

Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION RATIONALISATION PROJECT, MELBOURNE

(Fifth Report of 2000)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA 2000

The Parliament of the Commonwealth of Australia

Defence Science and Technology Organisation Rationalisation Project, Melbourne

Parliamentary Standing Committee on Public Works

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Membership of the Committee

Chair	Hon. Judi Moylan MP	
Deputy Chair	Hon. Janice Crosio MBE, MP	
Members	House of Representatives	Senate
	Mr John Forrest MP	Senator Paul Calvert
	Mr Colin Hollis MP	Senator Alan Ferguson
	Mr Peter Lindsay MP	Senator Shayne Murphy

Mr Bernie Ripoll MP

Committee Secretariat

Secretary	Mr Trevor Rowe
Inquiry Secretary	Mr Ian Ireland
Administrative Officer	Mrs Angela Nagy

Extract from the Votes and Proceedings of the House of Representatives

No. 87, dated Wednesday, 8 December 1999

28. PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE— REFERENCE OF WORK—DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION RATIONALISATION PROJECT, MELBOURNE

Mr Slipper (Parliamentary Secretary to the Minister for Finance and Administration), pursuant to notice, moved—That, in accordance with the provisions of the *Public Works Committee Act 1969*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Defence Science and Technology Organisation Rationalisation Project, Melbourne.

Question—put and passed.



1. On 8 December 1999, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed Defence Science and Technology Organisation rationalisation project, Melbourne.

THE REFERENCE

2. The terms of the reference were as follows:

The Department of Defence proposes to rationalise and consolidate the Melbourne facilities of the Defence Science and Technology Organisation. The Defence Science and Technology Organisation, or DSTO, is part of the Department of Defence. It conducts research and advises on the application of science and technology best suited to Australia's defence and security needs. The Aeronautical and Maritime Research Laboratory, known as AMRL, is one of the two major research laboratories in the DSTO and currently operates from a number of sites throughout Australia. Its two principal sites are located in Melbourne, one at Fishermans Bend and the other at Maribyrnong.

The current dual site arrangement presents significant operational and cost inefficiencies and also impacts on the quality and efficiency of the research and development activities undertaken by the laboratory. This proposal will lead to a reduction in operational costs and enhanced effectiveness of the research program. At the same time it will allow for the reduction in property holdings by rationalisation onto the Fishermans Bend site.

The first main component of the project is relocation and consolidation of existing capabilities. The project includes new and refurbished facilities to relocate and consolidate the following existing research activities: maritime platforms, combatant protection and nutrition, and science corporate management. The second is integrated technologies. The proposal also includes initiatives which will result in integrated common technologies across the following areas: nuclear, biological and chemical protection investigation; mechanical testing; and advance composites fabrication. The third is other enhanced capabilities. The following enhanced capabilities are also proposed as part of the AMRL investment: new Airframes and Engines Division research thrusts, large scale maritime and aircraft structures testing, on-site conference capability, thermal testing and structural component holding.

The estimated outturn cost of the proposal is \$56.171 million. Subject to parliamentary approval and environmental approval, construction will start in mid-2000 and be completed some 2&half years later.

3. When referred to the Committee, the estimated out-turn cost of the proposed work was \$56.171 million.

THE COMMITTEE'S INVESTIGATION

- 4. The Committee received a submission and drawings from the Department of Defence (Defence) and took evidence from the following at a public hearing, held in Melbourne on 28 March:
 - Ms Nicola Roxon MP Federal Member for Gellibrand;
 - Department of Defence;
 - Maribyrnong City Council; and
 - City of Melbourne Council.
- 5. Written submissions were also received from the following organisations and individuals:
 - Australian Heritage Commission;
 - BAE Systems Australia Limited;
 - City West Water Limited;
 - Department of Infrastructure;
 - Department of Premier and Cabinet;
 - Environment Australia—Commonwealth Department of the Environment and Heritage;
 - Mr Michael Danby MP—Federal Member for Melbourne Ports; and
 - National Trust of Australia (Victoria).

- 6. Prior to the public hearing the Committee inspected existing facilities at Maribyrnong and Fishermans Bend:
 - fire and smoke modelling laboratory (Maribyrnong);
 - composite lamination facility (Maribyrnong);
 - textile technology laboratory (Maribyrnong);
 - wing bay (Fishermans Bend);
 - structural testing laboratory (Fishermans Bend);
 - composite and mechanical testing (Fishermans Bend);
 - greenfields site for new facilities (Fishermans Bend);
 - mechanical testing laboratory (Fishermans Bend); and
 - transonic wind tunnel (Fishermans Bend).
- 7. At the public hearing, Defence took several questions from the Committee on notice. The Committee received written responses from Defence to those questions on 19 April 2000.

BACKGROUND

Defence Science and Technology Organisation

- 8. The Defence Science and Technology Organisation (DSTO) is the secondlargest government funded research organisation in Australia after the CSIRO. DSTO had a budget of \$221 million in 1998–99 and a work force of approximately 2000 employees.¹
- 9. DSTO has a central office in Canberra and two laboratories, the Aeronautical and Maritime Research Laboratory (AMRL) in Melbourne and the Electronics and Surveillance Research Laboratory (ESRL) in Salisbury, South Australia. Research facilities linked with these laboratories are located in the following centres:
 - Canberra;
 - Sydney;
 - HMAS *Stirling*, Western Australia;
 - Scottsdale, Tasmania; and
 - Innisfail, Queensland.

- 10. DSTO's objective statement is to give advice on the application of science and technology that is best suited to Australia's defence and security needs. This is achieved by:
 - providing scientific and technological advice and assistance;
 - contributing to new and enhanced Defence capabilities;
 - extending the safe operating life of Defence equipment; and
 - transferring Defence research results to industry.

Assured future of Fishermans Bend site

11. The Committee questioned DSTO about the continuing relevance of DSTO, particularly in view of the forthcoming Defence White Paper. DSTO advised the Committee that it expected that the White Paper, at the very least, would see no diminution in DSTO's role, noting that work in DSTO is always oversubscribed and that DSTO is the only part of Defence until this year that has had an increasing staff.

Aeronautical and Maritime Research Laboratory

- 12. The Aeronautical and Maritime Research Laboratory (AMRL) operates from a number of sites throughout Australia. The principal sites are located at Maribyrnong and Fishermans Bend, Melbourne. These sites occupy approximately 10 hectares and 13 hectares respectively and accommodate approximately 800 personnel. Both sites are owned by the Commonwealth.
- 13. AMRL currently conducts activities in four key areas:
 - *operational analysis*—including analysis, modelling and simulation, performance evaluation of weapons, sensor systems, platforms, and operations from tactical to theatre level;
 - acquisition advice—including science and technology advice on the acquisition of platforms and weapons from the initial analysis of requirements to testing and evaluation and finally introduction into service;
 - warfighter support—including the development and analysis of tactics, training, management of platform signatures, damage control in platforms and personal protection; and
 - through-life support of Australian Defence Force (ADF) assets—including through-life support of costly and technically complex ADF platforms and weapons systems, with particular focus on capability and technical development, low cost maintenance and life extension.

History and facilities at Maribyrnong

- 14. Defence has occupied the Maribyrnong site since 1922. At that time research concentrated on support for the adjacent munitions factories. With the closure of the munitions factories DSTO's role changed to include broader aspects of Defence research. Currently, AMRL's Maribyrnong site is occupied by the:
 - Maritime Platforms Division (MPD);
 - Combat Protection and Nutrition Branch (CPNB); and
 - elements of the Maritime Operations Division (MOD).
- 15. Defence advised the Committee that over the past decade AMRL employee numbers at the Maribyrnong site have decreased from approximately 600 to 230 and that it is using only approximately one-third of the Maribyrnong site.

History and facilities at Fishermans Bend

- 16. The Fishermans Bend site is the birthplace of aeronautical research activity in Australia. In 1938 the Commonwealth Government obtained a 50 year lease for the site from the Victorian Government for the purpose of aeronautical research under the then Council for Scientific and Industrial Research (CSIR). In 1939 CSIR set up the Aeronautical and Engine Research Test Laboratory.
- 17. In 1949, with the formation of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Aeronautical and Engine Research Test Laboratory was transferred to the Department of Supply and renamed the Aeronautical Research Laboratories (ARL).
- 18. In 1968, the initiation of the Lower Yarra crossing project by the Victorian State Government led to the construction of the Westgate Bridge, the closure of the Fishermans Bend airfield, and the leasing of an additional eight hectares for aeronautical research by the Commonwealth from the Victorian Government.
- 19. The Department of Defence took over responsibility for the ARL in 1974 and in July 1988 the entire Fishermans Bend site was acquired by the Commonwealth for \$13.5 million.
- 20. The Fishermans Bend facilities include offices, laboratories, workshops, test areas and specialised research facilities such as the transonic wind tunnel.

Development of the Fishermans Bend site—recent involvement by the Committee

21. The development of the Fishermans Bend site has spanned more than half a century and involved a number of large-scale projects. The Public Works Committee has been involved in this development. Recent major projects examined by the Committee were in 1990 and 1994.

- 22. In 1990, the Committee recommended that the redevelopment of the Fishermans Bend site should proceed at an estimated cost of \$17.5 million. The Committee concluded that many of the buildings were inadequate for their current use and that the site should be redeveloped.² This substantial investment was in addition to works undertaken between 1987–90 costing \$11.95 million.
- 23. In 1994, the Committee recommended the upgrading of the transonic wind tunnel at Fishermans Bend at an estimated cost of \$12.7 million. The Committee concluded that to maintain and develop Australia's airborne capabilities it is essential to have a modern transonic wind tunnel to provide data on aerodynamic loads of aircraft and stores to permit their more efficient deployment and life extension.³

THE NEED

AMRL rationalisation

- 24. Over the past 10 years DSTO has undergone significant restructuring and downsizing. In 1994, DSTO contracted from an organisation based on four laboratories to two, with the Aeronautical Research Laboratory and Materials Research Laboratory combining as AMRL. In 1998 DSTO commenced planning for a rationalisation and consolidation of DSTO's facilities at Melbourne. Defence believes that the current dual site arrangement presents significant operational and cost inefficiencies and also impacts on the quality and effectiveness of the research and development activities undertaken by the Laboratory.
- 25. In evidence to the Committee, Defence identified seven key constraints in relation to the existing facilities at Maribyrnong and Fishermans Bend:
 - research activities split over two sites which impose operational and cost inefficiencies on the organisation;
 - at Maribyrnong, poorly configured, inflexible and in many instances sub-standard buildings result in a dysfunctional and inflexible facility;
 - a number of assets at Fishermans Bend remain poorly configured, inflexible and outmoded;
 - no opportunity exists to develop fully integrated research facilities or to develop multi-functional shared facilities;

² Committee's report relating to the redevelopment of the Aeronautical Research Laboratory site, Fishermans Bend, Vic - Committee's 10th report of 1990 - Parliamentary Paper - 378/1990.

³ Committee's report relating to the upgrade of transonic wind tunnel at DSTO Fishermans Bend, Vic -Committee's 6th report of 1994 - Parliamentary Paper - 411/1994.

- a multi-disciplinary team approach to research cannot be fully implemented;
- there is little or no ability to increase research outputs or achieve productivity gains as a result of the inefficient siting of facilities; and
- maintenance costs are increasing on a large, under utilised asset base, which is in excess of requirements.
- 26. Defence examined four options, of which the relocation and consolidation of all AMRL functions at the Fishermans Bend site was the preferred option. The options were assessed in terms of:
 - (a) financial impacts which included all capital and recurrent inflows and outflows over the evaluation period; and
 - (b) a range of non-quantifiable impacts including all significant advantages and disadvantages to which a dollar value could not be attributed.
- 27. The financial performance of each option was assessed using a Net Present Value analysis over a 15-year evaluation period using a discount rate of 6% and an inflation rate of 6%.
- 28. The four options were:
 - Base Case—The Base Case looked at minimal upgrading of existing assets and assumed that AMRL would continue to operate from the Maribyrnong and Fishermans Bend sites.
 - Option 1—This option looked at upgrading and expanding the asset base at Fishermans Bend and Maribyrnong to meet the needs of AMRL in the future. Under this option surplus assets and land at Maribyrnong would be sold to provide a capital offset.
 - Option 2—This option looked at consolidating all of DSTO's Melbourne activities onto the Fishermans Bend site. Under this option it was proposed that DSTO's Maribyrnong property would be sold to offset the investment.
 - Option 3—This option looked at the development of a new greenfields facility to accommodate all of AMRL Melbourne. Under this proposal AMRL's Maribyrnong and Fishermans Bend property would be sold to offset the investment.
- 29. The above options were comprehensively evaluated by Defence. The evaluation indicated that the preferred option is Option 2, that is, to consolidate all of AMRL's Melbourne activities onto the Fishermans Bend site. Defence believes that Option 2 will:

- provide the best outcomes in terms of net present value over 15 years;
- resolve operational inefficiencies inherent in the current dual campus arrangement;
- provide a pay back over approximately six years in terms of the relocation from Maribyrnong;
- result in productivity gains estimated at two per cent;
- effect recurrent cost savings of in excess of \$3 million per annum; and
- provide a high level of additional non-quantifiable benefits.

THE PROPOSAL

Scope

The proposal encompasses relocating AMRL Maribyrnong activities to refurbished and new facilities at Fishermans Bend and enhancing AMRL capabilities.

EXISTING CAPABILITIES RELOCATED

Maritime Platforms Division (MPD) and Combatant Protection and Nutrition Branch (CPNB)

- 30. DSTO's MPD focuses on four core research thrusts—materials and structures, maritime systems, signature management and platform survivability.
- 31. The CPNB provides scientific research and technical support to develop and maintain ADF feeding systems for all operational environments—at home and overseas. CPNB also works to procure cost-effective, protective combat systems, including those against chemical and biological agents. Such systems are purpose-designed to optimise protection in Australian conditions.
- 32. The functions the relocations will support are:
 - integrated MPD and CPNB facilities;
 - a range of research facilities including laboratories and large scale testing laboratories; and
 - office accommodation for relocated MPD and CPNB staff.

- 33. The justification of need provided in evidence to the Committee by Defence for the relocation of MPD and CPNB from the Maribyrnong site to the Fishermans Bend site is:
 - improved operational efficiencies and effectiveness through the development of a single compact facility;
 - improved utilisation of facilities and equipment;
 - improved productivity, output gains and reduced travelling between sites; and
 - significant recurrent cost savings.

Library

- 34. The DSTO Research Library maintains site libraries at Melbourne Fishermans Bend and Maribyrnong, Salisbury and Sydney. These libraries have developed specialised research collections. While the libraries are not open to the public, the material held is available through the usual interlibrary loan channels.
- 35. The library facility at the Maribyrnong site is a specialist library, which supports research within DSTO. Materials from other Australian and overseas libraries may be obtained by electronic document delivery. Online searches are available to identify material on particular topics, and a number of databases are available via the online catalogue or CD-ROM. The audiovisual section allows staff to use video and audiotapes, films and slides. Microfiche and microfilm reader-printers are available. Library materials are purchased, catalogued and lent by means of an integrated computer system.
- 36. The justification of need provide in evidence to the Committee by Defence for the relocation of the AMRL library is:
 - the current split arrangement is ineffective and inefficient;
 - the relocation will create the appropriate critical mass to support AMRL's expanded research programs;
 - will allow a fully integrated centrally located multi-disciplinary library to be developed; and
 - result in significant recurrent cost savings.

Proposal

37. It is proposed to relocate MPD and CPNB from the Maribyrnong site to the Fishermans Bend site. A new three level building will be constructed for MPD and CPNB including the Nuclear, Biological and Chemical (NBC)

component comprising major testing laboratories and workshops at ground level and offices and testing and instrument rooms on the other floors.

38. It is proposed to relocate the library from the Maribyrnong site to the Fishermans Bend site. A new single level building will be constructed at the centre of the redeveloped site between building 22 (the canteen) and building 23 (the computer centre).

INTEGRATED TECHNOLOGIES

Biological protection investigation laboratories

- 39. DSTO conducts research in biological detection, hazard warning and decontamination. DSTO is developing prototype antibody detection kits and researching antidotes for deadly toxins such as ricin. Studies are also being undertaken into early indicators of chemical and biological attack while potential preventative treatments and therapies are being explored. DSTO's nuclear, biological and chemical research benefits the ADF in preparing for potential conflict and provides protection to all Australians through strategic planning for civil disaster scenarios involving accidental or deliberate release of toxins.
- 40. The justification of need provided in evidence to the Committee by Defence for specialist biological protection investigation laboratories to be incorporated into the new CPNB facility is:
 - extend research into areas which will assist in the protection of ADF personnel deployed in areas of risk;
 - enable Australia to fulfil its commitments to the Biological and Toxin Weapons Convention; and
 - enable the ADF to develop effective countermeasures and more efficient detection and identification devices.

Integrated and expanded mechanical testing facility

41. The proposed integrated and expanded mechanical testing facility will be used by both DSTO's Maritime Platforms Division (MPD) and Airframes and Engines Division (AED). MPD focuses on materials and structures, maritime systems, signature management and platform survivability. AED focuses on acquisition of new aircraft, reducing the cost to Defence of owning and operating its aircraft, and helping maintain a high level of safety in aircraft operations. In respect to reducing the cost to Defence of owning and operating its aircraft, AED applies component and full-scale fatigue testing to determine the fatigue critical locations and fatigue lives of aircraft and helicopter airframes and structural components. Fatigue tests and analyses provide a basis for evaluating repair options and developing management strategies for through-life support.

- 42. The functions the proposed facility is intended to support are:
 - integrated MPD and AED mechanical testing facility;
 - pump rooms and cooling water areas;
 - preparation and storage facilities; and
 - office areas.
- 43. The justification of need provided in evidence to the Committee by Defence for an integrated and expanded mechanical testing facility is:
 - allows for state of the art equipment and facilities to undertake leading edge fatigue and fracture work for both MPD and AED;
 - provides for recurrent cost savings through rationalisation and sharing of equipment and facilities;
 - allows increased utilisation of equipment;
 - provides greater integration of research teams and knowledge;
 - allows significantly higher standards of safety to be achieved through unified operation and management;
 - enables efficiency gains to be achieved in terms of shared skills and operator competencies across a range of machine types; and
 - result in reduced capital expenditure (avoidance of duplicated equipment) and ongoing maintenance costs.

Advanced composites fabrication facility

- 44. Both AED and MPD conduct research and development into advanced composites. AED and MPD research and development of advanced composites covers performance of bonded repairs emphasising durability, damage tolerance and behaviour under complex stress states, replacement of metallic aircraft and marine structures by fatigue and corrosion resistant composite structures.
- 45. The functions the proposed facility is intended to support are:
 - a fully integrated AED and MPD composites facility. The shared facilities include a common processing area, ovens and freezers, workshop spaces and surface treatment preparation areas.

- 46. The justification of need provided in evidence to the Committee by Defence for an advanced composites fabrication facility is:
 - enable AMRL to establish an enhanced capability to undertake advanced research in this increasingly important area of defence applications;
 - it allows currently separate MPD and AED composites research activities to be combined with resultant efficiencies and improvements in research outputs;
 - it creates a critical mass of staff, facilities and infrastructure providing a sound basis for further expansion and enhancement in the future; and
 - as a combined facility, current peaks and troughs in equipment utilisation are reduced (ie. overall increase in utilisation of facilities).

Proposal

- 47. It proposed to construct new biological protection investigation laboratories. These laboratories will be located within the proposed CPNB facility.
- 48. It is proposed to construct a single level high ceiling extension to the existing Building 2 mechanical testing facility to integrate MPD and AED mechanical testing capabilities.
- 49. It is proposed construct an advanced composites fabrication facility. This facility includes the refurbishment of extensive areas in Building 74 (composites) and Building 89 (specimen preparation and manufacture) and the existing Building 21 (material laboratory) extension together with new facilities provided by an extension to the south of Building 21.

ENHANCED CAPABILITIES

Refurbishment and expanded airframes and engine design division office and laboratory accommodation

- 50. The functions the proposed facility is to support are:
 - expanded AED office accommodation and support area;
 - refurbished wing bay; and
 - upgraded and refurbished general laboratory areas.
- 51. The justification of need provided in evidence to the Committee by Defence for the refurbishment and expanded airframes and engine design division office and laboratory accommodation is:

- there are no existing areas available to accommodate staff for new research thrusts;
- there is a need to accommodate an additional 94 staff on site, 40 of which will accommodated under this proposal; and
- additional office space is required to accommodate staff transferred and absorbed from AESF.

Maritime and aircraft structures testing facility

- 52. The functions the proposed facility is to support are:
 - major test areas for large scale maritime and aircraft structures;
 - capacity for full scale testings of both large ship and aircraft components; and
 - fully integrated AED and MPD capabilities.
- 53. The justification of need provided in evidence to the Committee by Defence for the maritime and aircraft structures testing laboratory is:
 - meet an identified need for large scale testing areas;
 - provide MPD with capability to test large scale maritime platforms; and
 - allow for improved operating efficiencies and higher levels of utilisation as a combined AED and MPD facility.

New conference facility

- 54. The functions the proposed facility is to support are:
 - an auditorium with 200 seats including foyer and display area with associated tea making facilities; and
 - audio visual and office management facilities.
- 55. The justification of need provided in evidence to the Committee by Defence for the new conference facility is:
 - increased communication between research staff on campus and with outside industry groups;
 - existing conference facilities at Fishermans Bend are inadequate;
 - conference facilities are an essential infrastructure support to AMRL's research and development activities;
 - the on site conference facility will result in significant recurrent cost savings; and

 proposed video conferencing capability will enable AMRL to link with existing and new overseas customers and service providers.

Thermal testing facility

- 56. The functions the proposed facility is to support are:
 - expanded facilities to support AED's research and development programs;
 - infra red signature testing areas; and
 - testing equipment with the capacity to provide air supplies at a range of temperatures to below zero to above 100 degrees Celsius.
- 57. The justification of need provided in evidence to the Committee by Defence for the thermal testing facility is:
 - current facilities are dysfunctional with limited capabilities;
 - significantly enhance AMRL's capability in the area of plume studies, infra red signature prediction and management of aircraft and ships;
 - enhance AMRL's ability to carry out icing investigations on ships, aircraft and other military hardware; and
 - enable AMRL to undertake heat transfer studies on engine components in support of retirement for cause research.

Structural component bank

- 58. The functions the proposed facility is to support are:
 - research activities;
 - storage capacity for aircraft parts from tear downs and accident investigations;
 - flexible area for crash investigations; and
 - storage of test sections for maritime platforms.
- 59. The justification of need provided in evidence to the Committee by Defence for the structural component bank is:
 - controlled facilities are needed in the short term to support existing research projects and asks, including F-111 and PC-9 projects; and
 - provide AED with new capability to undertake aircraft tear downs and accident investigation studies.

Statutory upgrading and refurbishment works to assets not previously upgraded

- 60. The functions the proposed work is to support are:
 - refurbishment of buildings 5 (No. 5 test house) and 21 (material laboratory);
 - refurbishment, in part, of building 1 (administration);
 - refurbishment of canteen—building 21; and
 - replacement and upgrade of infrastructure at north east corner of the site (sewer, water and storm water).

Proposal

- 61. Refurbishment of all areas within building 3 (structures and materials laboratories). It is also proposed to infill the existing atrium space of the centre of the building and part of the upper wing bay area to provide additional floor area for accommodating increased AED staff numbers.
- 62. In respect to the maritime and aircraft testing facility, it is proposed to construct a single level building to the west of the mechanical testing facility and adjacent to the proposed MPD building.
- 63. It is proposed to construct as the conference facility a single level building at the end of the proposed library building adjoining building 22 (canteen).
- 64. In respect to the thermal testing facility, it is proposed to extend and upgrade existing building 43 (No. 4 combustion test house) together with the integration of functions within buildings 40 (icing rig control room) and 42 (control room cold air plant).
- 65. It is proposed to construct as the structural component bank an extension to the existing building 35 hanger in an easterly direction as a single level free span structure.
- 66. In respect to the statutory upgrading and refurbishment works to assets not previously upgraded, building and refurbishment works will involve upgrade works to meet current regulatory and operational standards for those facilities.

Consideration by Committee

- 67. A number of aspects of the need for, and cost of, the relocation were raised by the Committee with Defence at the public hearing. These were:
 - quantitative studies conducted to demonstrated savings, both economic and in efficiency

Defence advised that investigations commenced into the specific construction aspects of the project in approximately 1996 with an update of the Fishermans Bend Master Plan. Consultants conducted a number of studies, including options analysis and economic analysis which subsequently formed a major capability submission.⁴

• rationale for choice of Fishermans Bend site

Defence advised the Committee that there were a number of reasons why the Fishermans Bend site was chosen, including:

- ⇒ it resolved operational inefficiencies inherent in the current dual campus arrangement;
- \Rightarrow result in productivity gains estimated at two per cent;
- ⇒ effect recurrent cost savings of in excess of \$3 million per annum;
- ⇒ the investment on Fishermans Bend is much larger than that at Maribyrnong; and
- ⇒ relocation to the Fishermans Bend site will enable a real colocation critical mass to be achieved which will make the area a centre for research and development.
- non-construction costs

The Committee questioned Defence about the level of nonconstruction costs, which make up approximately one quarter of the cost of the project. Defence advised that included in the non-construction costs is the managing contractor's fee and sum, the design consultants fee, who work for the managing contractor; and the project consultant fee.

Defence also advised that in the form of contract adopted for the project managing contractor's costs and design costs are separated out, whereas in other forms of contract used by

⁴ Defence Science and Technology Organisation, 'Major Capability Submission (Facilities) Project No: C8516', *Defence Science and Technology Organisation Rationalisation Melbourne*, November 1998.

Defence the head contract costs, the contractor's overhead costs and managing contractor's costs would all be tied in, that is, rolled into the managing contractor's costs for the individual components of the project.

relocation costs

In relation to relocation costs, Defence advised that while the amount of money allocated to relocation was significant, both the cost escalation and project contingency cost will be converted to bricks and mortar as the project is delivered, or they will handed back.

■ GST

The out-turn costs for the project shown in the Defence submission to the Committee included a GST component. At the public hearing Defence sought to amend its submission by removing the GST component. The Committee asked Defence why the GST cost to the project was taken out? Defence advised that GST will be handled separately and that the net costs of GST will be fully supplemented, or in other words, Defence can claim the full input tax credits equal to the GST payable.

contracting out

Defence advised the Committee that approximately \$10 million of AMRL's \$90 million science budget was contracted out. Defence also advised the Committee that DSTO has some 19 alliances with industries with whom DSTO meets regularly and develops joint programs.

Committee's Conclusions

- 68. The relocation, refurbishment and consolidation of existing capabilities will provide operational efficiencies, result in recurrent cost savings, and allow for a multi-disciplinary team approach to be implemented.
- 69. Proposed new facilities meet an identified need and will allow for improved operational efficiencies and significantly enhance AMRL's capabilities.

Carparking requirements

70. Defence advised the Committee that the rationale for provision of parking was detailed in the 1997 Master Plan for Fishermans Bend, namely:

Although the AMRL site is 4 km away from the Melbourne CBD it is relatively isolated from the city's public transport system. The nearest light rail/tram station is 3km away and the nearest railway station is 4km away. The site is serviced by an infrequent bus. There are no proposed developments in the Fishermans Bend or nearby precincts that will improve access for AMRL staff to public transport. Private motor vehicle will continue to be the main means of transport for staff to and from work. There are no public car parks in the Fishermans Bend precinct and on street parking for the present and projected number of staff vehicles would not be viewed favourably the council and would create considerable difficulties; not only for the AMRL but also for the council. On site parking is the only viable option in the foreseeable future.⁵

- 71. Defence advised the Committee that the increased population of the Fishermans Bend site would require the number of carparks at the site to increase from 475 to 648. Defence advised that a total of 104 spaces would have to be relocated, resulting in a total of 278 spaces to be constructed.
- 72. The Committee was advised by the representative from the City of Melbourne Council that the Council was aware of the public transport and parking problems in the Melbourne Ports area, and that the Council considered this to be a fundamental issue, and is studying ways to improve the situation.
- 73. The Council advised that the Melbourne Ports area has approximately 7, 500 people working and, as far as public transport is concerned, is serviced by a bus service. The Council believes that the bus service is a heavily under utilised service with only about 1,500 passenger trips per day done by bus.
- 74. The Committee also questioned the Council regarding rail link proposals. The Council advised the Committee recent proposals, which will effect the Melbourne Ports area, relate only to the transportation of goods and not passengers.
- 75. The Committee asked Defence to provide a cost estimate for the demolition of existing car parks and their replacement. Defence advised the Committee that the total cost for demolition and removal of the 104 existing spaces is

⁵ Defence Science and Technology Organisation, *MASTER PLAN (1997) FOR FISHERMANS BEND, MELBOURNE,* August 1997, p. 26.

estimated at \$52,000 and that the total cost for construction of 278 new spaces is estimated at \$556,000.

FUTURE OF THE MARIBYRNONG SITE

Reactions to rationalisation of Maribyrnong facilities

- 76. The federal member for Gellibrand and a representative from the Maribyrnong City Council, with constituents employed at the Maribyrnong site and living in the surrounds, presented arguments to the Committee that the rationalisation should be conditional. The major elements of the case put to the Committee can be summarised as follows.
- 77. Historically, the Commonwealth Government was the major employer in the City of Maribyrnong. The Commonwealth's decision to reduce and relocate employment has led to considerable job losses since the 1960s. This has created economic and social dislocation and created challenges relating to land uses, environment and infrastructure. In light of these historical facts it was argued that the Commonwealth should take an active role in assisting the City of Maribyrnong in dealing with the issues associated with economic and social adjustment.

Sale of Maribyrnong site

- 78. The Commonwealth is likely to release approximately 136 hectares of land for redevelopment in the inner north west of Melbourne. The land includes the DSTO's Maribyrnong site. The Maribyrnong site is of significance to the City of Maribyrnong as it offers opportunities to enhance and complement the City's existing provision of open space, its employment base and the mix of residential, commercial and industrial development. The extent to which these opportunities are managed will be of lasting significance for existing and future residents, employees and visitors to the City.
- 79. In evidence to the Committee the Member for Gillibrand recommended that any sale of the site must recognise its significance to the community and accordingly:
 - be conditional upon some areas being reserved for public, open spaces;
 - be conditional upon the maintenance of some heritage and historical aspects of the site; and
 - be accessible to the community that gave the defence industries so much, by including some public and affordable housing.

- 80. The recommendations of Maribyrnong City Council were:
 - that any disposal of the AMRL site at Maribyrnong be deferred until a comprehensive consultative, integrated approach for the whole Defence site has been implemented;
 - that transfer of employment from the AMRL Maribyrnong site be deferred until replacement employment opportunities are found at the site;
 - that the Commonwealth Government actively assists State, regional and local authorities in supporting the attraction of alternative employment opportunities at the AMRL site; and
 - that a full range of planning issues be addressed in the planning for the future use and possible disposal of the AMRL site, such as heritage, access, streetscape, open space and recreational trail requirements.
- 81. The Committee was advised that the implementation of the DSTO relocation is not dependent on the sale of the Maribyrnong site and that the eventual sale of the whole Maribyrnong property is a separate, large project that is in only its early stages. The sale of Maribyrnong site led to a number of questions from the Committee at the public hearing, including whether there is a strategic plan for the redevelopment of the site.
- 82. Defence advised the Committee that the requirement to dispose of the site, or to consider the site as a complete entity, is the best way to achieve an outcome that is most effective from the Defence point of view and that of the community. Defence also advised the Committee that it would conduct consultation with all levels of government and the community.
- 83. Defence also advised the Committee that it believed that relocation and the planning of the disposal of the site could occur concurrently. Defence maintained that if they did the planning for disposal first and then agree to the proposal to relocate this would extend the time that AMRL operates in less than efficient facilities by several years.
- 84. In respect to consultation with parties who would be effected by the sale, Defence advised the Committee that it had spoken with the Maribyrnong City Council on a number of occasions about the property. Defence advised that it was hoping to appoint a project manager in September who will have responsibility for addressing the various issues, including the potential of the site and the future use options, that are associated with the site. Studies, which will be conducted to look at all such issues, will be done through extensive consultations with State and local council. Defence provided the Committee with an assurance that it would continue to brief the Member for Gellibrand as to the direction of the project.

Army Engineering Agency

- 85. The Army Engineering Agency (AEA) provides technical advice and engineering design, development, test evaluation services to Army and other Defence agencies. AEA headquarters is at Maribyrnong.
- 86. When AMRL vacates the Maribyrnong site the AEA will be the only operational Defence organisation at the site. Defence advised the Committee that AEA is currently undergoing Commercial Support Program (CSP) market testing activities and that it is the long term intention of Defence to vacate the site, remediate and dispose of the property.
- 87. A number of questions relating to the future of AEA Maribyrnong were raised by the Committee with Defence at the public hearing. These included:
 - are there any strategic plans to move it [AEA] from where it is located currently?

Defence advised the Committee that there are strategic plans for AEA to ultimately vacate the Maribyrnong site. This may not occur until 2005 and will depend on the outcome of current CSP activities.

• what does that [AEA vacating Maribyrnong] mean for the people are who work there?

Defence advised the Committee that currently 195 of the 278 staff at AEA are in the process of relocating from Maribyrnong to Bourke Street in the Melbourne CBD. The remaining 83 staff are being subject to CSP market testing. Defence also advised that the future of these staff depends on the outcome of the current and any future CSP activities, particularly on whether the In-House bids for specific projects win the contracts.

- 88. The Committee questioned Defence on the consultation process with effected parties to the eventual sale of the Maribyrnong site. Defence advised the Committee that there had been informal discussions with a number of entities, including the Maribyrnong City Council and gave a commitment that consultation will occur.
- 89. In evidence to the Committee, Maribyrnong City Council indicated that it had met with DEO periodically on specific issues relating to future of the Maribyrnong site over the last year or two and that the Council, nor Defence, have yet started any community consultation process. The Council welcomed the guarantee of consultation given by Defence to the Committee.

Committee's Conclusions

- 90. Studies that will be conducted by Defence to look at all issues relating to the sale of the Maribyrnong site will be done through extensive consultations with effected parties.
- 91. Defence provided the Committee with a guarantee that effected parties to the sale of the Maribyrnong site, including the Maribyrnong City Council and the federal Member for Gellibrand, would be consulted.

DESIGN

- 92. Where appropriate, the design of new facilities will conform to the relevant provision of:
 - the Building Code of Australia (BCA);
 - relevant current Australian Standards and Codes;
 - Occupational Health and Safety Act, 1991;
 - the Defence Fire Protection Engineering Manual (MFPE);
 - Defence Security Manual (SECMAN);
 - Defence Facilities Communications Cabling Standard;
 - Environmental Protection Act and Regulations;
 - Environment Protection (Prescribed Waste) Regulations;
 - Environment Protection (Transport) Regulations; and
 - Workplace Health and Safety Act and Regulations.

Principles

- 93. The design principles adopted for the proposed facilities incorporate the following:
 - the provision of cost effective and utilitarian facilities of energy efficient design suitable for the micro climate conditions, and of a style compatible with buildings intended for long term retention;
 - adoption, where possible, of conventional construction techniques and materials, in particular those commonly used by the construction industry in the area;
 - use of durable materials that combine long life with minimum maintenance, and are recognised as environmentally sustainable building products;

- recognition of limitations of land availability, security requirements, functional relationships with existing facilities, and operational determinants; and
- recognition of occupational health and safety aspects impacting on the well being of personnel using the facilities.

Materials

- 94. The materials proposed for the new buildings will be selected for their economy, function, acoustic properties, low maintenance and compatibility with existing facilities. Materials selection for test halls will be steel framed and clad buildings with concrete floor slabs. The walls will be lined with face brickwork or impact resistant fibre cement wall lining. Where required, epoxy finishes will be applied to the base slab to provide for special use and slip resistant requirements.
- 95. Laboratory and office buildings will be steel or reinforced concrete framed buildings with concrete floor slabs. Exterior walls will be brick veneer or equivalent. Where required, acoustic ratings to internal walls will be provided. Laboratories will have floor slabs lined with welded vinyl floor sheeting. Office buildings will have commercial grade wool/nylon carpets. The ceiling in all areas is proposed as a one way grid metal suspension

External works

96. The proposed building sites are generally flat. No trees will be removed. Subject to a review of vehicle movements at Fishermans Bend some modifications and extensions to the existing road network may be required. A new pedestrian route system will be constructed to link all parts of the site.

Acoustics

97. High levels of noise from research projects require particular attention to be paid to acoustic design requirements. Buildings, such as test halls, which require appropriate acoustic insulation will be designed to achieve noise reduction from internal and external noise sources, in accordance with the relevant Australian Standards. Materials and jointing methods will be chosen for their ability to achieve minimisation of sound transmission and maximisation of sound absorption.

Landscaping

98. The additional facilities proposed will have little impact on the existing landscaping of the Fishermans Bend except from the development of a 'green' open space system with outdoor amenity areas with shelter and shade will be provided. Shade trees are also proposed in association with the provision of additional carparks.

Occupational health and safety

99. New works will be designed and constructed to meet relevant occupational health and safety requirements and codes of practice. Any asbestos material located in existing buildings proposed for demolition as part of this project will be removed in accordance with prescribed practices.

SYSTEMS

Fire protection

- 100. The principles outlined below will be adopted in the design of the fire protection systems:
 - as a minimum, all construction and fire protection requirements will be in accordance with the provisions of the Building Code of Australia (BCA), the Defence Manual of Fire Protection Engineering (MFPE) and all other applicable Codes and Standards. MFPE details Defence fire protection policy for asset and building function protection. The levels of fire protection specified in MFPE are above BCA requirements and have been determined by a risk assessment and risk management approach to fire protection;
 - Defence will require certification from a suitably qualified certifier, that the design and construction meet the requirements of the BCA, MFPE, relevant Codes and Standards and any additional State, Local Government and Defence requirements;
 - any recommended departures from the BCA requirements in relation to the project will be technically assessed by Defence specialist fire protection staff; and
 - successful tenderers will be required to produce a Quality Assurance Plan to clearly demonstrate how BCA, Australian Standards and any additional Defence requirements in relation to fire protection/fire safety, will be met and the required standards for construction/ installation maintained.

Electrical

- 101. Electric power will be provided from the established in-ground distribution network.
- 102. General and supplementary lighting will be provided in accordance with appropriate Australian standards. Switching patterns and dimmers will be arranged to utilise available daylight. External lighting will be provided at all entrances and exists in conformity with relevant Australian Standards.

Natural light will be introduced from suitably installed and positioned windows and skylights.

CONSULTATION

- 103. Defence advised the Committee that the following authorities were consulted or advised about the project during the planning stages:
 - Melbourne City Council;
 - National Trust of Australia;
 - Heritage Victoria;
 - Environment Australia;
 - Victorian EPA;
 - Melbourne Water;
 - United Energy;
 - Vicroads;
 - Victorian Metropolitan Fire Department;
 - Docklands Authority;
 - CSIRO;
 - Department of Infrastructure;
 - Department of Industry, Science and Resources;
 - Department of Employment, Workplace Relations and Small Business;
 - Department of Natural Resources and Environment;
 - Department of Premier and Cabinet;
 - Member Legislative Assembly;
 - Member Legislative Council; and
 - Members House of Representatives;
- 104. The Committee also questioned Defence about whether staff had been consulted about the proposed relocation and consolidation. Defence advised the Committee that an extensive consultative process has been undertaken with staff in terms of a consultation committee to keep staff informed of management thinking and planning and to work through the issues of the new facilities at the Fishermans Bend site. The consultation committee, the Maribyrnong Relocation Consultation Committee, included DSTO unions.

105. Defence advised the Committee there had been few objections to the relocation. Concerns with the relocation were in terms of the closing of a base that had been there for a long time and which has a particular culture and identity. Concerns were also expressed about the new facilities, what will be available and what management will be providing them with.

ENVIRONMENT AND HERITAGE

Impact assessments by Defence

106. Defence advised the Committee that there are no significant environmental impacts resulting from the proposal. In evidence to the Committee, Environment Australia advised that it appears that there are no major environmental impacts associated with the proposal. Defence advised that as the project does not impact on scheduled flora and fauna an environmental impact statement or public environment report are not required.

Heritage

107. Defence—Defence advised the Committee in its submission that:

There are no social, economic or heritage interests in the proposed site.⁶

- 108. Australian Heritage Commission—The Australian Heritage Commission advised that Committee that the Commission had provided information to the Department of Defence's consultants Connell Wagner (engaged for the coordination of the proposed relocation to Fishermans Bend) regarding the potential heritage values of the site. Buildings which may have heritage values include the Administration Buildings (No's. 1 and 51) and the Wind Tunnel (No. 11). The Commission recommended to the Committee that a preliminary survey be undertaken to identify any historic, natural or indigenous heritage values.
- 109. The Commission noted, in relation to the proposed sale of the Maribyrnong site, that that site as a whole is potentially significant for its early association with the former Maribyrnong Racecourse and for the historical development by the Department of Defence on the site. The Commission informed the Committee that on 10 September 1999 the Commission had provided Defence with information regarding the draft assessment of the former Explosives Factory Maribyrnong site for entry in the Register of the National Estate. Gazettal for the purpose of Interim Listing has taken place and section 30 of the *Australian Heritage Commission Act 1975* applies to the site.

⁶ Department of Defence, 'Statement of Evidence', *Transcript of Evidence*, p.32.

- 110. The Commission reiterated its advice to Defence of 17 December 1999 that prior to disposal or redevelopment of the Maribyrnong site, that detailed heritage investigations, stakeholder consultation, exploration of the site contamination and master planning be undertaken.
- 111. National Trust of Australia (Victoria)—The Committee also received a submission relating to the heritage values of the Maribyrnong and Fishermans Bend sites from the National Trust of Australia (Victoria). The Trust advised the Committee that it is concerned that the cultural heritage value of the Fishermans Bend site be properly assessed, and that this assessment guides appropriate development of the site. The Trust strongly recommended to the Committee that it is necessary that a heritage study be carried out for the Fishermans Bend site in accordance with the provisions of the Australian International Council on Monuments and Sites (ICOMOS) Burra Charter.
- 112. In relation to the Maribyrnong site, the Trust recommended that a cultural (and, if appropriate, natural) heritage study, similar to that proposed by the Trust for the Fishermans Bend site be conducted for the Maribyrnong site.
- 113. *Defence response*—Defence in evidence to the Committee, while acknowledging the Australian Heritage Commission's and National Trust of Australia (Victoria's) advice that some buildings at the Fishermans Bend site may have heritage value, advised the Committee that the DSTO AMRL Master Plan identifies Buildings 1, 51, 16, 93 and 12 as having some heritage values and includes a plan for their conservation. Defence also advised the Committee that the proposal does not impact on the heritage values of these buildings.
- 114. However, Defence advised the Committee that it has accepted the Australian Heritage Commission's recommendation to conduct a heritage study and has directed the Project Consultant to engage a heritage architect to complete a preliminary survey of any historic, natural or indigenous heritage values at both the Fishermans Bend and Maribyrnong sites.

Consideration by Committee

- 115. The Committee questioned Defence about the apparent contradiction between the claim in the submission that '[T]here are no social, economic or heritage interests in the proposed site' and the Defence response to the Australian Heritage Commission.
- 116. The Committee was advised that Defence had agreed to undertake another heritage investigation of the Fishermans Bend site.
- 117. The Committee also questioned defence about the propriety of the project consultant engaging a heritage architect. Defence advised that:

It would not be unusual for us to vary the commission of the project consultant if they had the resources in-house to actually do that work for us. We commission all consultants directly but the project consultant can initiate that work for us.⁷

Committee's Conclusions

- 118. The Maribyrnong site as a whole is potentially significant for its early association with the former Maribyrnong Racecourse and for the historical development by Defence.
- 119. The Fishermans Bend site has some buildings that may be of heritage value but the project is unlikely to impact on them.
- 120. Defence has advised the Committee that it has directed the Project Consultant to engage a heritage architect to complete a preliminary survey of any historic, natural or indigenous heritage values at both the Fishermans Bend and Maribyrnong sites.

Committee's Recommendations

- 121. That the survey of any historic, natural or indigenous heritage values at both the Fishermans Bend and Maribyrnong sites be carried out in accordance with the provisions of the Australian Burra Charter.
- 122. That the National Trust of Australia (Victoria) be consulted regarding appropriate person/s to be engaged for the survey of Fishermans Bend and Maribyrnong sites historic, natural or indigenous values.

COST AND PROGRAM

Cost

123. The out-turn cost of this project is \$56.171 million which includes construction costs, professional fees and charges, furniture and fittings, construction contingency and a predicted indexation adjustment over the construction period.

PROGRAM

124. Subject to Parliamentary approval, the project will be implemented as a managing contractor contract, with a phased delivery over three years.

⁷ Department of Defence, *Transcript of Evidence*, p. 85.

FUTURE WORKS

125. Defence advised the Committee of a proposal for the establishment of a Submarine Land Based Test Facility (SLBTF), possibly at the Fishermans Bend site. The SLBTF proposal is costed at \$25.8 million.

Committee's Recommendation

126. The Committee recommends the proposed provision of facilities for the DSTO rationalisation, Melbourne, at an out turn cost of \$56.171 million.

CONCLUSIONS AND RECOMMENDATIONS

- 127. The Committee's conclusions and recommendations and the paragraphs in which they appear in the report are set out below:
 - 1. The relocation, refurbishment and consolidation of existing capabilities will provide operational efficiencies, result in recurrent cost savings, and allow for a multi-disciplinary team approach to be implemented.
 - 2. Proposed new facilities meet an identified need and will allow for improved operational efficiencies and significantly enhance AMRL's capabilities.
 - 3. Studies that will be conducted by Defence to look at all issues relating to the sale of the Maribyrnong site will be done through extensive consultations with effected parties.
 - 4. Defence provided the Committee with a guarantee that effected parties to the sale of the Maribyrnong site, including the Maribyrnong City Council and the federal Member for Gellibrand, would be consulted.
 - 5. The Maribyrnong site as a whole is potentially significant for its early association with the former Maribyrnong Racecourse and for the historical development by Defence.
 - 6. The Fishermans Bend site has some buildings that may be of heritage value but the project is unlikely to impact on them.
 - 7. Defence has advised the Committee that it has directed the Project Consultant to engage a heritage architect to complete a preliminary survey of any historic, natural or indigenous heritage values at both the Fishermans Bend and Maribyrnong sites.

- 8. That the survey of any historic, natural or indigenous heritage values at both the Fishermans Bend and Maribyrnong sites be carried out in accordance with the provisions of the Australian Burra Charter.
- 9. That the National Trust of Australia (Victoria) be consulted regarding appropriate person/s to be engaged for the survey of Fishermans Bend and Maribyrnong sites historic, natural or indigenous values.
- 10. The Committee recommends the proposed provision of facilities for the DSTO rationalisation, Melbourne, at an out turn cost of \$56.171 million.

Hon. Judi Moylan MP Chair 8 June 2000

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Appendix A—Witnesses

Anderson, Mr Michael, Senior Project Manager, City of Melbourne Council

Clark, Ms Elizabeth, Director, Property Disposals, Defence Estate Organisation

Domney, Mr Murray, Assistant Secretary Science Corporate Management, Defence Science and Technology Organisation

Gibson, Mr Ian, Manager City Development, Maribyrnong City Council

Kelly, Brigadier Garry - Director General, Project Delivery, Defence Estate Organisation

Lowson, Mr Andrew, Project Director, Defence Estate Organisation

Ross, Mr William, Project Consultant, Connell Wagner Pty Ltd

Roxon, Ms Nicola, MP - Federal Member for Gellibrand

Schofield, Dr William, Director Aeronautical and Maritime Research Laboratory, Defence Science and Technology Organisation

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