Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

DEVELOPMENT OF THE EASTERN REGION OPERATIONS CENTRE AT RAAF BASE WILLIAMTOWN, NSW

(Fourth Report of 1998)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1998

The Parliament of the Commonwealth of Australia

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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
Senior Research Officer	Ian McKinnon

EXTRACT FROM THE
VOTES AND PROCEEDINGS
OF THE HOUSE OF REPRESENTATIVES

No. 147 dated 24 March 1998

PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE—REFERENCE OF WORKS—DEVELOPMENT OF THE EASTERN REGION OPERATIONS CENTRE AT RAAF BASE WILLIAMTOWN, NSW

Mr Fahey (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 works be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Development of the Eastern Region Operations Centre at RAAF Base Williamtown, NSW.

Question-put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Development of the Eastern Region Operations Centre at RAAF Base Williamtown, NSW

On 24 March 1998, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed development of the Eastern Region Operations Centre at RAAF Base Williamtown, NSW.

THE REFERENCE

1. The terms of reference were as follows:

> *The Department of Defence proposes to construct new facilities in the operational zone of the base. This will enable the No 41 Wing Headquarters and Number 3 Control and Reporting Unit to be collocated and integrated, leading to operational efficiencies, and will replace existing unsatisfactory accommodation occupied by No 3 Control and Reporting Unit at Duckhole Hill near the base.*
>
> *The proposal will provide administrative, operational, technical and training accommodation for the two units, which will have a combined strength of 170 personnel.*

2. When referred to the Committee, the estimated out-turn cost of the proposal was $18 million.

THE COMMITTEE'S INVESTIGATION

3. The Committee received a written submission from the Department of Defence (Defence) and took evidence from Defence officials and a private citizen (Mr. William Redriff) at a public hearing held at RAAF Base Williamtown on 18 May 1998.

4. Written submissions were also received from:

- Mr Bob Baldwin MP (Federal Member for Paterson);
- Environment Australia—Environment Protection Group;
- Australian Heritage Commission;
- Hunter Water;

- Port Stephens Council;
- Commonwealth Fire Board;
- Newcastle Airport Limited; and
- Newcastle Regional Chamber of Commerce.

5. Prior to the public hearing the Committee undertook an extensive inspection of RAAF Base Williamtown including the following units, equipment and facilities at Duckhole Hill, two kilometres north of the Base:

- No 3 Control and Reporting Unit (No 3 CRU) radar head;
- the existing No 3 CRU facilities; and
- the site of the proposed new facility.

6. The Committee also inspected a number of Defence Housing Authority married quarters, which house personnel based at RAAF Base Williamtown, at Bagnalls Beach and Raymond Terrace.

BACKGROUND

Location

7. RAAF Base Williamtown is located about 20 kilometres north of Newcastle and about 16 kilometres by road to the east of Raymond Terrace. Medowie, nine kilometers north of the Base, is a developing town, and many married quarters associated with the Base are located there.

8. Medowie Road runs along the eastern perimeter of the Base and is linked to the Nelson Bay and Cabbage Tree Roads which provide the major access to the Base. The Base occupies an area of approximately 800 hectares, not including its associated properties.

Role of RAAF Base Williamtown

9. RAAF Base Williamtown is the home of the Tactical Fighter Group and supporting elements, as well as a variety of other RAAF units. The Base is a major Defence facility and is manned by about 2,300 Service and civilian personnel.

10. The units currently based at Williamtown are as follows:

- Headquarters—Tactical Fighter Group;
- No 81 Wing incorporating:
  - Headquarters—No 81 Wing,
  - No 3 Squadron,
  - No 76 Squadron,
  - No 77 Squadron,
- No 2 Operational Conversion Unit;
- No 41 Wing, incorporating:
  - Headquarters—No 41 Wing,
  - No 3 CRU,
  - Air Defence Ground Environment Software Development Unit,
- No 481 Wing, incorporating:
  - Headquarters—No 481 Wing,
  - Aircraft Maintenance Squadron Williamtown,
  - Aircraft Equipment Maintenance Squadron Williamtown,
  - No 302 Air Base Wing,
  - No 26 (City of Newcastle) Squadron,
- Australian Defence Force Warfare Centre;
- Tactical Fighter Logistics Management Squadron;
- Ground Telecommunications Equipment; and
- Logistics Management Squadron.

Development of the Base

11. RAAF Base Williamtown was established during the Second World War as a base for fighter aircraft. Operations commenced on 15 February 1941. After the Second World War, Williamtown became the home base for the RAAF's Tactical Fighter Force in Australia.

Post-war development

12. In the post-war years, the fighter squadrons were gradually re-equipped and by 1960 were operating the Australian built Avon Sabre aircraft. Some Base improvements took place in that period to replace temporary wooden buildings.

Works for Mirage fighters

13. When the RAAF introduced Mirage fighter aircraft in the mid-1960s, some major works were undertaken on the Base but many Second World War structures, including aircraft hangars, continued to be used.

No 1 CRU

14. In the mid-1960s, No 1 CRU, re-equipped with *Hubcap* radar, was moved from Brookvale, NSW, to Williamtown, and re-formed as No 3 CRU. Facilities to enable No 3 CRU to undertake both its operational and training roles were developed progressively at Duckhole Hill. Facilities provided were based on the limited function of providing air defence control and monitoring in the Sydney-Newcastle area.

Further major development—involvement by the Committee

15. In October 1981, the Government announced the decision to acquire F/A-18 aircraft to replace the RAAF's Mirage fighter aircraft. Major redevelopment of the Base was needed to accommodate F/A-18 aircraft and to provide for technical and other support facilities for their operation.

16. The works were examined and reported on by the Committee in 1983 *(Committee's Third Report of 1983—Parliamentary Paper 230/1983).* The F/A-18 facilities were essentially completed by 1988, although their scope was changed to a limited degree:

- the new Parachute Training School for the Army was constructed at Nowra *(Committee's Twelfth Report of 1983—Parliamentary Paper 376/1983)*;

- the extent of new married quarters and single accommodation was reduced; and

- the Integrated Avionics System Support Facility was provided by converting the redundant Mirage aircraft radar support building.

17. The new engine run-up facility, built as part of the development works, was substantially modified following its initial use. This required the provision of augmentor tubes at the rear of the aircraft and engine run-up positions. The works were completed within the allocated funds.

Medium works at Williamtown

18. Since the completion of the works for the F/A-18 aircraft, additional facilities constructed on the Base were:

- Apron Aircraft Shelters;

- extension to the Avionics Workshop;

- No 76 Squadron Headquarters Building;

- extensions to Australian Defence Force Warfare Centre;

- facilities to accommodate the Tactical Fighter Logistics Management Squadron; and

- facilities to accommodate the Ground Technical Equipment Management Squadron.

Reorganisation

19. The Force Structure Review, which occurred in the early 1990s, resulted in a number of organisational changes at Williamtown:

- Base Squadron Williamtown became No 302 Air Base Wing;

- several logistics functions associated with weapons systems management were transferred to the Base from the Melbourne located RAAF Logistics Command. The logistics units formed at Williamtown were the Tactical Fighter Logistics Management Squadron, and the Ground Technical Equipment Management Squadron; and

- additional supply responsibilities were placed on No 302 Air Base Wing.

Civil aviation use of the airfield

20. Williamtown has been used as a civil airport on a regular basis since the early post-war period. The civil apron and terminal area are located near the southern end of the runway. In 1973, the Government approved construction of a new terminal building and the apron pavements were upgraded to cater for expanded civil aviation services. In 1992, a 30-year lease of civil aviation facilities was granted to the Newcastle City and Port Stephens Councils. The Councils formed a corporation in 1993, for the development and management of civil aviation facilities.

21. Boundaries of the civil area have been rationalised to clearly delineate the 23-hectare lease area. The runways, aircraft navigation aids, rescue and fire fighting services remain under the control of the RAAF. Siting approvals for any new civil aviation facilities require RAAF concurrence.

22. British Aerospace has announced that it will assemble the Hawk 100 aircraft at Williamtown. It is understood that this will require the construction of an assembly hangar and associated workshops in the civil aviation area

Defence Policy

23. The two previous Defence White Papers outline the role of the Tactical Fighter Force in providing air defence, strike and interdiction capabilities.

24. An associated capability, under the control of the Tactical Fighter Force, is the system for national air defence and airspace control. This capability encompasses information from ground based sensors. In future it will include the control and operation of Airborne Early Warning and Control (AEWC) aircraft when they are obtained.

Defence Efficiency Review

25. The recent Defence Efficiency Review confirmed the retention of Williamtown as the home base for the Tactical Fighter Group. No 3 CRU will also remain at Williamtown to provide air surveillance and operational training in conjunction with fighter squadrons.

26. The RAAF Logistics Command, together with Army and Navy Support Commands, has been subsumed into a combined Service command known as Support Command, Australia. The two Logistics Management Squadrons on Williamtown are now subordinate units of Support Command, Australia.

27. Other organisational changes, mainly affecting command arrangements for No 302 Air Base Wing functions, arose from the Defence Efficiency Review. These include the regional management of Defence facilities by the reorganised Defence Estate Organisation.

28. The Review noted that Defence has yet to fully examine further civilianisation or outsourcing of support functions.

THE NEED

Organisation

29. Command of the Tactical Fighter Force is exercised by the Commander of the Tactical Fighter Group based at Williamtown. Subordinate formations include Nos 81, 41 and 481 Wings. These wings also control units based at other centres. No 81 Wing controls No 75 Squadron at RAAF Base Tindal, and No 41 Wing controls all CRUs. No 41 Wing is responsible for Air Defence System and has recently been expanded to include command of Air Traffic Control functions at all RAAF establishments.

No 3 CRU—functions

30. At present No 3 CRU responsibilities include:

- tactical airspace control in Eastern Australia; and
- RAAF-wide training of air defence controllers and air defence technical personnel.

31. Defence plans to transfer the training function from No 3 CRU to a new unit, the Air Defence System Training Centre. Defence advised the Committee that strong links will, nevertheless, remain between No 3 CRU and the Air Defence System Training Centre.

32. No 3 CRU now has wide area surveillance and control responsibilities. Recently, this function was expanded to include a backup role for surveillance and control operations conducted in Northern Australia.

33. The Air Defence Ground Environment Software Development Unit has responsibilities for software development and software verification, validation and configuration control for air defence systems. The verification functions of the Air Defence Ground Equipment Software Development Unit are to be largely subsumed into No 41 Wing, with other functions being transferred to the Williamtown-based Ground Technical Equipment Logistics Management Squadron, or let to contract. The unit will cease to exist as an entity.

Future use of RAAF Base Williamtown

34. The AEWC aircraft, to be obtained for the RAAF, are proposed to be based at Williamtown. The AEWC Squadron will have a relationship with the Air Defence System Training Centre with respect to controller training, and with No 41 Wing with respect to management of controllers.

No 3 CRU at Duckhole Hill

35. The existing No 3 CRU facility was established on Duckhole Hill in 1967 to house *Hubcap* radar equipment and to provide working accommodation for the unit's operations and support personnel. The installation was expanded in 1977 with the construction of a substantial new operations and training building.

36. In 1981, the radar equipment was again upgraded and rehoused in the operations building. Since then, there has been a gradual expansion of personnel including those undergoing training. An expansion of the unit's activities, including management of data links and distributed communications networks, has been driven by advances in technology.

Accommodation needs

37. Over the years, increased accommodation requirements were met by re-configuration of existing facilities and the installation of several temporary and transportable facilities. These measures included the conversion of some crew rest facilities, amenities, kitchen and messing areas to classrooms and office space.

38. Redevelopment problems have been compounded by the lack of available level sites at Duckhole Hill and the need to maintain activities during construction. Defence advised the Committee that this has resulted in management inefficiencies and impediments to the effective conduct of operations.

39. Older buildings at Duckhole Hill are now showing signs of deterioration and maintenance costs are rising. Many facilities have asbestos-bearing materials and problems are arising with the deterioration of this material. For example, cable ducts are deteriorating to the extent that asbestos is flaking away. This presents problems with cable replacement and maintenance.

No 41 Wing Headquarters

40. No 41 Wing Headquarters is presently housed on the Base in the building used by Headquarters Tactical Fighter Group. With the expanded responsibilities of No 41 Wing that have occurred in the last two years and consequential staff increases, accommodation has now become congested.

Accommodation problems

41. Defence advised the Committee that the following situation has been reached:

- the changed roles of No 41 Wing and its subordinate Williamtown based units cannot be fulfilled from existing facilities;
- new equipment being acquired needs to be appropriately housed; and
- existing accommodation deficiencies need to be remedied.

Requirement

42. For these reasons, Defence believes there is a need to provide a new facility to house an Eastern Region Operations Centre (EASTROC)

43. In broad terms, the functional requirements for an EASTROC include:

- command and control;
- administrative support;
- control and reporting operations;
- software development;
- personnel training;
- equipment maintenance; and
- supply and storage.

44. The assessed accommodation requirements are:

- No 41 Wing Headquarters—32 personnel—450 square metres;
- No 3 CRU—Headquarters—9 personnel—250 square metres;
- Operations and Logistics—Operations—up to 125 personnel during extended operation; Logistics—up to 45 including contractor support—1800 square metres;
- Maintenance Support and Storage—15 personnel—900 square metres; and

- ADF Air Defence Training Centre—58 staff and up to 50 students—1600 square metres.

Alternatives examined

45. Defence advised that three alternatives were considered to remedy the accommodation and equipment housing problems. These were:

- Alternative 1—involving extensions and upgrading of the existing buildings at Duckhole Hill;

- Alternative 2—involving the upgrading of existing training and maintenance facilities at Duckhole Hill and the relocation of the Operations Room into a new building on the Base; and

- Alternative 3—involving the construction of a new facility on the Base for No 3 CRU and No 41 Wing.

46. With all options, the radar head and radar support building will remain at Duckhole Hill.

Consideration of alternatives

47. Defence advised that Alternative 1 would require extensive modification and reconstruction of existing buildings on the Duckhole Hill site. Major demolitions would be required and No 3 CRU would not be able to continue operations while construction work was in progress. It would also be necessary to temporarily relocate the No 114 Mobile CRU Williamtown for the duration of the work to enable essential control and reporting activities to be maintained for fighter training activities in Williamtown's air space. This would add to the cost. In addition, because of site constraints, construction would be difficult and costly. The cost of transporting personnel to and from the site would remain an ongoing expense. This alternative is not favoured by Defence.

48. Alternative 2 would be slightly less costly than Alternative 1 in terms of capital works. However, rehabilitation of existing Duckhole Hill facilities would still be required to meet training needs and to overcome existing deficiencies. A major disadvantage with this alternative would be that unit activities would be split. This, Defence believes, would lead to a loss in training and operational efficiency. Staffing levels would have to be increased as a consequence, and the cost of transport would remain. There would not be an overall cost advantage with this alternative, and it is also not favoured by Defence.

49. Alternative 3 has the advantage of a new facility entirely meeting the technical and accommodation requirements of the units while still keeping the

existing facility in operation during the construction period. Defence advised the Committee that this alternative would present a marginal increase in facilities cost over Alternative 2, but less costly than Alternative 1. Added advantages would be an improvement in security and a reduction in transportation costs. This alternative is preferred by Defence.

THE PROPOSAL

Scope

50. It is proposed to provide a new building to house an on-base EASTROC to accommodate about 190 personnel on a day-to-day basis, together with up to 50 students under training. During periods of prolonged exercises, up to 30 additional personnel could be engaged in operational activities within the building.

51. The facility will be in operation during normal Base working hours and weekends and out-of-hours where necessary. Parts of the facility will be kept in operation for extended hours for consecutive periods of about five days each month. When occasions demand, the facility must be able to sustain continuous round-the-clock operations for extended periods to test operational readiness.

52. The facility will house a number of discrete but inter-related functional elements described in the following paragraphs.

No 41 Wing Headquarters

53. The Headquarters comprises 32 personnel responsible for the administration, planning and control of subordinate squadrons and units located at various RAAF Bases. In addition, Headquarters personnel supplement operational staff of No 3 CRU in exercises. The proposed accommodation will provide for command and administrative functions. A library and an auditorium will be shared with other building occupants.

No 3 CRU

54. No 3 CRU has four main functional elements:

- Headquarters;
- Operations;
- Logistics; and
- Maintenance Support and Deployment Store.

Headquarters

55. The Headquarters comprises nine personnel, involved in planning, control and administration of the Unit. The proposed accommodation will provide for command and administrative functions.

Operations

56. The Operations elements normally comprise 30 personnel but these are often supplemented by executive staff. The number of operational staff can rise to up to 125 during sustained round-the-clock operations. Personnel undertake activities associated with wide area air defence surveillance and control. The proposed accommodation will house:

- Command Centre;
- the Tactical Air Operations and Training Tactical Air Operations Centres;
- the Eastern Airspace Coordination Centre;
- the Mission Support Centre; and
- rest facilities and ancillary support functions.

Logistics

57. Up to 45 personnel will be engaged in logistics functions, which will comprise maintenance and software management and control of equipment housed within the facility. Contractors will undertake some of the logistics support activities.

58. The proposed facilities will be for a maintenance workshop, computers and communication equipment, associated contractor stores, administrative and management personnel.

Maintenance Support and Deployment Store

59. This element provides mechanical, electrical and electronic workshop facilities, office accommodation and storage for deployment equipment. Fifteen personnel will normally work in the areas. The workshops are to support installed and transportable equipment. The deployment store will house rapid deployment operational equipment and maintenance support items.

ADF Air Defence System Training Centre

60. The ADF Air Defence System Training Centre would have a staff of 58 personnel responsible for the training of personnel on the Air Defence System. Sixteen basic and advanced courses are to be conducted. Courses will vary in content, duration and the number of students attending. The courses will include the following:

- Controllers Basic Course with six to eight students—13 weeks (six courses per year);
- the Fighter Controllers Course—four to five students—20 weeks (one course per year); and
- the Air Defence Ground Environment Familiarisation Course—nine students—lasting one week (five courses per year).

61. An average of 50 students will be on courses and an average of eight courses would be running simultaneously at any time, although student numbers might peak at 90 on occasions.

62. Apart from accommodation needed for the direct training of personnel, including provision for various simulators, facilities will be provided for training administration and training development activities. The proposed library and theatrette will be available for use by other building occupants.

Ancillary facilities

63. Proposed ancillary facilities will include:

- change rooms with separate external access;
- vehicle standing area and carparking;
- pad for satellite dishes;
- exercise training areas; and
- security fencing of the building and associated adjacent external facilities.

Committee's Conclusions

64. There is a need to provide facilities for No 41 Wing and its subordinate units to improve their operational effectiveness.

65. Construction of a purpose-designed Sector Operations Centre at RAAF Base Williamtown would be available to backup the one in Northern Australia, in keeping with the accepted concept of a layered air defence system. No 41 Wing personnel could readily fill a dual operational role.

66. Construction of a new facility would ensure compatibility with new equipment being acquired and the new facility would be purpose-built to suit contemporary operational needs.

67. Savings would be achieved with the co-location of units in the one building on the Base.

68. Construction costs would be reduced through the minimisation of engineering services and site works, and the sharing of communications and support areas.

69. Transportation costs would be reduced through locating the facility on Base rather than at Duckhole Hill.

70. Cost savings would be achieved by constructing the facility on a level site on the Base rather than building it on Duckhole Hill, where site conditions are unfavourable.

71. Engineering services to meet an increased demand are readily available on the Base, whereas upgrading of existing services on Duckhole Hill would be more expensive.

72. Morale of personnel would be improved by the provision of working accommodation and staff amenities to contemporary standards.

73. Occupational Health and Safety problems, stemming from occupation of cramped and makeshift accommodation would be alleviated.

SITING AND DESIGN

Siting

74. The Committee sought to establish if RAAF Base Wiliamtown is the most suitable location for an EASTROC. Defence advised the Committee that a number of other bases were considered. Williamtown emerged as the preferred

option because of synergy that could be developed between a Williamtown EASTROC, the fighter squadrons and, in the future, the AEWC aircraft.

75. Defence advised that the proposed site for the facility does not conflict with envisaged planning concepts being developed for the Base. The site was selected after a technical analysis of a number of possibilities was undertaken. The site is within the most appropriate functional area of the Base, reasonably close to the Tactical Fighter Group Headquarters, close to existing messes and amenities, convenient to existing engineering services, and within the 25 to 30 ANEF zone of the Base. The Master Plan will be amended accordingly to reflect the siting of the proposed new facility.

76. The Committee understands that the Master Plan was updated in 1983 and believes there is an urgent need for the Base to be developed in accordance with a master plan reflecting continued use of the Base well into the next century.

Description

77. The proposed facility will be a single building of two-storied construction, although larger workshops will extend to the full height of the building. The building will be internally compartmentalised into discrete functional areas.

Structure and finish

78. The building will be steel framed and masonry clad on a stiffened concrete floor on shallow strip and pad footings, with an insulated metal roof. Special features will be incorporated into some areas dictated by the functions to be performed and security requirements.

Functional areas

79. The headquarters, administration and training areas will be designed to normal commercial standards. The operations and associated maintenance area will be designed to incorporate special security features and be windowless for operational and security reasons.

80. The specialist workshops will incorporate security protection measures where necessary, although other heavy workshops and the Deployment Store will only be designed to normal industry standards. Plant rooms will be incorporated on the four corners of the building to minimise distribution losses for services and to provide some redundancy. The Committee questioned the need for a facility of 5,000 square metres. Defence acknowledged that an allowance has been made for future growth and that the building will be fully utilised.

Design features

81. Design features to be provided include:

- office and training areas to be carpeted, with steel framed stud-wall partitions, airconditioned to comfort levels, acoustic treatment to ceilings and windows, generally to commercial standards;
- window glazing will address the issues of thermal efficiency, acoustics, and control of natural lighting and will be double-glazed, screened for sun protection and tinted glass;
- operational areas will be climate controlled to ensure specified environmental conditions for equipment. Generally, these areas will have anti-static vinyl floor covering, other than in designated office areas where floors will be carpeted;
- internal walls will be of steel-framed stud construction, although some walls will be of masonry construction where noise attenuation or special security conditions are required. The entire area will be windowless for security and operational reasons;
- computer flooring will be provided through designated areas of the Operations Centre, and the Maintenance and the Training areas;
- enclosed working areas will be designed to achieve noise attenuation to 60 dBA in general working areas where possible, but to 45 dBA in specific operational and training areas;
- eating areas will be airconditioned to comfort levels with additional exhausting in food preparation areas;
- vaults will be designed to appropriate security standards and will be provided with strengthened walls and ceilings;
- specialist workshops will incorporate concrete floors, vinyl clad in specific instances, generally with airconditioning of internal areas, as well as exhausting from specified areas; and
- vehicle bays in the heavy-duty workshop will incorporate a gantry crane over one bay to facilitate movement of heavy components.

82. The Committee questioned Defence about the extent of noise attenuation to be provided. Defence advised that an acoustic engineer will be engaged in the design phase. Defence advised the Committee that acoustic treatment will be provided to insulate the building from aircraft noise. There will also be inter-

office acoustic insulation. Based on the experience with the present facilities, work consoles will have individual acoustic foam office screening.

Engineering services

83. Engineering services to be provided will include the following:

- design of airconditioning systems to take into account heat loads generated by equipment;

- all airconditioning and mechanical ventilation systems will be designed with energy saving features, including variable airflow, external air intake under appropriate temperature conditions and a total building management operating system for optimum plant control. Humidity control will be incorporated into the airconditioning system to service areas requiring specified climate controls;

- conditioned power will be provided to selected equipment items whose operation requires a stable power source. An Uninterruptible Power Supply will be provided to critical equipment to ensure continued power supply in the event of a mains failure and before emergency generators are brought on line. Frequency converters with distribution boards will be provided to supply 60 Hertz and 400 Hertz power and 28 volt DC power to work areas and to specialist workshop areas;

- voice and data communications will be linked to the Base communications network. An internal public address system will be provided in the Operations and Logistics areas of the building. In addition, some special satellite communications links will be provided. Satellite communications equipment is to be provided as a separate equipment project. An external area will be provided for a satellite communications dish; and

- security and fire detection will be incorporated into the Base security and fire alarm systems and monitored at the Base Fire Station and the Main Entry Control Guardhouse.

External works

84. External engineering services, demolitions, and site works will include the following features:

- electrical supplies will be drawn from the Base electrical ring main;
- a new high voltage substation will be provided to service the facilities;
- the main switchboard will be separately housed and segregated incorporating surge protection on the incoming supply;
- load shedding devices will be installed to disconnect non-essential loads under emergency conditions to ensure that critical work areas are provided with electrical power from the Central Emergency Power Station and by a local emergency generator;
- water, sewerage and stormwater connections will be made to the existing Base systems;
- a area will be provided adjacent to the building for the location of a satellite dish and deployable cabins containing communications and radar support equipment;
- provision for access by heavy vehicles will be provided, together with car parking for service vehicles;
- redundant buildings on Duckhole Hill will be demolished and the building sites will be rehabilitated; and
- the area surrounding the new building will be landscaped with low maintenance vegetation compatible to the area.

Standards

85. Where appropriate, the design of new facilities will conform to the relevant sections of:

- the Building Code of Australia;
- relevant current Australian Standards and Codes;
- Occupational Health and Safety statutes;
- the Defence Fire Protection Engineering Manual (FACMAN 2);

- the Defence Security Manual (SECMAN);
- Environmental Protection statutes, and
- Workplace Health and Safety statutes.

Design principles

86. The principles adopted in the design of the proposed facility include the following:

- the provision of austere, cost effective and utilitarian facilities of energy efficient design suitable for the rigours of the climate and of a style compatible with surrounding facilities;
- recognition of security and operational requirements;
- adoption, where possible, of conventional construction techniques and materials, in particular those commonly used by the construction industry in the area;
- durable materials that combine long life with minimum maintenance; and
- consideration of the impact of aircraft noise on the working environment and the occupational health and safety of occupants.

Fire protection systems

87. The following principles were adopted for 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 (FACMAN 2) and all other applicable Codes and Standards. FACMAN 2 details Defence fire protection policy for asset and building protection;
- the levels of fire protection specified 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,

FACMAN 2, relevant Codes and Standards and any additional State, Local Government and Defence requirements;

- any recommended departures from BCA requirements in relation to the project will be technically assessed by Defence specialist fire protection staff. Agreed departures, ensuring an equivalent or higher level of protection than BCA requirements, will require written approval at Director General level; and

- successful tenderers will be required to produce a Quality Assurance Plan to clearly show 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.

Energy Management and Lighting

88. 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.

89. To reduce energy consumption, where possible, lighting is to be controlled by photoelectric switches in conjunction with timeswitch 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.

PERSONNEL

Establishment Population

90. It is expected that establishment changes in No 41 Wing and its subordinate Williamtown-based units will result in an increase of about 40 personnel. The student population will increase marginally at varying times. No new on-base domestic accommodation is envisaged for this slight increase in personnel numbers.

Construction Force

91. Over the envisaged construction period of about 18 months, an average of about 50 personnel will be directly employed on construction activities. In addition, it is anticipated that construction will generate further job opportunities

off-site from the prefabrication of components and the manufacturing and distribution of materials.

CONSULTATIONS

External Authorities

92. The following Authorities have been advised or will be consulted during the planning stages:

- Federal and State Government Representatives for the area;
- Port Stephens Shire Council;
- Newcastle City Council; and
- Hunter Water Corporation.

ENVIRONMENT AND HERITAGE

Environmental Approval

93. An Environmental Certificate of Compliance was issued by Defence in October 1997.

Environmental Implications

94. There are no significant environmental implications resulting from the provision of the proposed facilities.

95. During construction, measures will be put in hand, similar to those adopted in the past, to ensure that contamination to ground water does not occur.

96. Redundant buildings and structures on Duckhole Hill will be demolished and the debris cleared from the site. Investigations will take place to determine the presence of asbestos bearing materials and a certified contractor will dispose those of those materials.

Aircraft noise

97. The Committee questioned Defence about the extent of aircraft noise complaints from the local community. Defence advised the Committee that aircraft noise is an issue that has to be managed. RAAF personnel attend public meetings and have established a noise management committee. An aircraft noise officer has been appointed. As part of this management process, Defence recently offered to purchase 20 rural properties on Slades road affected by aircraft noise and 18 property owners accepted the offer.

Drains

98. The Base is located on the Tomago Sandbeds whose aquifer was used in former years to supplement Newcastle's water supply. The Base is also located on a low lying area prone to flooding. The surrounding area has a number of drains intended to channel runoff into various creeks.

99. The question of the adequacy of the Base drainage system and its effects on adjacent properties was canvassed by the Committee in 1983 during consideration of works proposed for the introduction of F/A 18 aircraft. The Committee's report, in addressing this question, noted:

> *The Committee notes that whilst the Department of Housing and Construction proposes to re-align and widen drains as necessary on the Base, no mention is made of the wider drainage system. The Commonwealth should contribute to the maintenance of any drains carrying runoff from Commonwealth property, especially in this case where the area is low lying and there is potential for runoff water directed to Tilligerry Creek causing local flooding.*[1]

100. The Committee was also surprised to learn that flooding, and a rising watertable, had caused severe damage to the runway in 1990 which was described by Defence in the following terms:

> *There was a problem with the runway. Apparently the rising watertable forced up either air or water underneath the runway and lifted the seal on the runway. It bubbled up and made it unuseable; they had to reseal it over several months...Operations did continue in some other way by moving the aircraft or using the parallel taxiway. There was an interruption to operations.*[2]

101. A local resident, Mr William Redriff, raised the wider issue of a need for coordinated action to ensure that the on-base and off-base drainage system is able to prevent local flooding, especially as a result of high rainfall events. It appears to the Committee that problems identified by the Committee in 1983 continue, without any coordinated attempts having been made to cope with flooding.

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[1] Public Works Committe Report—RAAF Base Williamtown, NSW—F/A- 18 Hornet facilities development (Third Report of 1983), Parliamentary Paper 230/1983, p. 51

[2] Minutes of Evidence, public hearing 18 May 1998, p. 76

102. Defence advised that the following action had occurred since 1995:

- Moors Drain from the Base to Tilligerry Creek was cleared and widened by the Port Stephens Council in 1994;
- in 1995, the Council also constructed an earth berm on RAAF land near the Nelson Bay Road-Medowie Road roundabout to redirect water towards Tilligerry Creek and away from the Williamtown township;
- current available records show that the RAAF contributed $2,500 towards drainage extensions to Dawsons Drain in the 1992/93 financial year and $5,000 towards the clearance of Moors Drain in the 1993/94 financial year;
- no maintenance has been required to Moors Drain since the major works undertaken in 1994; and
- in the 1995/96 financial year, drainage rehabilitation works were undertaken on the Base, including the removal of silt and the grouting of underground stormwater pipes. This work was undertaken as an Asset Maintenance project at a cost of $431,652.

103. Defence also advised the Committee that the extent of flooding in the area has been known for some time and is the subject of various reports. The subject of ownership of the drains is complex and unresolved. Port Stephens Council has investigations programmed to identify potential solutions to the flooding. As in the past, Defence will continue to be a responsible corporate citizen and provide an appropriate contribution to remedial works when requested.

104. On the basis of these factors and on the evidence presented by Mr Redriff, the Committee believes it is both necessary and urgent for State and local government and the Commonwealth to address the question of responsibilities and to combine forces to undertake flood mitigation measures. This, the Committee believes, is in the interest of protecting a vital Commonwealth asset and the wider community.

Committee's Recommendation

105. It is both necessary and urgent for State and local government and the Commonwealth to address the question of responsibilities and to combine forces to undertake flood mitigation measures.

Native Title Claims

106. To date, no Native Title claims have been lodged in respect of the Commonwealth's Williamtown properties.

COST AND PROGRAM

Cost

107. The out-turn cost of the works is estimated at $18.0 million. This includes construction costs, professional fees and charges, furniture and fittings, construction contingency and a predicted indexation adjustment over the construction period. This figure does not include the cost of the new equipment to be installed.

Timings

108. Subject to Parliamentary approval, tenders will be called toward the middle of 1998, with the objective of having construction completed by December 1999, consistent with the projected delivery of new equipment.

FUTURE WORKS

Sensor pod storage

109. Upgrading of Delamere Range, near RAAF Base Tindal, is proposed. In association with that project, a sensor pod storage and maintenance facility is proposed for Williamtown.

AEWC Aircraft

110. It is envisaged that the AEWC aircraft to be obtained for the RAAF will be home based at Williamtown. Works to accommodate these aircraft will be required on the Base. The extent of the works will become apparent when the aircraft type has been selected.

111. The Committee questioned Defence about the capacity of available land on the Base to handle the AEWC aircraft. Defence advised that the land available at Williamtown could be sufficient for the aircraft. The current scheme of operations is to divide the aircraft between Williamtown and RAAF Base Tindal, with Williamtown being the home Base.

Committee's Recommendation

112. The Committee recommends the construction of the Eastern Region Operations Centre at RAAF Base Williamtown, NSW, at an estimated out-turn cost of $18 0 million.

CONCLUSIONS AND RECOMMENDATIONS

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

1. There is a need to provide facilities for No 41 Wing and its subordinate units to improve their operational effectiveness. (Paragraph 64)

2. Construction of a purpose-designed Sector Operations Centre at RAAF Base Williamtown would be available to backup the one in Northern Australia, in keeping with the accepted concept of a layered air defence system. No 41 Wing personnel could readily fill a dual operational role. (Paragraph 65)

3. Construction of a new facility would ensure compatibility with new equipment being acquired and the new facility would be purpose-built to suit contemporary operational needs. (Paragraph 66)

4. Savings would be achieved with the co-location of units in the one building on the Base. (Paragraph 67)

5. Construction costs would be reduced through the minimisation of engineering services and site works, and the sharing of communications and support areas. (Paragraph 68)

6. Transportation costs would be reduced through locating the facility on Base rather than at Duckhole Hill. (Paragraph 69)

7. Cost savings would be achieved by constructing the facility on a level site on the Base rather than building it on Duckhole Hill, where site conditions are unfavourable. (Paragraph 70)

8. Engineering services to meet an increased demand are readily available on the Base, whereas upgrading of existing services on Duckhole Hill would be more expensive. (Paragraph 71)

9. Morale of personnel would be improved by the provision of working accommodation and staff amenities to contemporary standards. (Paragraph 72)

10. Occupational Health and Safety problems, stemming from occupation of cramped and makeshift accommodation would be alleviated. (Paragraph 73)

11. It is both necessary and urgent for State and local government and the Commonwealth to address the question of responsibilities and to combine forces to undertake flood mitigation measures. (Paragraph 105)

12. The Committee recommends the construction of the Eastern Region Operations Centre at RAAF Base Williamtown, NSW, at an estimated out-turn cost of $18 0 million. (Paragraph 112)

Wilson Tuckey MP
Chairman

25 June 1998

APPENDIX A

WITNESSES

BROUWER, Mr Michael Dirk, Project Manager and Superintendent, Gutteridge Haskins and Davey Pty Ltd, PO Box 36, Belconnen, ACT

BROWNING, Squadron Leader Ian William, Estate Planning Manager, Regional Estate Centre—Central and Northern New South Wales, RAAF Base Williamtown, Williamtown,

KELLY, Brigadier Garry Ross, Director General, Project Delivery, Department of Defence, Campbell Park Offices, Canberra, ACT

KRIEG, Wing Commanderr Peter Anthony, Air Defence Ground Environment Operations, Department of Defence, HQ 41 Wing, RAAF Base Willliamtown, NSW

REDRIFF, Mr William Walter, RMB 2546 Steel Street, Williamtown, NSW

SHEPPARD, Mr Robert Sherman, Project Director, Department of Defence, Campbell Park Offices, Canberra, ACT

APPENDIX B

PROJECT PLANS
(Not available in PDF format)

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