herein, principally that a broad understanding of the true value of major shipbuilding works is acquired before acquisition decisions are made, is precisely what the Competitive Evaluation Process already does and reflects the approach the Government has always taken.

1.33 The value of local investment does not escape the Government's consideration, as evidenced by the fact that the CEP already requires participants to deliver maximum local investment via their proposals.

1.34 The Coalition believes that the sentiment expressed in Recommendation 6 is an obvious one but cautions against the corporate welfare that may tempt Labor and Senator Xenophon.

**Senator Sean Edwards**  
**Deputy Chair**

**Senator Matthew Canavan**  
**Nationals Senator for Queensland**



## **Additional Comments by Senator Nick Xenophon**

1.1 I welcome the Senate Economics References Committee's report, Part III, into the future of Australia's naval shipbuilding industry, in particular long-term planning, and endorse its recommendations.

1.2 This inquiry was brought about due to serious concerns about the Government's decision-making process on Australian naval shipbuilding since coming to office in September 2013.

1.3 A key part of the planning for naval ship building for Australia must be recognition of the wider economic, employment, taxation and social benefits of carrying out shipbuilding in Australia.

1.4 Finance Minister Senator Mathias Cormann was asked at the most recent Budget Estimates Committee hearings whether this was a factor in the Government's planning for naval ship building.<sup>1</sup>

1.5 I asked the Finance Minister on six separate occasions whether the wider economic effects, through additional employment multipliers, taxation and economic activity, was factored-in when the Government was weighing decisions as to where to build the Navy's future ships and submarines.

1.6 While the Finance Minister said he 'understood the point' that was being raised, he declined to confirm whether the Government took these factors into account when making major defence procurement decisions.

1.7 Reputable think tanks such as the Royal United Services Institute of the UK (RUSI-UK) has estimated that approximately 40 per cent of defence spending in that country is returned to the UK Government through taxation and other benefits. This does not include, as I understand it, the broader multiplier effects on an economy by such local procurement.

1.8 As a comparison, the Bracks Review of the auto sector in 2008 found that for each direct job in auto-manufacturing there were six jobs created in support roles.

1.9 These benefits would be similar in Australia for naval ship building.

1.10 It is baffling and unacceptable that the Government won't recognise and take account of this benefit in making defence acquisition decisions.

1.11 I understand there is nothing in the Commonwealth Procurement Rule per se, which would prevent it from taking account of these wider factors. However, if the Government believes this is the case, then the Rules should be revised to make it clear that such factors are real and to be recognised.

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1 Budget Estimates, Finance and Public Administration Committee, 27 May 2015.

## **Recommendation 1**

**1.12 The Government take account of the wider economic benefits and employment multipliers when deciding whether to build navy ships and submarines in Australia.**

## **Recommendation 2**

**1.13 That the application of the Commonwealth Procurement Rules be urgently reviewed to determine whether the wider economic, employment and taxation benefits of local procurement are being taken into account in decision making; if they are not then the Rules should be revised to explicitly require Government departments and agencies to do so.**

1.14 It appears the Government is continuing to talk-down the naval ship building industry in Australia.

1.15 The Finance Minister told the media in Perth on May 22 that an Australian-built Air Warfare Destroyer was 'costing \$3 billion a ship, when equivalent ships in other parts of the world would have cost us just \$1 billion a ship', endorsing a front page story that appeared in The Australian that day.<sup>2</sup>

1.16 While denying the Government leaked the story to The Australian to coincide with the launch of the first AWD in Adelaide the following day, the Finance Minister stood by his comments about the per-ship cost of the AWDs under questioning in Budget Estimates.

1.17 As the head of the AWD Alliance, Rod Equid, said on Adelaide radio on the morning of May 22, but before the Finance Minister's press conference in Perth, the cost comparison was a case of 'some pretty strange mathematics' to arrive at a per-ship cost three times that of an overseas build.<sup>3</sup>

1.18 Mr Equid explained:

Principally because of the other costs that are included in the \$9 billion, which includes facilities, other defence costs, purchase of missiles, the training systems, the technical publications etcetera. So the unit price of ships is not nine divided by three.

1.19 The Finance Minister's comments were inaccurate and appear designed to damage the reputation of ASC and Australian naval ship building more broadly. This is a curious course of action for a minister who is technically the owner of ASC on behalf of the tax payers.

1.20 I maintain that the Government is continuing to trash its own submarine builder, and run down the wider naval ship building sector, so that the public are 'softened up' ahead of a Government announcement later this year, or early next year, to build the \$50 billion Future Submarines overseas, probably in Japan.

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2 Senator Cormann transcript, 22 May 2015,  
<http://www.financeminister.gov.au/transcripts/2015/0522-doorstop.html>.

3 Rod Equid, ABC 891 radio Adelaide, 22 May 2015.

1.21 The Finance Minister said he would provide the factual basis for his comments to the Committee on notice. I look forward to seeing this, if it, in fact, exists.

1.22 In fact, as the Government-commissioned RAND Corporation report in April on the future Australian naval ship building and other experts have estimated, the 'cost premium' for building complex naval ships in Australia is approximately 30-40 per cent.<sup>4</sup>

1.23 The Defence Minister cited the RAND report, which found that this premium could be reduced if the following factors were addressed:<sup>5</sup>

- Establishing a consistent production and build demand.
- Selecting a mature design at the start of the build and limiting the amount of changes once production begins.
- The necessity of ensuring a well-integrated designer, builder and supplier team.
- Matching the industrial base structure to demand.
- Ensuring there is visionary leadership provided by company management.

1.24 It's clear that the first four of these factors have been and continue to be in the control of the Government.

1.25 The first relates to a 'continuous build' of ships and submarines so that Australian ship builders aren't forced to expand and contract as Government contracts come and go. The necessity for a continuous build has been repeatedly highlighted by the Defence Teaming Centre's Chris Burns, both to the Committee and as part of its broader public campaign:

A sustainable shipbuilding industry is one that has a reliable and continuous flow of work as a result of a long-term strategic defence acquisition plan that industry trusts and will invest against. When you have a long-term commitment from government and investment by industry, you foster innovation and develop efficiencies that make you competitive in the global marketplace.<sup>6</sup>

1.26 The second and third items from the RAND report relate to the key lessons learnt on the AWD project, as set out in the ANAO report of March 2014<sup>7</sup> and the

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4 RAND Corporation [http://www.rand.org/pubs/research\\_reports/RR1093.html](http://www.rand.org/pubs/research_reports/RR1093.html).

5 Defence Minister media release 16 April 2015, <http://www.minister.defence.gov.au/2015/04/16/minister-for-defence-release-of-the-rand-corporation-report/>.

6 Committee hearing Adelaide, 14 April 2015, Hansard, p. 27.

7 ANAO, Air Warfare Destroyer Program, report number 22, 6 March 2014, <http://www.anao.gov.au/Publications/Audit-Reports/2013-2014/Air-Warfare-Destroyer-Program>.

later White-Winter report (while the Government has kept the White-Winter report secret, some of its contents have been reported).<sup>8</sup>

1.27 The fourth item relates to successful industrial policies applied to naval ship building, which is not what we are seeing from this Government.

1.28 Both sides of politics have failed to properly manage naval shipbuilding in the past decade, resulting in the 'valley of death' which is engulfing the sector now. Both BAE Systems in Melbourne<sup>9</sup> and Forgacs in Newcastle<sup>10</sup> have announced further job losses in recent weeks due to the failure to provide adequate naval shipbuilding contracts.

1.29 As William Saltzer, Director Maritime, BAE Systems Australia, told the Committee in Adelaide, the industry can't build if the Government isn't buying:

BAE Systems agrees that a continuous and efficient production of naval vessels will benefit all parties, especially the Australian taxpayer. But the industry can only produce when the government purchases. We do not want to build ships that are not needed just to support this industry. The Royal Australian Navy will need many new ships and submarines over the coming years. A number of them should have been ordered already to replace vessels that are too old and are costing too much to maintain, but the fact that they have not should not be a reason to delay further. It should be a call to action now. Since there already seems to be agreement across party lines on the most important points, can you not come together and work in cooperation with industry to make it happen now?<sup>11</sup>

1.30 Besides the broader problems highlighted by RAND Corporation and others, three specific naval acquisitions have been mishandled by successive governments to arrive at the Valley of Death. They are:

- The previous Labor Government's delays in deciding on the process to acquire the Future Submarines and the continued delay and confusion around this project by the present government.
- The Government's decision in mid-2014 to send the \$2 billion supply ship tender overseas, to be competed between South Korea and Spain.

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8 '2000 jobs at risk in Air Warfare Destroyer project chaos', Cameron Stewart, The Australian, November 28 2014, <http://www.theaustralian.com.au/national-affairs/defence/jobs-at-risk-in-air-warfare-destroyer-project-chaos/story-e6frg8yo-12271375246644>.

9 'Hundreds of shipbuilding jobs under threat at BAE Systems in Melbourne', ABC News 16 June 2015, <http://www.abc.net.au/news/2015-06-16/hundreds-of-shipbuilding-jobs-at-bae-systems-under-threat/65496422>.

10 'Forgacs to lay off 160 Tomago workers', Newcastle Herald July 1 2015, <http://www.theherald.com.au/story/3166074/forgacs-to-lay-off-160-tomago-workers/?cs=122>.

11 Committee hearing 14 April, Hansard p. 16.

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- The Government's decision to leave the decision for the future Pacific patrol boats project until 2017 – the reason for BAE Systems Australia's decision not to tender for the \$600 million project.<sup>12</sup>

### **Recommendation 3**

#### **1.31 That the Government:**

- **Commit to an Australian build of the Future Submarines, as per its commitment at the last election, partnering with the most competitive naval capability offered by either France, Germany, Japan or Sweden following a bona fide competitive process.**
- **Cancel its decision to offshore the supply ships tender and award it to Australian naval shipbuilders as soon as practicable.**
- **Bring forward the Pacific patrol boats acquisition to this year so as to prevent the damaging shrinkage of naval ship building capacity in Australia, resulting in the future high cost of ramping-up the industry when the Government decides to purchase more navy ships.**
- **Review up-coming naval warship requirements and bring forward projects and award them to Australian ship builders, where practicable.**

**Senator Nick Xenophon**  
**Independent Senator for South Australia**

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12 'Hundreds of shipbuilding jobs under threat at BAE Systems in Melbourne', ABC News 16 June 2015, <http://www.abc.net.au/news/2015-06-16/hundreds-of-shipbuilding-jobs-at-bae-systems-under-threat/6549642>



# Appendix 1

## Submissions received to date

<b>Submission Number</b>	<b>Submitter</b>
1	Forgacs
2	Australian Business Defence Industry
3	Mr Wade Noonan MP and Mr Cesar Melhem MP
4	Australian Manufacturing Workers' Union
5	Defence SA
6	The Royal Institution of Naval Architects, Australian Division
7	Australian Industry and Defence Network
8	Adelaide Ship Construction International
9	BAE Systems Australia
10	Defence Teaming Centre
11	Lean Design Australia Pty Ltd
12	Navy League of Australia
13	Victorian Government
14	Department of Finance
15	Mr Grant Spork
16	Mr Jon Primrose
17	Mr Peter Briggs AO and Mr Terence Roach AM
18	Mr Paul Greenfield AM
19	LeadWest Ltd
20	Hobsons Bay City Council
21	Dr John White
22	Submarine Institute of Australia Inc.
23	Mr Hank Willems
24	Mr Benjamin Cropley
25	Professor Göran Roos
26	Mr Martin Katschner
27	Emeritus Professor John Norrish
28	Austal
29	Raytheon Australia

30	Dr Duncan Connors, Durham University Business School
31	Mr Ron Paulus
32	Defence Materials Technology Centre
33	Engineers Australia
34	Mr Christopher Skinner
35	Department of Defence
36	Tasmanian Government
37	AMWU
38	Government of Western Australia
39	Shadbolt Engineering Pty Ltd

## **Tabled documents**

1. Media articles tabled by Senator the Hon Stephen Conroy at a public hearing held in Canberra on 30 September 2014.
2. Document tabled by Dr John White at a public hearing held in Melbourne on 13 October 2014.
3. Document tabled by Mr Phillip Taylor at a public hearing held in Melbourne on 6 March 2015.
4. Document tabled by Mr John Wardell, Shadbolt Engineering, at a public hearing held in Melbourne on 6 March 2015.
5. Opening statement tabled by BAE Systems Australia at a public hearing held in Adelaide on 14 April 2015.
6. Opening statement tabled by Defence Teaming Centre at a public hearing held in Adelaide on 14 April 2015.
7. Opening statement tabled by the Australian Business Defence Industry at a public hearing held in Adelaide on 14 April 2015.

## **Additional information received**

1. Documents provided by the Australian Industry & Defence Network following the public hearing held in Melbourne on 13 October 2014.
2. Opening statements from ASC's appearance at the public hearing held in Adelaide on 14 October 2014.
3. Report of the Auditor General of Canada into National Shipbuilding Procurement Strategy released in November 2013, provided by the Australian Industry & Defence Network on 20 October 2014, following the public hearing held in Melbourne on 13 October 2014.



4. Media release provided by the Economic Development Board of South Australia following the public hearing held in Melbourne on 13 October 2014.
5. Notes and talking points provided by the Electrical Trades Union of Australia at the public hearing held in Adelaide on 14 October 2014.
6. Interim response received from the Minister for Defence on 27 November 2014.
7. 'Sovereignty, Security and Prosperity', Report of the CADSI Marine Industries Working Group, provided by BAE Systems Australia on 1 May 2015, following a public hearing in Adelaide on 14 April 2015.
8. Article from the Canadian Naval Review, provided by BAE Systems Australia on 1 May 2015, following a public hearing in Adelaide on 14 April 2015.
9. Document provided by BAE Systems Australia on 1 May 2015, following a public hearing in Adelaide on 14 April 2015.

### **Answers to questions on notice**

1. Answers to questions on notice from a public hearing held in Canberra on 21 July 2014, received from the Department of Defence on 12 and 19 August 2014.
2. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 20 October 2014.
3. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 21 October 2014.
4. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 22 October 2014.
5. Answer to a question on notice from a public hearing held in Newcastle on 8 October 2014, received from Forgacs on 27 October 2014.
6. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 28 October 2014.
7. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 30 October 2014.
8. Answers to questions on notice from a public hearing held in Canberra on 30 September 2014, received from the Department of Defence on 31 October 2014.
9. Answers to questions on notice from a public hearing held in Melbourne on 13 October 2014, received from the Victorian Government on 11 November 2014.
10. Answers to questions on notice from a public hearing held in Canberra on 19 February 2015, received from ASC Pty Ltd on 14 April 2015.



## **Appendix 2**

### **Public hearings and witnesses**

#### **CANBERRA, 21 JULY 2014**

BURNS, Mr Christopher, Chief Executive Officer, Defence Teaming Centre Inc.

DUNK, Mr Graeme, Manager, Australian Business Defence Industry

EDGE, Mr John, Acting Deputy Secretary, Business, Procurement and Asset Management, Department of Finance

FLETCHER, Mr Andrew, Chief Executive, Defence SA

HAMILTON-SMITH, The Hon. Martin, Minister for Defence Industries, South Australian Government

KING, Mr Warren, Chief Executive Officer, Defence Materiel Organisation

SHERIDAN, Mr John, Australian Government Chief Technology Officer and Procurement Coordinator, Department of Finance

THOMPSON, Mr Glenn, Assistant National Secretary, Australian Manufacturing Workers Union

THORNE, Mr Col, General Manager Land and Maritime, Defence Materiel Organisation

#### **CANBERRA, 30 SEPTEMBER 2014**

BARRETT, Vice Admiral Timothy, AO, CSC, RAN, Chief of Navy, Department of Defence

BRIGGS, Rear Admiral Peter (Retired), Private capacity

GREENFIELD, Commodore Paul (Retired), Private capacity

HALL, Ms Stacie, Branch Manager, Government Business Advice, Department of Finance

JONES, Vice Admiral Peter, AO, DSC, RAN, Chief, Capability Development Group, Department of Defence

KING, Mr Warren, Chief Executive Officer, Defence Materiel Organisation,  
Department of Defence

NICHOLLS, Commander (Retired) David, Executive Manager,  
Submarine Institute of Australia Inc

OWEN, Commander (Retired) Frank, Secretary, Submarine Institute of Australia Inc

PACEY, Mr Brice, Private capacity

ROACH, Commodore Terence (Retired), Private capacity

SAMMUT, Rear Admiral Gregory, Head, Future Submarine Program,  
Defence Materiel Organisation, Department of Defence

THORNE, Mr Col, General Manager, Land and Maritime,  
Defence Materiel Organisation, Department of Defence

#### **NEWCASTLE, 8 OCTOBER 2014**

CUTTELL, Ms Barbara, Communications Adviser, Forgacs

DICK, Mr Ian, Defence Project Director, HunterNet Cooperative

DUNK, Mr Graeme, Manager, Australian Business Defence Industry

HORAN, Mr Benjamin, Delegate, Australian Manufacturing Workers Union

KNIGHT, Mr Jeremy, Delegate, Australian Manufacturing Workers Union

LANE, Mr John, Director of Shipbuilding, Forgacs

PIDGEON, Mr Bradley, Industrial Officer, Australian Manufacturing Workers Union

ROOS, Professor Goran, Private capacity

STRATTON, Mr Lindsay, Chief Executive Officer, Forgacs

THOMPSON, Mr Glenn, Assistant National Secretary,  
Australian Manufacturing Workers Union

#### **MELBOURNE, 13 OCTOBER 2014**

GILLARD, Mr David, Director, Commercial and Procurement,  
BAE Systems Australia

KANE, Mr Chris, Head of Strategy and Business Development, Maritime,  
BAE Systems Australia

NICHOLSON, Mr Peter, AO, Head of Government Relations,  
BAE Systems Australia

SALTZER, Mr William, Director Maritime, BAE Systems Australia

LYNCH, Mr Matthew, Director Aviation, Defence and Aerospace,  
Trade, Manufacturing and Employment Division,  
Department of State Development, Business and Innovation

VAN ROODEN, Ms Marion, Deputy Secretary, Trade, Manufacturing and  
Employment Division, Department of State Development, Business and Innovation

MORRIS, Ms Charlotte, Manager, Submarine Industry, Australian Industry &  
Defence Network Inc., Victoria

SMITH, Mrs Sue, Executive Officer, Australian Industry & Defence Network Inc.

WHITE, Dr John, Private capacity

BRAIN, Dr Peter, Executive Director,  
National Institute of Economic and Industry Research

ROWLEY, Mr Craig, Chief Executive Officer, LeadWest

WILSON, Councillor Sandra, Mayor, Hobsons Bay City Council

SLEE, Mr Jeff, Delegate, Australian Workers Union

THOMPSON, Mr Glenn, Assistant National Secretary,  
Australian Manufacturing Workers Union

VICKERS, Mr David, Delegate, Technical, Supervisory and Administrative Division,  
Australian Manufacturing Workers Union

WHITE, Mr Leon, Delegate, Australian Manufacturing Workers Union

**ADELAIDE, 14 OCTOBER 2014**

BURNS, Mr Chris, Chief Executive Officer, Defence Teaming Centre

CARROLL, Mr Alistair, Production Leader, Electrical Controls, AWD Project

DONNELLY, Mr Robert, South Australian Branch Secretary, Communications, Electrical, Electronic, Energy, Information, Postal, Plumbing and Allied Services Union of Australia, Electrical Energy and Services Division, South Australian Branch

EDWARDS, Mr Martin, General Manager, Current Operations, AWD Project, ASC Pty Ltd

HAMILTON-SMITH, Mr Martin, Minister for Defence Industries, South Australian Government

JACKMAN, Mr Malcolm, Chief Executive, Defence SA

KATSCHNER, Mr Martin, Private capacity

LAMPS, Mr Peter, Acting Secretary, South Australian Branch, Australian Workers' Union

PAULUS, Mr Ron, Electrician, Secretary, Communications, Electrical, Electronic, Energy, Information, Postal, Plumbing and Allied Services Union of Australia, Electrical Energy and Services Division, South Australian Branch

SCUDDS, Mr Paul, South Australian Branch Organiser, Communications, Electrical, Electronic, Energy, Information, Postal, Plumbing and Allied Services Union of Australia, Electrical Energy and Services Division, South Australian Branch

SMITH, Mr Brett, Private capacity

STANBOROUGH, Mr Christopher, Private capacity

SUDHOLZ, Mr Andrew, Private capacity

TAYLOR, Mrs Sarah, Membership and Advocacy Manager, Defence Teaming Centre

THOMPSON, Mr Glenn, Assistant National Secretary, Australian Manufacturing Workers Union

WHILEY, Mr Stuart, Interim CEO, ASC Pty Ltd

WOLOWIEC, Mr Stanislaw, Communications, Electrical, Electronic, Energy, Information, Postal, Plumbing and Allied Services Union of Australia, Electrical Energy and Services Division, South Australian Branch

### **CANBERRA, 19 FEBRUARY 2015**

EDWARDS, Mr Martin, General Manager, Current Operations, ASC Pty Ltd

WHILEY, Mr Stuart, Interim Chief Executive Officer, ASC Pty Ltd

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**MELBOURNE, 6 MARCH 2015**

HODGE, Dr Mark, Chief Executive Officer, Defence Materials Technology Centre

McCLYMONT, Mr Scott Gregory, Manager, Alton Personnel Pty Ltd

QUICK, Mr Tony, Chairman, Defence Materials Technology Centre

TAYLOR, Mr Phillip Allan, Director, Taylor Bros Marine Pty Ltd

WARDELL, Mr John, Manager, Shadbolt Engineering Pty Ltd

**ADELAIDE, 14 APRIL 2015**

BURNS, Mr Christopher, Chief Executive Officer, Defence Teaming Centre

DUNK, Mr Graeme, Manager, Australian Business Defence Industry

EDWARDS, Mr Martin, ASC Shipbuilding Chief Operating Officer, ASC Pty Ltd

HAMILTON-SMITH, The Hon. Martin MP, Minister for Defence Industries, South Australian House of Assembly

KEOUGH, Mr Andy, General Manager, Business and Strategic Development, ASC Pty Ltd

SALTZER, Mr William (Bill), Director Maritime, BAE Systems Australia

THOMPSON, Mr Glenn, Assistant National Secretary, Australian Manufacturing Workers Union





## Appendix 3

### Extract from Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012 Recommendation 16

#### Future submarines SEA 1000

*Recommendation 16—Early planning and analysis*

*paragraph 3.20*

Because the future submarine project is still at an early stage, and based on the RAND study, the Coles Report, independent defence analysts and the past performance of major Defence acquisition projects, the committee recommends that government and Defence start work immediately to:

- ensure that the program is directly managed by the Chief of Navy supported by the ASC and DMO where relevant, the scientific community and the public—support must be both external to the program and internal within the navy and submarine community;
- avoid early lock-in through premature weapons systems choices;
- ensure that the capability sought is available and minimises developmental risks;
- take drastic action to address the serious skill shortages identified by RAND before a decision on assembly in Australia is made, regardless of type and design;
- ensure that the program is open and transparent—full disclosure throughout the program is necessary to obtain government, industry and public support;
- involve experienced people in key management positions—this requires a strategy to grow people so they are experienced in various disciplines—a top-level strategic lesson must be implemented far in advance of any specific program; and
- listen to technical community concerns about risk—the technical community, supplemented by outside expertise from industry and allied technology partners as necessary, should understand the state of technology and the degree to which a new design extends that technology.<sup>1</sup>

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1 A number of the recommendations are taken from, or based on, RAND, *Learning from Experience, Volume IV, Lessons from Australia's Collins Submarine Program* 2011, pp. xiii–xiv.