Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

HMAS *ALBATROSS* STAGE 1 REDEVELOPMENT, NOWRA, NSW

(First Report of 1998)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1998
The Parliament of the Commonwealth of Australia

Parliamentary Standing Committee on Public Works

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Thirty-Second Committee)

Mr Wilson Tuckey MP (Chairman)[1]
Mr Colin Hollis MP (Vice-Chairman)

Senate	**House of Representatives**
Senator Paul Calvert	Mr Richard Evans MP
Senator Alan Ferguson	Mr John Forrest MP
Senator Shayne Murphy	Mr Ted Grace MP
	Mr Michael Hatton MP[2]

1 Replaced Mr Neil Andrew MP as Chairman on 4 September 1997
2 Replaced The Hon Michael Lee MP on 26 June 1996

Committee Secretary:	Bjarne Nordin
Inquiry Secretary:	Michael Fetter
Administrative Officer:	Lynette Sebo

EXTRACT FROM THE
VOTES AND PROCEEDINGS
OF THE HOUSE OF REPRESENTATIVES

No. 117 dated 2 October 1997

PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE— REFERENCE OF WORKS—HMAS *ALBATROSS* STAGE 1 REDEVELOPMENT, NOWRA, NSW.

Mr Ruddock (Acting Minister for Administrative Services), 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: HMAS *Albatross* Stage 1 redevelopoment, Nowra, NSW.

Question-put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

HMAS *Albatross* Stage 1 redevelopment, Nowra, NSW

On 2 October 1997, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed HMAS *Albatross* Stage 1 redevelopment, Nowra, NSW.

THE REFERENCE

1. The terms of the reference were as follows:

> The Department of Defence proposes to complete a major redevelopment at HMAS *Albatross*. The redevelopment will provide modern, functional facilities that will improve operational reliability and organisational functionality. The project will include facilities to support the introduction into service of the new Seasprite helicopter.
>
> The proposal will provide maintenance and storage hangars for Seasprite and Seahawk helicopters, shelters for fixed-wing fleet and support aircraft, air traffic control facilities, explosive ordnance storage facilities, replacement airfield lighting, photographic centre, a training complex and engineering services and civil works.

2. When referred to the Committee, the estimated out turn cost of the proposed work was $69.3 million.

THE COMMITTEE'S INVESTIGATION

3. The Committee received a written submission from the Department of Defence (Defence) and took evidence from Defence officials at a public hearing held at HMAS *Albatross* on 21 November 1997. The Committee also received a written submission from Shoalhaven City Council and took evidence from a representative of the Council.

4. Written submissions were also received from the following organisations:

- Australian Heritage Commission;
- Environment Australia—Environment Protection Group;
- Commonwealth Fire Board;
- NSW Environment Protection Authority;

- NSW National Parks and Wildlife Service;
- NSW Department of Land and Water Conservation;
- Eastern Gas Pipeline; and
- Families at Work.

5. Prior to the public hearing the Committee inspected HMAS *Albatross*. The following facilities and sites were included in the inspection:

- facilities housing the photographic unit and the site proposed for a new photographic centre;
- 'J' hangar (Asset 105) and the sites proposed for HS 816 Squadron, Anzac Squadron facilities and the fleet support aircraft shelters;
- existing explosive ordnance storage and handling facilities and the sites proposed for new facilities which will encompass;
    - stock storage
    - quarantine storage
    - a preload storehouse
    - receipt and despatch
    - administration
    - vehicle carpark
    - explosive ordnance preparation
- the existing air traffic control tower and the site proposed for a new air traffic control complex; and
- the site proposed for the aviation systems training centre.

6. Whilst at HMAS *Albatross*, the Committee also inspected a representative sample of houses owned or managed by the Defence Housing Authority. These houses are on-base as well as in new housing estates being developed by the private sector in relatively close proximity to the Base.

BACKGROUND

Location

7. HMAS *Albatross* is located eight kilometres south-west of Nowra, NSW, 12 kilometres north-west of Jervis Bay and 176 kilometres south of Sydney. The site was selected in 1938 to fulfil regional civil aviation requirements and to provide an advanced operational base for air defence by the RAAF.

Role of HMAS *Albatross*

8. HMAS *Albatross* is the RAN's major establishment for the provision of operational, training, engineering, administrative, and logistic support for naval air squadrons. It is also the supporting Base for a number of lodger units responsible to the Maritime, Training and Support Commanders.

9. The Base provides aviation-related operational and maintenance support for Fleet units. Other functions at HMAS *Albatross* include the Army Parachute Training School and the commercially operated Naval Aviation Museum.

10. There are 1,020 Naval, 96 Air Force (including RNZAF), 80 Army, 130 Defence civilian personnel and 117 civilian contractors employed at the Base.

History of development

11. Construction of Defence facilities commenced in 1940 and by September 1941 facilities were upgraded to support the war effort. The aerodrome was taken over by the Department of Air in January 1941, followed by the formation of RAAF Station Nowra in May 1942. In October 1944, the Royal Navy Fleet Air Arm commenced flying operations from the Base in support of naval forces deployed to the south-west Pacific. Further substantial upgrading of hangars and runways continued to June 1945.

12. The Fleet Air Arm vacated Nowra in March 1946, returning it to RAAF control. Following a decision to retain the Base for naval aviation purposes, the aerodrome was transferred to the RAN as Naval Air Station Nowra. On 31 August 1948, it was commissioned as HMAS *Albatross*.

Post-war development—involvement by the Committee

13. The development of HMAS *Albatross* has spanned more than three decades involving a number of large scale projects. The Public Works Committee has been involved in this development and since the Second World

War has approved works costing $112.4 million at 1997 prices[1]. This does not include expenditure on small and medium-sized works. Projects examined and reported on by the Committee are described in the following paragraphs.

Avionics workshop

14. In 1967, the Committee examined the proposed construction of a new avionics workshop, estimated to cost $530,000 ($4.2 million at 1997 prices). The proposed workshop was of single storey construction, designed for the servicing of electronic, electrical and instrument systems of naval aircraft. The steel-framed brick building had an area of 17,500 square feet. The Committee's report concluded that there was a need for a modern avionics workshop and that the proposed site, at the junction of Fulmar and Skua Roads, was suitable. *(Committee's Third Report of 1968—Parliamentary Paper 4/1968).*

Replacement of accommodation

15. Between 1968 and 1971, the Committee reported on three references designed to replace substandard accommodation dating from the Second World War. In 1968, the Committee recommended *(Parliamentary Paper 73/1968*) the construction of the following elements at a cost of $1.05 million ($7.9 million at 1997 prices):

- a senior sailors' and WRANS' accommodation block;
- a junior sailors' and WRANS' galley and mess; and
- a victualling store.

16. This was followed in 1969 with a reference involving the construction of sleeping quarters for officers and junior sailors at a cost of $900,000 ($6.5 million at 1997 prices) and comprising two officers' accommodation blocks and a junior sailors' accommodation block (*Committee's Eighteenth Report of 1969—Parliamentary Paper 111/1969).*

17. A further reference, estimated to cost $5.8 million ($41.9 million at 1997 prices), designed to replace old war-time facilities, was examined and reported on in 1969. This involved the following accommodation, messing, recreation and fitness facilities comprising:

- an assembly hall;

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[1] Expressed in average September quarter 1997 prices by using the implicit price deflator for gross non-farm product. [This implicit price deflator is a general measure of price change and is used in the Budget Papers to convert actual prices to real prices.]

- extension of junior sailors' canteen;
- gymnasium and squash court;
- junior WRANS' sleeping quarters;
- senior sailors' mess and galley;
- wardroom;
- officers' sleeping quarters; and
- junior sailors' sleeping quarters.

New hangar complex

18. In 1980, the Committee examined and reported on a proposal to construct a new hangar complex at the Base, estimated to cost $5.6 million ($13.2 million at 1997 prices) comprising the following elements:

- a new hangar;
- a technical and services workshop;
- an administration building; and
- storage facilities and associated engineering services.

19. The complex was designed to replace facilities destroyed by fire in 1976 and was to form the focal point for the four fixed-wing squadrons on the airfield and provide servicing and maintenance facilities for two of them. *(Committee's Eighth Report of 1980—Parliamentary Paper 148/1980).*

First stage of major development

20. The first stage of major development of the establishment was examined and reported on by the Committee in 1986. *(Committee's Twelfth Report of 1986—Parliamentary Paper 308/1986)* This proposal, estimated to cost $19.27 million ($27.9 million at 1997 prices), involved the following elements:

- a new building to house a flight simulator and aircraft weapons system support centre for Seahawk helicopters;
- a maintenance facility for Seahawk helicopters;
- extensions to the avionics workshop building;

- a new supply complex building;
- a new building to house the RAN tactical electronic warfare support section;
- upgrading of fire protection in Hangars 'A', 'B' and 'J'; and
- basic upgrading of services.

Second stage of major development

21. The second stage of major development of the establishment was examined and reported on in 1991 *(Committee's Seventh Report of 1991—Parliamentary Paper 226/1991)*. This project, estimated to cost $9.9 million ($10.8 million at 1997 prices), involved:

- a new building to house the command, operations, communications and administration centres;
- a new building to provide office facilities for technical and administrative staff of two squadrons and the upgrading of associated hangar annexes; and
- upgrading of high voltage reticulation and emergency power supplies.

22. In summary, over the past three decades, the Commonwealth has made substantial investments in facilities at HMAS *Albatross* designed to overcome deficiencies in accommodation and to provide additional accommodation for Defence assets to enable the establishment to undertake its assigned functions.

THE NEED AND WHAT IS PROPOSED

816 Squadron complex

23. HS 816 Squadron provides aircraft, flight crews and operational support to the RAN Fleet including flight support. The Squadron has a complement of 110 personnel and supports 16 Seahawk helicopters, ten of which are generally based at HMAS *Albatross* and the remaining aircraft are embarked on the six Guided Missile Frigates (FFGs).

24. HS 816 Squadron currently shares accommodation with No 2 Squadron, Royal New Zealand Airforce (RNZAF) personnel in Squadron Administration Building South. The Squadron’s ten helicopters and six of the RNZAF’s Skyhawk aircraft are currently housed in 'J' Hangar.

25. Defence advised the Committee that with the two Squadrons located in the one hangar, overcrowding has lead to inefficiencies. The risk of losing a number of these strategically valuable aircraft in a fire is also considered unacceptable. This was confirmed by the Committee during the site inspection. No other suitable hangars are available close to the Squadron administration and maintenance facilities in which to store and maintain the aircraft.

Proposal

26. It is proposed to construct a new facility comprising hangarage, workshops and administration functions between 'J' Hangar and 'G' Hangar. Sufficient hangar space will be provided for four helicopters and the remaining six helicopters will be housed in individual hangarettes. New aprons will connect to existing airfield infrastructure. 'J' Hangar will then be allocated for the sole use of No 2 Squadron (RNZAF).

ANZAC Squadron complex

27. A major capital equipment acquisition project, known as SEA 1411, involves the acquisition of 18 new Seasprite helicopters to form the basis of the ANZAC Squadron. The ANZAC Squadron will consist of 82 RAN personnel and will support the Seasprite helicopters providing aircraft, flight crews and operational support to eight ANZAC frigates.

28. Ten of the Seasprite helicopters will be based at HMAS *Albatross* with the newly formed ANZAC Squadron. New hangars, workshops and administration facilities are required because no suitable facilities are available on the Base.

Proposal

29. A new facility is proposed to support the ANZAC Squadron for the life of type of the Seasprite. The facilities will be almost identical to those of HS 816 Squadron to enable housing of either the Seasprite or the Seahawk. The new facility will be located adjacent to HS 816 Squadron to enable economies to be realised.

Consideration by Committee

30. A number of aspects of the need for and the extent of the proposed works were raised by the Committee with Defence at the public hearing. These were:

- *the need for additional hangars for Seahawks in view of extensive works provided for the aircraft in previously approved references*

  Defence advised that the works carried out previously did not provide additional hangarage. There was some augmentation of 'J' Hangar, but this did not include hangarage.

- *the future of the Seahawk helicopters*

  Defence advised that the proposal provides for two hangars, one for Seasprites and one for Seahawks, located adjacent to each other and the retention of an existing administrative facility. The Seahawks will have the same life of type as the FFG frigates from which they operate. The last FFG is expected to pay-off in 2021 and Defence has embarked on a Seahawk life of type extension project designed to keep the helicopters operational until then.

- *the mix of helicopters*

  Defence advised that for the foreseeable future, the RAN will be using Seasprite and Seahawk helicopters, eventually supporting 14 frigates. From 2004, there will be 66 aircraft operating at HMAS *Albatross*.

- *the adequacy of helicopter support facilities at HMAS* Stirling

  Defence assured the Committee that training and logistic facilities at *Stirling* are sufficient for aircraft normally embarked on ships. The home squadron for the long term maintenance of helicopters and long term career training will be at *Albatross*.

- *cost and extent*

  Defence advised that designs are at the concept stage and will have three functional areas:

  - for the deeper level maintenance of aircraft
  - for support elements involving maintenance and administrative support

- for operational aircraft.

31. Defence also advised that the move away from hangaring assets in once space will be a significant departure from past practice. Under this arrangement, aircraft undergoing deeper levels of maintenance will be hangared in the purpose-designed maintenance hangar where sophisticated fire protection measures will be provided. These will comprise foam suppression systems and two types of integrated fire detection: smoke and flame as well as a ventilation system.

32. Hangarage for operational aircraft will be provided on the basis of one aircraft per hangarette.

33. In summary, Defence believes the cost of the proposed helicopter facilities can be justified as being required for the housing and maintenance of sophisticated aircraft. Defence pointed out that on average there will be 12 Seahawk or Seasprite helicopters in the hangars at any one time. These aircraft cost between $30-$40 million. Having been provided with the cost of the proposed hangars on a confidential basis, the Committee believes this cost to be reasonable, given the value of the assets to be protected and maintained.

Committee's Conclusions

34. Seahawk and Seasprite helicopters represent substantial capital equipment investments for the Defence Force and are planned to remain in service for the next decade or longer.

35. There is a need to reduce overcrowding in the aircraft hangar used for housing Seahawk helicopters and Skyhawk aircraft and to provide a new purpose designed hangar for Seasprite helicopters when they enter service.

36. The proposed new facilities will overcome existing overcrowding, provide substantially improved maintenance and storage facilities for Seahawk helicopters and will enable Seasprite helicopters to be stored and maintained at appropriate standards from the day they enter service.

37. The extent of the proposed works will make substantial contributions towards ensuring that the life of type of both helicopter models is not reduced as a consequence of inadequate storage and maintenance facilities.

Air traffic control complex

38. The Australian Defence Force is responsible for maintaining air traffic control services to meet military and civilian requirements in the Nowra area. The services include control for Fleet activities and exercises, squadron training, and civilian operations at HMAS *Albatross* and in the surrounding RAN-administered air space. This responsibility requires a suitably equipped and sited air traffic control tower and approach control section.

39. The existing air traffic control tower was built in the 1950s and is located on the eastern side of Runway 03/21. The tower is inappropriately positioned on the airfield relative to aircraft movements in the air and on the ground. It protrudes into the aerodrome obstruction clearance surfaces for Runway 03/21 and requires excessive controller movement to observe all runway thresholds and flight paths. In addition, all parking and movement areas cannot be seen from the present site.

40. The tower is too small, poorly orientated and has inadequate amenities as well as a number of occupational health and safety problems. In particular, the working environment is cramped, access and emergency egress is unacceptable, work stations are inappropriately aligned and excessive window reflections occur during night time operations.

41. Defence advised that because of the lack of space and the configuration of the consoles, the cabin is not suitable for the new air traffic control and airspace control communications equipment currently being acquired which will re-equip Defence operated control towers across Australia.

Proposal

42. The proposed new air traffic control complex includes tower and support facilities comprising approach control, airfield coordination and equipment maintenance. General staff amenities and carparking are also proposed.

43. Defence was unable to explain the reason for the initial location of the existing control tower. The best location for a control tower is on the western side of the airfield. Defence advised this location will give air traffic controllers better visibility of aircraft operating areas and approaches to the airfield.

Committee's Conclusions

44. The location of the existing air traffic control tower is considered by Defence to be inappropriate and the cabin will not be suitable to house replacement air traffic control equipment being acquired by Defence.

45. The proposed new facility and its location will overcome existing problems of size and provide improved visibility of aircraft operating areas and approaches to the airfield.

Airfield lighting system

46. Airfield lighting is required to enable aircraft operations to occur during the night and in periods of inclement weather.

47. The airfield lighting system is generally at the end of its life and needs to be replaced. Fixtures and equipment are generally obsolete, both commercially and technically, and beyond economic repair.

Proposal

48. It is proposed to procure and install a new airfield lighting system.

49. The Committee questioned a number of facets of the proposed work including:

- *if there had been any failures of the existing airfield lighting system*

  Defence advised that whilst there had been no failures, the current system is less than totally reliable. For this reason, the lights are left on rather than relying on the pilot activated lighting system. Defence believes that for these reasons the system is inefficient and is more costly to operate than it could be.

- *the cost and extent of the proposed work*

  Defence advised that the scope of the works will include control systems, cabling, replacement of transformers, high intensity and low intensity runway lighting, taxiway and apron edge lighting, as well as approach lights on runway 26/08. Defence advised that the cost is comparable with other airfield lighting replacement projects across Australia. One element of the lighting system, the lights themselves, are imported and their unit cost is significant.

- *utilisation of the airfield lighting*

  Defence advised that it is a requirement of training squadrons to qualify pilots and aircrew for night operations. Night flying operations are undertaken about three nights per week. The lighting system is required because 20-30 per cent of operations occur after dark.

Committee's Conclusion

50. The airfield lighting system has reached the end of its economic life, is inefficient and costly to operate and needs to be replaced with a modern system as proposed.

Fleet support aircraft shelters

51. Under the Enhanced Nowra Agreement between Australia and New Zealand, the RNZAF operates a squadron of Skyhawk aircraft from HMAS *Albatross* in support of RAN Fleet operations.

52. Squadron personnel share office accommodation with HS 816 Squadron personnel in the Squadron Administration Building South. The Squadron's six Skyhawk aircraft are currently housed in 'J' Hangar along with HS 816 Squadron Seahawks.

Proposal

53. Under the Enhanced Nowra Agreement with the RNZAF, the RAN has agreed to provide improved facilities including a flight line shelter for six aircraft. The proposed shelters will be used for the environmental protection of Skyhawk aircraft. An existing flight line building will be reused and some upgrading of existing aprons will be required.

54. The Committee asked Defence about the implications of the non-renewal of the Enhanced Nowra Agreement on the utilisation of the proposed facilities. Defence advised that if the agreement is not extended, the requirement for fleet support will remain. The RAAF is introducing the Hawk lead-in fighter and a number have been earmarked for the fleet support role. This means that if the shelters were not to house RNZAF aircraft, they would house the RAAF's Hawk aircraft.

Committee's Conclusions

55. Improved flight line shelters are required for six Skyhawk aircraft to provide environmental protection.

56. The proposed extent and location of the shelters adjacent to 'J' Hangar will provide the necessary environmental protection and convenient accessibility.

Explosive ordnance storage and handling facilities

57. Explosive ordnance storage facilities are required to accommodate the receipt, storage, issue, inspection and maintenance of explosive ordnance as required by the RAN at HMAS *Albatross*. In addition, HMAS *Albatross* provides some storage and management of explosive ordnance for the Army and the RAAF.

58. The existing 11 explosive storage and handling buildings were constructed in 1955 and do not meet the current storage requirements, nor are they able to cater for the forecast explosive ordnance storage needs of the Base. The licensed capacity of the facilities has been reduced in order to meet current NATO safety standards. This reduction has affected the ability of the Base to support aircraft ordnance operations and training. The existing buildings have occupational health and safety and severe structural problems, including deteriorating asbestos roofs, white ant infestation, water ingress, deteriorating electrical and water reticulation systems and unreliable security alarm systems due to dust, wind and vermin.

Proposal

59. It is proposed to construct two identical explosive ordnance storehouses, a preload storehouse, an explosive ordnance quarantine storage building, an explosive ordnance preparation building, an explosive ordnance repack facility, a vehicle carport/storage shed, an administration building and associated road and services infrastructure.

Committee's Conclusions

60. Buildings used for the storage and handling of explosives are substandard and inadequate and these factors have reduced the ability of HMAS *Albatross* to support operations and training activities.

61. The extent and location of the proposed explosive ordnance storage and handling facilities are needed for the provision of enhanced capabilities and reflect current NATO storage and handling standards.

Aviation systems training centre

62. The training centre at HMAS *Albatross* provides for the training of Naval aviation aircrew, technical, and flight deck personnel.

63. The training centre is staffed by 61 personnel, who are responsible for conducting air engineering technical qualifying courses, aircraft technical courses for all types of RAN helicopters, micro-miniature repair courses, observer training, basic air crew training, flight deck procedural training, and survival equipment training. Approximately 1,500 students are trained at the centre each year.

64. The existing facilities used by the centre are located at seven dispersed locations on the Base and none were purpose-designed. They are now functionally inadequate, inefficient and a maintenance liability. Most of the classrooms are overcrowded, do not have noise attenuation and many do not have airconditioning or access to local area network or Base area network computer facilities. Current training activities are confined to 2,200 square metres of accommodation, whereas a facility of approximately 4,000 square metres is required to support all existing and future functions in accordance with current scales and standards.

Proposal

65. It is proposed to construct a new training complex of approximately 3,600 square metres including aviation, technical and common room facilities. Training support facilities will include administration offices and an instructional printing centre. The proposed facilities will be provided in accordance with scales and standards.

66. The Committee questioned the relatively high cost and scope of the proposed work. Defence advised that the scope of the proposed work is consistent with the functions of the Centre. The Centre will provide the opportunity to aggregate a number of training activities which are currently dispersed around the Base. The auditorium will be used to give general presentations to personnel, staff meetings, presentations to personnel by external authorities and seminars. It will also be used as the Base cinema and will be available for use by external authorities.

67. The Committee also asked Defence if consideration had been given to devolving training courses to a TAFE in Nowra, rather than providing in-house courses on Base. Defence advised that generic training of maintenance personnel, for basic qualifications, is undertaken at the Riverina TAFE at RAAF Base Wagga. The RAN then trains its personnel further in specific equipment training. This type of training is required to be undertaken in-house because

TAFEs do not have training personnel available with knowledge of specific equipment. Defence therefore does not believe it would be possible for equipment-specific training to be outsourced to TAFEs either at Nowra or Wagga. Defence is, nevertheless, continuing to consider what should be devolved to commercial support in terms of core and non-core functions. The training functions undertaken at *Albatross* are considered by Defence to be core functions.

Committee's Conclusions

68. Facilities used for the training of aviation aircrew, technical and flight deck personnel are dispersed, functionally inadequate and have insufficient space to support modern training techniques.

69. There will be a continuing requirement for Defence to provide in-house equipment specific training.

70. The extent of the proposed aviation systems training centre fulfils the in-house training requirement of personnel involved in the operation and maintenance of high cost and sophisticated ship-borne helicopters.

Photographic centre

71. The photographic centre provides photographic support to the RAN Tactical Electronic Warfare Support Section and other lodger units at HMAS *Albatross* as well as HMAS *Creswell*, Jervis Bay Range Facility and Beecroft Range.

72. The existing photographic centre, constructed during the Second World War, is poorly located, substandard, and is now a maintenance liability.

Proposal

73. A new photographic centre of approximately 450 square metres, consisting of black and white and colour printing facilities, is proposed to be located adjacent to the RAN Tactical Electronic Warfare Support Section building.

74. The Committee asked Defence if the work undertaken by the Centre could be outsourced to the private sector. The location of the photographic unit on the Base is due to the location of aviation maintenance activities and some intelligence-oriented activities. Defence does not believe that the work could be outsourced. Much of the work undertaken involves defect investigation and engineering assessments of equipment which has faults or has been damaged as well as intelligence-related photography. The skills required of photographic

section personnel are significantly greater than those of commercial photographers. Photography is part of the support of operational activities.

Committee's Conclusions

75. The need for new photographic facilities stems from a continued requirement for a professional in-house photographic capability and the poor state of existing facilities.

76. The extent of the proposed photographic centre, and its location, will provide an enhanced photographic capability and is convenient to a major client.

DESIGN

Master plan

77. The master plan was revised as part of the proposed development and the siting of facilities will be in accordance with the 1997 master plan.

Standards

78. Where appropriate, the design of new facilities will conform with the relevant sections of:

- the Building Code of Australia;
- relevant current Australian Standards and Codes;
- the Defence Fire Protection Engineering Manual (FACMAN2);
- the Defence Security Manual (SECMAN);
- Environmental Protection Act and Regulations;
- Workplace Health and Safety Act and Regulations; and
- Commonwealth Office Accommodation Guidelines.

Principles

79. The principles adopted for the design of the proposed facilities incorporate the following:

- the provision of austere, cost effective and utilitarian facilities of energy efficient design suitable for the rigours of the climate and

marine environment, and of a style compatible with surrounding facilities;

- 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;
- 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

80. The materials proposed for the new and refurbished buildings will be selected for their economy, function, acoustic properties, low maintenance and compatibility with other HMAS *Albatross* facilities. Materials for the new training centre and for the office, administration and maintenance components of other buildings, will generally be face brick, concrete floors, steel tray roofs, acoustic tile ceilings and aluminium window frames. Hangar buildings will be steel framed and clad with masonry walls to achieve fire rating requirements.

81. The explosive ordnance storage facilities will be purpose designed concrete arch, earth covered buildings. The warehouse and administrative buildings will comprise brick walls, concrete floors and steel roofs or a proprietary steel system. External cladding for the air traffic control facility will be determined following detailed design.

Structure

82. Each building structure will be designed to provide a functional, low maintenance, economical solution related to each particular site. The hangars, aircraft shelters and the air traffic control tower will be steel framed buildings. Maintenance and workshop components will be constructed of masonry walls with concrete floors. The single storey aviation systems training centre and office building components of other buildings will have brick walls with either steel or timber roof trusses. Internal walls will be lightweight partitions supported on concrete floors. The explosive ordnance facilities will comprise a mixture of brick, concrete and steel structures.

External works

83. The proposed building sites are generally flat. All excavated material will be retained on site. No trees will be removed. Some modifications and extensions to the existing paved road network will be required, especially for the new air traffic control facility, the squadron complex, the explosive ordnance facility and the new aviation systems training centre building. Sealed and drained carparking will be provided adjacent to the air traffic control complex**.**

Acoustics

84. High levels of noise from aircraft sources requires particular attention to be paid to acoustic design requirements. All buildings 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

85. The additional facilities proposed for the Stage 1 works will have little impact on the landscaping of the Base. Where possible, each of the new building sites will be graded, grassed and planted with trees and shrubs to enhance the environment.

Occupational health and safety

86. 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 will be removed as part of this project in accordance with prescribed practices.

Provisions for people with disabilities

87. Access and toilets suitable for disabled personnel will be provided on the ground floor of the new training building.

SYSTEMS

Fire protection

88. The principles outlined below will be adopted in the design of the fire protection systems:

- all construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Code of Australia (BCA), the Defence Manual of Fire Protection Engineering (FACMAN2) and all other applicable Codes and Standards. FACMAN2 details Defence fire protection policy for asset and building function protection. The levels of fire protection specified in FACMAN2 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, FACMAN2, 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. Agreed departures will require written approval at Director General level; 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.

Commonwealth Fire Board

89. A written submission from the Commonwealth Fire Board (CFB) made the following points:

- some elements of design and construction will almost certainly not be adequately catered for by the "deemed to satisfy" provisions of the BCA;

- civil fire fighting authorities should be consulted during the design, construction and approval phases of the project;

- egress and access for the disabled should be addressed to satisfy the intentions of the *Disability Discrimination Act 1992*; and

- water supply for fire fighting should be adequate.

90. In response, Defence advised the Committee that:

- Defence policy requires any performance-based solutions to be assessed and documented in accordance with Fire Engineering Guidelines;

- the on-base fire protection service will provide the fire fighting response. For a major fire incident Defence will seek assistance from civilian fire fighting services. For this reason, the local fire brigade will be consulted to ensure that its operational requirements can be met;

- the egress and access requirement for the disabled will be addressed in the design of the project; and

- water supplies for fire fighting will be addressed as part of the project and will include the requirements for the fire suppression systems.

Electrical

91. Electric power will be provided from the established in-ground distribution network. Seven new substations will be required to service the proposed works. Standard 240 and 415 volt power outlets will be provided to suit specific requirements.

92. General and supplementary lighting will be provided in accordance with AS 1680. Switching patterns and dimmers will be arranged to utilise available daylight. External lighting will be provided at all entrances and exits in conformity with SECMAN 7 and relevant Australian Standards. Natural light will be introduced from suitably installed and positioned windows and skylights.

Energy management and lighting

93. The design of all power supply, electrical and mechanical equipment will include an assessment of energy use, applying life cycle costing techniques and power demand analysis. Facilities will incorporate building management

systems, metering and other provisions to measure and monitor energy use and to allow regular energy audits.

94. To reduce energy consumption, lighting is to be controlled, where possible, by photoelectric switches in conjunction with time-switch schedules. This is to include provision of personnel sensor controlled lighting to amenities and other intermittently occupied areas. Lamps are to be high efficiency fluorescent, compact fluorescent or discharge type. External lighting is to be designed to minimise glare and colour distortion. Solar hot water systems are to be used where practical and cost effective. Consideration will be given to the control and/or monitoring of building services from the existing energy management system.

Security

95. Security and fire detection will be incorporated into the Base security and fire alarm systems and monitored at the main security control panel. Fire suppression will be provided in the new maintenance hangars.

96. The Committee questioned Defence about the record of security on the Base. Defence advised that master planning has addressed the location of key facilities, especially the need to separate operational facilities from domestic and support functions.

97. In terms of overall security, the Base underwent a security review in 1997 and achieved a highly satisfactory assessment. This showed that the level of security is appropriate to requirements. Defence believes everything is being done in the use of the Naval coxswain force and civilian security personnel to maintain security in a relatively open environment.

Communications

98. The existing Base communication system has sufficient capacity to service the requirements of this project. The data communications backbone is being upgraded as a separate project under the Defence Corporate Information Management Organisation.

Mechanical services

99. Natural ventilation will be used in areas where it is consistent with thermal comfort and equipment requirements. Airconditioning and mechanical ventilation will be provided in accordance with AS 1668, generally with a design life of 15 years. Airconditioning will be used in classrooms, office and administration areas and the air traffic control complex. Mechanical extraction systems will be used for workshops. Compressed air supplies will be required in workshops, hangars and hangarettes. All amenity areas will be mechanically ventilated. Overhead gantry cranes will be provided to all hangars and to two hangarettes in each complex.

100. To minimise the corrosion of aircraft elements, de-humidified air will be pumped from a central mechanical plant, directly into helicopters housed within hangarettes. The results of studies carried out on the Blackhawk helicopters will be used to determine appropriate air quality requirements.

Gas

101. No additional gas infrastructure will be required to service the redevelopment works. Gas fired boilers are proposed for hot water heating and for heating to all workshops and hangars.

Hydraulic services

102. All designs will comply with the relevant codes.

Sewage

103. HMAS *Albatross* has its own sewage treatment plant which has sufficient capacity to service the requirements of the project. Sewage from the buildings will be discharged into the existing reticulation system to be treated on site and used for irrigation.

Stormwater

104. The existing stormwater system consists of underground stormwater pipes and open unlined drains. The existing mains system has sufficient capacity to service the requirements of this project. Stormwater will be collected from the building roofs and surrounding pavement areas and discharged to the existing drainage system. Adequate spill containment and environmental management systems, such as oil/fuel interceptors, will be incorporated into the drainage system for the maintenance facilities.

Water

105. The existing water mains are of sufficient capacity to meet the water requirements for this project. Hot and cold water will be reticulated throughout the facilities to showers, basins and sinks. Cold water will be provided to all cisterns, refrigerated drinking fountains, fire hose reels, amenity area hose taps and external hose taps. Water efficient shower roses will be installed in all shower cubicles. Electric instant boiling water units will be provided in all tea making facilities.

MAINTENANCE POLICY

106. The Committee questioned Defence about the extent to which investments in new facilities will lead to reductions in maintenance costs. Defence was unable to be specific in response, but pointed to organisational changes arising from the Defence Efficiency Review as stimulating reductions in inefficient maintenance. The Defence Estate (Defence facilities) is now centrally controlled. Previously, capital works and maintenance were separately administered. Central control of capital works and maintenance will provide Defence facilities planners and managers with enhanced control over through-life costing by balancing maintenance costs against capital investments. Defence is confident that as a result of the Stage 1 works, there will be a significant reduction in inefficient maintenance requirements on the Base.

BENEFITS

107. According to Defence, the proposed Stage 1 redevelopment works will provide the following benefits:

- provision of an appropriate standard of accommodation that meets occupational health and safety and BCA requirements;
- improved operational efficiency by decreasing the amount of time spent by personnel travelling between facilities;
- sufficient and appropriate aircraft hangarage for new aircraft capabilities;
- fewer buildings to operate and maintain;
- fire protection of aircraft assets to current standards;
- significantly improved day time and night time aircraft operational safety standards;
- suitable explosive ordnance storage and handling facilities; and
- compliance with the Enhanced Nowra Agreement.

SHOALHAVEN SHIRE

Support for project

108. Shoalhaven Shire Council indicated strong support for the proposed development. The Shire is experiencing rapid population growth with a population of about 80,000, including about 3,000 Defence personnel and their dependents. Defence is one of the largest wage and salary sectors in the Shire.

109. The development of HMAS *Albatross* and a number of other projects under consideration or development are regarded as keys to future economic growth in the area. In this context, Council pointed to an initiative involving Defence and the State Government and the suppliers of the Seasprite helicopters for the establishment of a technology park at the western end of the Base. It is the Council's aim that the technology park will entice other commercial support contractors to the area. The Council is confident that approvals for the park will be given by the end of the first quarter of 1998, with construction commencing before the end of the second quarter. Infrastructure will require an investment of about $3 million by the Council and the State Government.

110. Defence advised the Committee that the proposed development will provide significant employment opportunities in the local construction industry over the life of the project. The peak number of construction employees on site is estimated to be 200. Off-site job opportunities will also be created in the local community and the region.

Aircraft noise and zoning around the Base

111. The Committee questioned Council officials about the impact of aircraft noise and planning measures which have been implemented to protect the Base from land uses incompatible with noise generated by flying operations.

112. A Council official advised the Committee in relation to aircraft noise, that there is general acknowledgment in the wider community that the Shire contains a military establishment which provides a positive contribution to the economy. Council is faced with the dilemma, not unique to the Shoalhaven area, of supporting development within planning rules and at the same time ensuring the integrity of the Base as a major economic force. Land around the Base has accordingly been zoned for low density development. The industrial area and a major sporting recreation area are situated between the Base and Nowra. Australian Noise Exposure contours have also been incorporated in planning documents. This means that people planning to build or sell houses or property are advised that restrictions apply. In certain noise sensitive areas there are requirements that remedial works or noise attenuation measures be incorporated in buildings. In other specified areas, residences are not permitted.

Employment opportunities

113. The Committee also took the opportunity to raise with Council officials the question of employment opportunities in the Shire for spouses of Defence personnel. Council advised the Committee that this question is being addressed continually for the community in general. The problem, from the Council's perspective, has been one of growth, with 700 people joining the labour force annually. Whilst more than 500 jobs are created annually, the Council acknowledged that as more jobs are created there is an influx of people into the Shire.

DEFENCE HOUSING

114. The Committee's inspection of HMAS *Albatross* included inspections of on-base as well as off-base housing and the Defence Housing Authority (DHA) provided details of its operations in serving the requirements of HMAS *Albatross* and HMAS *Creswell*. There are currently 113 on-base married quarters at HMAS *Albatross.* Of these, 52 are in areas subjected to high noise levels from aircraft and will be replaced with houses in Nowra. During the current financial year, DHA plans to spend $11.3 million in obtaining 112 houses by spot purchase, new construction, land purchase and new leases.

115. At the public hearing, the Committee questioned Council officials about the extent of collaboration with DHA. The Council advised the Committee that there has been considerable liaison with DHA to encourage Defence personnel to live in local communities. Private housing developers, examining the possibilities of entering into contracts with DHA, have liaised with Council. By way of example, a medium density development at Bomaderry involved the developer and the Council working together in order to integrate the development into the local community.

116. The Committee also questioned the Council about the relocation of on-base houses which will be removed due to their location in high noise areas. Council's policy is that relocated dwellings are not accepted into urban areas, although they may be permitted in rural areas.

CONSULTATION

117. Defence advised that the following authorities were consulted or advised about the project during the planning stages:

- NSW National Parks and Wildlife Service;
- NSW Department of Land and Water Conservation;
- NSW Department of Urban Affairs and Planning;
- Shoalhaven City Council;
- Integral Energy;
- Telstra; and
- the Eastern Gas Line project.

ENVIRONMENT AND HERITAGE

Land acquisition

118. Land to the south west of the Base has been purchased for operational reasons and as a buffer zone. The land will allow for future master planned extensions of the main instrumented runway, containment of the explosive ordnance safeguarding arcs within Commonwealth boundaries and provide a buffer zone against future urban encroachment. The master plan also identifies this zone for future use as a parachute drop zone.

Impact assessments by Defence

119. Defence advised the Committee that the environmental assessment, undertaken as part of master planning, indicated that there is no significant environmental impact expected as a result of the Stage 1 works. An Environmental Certificate of Compliance for the project was issued by Defence.

120. A number of matters, relating to possible environmental impacts from the proposal and from the Base in general were raised in submissions to the Committee by Commonwealth and State agencies and these, and the Defence responses, are summarised in the following paragraphs.

Environment Australia—Environment Protection Group

121. The Environment Protection Group (EPG) advised the Committee that, based on the submission to the Committee from Defence, the Stage 1 works are unlikely to affect the environment to a significant extent.

122. The EPG raised the possibility that some of the airfield lighting electrical equipment may contain Polychlorinated Biphenyls (PCBs) and recommended that an audit be undertaken to establish if any exist on the site. If PCBs are found, they should be labelled and provision be made for their decommissioning and safe disposal. Any disposal should be in accordance with the PCB management plan which is being implemented by the Commonwealth and other Australian and New Zealand Environment and Conservation Council jurisdictions.

123. Defence advised that an audit will be conducted as part of the design development of the new system to ensure that appropriate environmental records are maintained for the disposal of PCBs.

124. The EPG also suggested that any toxic photographic chemical waste should be collected by a certified contractor and any silver, present in photographic waste, should be recycled. Defence confirmed that toxic photographic chemicals and silver recycling are currently managed by certified contractors.

125. The EPG (and the NSW National Parks and Wildlife Service) drew attention to possible environmental impacts stemming from the construction of a parachute drop zone. This, the EPG believes, could involve the clearing of remnant vegetation in an area which has been proposed as a nature reserve by the NSW National Parks and Wildlife Service. The area involved could possibly be the habitat of three flora and two fauna species listed under the *Endangered Species Act 1992*. Accordingly, the EPG advised that the area proposed for the parachute drop zone will require a survey of flora and fauna to confirm or disprove the existence of endangered species and any development should be referred to the EPG for assessment under the *Environment Protection (Impact of Proposals) Act 1974*.

126. Defence advised, in response, that the proposed parachute drop zone is at present in the planning stages. The zone, comprising an area of 1.4 kilometres by 550 metres which requires limited clearance of vegetation, is intended to remain completely within land under acquisition by Defence. Defence also assured the Committee that the environmental impact of future development will be assessed in accordance with the provisions of the Administrative Procedures under the Act.

NSW National Parks and Wildlife Service

127. The National Parks and Wildlife Service (the Service), whilst advising that the Stage 1 works are unlikely to have significant adverse effects of natural or Aboriginal heritage significance, expressed concern that possible future stages could have major impacts. The Service suggested that later stages should be the subject of thorough and public environmental impact assessment. The Defence response to this suggestion was similar to the EPG response.

128. The Service also raised the question of the impact of additional noise from low flying aircraft in the Ettrema and Budawang wilderness areas. Defence advised, in response, that apart from the integration of a new helicopter squadron facility, the extent of infrastructure on the Base will increase only marginally. Defence believes that the Stage 1 developments are independent of future proposed developments. In response to criticisms of the impact of aircraft noise, Defence advised that at present low flying operations occur for Skyhawk aircraft at the rate of one hour per month and for helicopters for up to five hours per month. Whenever possible, there are limitations to flying on weekends, public and school holidays.

Committee's Recommendation

129. The Committee believes low-flying aircraft should not intrude into airspace in designated wilderness areas unless essential for operational or training purposes.

NSW Environment Protection Authority

130. The NSW Environment Protection Authority (EPA) suggested that erosion and sediment control measures be installed during construction in accordance with State guidelines. These measures should be adequately monitored, managed and maintained during construction.

131. Whilst confirming that erosion and sediment control measures will be implemented, Defence were imprecise about their design, monitoring and management. The Committee believes State guidelines should be followed.

132. The EPA also raised the question of increased aircraft noise on the surrounding community from additional helicopters operating from the Base. Defence advised that noise forecasts for 2006, which include the new Seasprite helicopter squadron, have been prepared and that Shoalhaven Shire Council was consulted.

Heritage

133. Defence advised that there are no known Aboriginal sites or sites of heritage significance within the present boundaries of the Base or the land proposed for explosive ordnance storage and handling.

134. The Australian Heritage Commission confirmed that HMAS *Albatross* is not listed on the Register of the National Estate, but suggested that a heritage survey of the Base be undertaken to determine if the site has any national estate values. This suggestion was noted by Defence.

Impact from increased personnel

135. Defence believes that project, when completed, will have a limited impact on the local community. Although more personnel will train and operate from HMAS *Albatross* most of their immediate needs will be provided on-Base by the RAN. There will be very little change to traffic patterns.

COST AND PROGRAM

Cost

136. The out turn cost of this project is $69.3 million which includes construction costs, professional fees and charges, furniture and fittings, construction contingency and a predicted indexation adjustment over the construction period.

Program

137. Subject to Parliamentary approval, the managing contractor will be engaged and tenders for construction are planned to be called progressively from March 1998 with construction to be completed by July 2000.

138. Priority will be given to construction of the air traffic control tower to ensure completion by October 1998 to enable installation of the air traffic control equipment under a complementary major equipment project—Projects AIR 5186/5397.

Future works

139. The Stage 2 works are currently being developed and Government approval will be sought in 1998.

Committee's Recommendation

140. The Committee recommends the proposed HMAS Albatross Stage 1 redevelopment at an out turn cost of $69.3 million.

CONCLUSIONS AND RECOMMENDATIONS

141. The Committee's conclusions and recommendations and the paragraphs in which they appear in the report are set out below:

1. **Seahawk and Seasprite helicopters represent substantial capital equipment investments for the Defence Force and are planned to remain in service for the next decade or longer. (Paragraph 34)**

2. **There is a need to reduce overcrowding in the aircraft hangar used for housing Seahawk helicopters and Skyhawk aircraft and to provide a new purpose designed hangar for Seasprite helicopters when they enter service. (Paragraph 35)**

3. **The proposed new facilities will overcome existing overcrowding, provide substantially improved maintenance and storage facilities for Seahawk helicopters and will enable Seasprite helicopters to be stored and maintained at appropriate standards from the day they enter service. (Paragraph 36)**

4. **The extent of the proposed works will make substantial contributions towards ensuring that the life of type of both helicopter models is not reduced as a consequence of inadequate storage and maintenance facilities. (Paragraph 37)**

5. **The location of the existing air traffic control tower is considered by Defence to be inappropriate and the cabin will not be suitable to house replacement air traffic control equipment being acquired by Defence. (Paragraph 44)**

6. **The proposed new facility and its location will overcome existing problems of size and provide improved visibility of aircraft operating areas and approaches to the airfield. (Paragraph 45)**

7. **The airfield lighting system has reached the end of its economic life, is inefficient and costly to operate and needs to be replaced with a modern system as proposed. (Paragraph 50)**

8. **Improved flight line shelters are required for six Skyhawk aircraft to provide environmental protection. (Paragraph 55)**

9. **The proposed extent and location of the shelters adjacent to 'J' Hangar will provide the necessary environmental protection and convenient accessibility. (Paragraph 56)**

10. Buildings used for the storage and handling of explosives are substandard and inadequate and these factors have reduced the ability of HMAS *Albatross* to support operations and training activities. (Paragraph 60)

11. The extent and location of the proposed explosive ordnance storage and handling facilities are needed for the provision of enhanced capabilities and reflect current NATO storage and handling standards. (Paragraph 61)

12. Facilities used for the training of aviation aircrew, technical and flight deck personnel are dispersed, functionally inadequate and have insufficient space to support modern training techniques. (Paragraph 68)

13. There will be a continuing requirement for Defence to provide in-house equipment specific training. (Paragraph 69)

14. The extent of the proposed aviation systems training centre fulfils the in-house training requirement of personnel involved in the operation and maintenance of high cost and sophisticated ship-borne helicopters. (Paragraph 70)

15. The need for new photographic facilities stems from a continued requirement for a professional in-house photographic capability and the poor state of existing facilities. (Paragraph 75)

16. The extent of the proposed photographic centre, and its location, will provide an enhanced photographic capability and is convenient to a major client. (Paragraph 76)

17. The Committee believes low-flying aircraft should not intrude into airspace in designated wilderness areas unless essential for operational or training purposes. (Paragraph 129)

18. The Committee recommends the proposed HMAS Albatross Stage 1 redevelopment at an out turn cost of $69.3 million. (Paragraph 140)

Wilson Tuckey MP
Chairman

5 March 1998

APPENDIX A

WITNESSES

COLE, Captain Geoffrey Raymond, Commanding Officer HMAS *Albatross*, HMAS *Albatross*, Nowra, NSW

KABLE, Commodore Garvon Paul, Director General, Maritime Development, Defence Headquarters, Department of Defence, Russell Offices, Canberra, ACT

KENNEDY, Air Commodore James Frederick George, Director General Project Delivery, Defence Estate Organisation, Department of Defence, Campbell Offices, Canberra, ACT

NEWMAN, Wing Commander John James, Project Director, Department of Defence, Campbell Park Offices, Canberra, ACT

PULLEN, Mr Greg, Economic Development Manager, Shoalhaven City Council, Bridge Road, Nowra, NSW

APPENDIX B

PROJECT PLANS

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Base plans

Squadron facilities

Air traffic control complex

Explosive ordnance facilities

Aviation systems training and photographic centre