INQUIRY INTO NAVAL SHIPBUILDING IN AUSTRALIA

Submission by the
Australian Association for Maritime Affairs*

Introduction

1. The Australian Association for Maritime Affairs (AAMA) welcomes this inquiry which is seen as important in defining the way ahead for Australian companies involved in the design, construction, fitting out and through life maintenance of naval vessels. The national requirement, well into the future, for a wide range of naval vessels to underpin the security of our nation in peace time, in situations short of war and in hostilities is a paramount requirement.

2. Over the past three decades the Royal Australian Navy has become less and less reliant on overseas technology as these wide-ranging capacities and skills have been built up within Australia over time. The ability to construct large naval vessels in Australia is seen as an extension of what has been achieved in the past two to three decades.

Case Study of the ANZAC Ship Project

3. This report, produced by Tasman Asia Pacific, was published in February 2000 and is seen as particularly relevant to this inquiry. Although it was produced six years ago, the key findings of this study included an estimate that the national GDP would grow by around $3.0 billion annually, and that the project would generate around 7850 full-time jobs. Importantly the project was able to stimulate improvements across the board by the many companies involved, specifically in

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* The role of the Australian Association for Maritime Affairs – formerly the Australian Centre for Maritime Studies – is to generate greater public awareness and discussion of maritime affairs generally. It is not oriented to single industries or interests but provides a focal point for all those with an interest in maritime affairs, especially those people in business, tertiary institutions, the marine professions and the public service who are concerned to promote the national interest across the range of maritime affairs. We do this principally through our publications, *Maritime Studies* and the *Australian Maritime Digest*.

This submission has been developed as a contribution for consideration by the Committee. It does not purport to carry the personal endorsement of all our members. In fact there may be points where individual members disagree or are unable to comment because of their employment.

the fields of productivity, research and development, business practices, and export opportunities. In addition this project enabled an efficient and through life support capability to be built up in country: in balance of trade terms this project has been a significant achievement.

4. Upgrades of these vessels, involving Australian companies at the leading edge of technology, such as CEA Technologies – designers and makes of a unique phased array radar – has been an important outcome for Australian companies. The failure to sell the ANZAC frigate into the South East Asia region is seen as a failure of Government which was well-placed to extend the building program by aggressively selling it into the South East Asia region where we are supposed to have established special relationships in the field of international security.

Marine Industry Action Agenda (MIAA)

5. An initiative by the Department of Industry, Tourism and Resources, the MIAA outlines the opportunities for marine industries in the fields of recreational, commercial and para-military vessels. The study identifies an industry consisting of 2700 companies, employing more than 29,000 people with a turnover of $5.5 billion. This industry exports over $750 worth of product annually and is itself a product of innovation and efficiency. Many of the skills involved are similar to those employed in the naval shipbuilding, fit out and through-life support capabilities already found in Australia. In its examination of future Naval Shipbuilding in Australia it is therefore recommended that the committee take into account the linkages which need to be established with this industry in the fields of education, design, technology and skills. This is turn leads to the need to establish a Co-operative Research Centre for Marine Technology as recommended by the MIAA.

6. In endorsing and supporting this initiative the Committee should stress the need to harness, foster and grow the disparate research, academic, industrial and R&D capabilities of Australia's diverse maritime interests and industry. A specific focus should be to encourage sustainable capability growth by investment and support of education and skills development at an individual and institutional level.

7. Long-term assured levels of government commitment over decades rather than over individual budget cycles are essential to achieve an effective growth and sustainment strategy. For a nation whose physical form, maritime responsibilities, history and trade dependence is deeply embedded in the security and integrity of its maritime boundaries and sea lines of communications, such a long-term investment is seen as paramount.

Economic Issues

8. While the Terms of Reference focus largely on the economic issues relevant to building large tonnage naval vessels in Australia, there are many factors which impact on the economies of shipbuilding. For instance the cost of hulls and machinery is the minor portion of any warship build and represents about 18 per cent of the total "steam away" cost. The largest component in economic terms is the cost of weapon and sensor systems and their integration into a cohesive command control system. Unlike the older steam systems which had to be built into a vessel, modern diesel and gas turbine systems are removable individual items, and therefore proportionally less costly.

9. Most naval sensor and weapon systems are sourced locally or from the USA. This feature, which has been a driving element in Australian warship design for three decades is driven largely by considerations of interoperability, logistics and "out of area" support. The implications of this is that for an overseas build, the design and systems integration of the weapon and sensor systems was to be largely an Australian undertaking. This would mean establishing a large team of designers and engineers overseas or bringing the ship to Australia for fitting out.

10. Hull fabrication based on modular designs and construction is common practice overseas and has been successfully used in Australia. The leading shipbuilding countries in the world today have perfected this technology (first introduced in Japan in the 1960s) namely Japan, South Korea and Europe. Tenix successfully used modular construction in the ANZAC Frigate project. The cost of hull fabrication and engine fit out is related more to design and efficient work practices than wages: this has been proved in Japan which, despite high wages, is still the world's biggest shipbuilder.

11. Allied to the question of hull fabrication is the need to use high quality steel. Australian steel makers have no peer in the world and as demonstrated in the Navy's submarine project. The steels used in these vessels were required to have unique qualities and proved to be better than anything then available in the world. Warships built in Australia must be fabricated from the best steel and fortunately Australian steels have been shown to be equal if not better than steels manufactured overseas. This is more than a question of economics: it is an important factor in relation to "shelf life" of Australian warships which can be as long as 40 years.

Summary

12. Without being specific this Association considers that the question of building large naval vessels in Australia is wider than narrow economic issues because the cost balance between the hull and engine component and the sensor/weapon integration component lies heavily toward the latter (20% - 80%). The driving issue should be where best for this component to be undertaken. The ANZAC frigate program has shown that this is best done in Australia. Through-life support is also an important flow-on from an Australian build and fit out.

13. The Case Study of the ANZAC Ship project should be considered closely by the Committee in coming to its conclusions. The social and economic benefits flowing from this project should be closely examined in the context of this Inquiry.

14. In relation to hull fabrication modular construction is standard practice in the developed world and has been successfully used in Australia, and has been shown to be cost effective. Also the availability of high quality Australian steel should be a driving consideration.

15. As a maritime nation facing huge challenges in oceans governance in its broadest sense there is a need to develop skills across the whole range of what could be called "the national maritime enterprise" –marine scientists, seafarers, fishing experts, technologists, marine architects and engineers, environmentalists, etc. To this end the recommendation of the Marine Industry Action Agenda to establish a

Cooperative Research Centre (CRC) for Marine Technology should be endorsed. Furthermore, it is suggested that the Committee recommend long-term and assured levels of government funding to support this CRC.

16. Finally, members of our Executive are available to meet with the Committee to expand on any of the issues raised.