Australian Government

Department of Defence

ROYAL AUSTRALIAN AIR FORCE BASE EAST SALE REDEVELOPMENT PROJECT

East Sale, Victoria

Statement of Evidence
to the
Parliamentary Standing Committee
on Public Works

Canberra, Australian Capital Territory
August 2011

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Contents

Attachments

1. Locality Plan – RAAF Base East Sale
2. Regional Plan – RAAF Base East Sale
3. Site Plan - RAAF Base East Sale
4. School of Air Warfare Training Facilities – Floor Plan
5. School of Air Warfare Training Facilities – Perspective
6. Physical Training Facilities – Floor Plan
7. Physical Training Facilities – Perspective
8. Commercial Facilities – Floor Plan
9. Commercial Facilities – Perspective
10. Chapel and the Community Facilities – Floor Plan
11. Chapel and the Community Facilities – Perspective
12. Flight Line Maintenance Facilities – MEOMS – Floor Plan
13. Flight Line Maintenance Facilities – Airflite – Floor Plan
14. Flight Line Maintenance Facilities – Oxygen Workshop – Floor Plan
15. Flight Line Maintenance Facilities – Hawker Pacific – Floor Plan
16. Flight Line Maintenance Facilities – Search and Rescue – Floor Plan
17. Flight Line Maintenance Facilities – Typical Perspective
18. Air Traffic Control Complex – Floor Plan
19. Air Traffic Control Complex – Perspective
20. Living-in Accommodation – Typical Floor Plan
21. Living-in Accommodation – Typical Perspective

RAAF Base East Sale Redevelopment

Need for Works

Identified Need

1. The RAAF Base East Sale Redevelopment project proposes to provide:

    a. major engineering services upgrades;

    b. new and refurbished working accommodation;

    c. new and refurbished training and maintenance facilities;

    d. security upgrades;

    e. a new air traffic control complex;

    f. new commercial, community and chapel facilities;

    g. a new firing range;

    h. new living-in accommodation; and

    i. demolition of redundant facilities.

2. RAAF Base East Sale is the primary officer training base of the RAAF. The base is also a main operating air base, providing continuous support to two operational squadrons, in addition to visiting operational squadrons, minor exercises and operations, and contracted search and rescue operations. RAAF Base East Sale supports operations in the Bass Strait, in Tasmania, and throughout Victoria and the greater Melbourne area. Non-operational activities include initial and specialisation officer training, Australian Defence Force Academy single service training, and provision of support to the Australian Air Force Cadets.

3. The Department of Defence has identified RAAF Base East Sale as an enduring training base to be retained by Defence for the long-term.

4. The population of the base is anticipated to grow in coming years from approximately 1,720 to approximately 2,260 personnel. The personnel growth takes into account increases in base activities and training requirements. The existing level of base supporting infrastructure does not have the capacity to effectively or efficiently meet these increases.

5. The majority of base engineering services are at the end of their design life. Many of the engineering services are at capacity and have no redundancy, are in a very poor state, are not Occupational Health and Safety (OH&S) compliant, and do not meet Defence standards.

6. Over time, Defence has undertaken a series of projects to modify and update various World War II-era buildings to support Defence activities and requirements. However, a number of buildings, as identified in the project scope, do not meet the current Building Code of Australia, Manual of Fire Protection Engineering, or Australian Standards requirements for design, OH&S, or functionality, requiring them to be upgraded or replaced.

7. The RAAF Base East Sale Redevelopment project proposes to improve the functionality and capability of the base by upgrading or replacing inadequate and non-compliant facilities, infrastructure and engineering services to meet current and anticipated future requirements.

Options Considered for Meeting the Need

8. To meet the identified need, Defence has considered the options of building new or refurbishing existing facilities. Apart from the School of Air Warfare training facilities and elements of the flight line maintenance facilities, refurbishment was rejected on the basis that the costs associated with bringing the existing facilities up to the required Building Code of Australia standard alone, were prohibitive and did not represent value for money to the Commonwealth.

9. Consideration was also given to a reduced scope of infrastructure works. This was rejected on the basis of a combination of factors, including that the works need to be completed to support existing base facilities, and significantly better value for money could be achieved through economies of scale, by undertaking the works in a single combined project rather than a series of separate projects.

Historical Background

10. During the first two years of World War II, the RAAF trained pilots as flying instructors at the Central Flying School at Point Cook. Operational aircrews and instructors for advanced training squadrons completed their training in operational squadrons. However, limitations at some squadrons meant that training was inconsistent. The Number 1 Operational Training Unit was subsequently established and approval was granted for the construction of an aerodrome at East Sale in February 1941.

11. In 1942, the Commonwealth acquired approximately 480 hectares of land for the establishment of the East Sale airfield and base. Works included the establishment of a base and airfield that would accommodate 128 aircraft and approximately 2,400 personnel. Between 1942 and 1944, temporary and permanent facilities were constructed to provide working accommodation, technical and training facilities, recreational facilities, living-in accommodation, and support facilities. Two runways were also constructed and some Bellman Hangars were relocated to the site from West Sale. RAAF Base East Sale was declared operational on 22 April 1943.

12. During the late 1940s and into the 1950s, construction works were undertaken to accommodate the relocation of the Central Flying School to East Sale, which occurred in 1946, and to construct a supplementary runway. Ad hoc construction activities continued through to the 1980s, however some (mainly hangars) of the original World War II buildings still remain in use.

13. In the mid-1980s, a two-stage development program was undertaken at the base. The first stage involved construction of junior and senior officers' accommodation, the School of Air Traffic Control, the Central Flying School,

Maintenance Squadron and Field Training Flight, the Base Security Control Centre and the School of Photography. The second stage involved construction of accommodation, a fire station, the School of Air Navigation, a Communications and Electronic Data Processing Centre, and a security complex. Demolition of a number of the original or early buildings was also undertaken around this time.

14. In 1994, some minor funding was allocated to East Sale for a new medical flight facility.

15. During 2006 to 2008 a new Officer Training School (OTS) was constructed under the RAAF College Relocation project to replace the antiquated OTS facilities at RAAF Williams (Point Cook). This resulted in the relocation of approximately 130 personnel from RAAF Base Williams (Point Cook) to RAAF Base East Sale. Minor engineering services upgrades and a new combined mess were also undertaken as part of the RAAF College Relocation project.

Heritage Impact

16. During the planning phase for this project, a review of the existing Heritage Management documents was undertaken. Although RAAF Base East Sale is not listed on the Commonwealth Heritage Register, the outcome of the review was a recommendation that a new base wide Heritage Management Plan (HMP) be developed. Consequently, a new HMP has been prepared as part of this project. The Defence Estate Policy and Environment (EPE) Branch has considered the HMP in relation to the Commonwealth's *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act).* In accordance with the HMP, the project will not have any significant impacts on any facilities with heritage value. Referral under the EPBC Act has been assessed by Defence's EPE Branch and is not required.

Environmental Impact

17. An Initial Environmental Review (IER) was completed for the project in January 2010. The IER identified a number of potential environmental issues and mitigation measures for the design and construction phases of the project.

The IER also identified a number of relatively minor information gaps requiring further investigation to determine the extent of the potential impacts and mitigation measures associated with the project.

18. During the planning phase a series of site investigations were undertaken in response to the information gaps identified in the IER. These included: stormwater treatment options; flora and fauna investigations; an acoustic assessment; an assessment of remnant flora patches and a targeted fish and frog survey in the drainage channels.

19. Each of these investigations assessed their relative risks in relation to the project and made practical and cost effective recommendations for mitigating the risks.

20. To mitigate any potential environmental impacts as identified in the IER and subsequent investigations, the project will be managed in accordance with the Defence Environmental Management framework, including compliance with the regional Environmental Management System. The Managing Contractor's environmental procedures for construction activities will comply with the approved Construction Environmental Management Plan. A Defence Environmental Clearance Certificate will be issued prior to any construction related activities being undertaken on site. Referral under the EPBC Act has been assessed by the Defence Environmental Impact Management Directorate and is not required.

21. In constructing the facilities and infrastructure, excavations will be undertaken in a manner that will minimise the extent of soil disturbance. Any soil removed will be tested for contamination. If contaminated, the disturbed soil will be removed for remediation and disposal and will be replaced with suitable clean fill. Uncontaminated soil will be reused as required.

Key Legislation

22. The following key legislation is relevant to this project:

    a. *Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)*; and

    b. *Building and Construction Industry Improvement Act 2005 (Cwlth).*

23. The design will comply with all relevant and current Defence Standards, Australian Standards, Codes and Guidelines including, but not limited to, the following:

    a. Building Code of Australia;

    b. *Occupational Health and Safety Act 1991 (Cwlth);*

    c. *Disability Discrimination Act 1992 (Cwlth);*

    d. *Fair Work Act 2009 (Cwlth);*

    e. Defence Manual of Fire Protection; and

    f. Defence Infrastructure Management polices and processes.

Impacts on Local Communities

24. As evidenced by the recently completed RAAF College Relocation project, the local community has embraced the opportunity to be involved in the development of the base. The Managing Contractor for this redevelopment project has developed a procurement strategy whereby the smaller packages of works can be sub-contracted directly to the local market. It is anticipated that the full scope of works would exceed the capacity within the local market, therefore a combination of local, Melbourne and interstate based contractors is expected to compete for the works.

25. A communications strategy has been employed by the project team with a single point of contact for direct enquiries or concerns from the community. As part of

this strategy, a letter box drop with a project information notice will be undertaken.

26. Further, Defence plans to convene a public meeting at the Wellington Shire Council offices in mid October to brief the local community on the potential impacts and other aspects of the project.

Consultation with Stakeholders

27. Consultation has occurred, or will occur, with the following key stakeholders as a minimum:

    a. Gippsland Water;

    b. Wellington Shire Council;

    c. Southern Rural Water;

    d. SP Ausnet;

    e. Environmental Planning Authority Victoria;

    f. West Gippsland Water Catchment Authority;

    g. the Federal Member for Gippsland, Mr Darren Chester MP;

    h. the State Member for Gippsland East District, Mr Tim Bull MP; and

    i. the State Member for Gippsland South District, Mr Peter Ryan MP.

Purpose of the Works

Project Location

28. RAAF Base East Sale is located in south-east Victoria, approximately 225km east of Melbourne. The Base is located on the eastern edge of the regional

centre of Sale, at the end of Aerodrome Road, approximately 5km from the centre of the town.

29. A locality plan is at Attachment 1, a regional plan at Attachment 2 and a base site plan is at Attachment 3.

Project Objectives

30. The aim of the project is to improve the functionality and capability of the base by upgrading or replacing inadequate and non-compliant facilities, infrastructure and engineering services to meet current and anticipated future requirements.

Project Description and Scope of Works

31. To meet this objective, the proposed redevelopment combines the construction of new facilities, civil works, upgrading of engineering services infrastructure, some upgrades of existing facilities, and demolition works. The 13 specific scope elements of the project are outlined in the following paragraphs.

Project Element 1 - Site Engineering Services Upgrade

32. The base engineering services are at the end of their economic life. Many of the engineering services are at capacity and have no redundancy, are in a very poor state, are not OH&S compliant and do not meet Defence standards. The project proposes to provide upgrades to overcome these deficiencies, meet Defence standards and enable ongoing support of the facilities on the base.

Electrical

33. The electrical services are deficient in the following areas:

    a. the emergency electrical supply is unreliable and requires manual operation to distribute supply around the site when mains power is interrupted; and

    b. street lighting at certain locations is insufficient for personnel moving around the base, including high-traffic areas where vehicular traffic and marching troops share the roadways.

34. To overcome these deficiencies, the project proposes to:

    a. upgrade the Central Emergency Power Station;

    b. upgrade site electrical metering;

    c. upgrade external street lighting; and

    d. install four new High Voltage substations, new Low Voltage main switchboards and associated cabling.

Supply Water

35. The supply water services are deficient in the following areas:

    a. the existing underground water reticulation system is degraded due to age and is failing due to movement of the ground, intrusion by vegetation and build up of sediment; and

    b. the supply water ring main is in poor condition, suffers from leakage and cannot support the water pressures required to operate emergency fire services.

36. To overcome these deficiencies, the project proposes to:

    a. install new in-ground mains to replace asbestos, cement and cast iron pipes, re-using existing mains where appropriate and possible;

    b. replace all in-ground valves; and

    c. install a complete new fire services system including new in-ground mains, fire water storage tanks and pump sets.

Stormwater

37. The stormwater services are deficient in the following areas:

    a. the existing 35km of storm water infrastructure is under-sized in locations supporting the airfield runways, requires re-lining in approximately 10 per cent (3.5km) of pipe work and requires replacement in approximately 10 per cent (3.5km) of pipe work; and

    b. the existing stormwater channel has eroded and requires improvements to ensure the ongoing effective natural filtration of stormwater leaving the base.

38. To overcome these deficiencies, the project proposes to:

    a. jet blast mains to remove root intrusion and silt build up;

    b. install environmental separation tanks to capture and remove contaminants that may enter from the flightline, including from fire fighting activities; and

    c. re-grade banks and re-plant vegetation to the main stormwater channels to prevent erosion and ensure the quality of water leaving the Base.

Sewer

39. The sewer services are deficient in the following areas:

    a. the existing 10km of sewer main requires relining in approximately 35 per cent (3.5km) of pipe work and replacement in approximately 10 per cent (1.0km) of pipe work;

    b. ten facilities on the base located close to the sewer network have their sewage treated by septic tank rather than discharging to the sewer main due to insufficient capacity of the sewer main; and

c. the existing sewer pump station is beyond its design life, requires a high level of maintenance and presents a significant OH&S risk to maintenance staff due to the confined space nature of its functional layout.

40. To overcome these deficiencies, the project proposes to:

a. install a new intermediate sewer pump station and modify the existing sewer pump station; and

b. re-line sections of the in-ground mains and rehabilitate sewer manholes.

Gas

41. The gas services are deficient in that existing gas main does not form a ring main and there are minimal isolation points provided, which limits the ability to shut down supply to facilities in the event of maintenance or an emergency.

42. To overcome these deficiencies, the project proposes to:

a. replace valves; and

b. install additional gas mains to complete a base wide ring main.

Communications

43. The communication services are deficient in the following areas:

a. the existing communications infrastructure system relies on dispensations to achieve accreditation, does not have the capacity to support future expansion and does not have many of the facilities fully accredited; and

b. a significant number of communication pits impacted by the project contain asbestos and do not have OH&S compliant lids or Security Construction and Equipment Committee (SCEC) endorsed locking systems.

44. To overcome these deficiencies, the project proposes to:

    a. upgrade the Defence Restricted Network from multi-mode optic fibre to single mode optic fibre;

    b. upgrade deficient and asbestos laden communications pits with SCEC endorsed pits; and

    c. establish a base wide Defence Engineering Services Network.

Metering

45. The metering services are deficient in the following areas:

    a. metering of infrastructure including supply water, sewer, natural gas and electricity is limited on the base; and

    b. where meters are supplied they are aged and not suitable to be linked to the Building Management System.

46. To overcome these deficiencies, the project proposes to install metering for all services at new buildings being constructed and connect them to the new Defence Engineering Services Network (DESN).

Project Element 2 - School of Air Warfare (SAW) Training Facilities

47. The School of Air Warfare (SAW) is accommodated in buildings 106 and 135 at the base. SAW provides student training and support for the Air Combat Officer (ACO) Basic and Stream training, Navy Observer, Aviation Instructor and Operations Officer courses, and base weapons training.

48. On 4 August 2004, Air Force established the new ACO category as the new aerospace war-fighting officer category. Immediate facility requirements were managed at the regional level to support the first ACO course at RAAF Base East Sale in January 2008. This was achieved by temporarily accommodating students in the former School of Air Navigation, at RAAF Base East Sale, which was renamed the School of Air Warfare. While the renamed school provided training spaces, these did not meet the functional requirements of ACO training.

Student numbers within this course have grown since that time, from 42 to 49, and are forecast to grow further in the future. Therefore, works are required to provide appropriate functional teaching and working accommodation for the ACO training requirements.

49. A new facility is proposed to be constructed on a greenfield site adjacent to the existing building 135. The proposed new facility will accommodate the current and projected increase in SAW student training throughput of Air Force and Navy. This new facility will include office accommodation, utility and training rooms, meeting areas and breakout spaces, enabling the co-location of functionally related training requirements.

50. Minor refurbishment works are also proposed for building 106 to improve sub-standard working accommodation. The scope of work includes a new office, recreation spaces and awning structures.

51. During the refurbishment of building 106, students and instructors will be accommodated in working accommodation within building 135 or alternative working accommodation at RAAF Base East Sale.

52. The proposed floor plan and perspective drawing for the SAW Training Facility are at Attachments 4 and 5 respectively.

Project Element 3 - Physical Fitness Facilities

53. The current physical fitness facilities for RAAF Base East Sale are a mixture of purpose built facilities such as the swimming pool, and adaptively reused facilities such as the former airmen's mess now used for wet weather teams and circuit training activities. Most of the facilities were constructed in the 1950s and 1960s and are located in six different locations on the base. These facilities are aged, are generally not fit for purpose and currently do not meet base training requirements.

54. Physical fitness is a mandated requirement for Defence uniformed personnel. Physical fitness facilities service both permanent base staff and trainees as part of Air Force's physical fitness and trainee induction programs. All Air Force

members are required to maintain their ability to be operationally deployed, including having appropriate levels of fitness through a structured physical training environment.

55. The proposed new physical fitness facilities will centralise the current dispersed physical fitness activities into the one location. The proposed physical fitness facilities comprise an indoor 25m pool; gymnasium/sports hall; a squash court; boxercise, spin, weights and cardio rooms; office space for Physical Training Instructors; and supporting auxiliary spaces including storage and ablutions. Outdoor facilities will include a 400m synthetic running track and two tennis courts.

56. The existing Combat Support Unit gym, which is located within an existing warehouse, will remain as a storage area. However all other current facilities will be demolished as part of this project, once the new facilities have been commissioned.

57. The proposed floor plan and perspective drawing for the physical fitness facilities are at Attachments 6 and 7 respectively.

Project Element 4 - Commercial Facilities

58. Defcredit, an Australia Post outlet, a hairdresser and a café operator currently lease the commercial facilities on the base. The existing commercial complex housing these lessees was originally a petrol service station constructed in the 1960s that was decommissioned and converted to provide a commercial hub for the base. The complex has reached the end of its economically effective life.

59. The proposed commercial facilities will replace the existing aged facilities with a new integrated facility to accommodate the existing commercial services.

60. The proposed commercial facilities will comprise two separate building footprints located north of the base mess to form part of a 'commercial hub'. These facilities will also be used during out of hour's periods and on ceremonial occasions by visiting family and friends.

61. The existing commercial buildings will be demolished once new facilities have been commissioned. Once demolished, the vacant space will be designated future development space in the zone plan.

62. The proposed floor plan and perspective drawing for the Commercial Facilities are at Attachments 8 and 9 respectively.

Project Element 5 - Chapel and Community Facilities

63. In accordance with the Defence Mental Health Strategy, psychology, chaplaincy, social work and medical services are to work together in an integrated service to meet the needs of the Defence community. Psychology, chaplaincy and social work were housed in the Ken Morrison Centre at the base until late 2007, when the facility was condemned and demolished due to evidence of asbestos contamination from the asbestos cladding.

64. A temporary solution involving minimal capital expenditure was agreed by the Base to accommodate the displaced services in existing facilities across the base. However, this temporary solution does not meet the functional needs of the users, is generally in a poor condition, and the dispersed locations make working together as an integrated service difficult. New purpose built, co-located facilities are proposed.

65. The proposed new facilities will form a 'social and community hub' accommodating a multi-denominational chapel, mental health and psychology section, and the Defence Community Organisation.

66. The chapel and community facilities are proposed to be located on a greenfield site, south-east of the main base entry. This is within the base entry precinct, allowing easy access by Defence families.

67. The proposed floor plan and perspective drawing for the chapel and the community facilities are at Attachments 10 and 11 respectively.

Project Element 6 - Flight Line Maintenance and Support Facilities

68. Working accommodation, workshops and training rooms are required to accommodate and support staff for flight line maintenance and support organisations including the Training Aircraft Systems Program Office, Mechanical Engineering Operational Maintenance Section, Search and Rescue, and maintenance contractors.

69. Currently most of the offices and training rooms for flight line organisations are located in aged, transportable buildings and ad hoc sheds within and between the hangars. This reduces the hangar space and offers sub-standard personnel working accommodation.

70. The proposed scope involves the provision of five new single-storey buildings adjacent to existing hangars, and removal of transportable buildings from within the hangars.

71. The proposed floor plans and a typical perspective for the Flight Line Maintenance Facilities are at Attachments 12 to 17.

Project Element 7 -Air Traffic Control Complex

72. The current air traffic control tower and support facilities were built in 1959 and are no longer suitable for the modern air traffic control environment. Support facilities are inadequate and not up to current standards for the management of air movements at RAAF Base East Sale, where operations are maintained at more than 18 hours per day involving shift work to satisfy night flying requirements. Support facilities are largely temporary demountable buildings, with some dispersed across the base. Although there are currently no pressing issues in relation to flight safety, there are problems in terms of staff management efficiencies.

73. The proposed facilities include a new air traffic control tower and support facilities, including working accommodation, workshops and stores, and training and recreational facilities. The proposed facilities will be co-located and will accommodate command and administration staff, air traffic controllers, ground

electronic services technical staff, student training, air traffic control, radar and approach control, fitter training, unit weapon handling maintenance workshops and stores, crew support facilities, and Bureau of Meteorology staff.

74. The new facilities are proposed to be constructed within the taxiway precinct, south-west of the current tower and fitted out with new air traffic control equipment, which is being provided under a separate project delivered by the Defence Material Organisation (Project AIR5431). The current air traffic control tower and demountable buildings will be demolished once users have relocated into the new facilities.

75. The proposed floor plan and perspective drawing for the Air Traffic Control Complex are at Attachments 18 and 19 respectively.

Project Element 8 - 25 metre Firing Range

76. The current firing range requires replacement as it is in poor condition, is not constructed to current compliance standards and does not have the capacity to efficiently support existing student numbers. The range is located on the airfield and poses a risk to airfield operations due to ricochets not being contained within the range. As a result, use of the current range must be co-ordinated with airfield operations, further limiting use of the range.

77. The project proposes to replace the existing non-compliant range with a new 25 metre firing range, that will permit range use concurrent with airfield operations (as long as a Notice to Airmen is released). The 25 metre firing range will be used by permanent personnel and Reserve units on base, as well as visiting Army and Air Force operational units, as an essential part of training to ensure personnel maintain their weapons handling proficiency.

78. The proposed new range has been designed to accommodate ten personnel at the firing point and ten in the waiting area, plus three training staff. The facility will feature a 25 metre open range with a pre-cast rear stop butt wall draped in two-ply rubber, and timber clad pre-cast walls providing side and rear protection.

79. The range will include a covered firing point and waiting area, toilet block, target shed and ammunition bay, and security fencing. The range will be designed to accommodate night firing practices using either night firing equipment or white light. The resulting range will permit weapons training to occur without the current restrictions.

80. A new access driveway will be constructed to provide access from Kittyhawk Avenue to the new facility.

81. The existing range is proposed to be demolished and the site remediated once the new facility is commissioned.

Project Element 9 - Passive Security Works

82. The base perimeter fence does not meet Defence standards for perimeter security. A new base perimeter fence, built to Defence standards, is proposed that will cover the entire 13.1km base perimeter (including associated gates). A 2.4 metre high Class 2 perimeter security fence complete with signage is proposed.

83. The main base entry provides the control of access for personnel and equipment onto the base. The design of the existing entry presents a safety hazard due to conflicts between pedestrian and vehicle traffic. Minor traffic management works are proposed at the entry point to improve pedestrian safety.

Project Element 10 -Fuel Farm

84. The existing fuel farm dates from the mid 1950s and has been progressively expanded to provide a storage capacity of 675,000 litres. Painting of some tanks was undertaken around 2003-04, however further upgrade works were deferred. The current arrangement does not operate efficiently or safely, and has a large maintenance liability. An upgrade of the existing fuel farm is required to enable effective and safe operation with the required fuel supply capacity. The upgrade will also facilitate a significant maintenance reduction and improve operability.

85. This project proposes to deliver a fuel farm, which is fully compliant with the requisite codes and regulations and meets user requirements. Four new stainless

steel tanks are proposed, which will not require external or internal paint. Existing bunds will also be modified to contain fuel in the event of a spillage. All of the existing tanks will be removed.

Project Element 11 -Bore Water Treatment Plant

86. Operation of the existing bore water treatment plant has been suspended due to excessive ongoing plant maintenance costs. The potable water supply for RAAF Base East Sale is currently sourced at a reduced level from the local provider, Gippsland Water, under a licensed supply arrangement. Investigations undertaken during the development of the project determined that the projected demand for base potable water will be in excess of the current licensed supply arrangement. Not only is there a limited scope to increase the supply, but the costs to supply have been increasing and that trend is expected to continue.

87. In order to meet the expected projected water demand, Defence would need to upgrade the 150mm water supply main external to the base along Aerodrome Road. Whole-of-life analysis has shown that there is a financial benefit in developing a new bore water treatment plant to supplement the ongoing purchase of potable water from Gippsland Water.

88. This project proposes to deliver a new bore treatment plant, which will draw water from the Biosdale aquifer in accordance with the current 100 mega-litre per annum Defence licensing agreement. In addition to the bore supply, water will continue to be purchased from the local provider to ensure there is a redundancy in the system.

Project Element 12 -Living-In Accommodation

89. Training and working accommodation for the School of Air Warfare, Central Flying School and the School of Air Traffic Control are currently established within the base. Students attending courses at these schools are accommodated in living-in accommodation on the base. Although new living-in accommodation to contemporary standards was provided for the Officer Training School (OTS) under the RAAF College project, the existing living-in accommodation for the School of Air Warfare, the Central Flying School and

the School of Air Traffic Control is in poor condition and does not meet the current minimum standards.

90. This project proposes to provide six new living-in accommodation blocks to replace the existing substandard accommodation. The new blocks will provide 120 living-in accommodation rooms for the School of Air Warfare and the Central Flying School, and a further 60 living-in accommodation rooms for the School of Air Traffic Control. The living-in accommodation blocks will be located in close proximity to their respective schools working accommodation and messing facilities.

91. The living-in accommodation will be designed in accordance with the Training Level 1 Defence standard for living-in accommodation.

92. Most of the current living-in accommodation will be demolished. It is proposed to maintain the existing condominiums and old Officers' Mess (building 335) accommodation as transit accommodation. This will provide a total of 70 transit accommodation rooms available to accommodate visiting Defence members including cadets and reserves.

93. A typical floor plan and perspective drawing for the living-in accommodation works are at Attachments 20 and 21.

Project Element 13 -Demolition

94. Provision has been made to demolish buildings vacated as part of the redevelopment project, as well as a number of other buildings on the site which are not appropriate for refurbishment and reuse, are surplus to requirements, and present an ongoing operational and maintenance liability for the base.

Details and Reasons for Site Selection

95. The selection of sites for each project element has been undertaken in accordance with Infrastructure Division planning policy requirements. A Site Selection Board was conducted in August 2009 and addressed Defence policies regarding environment, heritage and operational requirements.

96. The proposed sites for each of the elements of works are shown on the site plan at Attachment 3. All sites are contained within the RAAF Base East Sale Precinct, being Commonwealth owned and Defence controlled land.

Public Transport

97. RAAF Base East Sale is not serviced by public transport and as a result Defence personnel are required to use private motor vehicles for transport to and from the base. The base has capacity available to accommodate the potential additional vehicle parking associated with the projected increased base population and additional general parking is not required.

Local Road and Traffic Concerns

98. Aerodrome Road is the main access point into the base. In accordance with the project traffic management plan, construction vehicle access may be via a secondary access point not accessible by Base occupants or visitors. Designated parking zones will be identified for contractor parking and proposed truck routes will be established within the base, thus minimising the use of roads regularly used by the base population and visitors.

99. Minimal impact to local road and traffic conditions is anticipated as a result of the construction activity.

Zoning, Local Approvals and Land Acquisition

100. The facilities proposed in the project will be constructed on Commonwealth owned and Defence controlled land, and therefore no civilian authority, zoning or development approvals are required. The proposal does not require the acquisition of additional land or involve any land disposal.

101. There are no Native Title or Indigenous Land Use Agreement issues associated with this proposal.

102. There will be no change to the existing land use conditions for any of the project sites and all proposed land uses for the various sites are consistent with the current zone and precinct plans, where such plans exist.

Planning and Design Concepts

103. The project will provide safe, secure and efficient working accommodation, living-in accommodation and training facilities that meet the required functional requirements and provide value for money. The proposed design has given consideration to the impact of materials, equipment, finishes, construction techniques and building efficiencies. The design presents solutions that offer sustainability, minimise the environmental impact and address whole of life issues.

104. The selection of engineering services and associated equipment and energy systems were assessed against forecast capital, operational and maintenance costs. Consideration has been given to energy efficient solutions employing passive solar energy supply, sub-metering of energy sources to buildings and water conservation initiatives.

105. Buildings have been sited to allow for future expansion if required. The engineering services have been designed to support future population growth on the base with appropriate redundancies, consistent with spatial capacity to accommodate further population on the base.

Structural Design

106. Consideration has been given to each element individually to determine the structural system that offers:

    a. the best value for money;

    b. optimum balance between prefabricated materials and in situ construction; and

    c. suitable systems based on the outcomes of the specific geotechnical investigations undertaken.

Materials and Furnishings

107. Due to the extensive nature of the redevelopment, the materials selected will be integral to forming the ultimate character of the base. They will be contextually relevant in creating a consistent visual quality to the base. The main characteristics of materials selected will be their robustness, low maintenance requirements, low life cycle costs, ease of replacement and repair, pre fabricated where possible, and colour.

Mechanical Services

108. Consideration has been given to each element individually to determine the mechanical services that offer:

    a. the best value for money;

    b. maximum use of Ecologically Sustainable Development initiatives;

    c. appropriate level of climate control for the intended purpose of the facility; and

    d. maximum flexibility for internal spaces (e.g. mixed mode ventilation, ducted heating/cooling and mechanical exhaust).

Hydraulic Services

109. All hydraulic services have been designed in accordance with user requirements, the Building Code of Australia, the Defence Manual of Fire Protection Engineering (MFPE) and other Defence requirements.

Electrical Services and Fire Protection

110. All electrical services have been designed in accordance with user requirements, Australian Standards, the Building Code of Australia, the Defence Manual of Infrastructure Engineering – Electrical (MIEE), the MFPE and other Defence requirements.

Acoustics

111. The new facilities will comply with the Building Code of Australia standards for noise and acoustics. Acoustic separation has been considered between rooms, and walls are being designed to meet user requirements and building functions.

112. Where necessary, new facilities have been designed in accordance with AS2021-2000 '*Acoustics – Aircraft Noise intrusion – Building Siting and Construction*' to mitigate the risk of undue noise for building users.

Landscaping

113. Landscaping design has been included in all new building elements where appropriate and functional. Landscaping works will also be completed to restore areas disturbed during construction and provide general improvement to the built environment.

114. Landscaping design will focus on a functional, low maintenance and water sensitive approach with plants that are indigenous to the area. A two-year establishment period will be included in the landscaping contract to ensure the landscaping elements are maintained during the establishment period to promote the most effective and efficient propagation.

115. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices in accordance with local environmental conditions and the Construction Environment Management Plan.

Water and Energy Conservation Measures

116. The Commonwealth is committed to Ecologically Sustainable Development and the reduction of greenhouse gas emissions. Defence reports annually to Parliament on its energy management performance and on its progress in meeting the energy efficiency targets established by the Government as part of its commitment to improve Ecologically Sustainable Development. Defence also implements policies and strategies in energy, water and waste to improve natural resource efficiency and to support its commitment to the reduction of energy consumption, potable water consumption and waste diversion to landfill. This project has addressed this policy by adopting cost-effective and ecologically sustainable development as a key objective in the design development and delivery of new facilities.

117. The project represents a very significant redevelopment /upgrade of the base. As such, the project provides many opportunities to ensure that best practice, and available ecologically sustainable development (energy, water and waste conservation) options are effectively incorporated during relevant project development schedules.

118. The ecologically sustainable measures for the project are balanced with other requirements for Defence buildings, including security, heritage and occupational health and safety considerations, to ensure that Defence's operational capability is not compromised. All buildings are designed and will be constructed, operated and maintained to ensure that they use energy efficiently considering their required use.

119. To achieve this, buildings will comply with:

    a. Part 1.2 and Section J of Volume One of the Building Code of Australia, 2009;

    b. Part 3.12 of Volume Two of the Building Code of Australia, 2009;

    c. The Energy Efficiency in Government Operations policy; and

    d. Defence Green Building Requirements Policy.

120. Some of the proposed facilities will be new construction on previously developed but now cleared sites. The relatively unrestricted sites, in terms of building site size, orientation and aspect, provide the greatest opportunity to implement environmental sustainability in precinct and building design.

121. All energy sources supplying the building/s will be individually metered and linked to a control and monitoring system allowing Defence to better manage and monitor environmental performance. Sub-metering will be provided in accordance with the Defence Energy Management Strategy, the requirements of the Commonwealth Energy Policy and any metering requirements specified by Defence.

122. A significant environmental outcome for this project will be the treatment of stormwater from the site from buildings, roads and hardstands and the stormwater channel remediation improvement works. Although there are no current quality concerns relating to the base stormwater discharge, these works will ensure the ongoing quality of the stormwater discharging into the Gippsland Lakes Ramsar listed Wetlands.

123. An example of other ecologically sustainable development initiatives to be implemented within the scope of the Project include:

a. rainwater collection for use in building toilets;

b. implementation of pedestrian and bicycle routes across the base;

c. cut and fill volumes will be balanced as much as possible;

d. solar hot water systems and other facility specific initiatives;

e. building orientation will be designed to maximise solar efficiencies; and

f. all facilities will include energy and water efficient plant and fixtures.

124. Whilst Green Star building certification will not be applied for, it is the intention to design and construct to the relevant Green Star standard relative to facility usage.

Demolition and Disposal of Existing Structures

125. The project proposes to demolish redundant facilities. The demolition works will include:

a. the safe removal and disposal of hazardous material including asbestos;

b. 70% of material by weight will be recycled or reused;

c. excavated material will be re-used on site where possible; and

d. minimal use of landfill disposal.

126. The demolition will be undertaken in accordance with the Defence Regional Demolition Plan, and with council and other statutory requirements.

Zone Planning

127. The RAAF Base East Sale Zone Plan project is currently being developed by the Defence Land Planning and Spatial Information Branch. As the project planning was undertaken prior to the establishment of an approved zone plan, the project developed a site master planning strategy in consultation with the Defence Land Planning and Spatial Information Directorate to ensure the proposed works would not impede future zone planning requirements. There will be no change to the existing land use conditions for any of the project sites.

Provisions for People with Disabilities

128. Access and facilities for the disabled will be provided where necessary in accordance with the Building Code of Australia, Australian Standard AS1428 and the Defence policy 'Disabled Access and Other Facilities for Disable Persons'.

129. Dispensation will be sought where operational requirements are inconsistent with Building Code of Australia requirements. The nature of some facilities occupied by military personnel can preclude disabled access.

Childcare Provisions

130. There is no requirement for additional child care facilities as part of this Project. A childcare centre was constructed on the base in 2006 and meets the current and known future needs of the base.

Occupational Health and Safety Measures

131. The facilities to be provided under this project will comply with Department of Defence Occupational Health and Safety policy, the *Occupational Health and Safety Act 1991 (Cwlth)*, Occupational Health and Safety (Commonwealth Employment - National Standards) Regulations and the Defence Occupational Health and Safety manual.

132. In accordance with Section 35(4) of the *Building and Construction Industry Improvement Act 2005 (Cwlth)*, contractors will be required to hold full occupational health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building and Construction Occupational Health and Safety Accreditation Scheme. All construction sites will be appropriately secured to prevent access during the construction period. No special or unusual public safety risks have been identified.

Cost Effectiveness and Public Value

Outline of Project Costs

133. The estimated cost for this project is $185.6 million, excluding Goods and Services Tax. The estimate includes allowances for escalation, design and construction contingency, professional fees, design completion, Defence contingency, and the cost of active information technology equipment and business machines.

134. An increase in net operating costs is expected due to the construction of the new facilities and the associated increases in facilities maintenance, cleaning and utilities expenses.

Details of Project Delivery System

135. A Project Manager / Contract Administrator will be appointed by the Commonwealth to manage the proposed works and administration of the contracts for construction. A Managing Contractor, using the Defence form of Managing Contractor Contract, will be appointed to control the completion of design development, procurement of trades and construction of the proposed works. The Managing Contractor will provide the Commonwealth with buildability experience and fitness for purpose warranties while promoting access for small to medium enterprises through sub-contract design and construction trade packages.

Construction Schedule

136. Subject to Parliamentary approval of the project, construction is expected to begin mid-2012 with completion expected by mid-2015.

Public Value

137. The proposed redevelopment contributes significantly to Air Force capability outputs by providing effective new and re-used facilities at RAAF Base East Sale.

138. Existing facilities have been re-used where they feasibly meet the operational needs of the Air Force and to minimise operating costs and environmental impacts. The cost of investment, both in capital and operating terms, has been optimised in a number of proposed purpose designed facilities. The proposed redevelopment of facilities includes the renewal of engineering services infrastructure to ensure these services will be adequate for the next 30 years.

Revenue

139. No revenue will be derived from this proposal.

LOCATION OF SALE FROM MELBOURNE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT

LOCATION OF SALE FROM MELBOURNE (NOT TO SCALE)

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	LOCATION PLAN 01	PWC-SOE-LOC-01	JULY 2011	A

Attachment 1: Locality Plan – RAAF Base East Sale

LOCATION OF EAST SALE RAAF BASE FROM SALE (NOT TO SCALE)

LOCATION OF EAST SALE RAAF BASE FROM SALE

Attachment 2: Regional Plan – RAAF Base East Sale

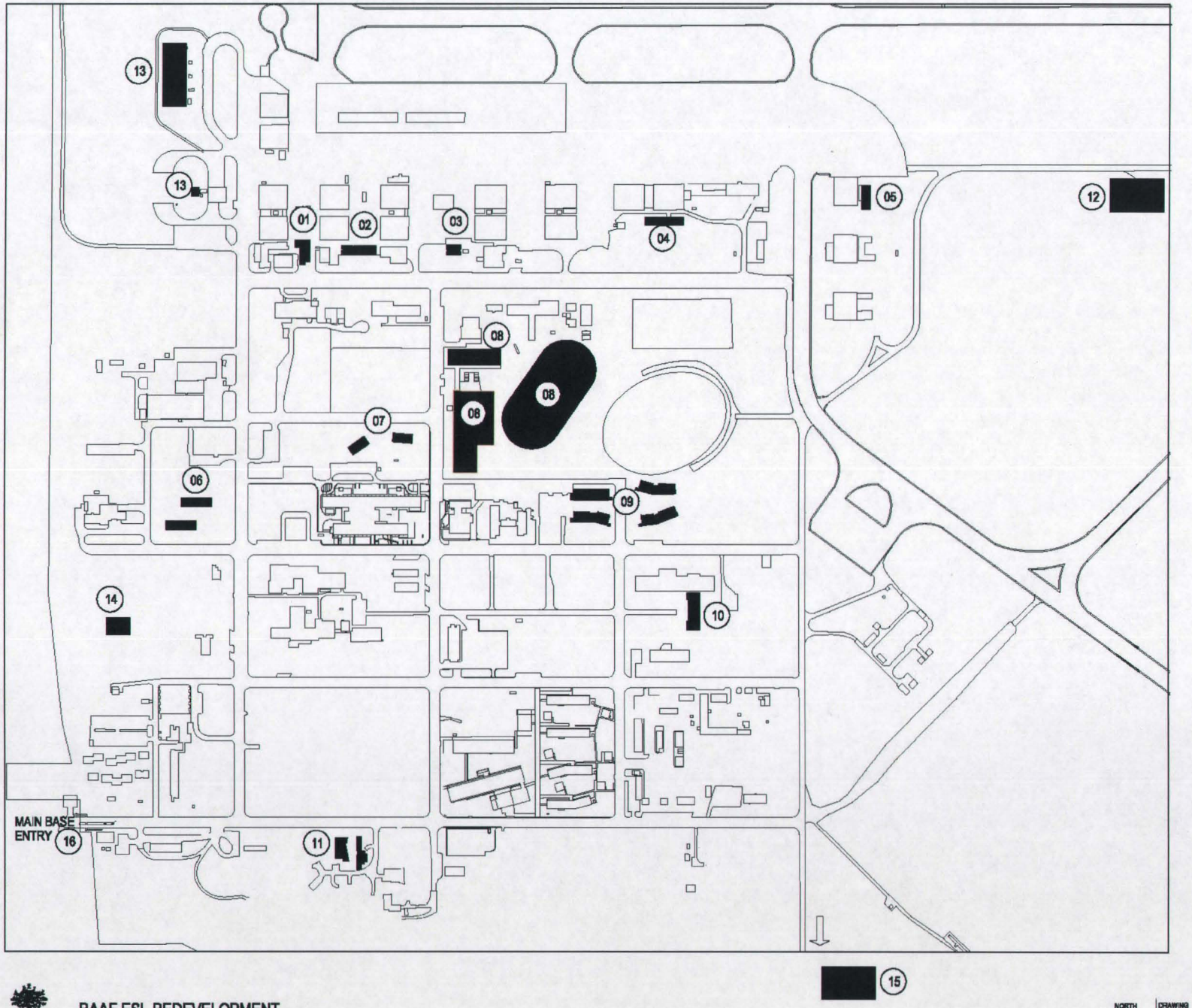
Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT

LOCATION OF EAST SALE RAAF BASE FROM SALE (NOT TO SCALE)

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	LOCATION PLAN 02	PWC-SOE-LOC-02	JULY 2011	A

PRECINCT PLAN (NOT TO SCALE)



NEW BUILDINGS LEGEND

01	FLIGHTLINE - MECHANICAL ENGINEERING OPERATIONAL MAINTENANCE (MEOMS) FACILITY
02	FLIGHTLINE - AIRFLITE FACILITY (AIR)
03	FLIGHTLINE - OXYGEN WORKSHOP (OXY)
04	FLIGHTLINE - HAWKER PACIFIC FACILITY (HAP)
05	FLIGHTLINE - SEARCH & RESCUE FACILITY (SAR)
06	SCHOOL OF AIR TRAFFIC CONTROL LIVING-IN ACCOMMODATION (LIA-SATC)
07	COMMERCIAL FACILITIES (CF)
08	PHYSICAL FITNESS FACILITIES (PFF)
09	SCHOOL OF AIR WARFARE & CENTRAL FLYING SCHOOL LIVING-IN ACCOMMODATION (LIA-SAW/CFS)
10	SCHOOL OF AIR WARFARE FACILITY (SAW)
11	CHAPEL AND COMMUNITY SUPPORT FACILITY (CSF)
12	AIR TRAFFIC CONTROL COMPLEX
13	FUEL FARM FACILITIES
14	WATER TREATMENT PLANT
15	25m FIRING RANGE
16	MAIN BASE ENTRY

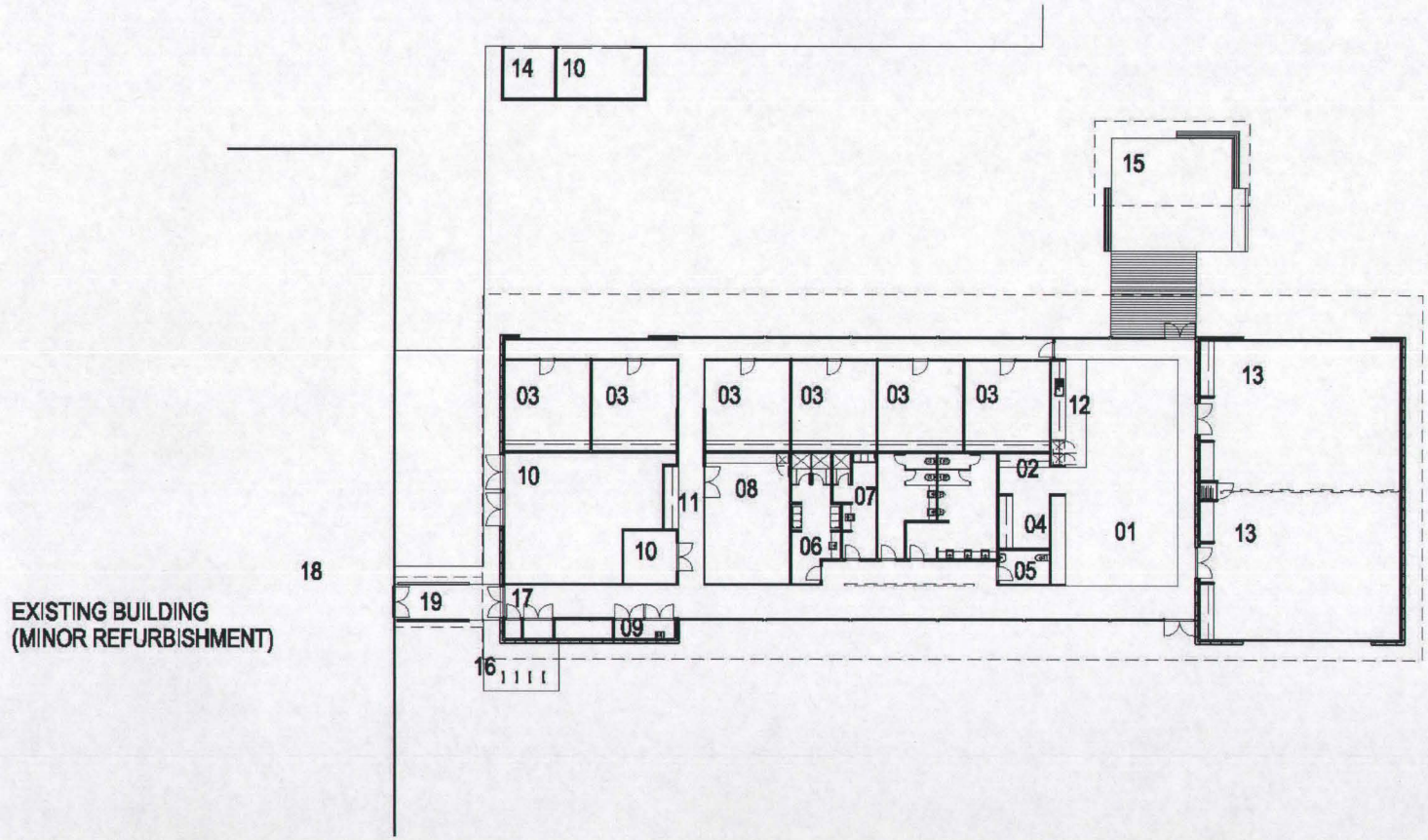
Attachment 3: Site Plan – RAAF Base East Sale

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
PRECINCT PLAN (NOT TO SCALE)

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	PRECINCT PLAN	PWC-SOE-PRE-01	JULY 2011	A

SCHOOL OF AIR WARFARE NEW FACILITIES



TYPICAL GROUND LEVEL FLOOR PLAN (SCALE 1:800)

ROOM LEGEND

01	FOYER / COMMON ROOM
02	STUDENT TOUCH DOWN
03	OFFICE
04	UTILITY
05	ACCESSIBLE TOILET
06	MALE CHANGE
07	FEMALE CHANGE
08	MEETING ROOM
09	CLEANER
10	PLANT
11	STAFF UTILITY
12	BREW
13	TRAINING ROOM
14	WASTE COLLECTION
15	OUTDOOR BREAKOUT
16	BICYCLE PARKING
17	STUDENT ENTRY
18	EXISTING BUILDING (MINOR REFURBISHMENT)
19	LINK TO EXISTING BUILDING

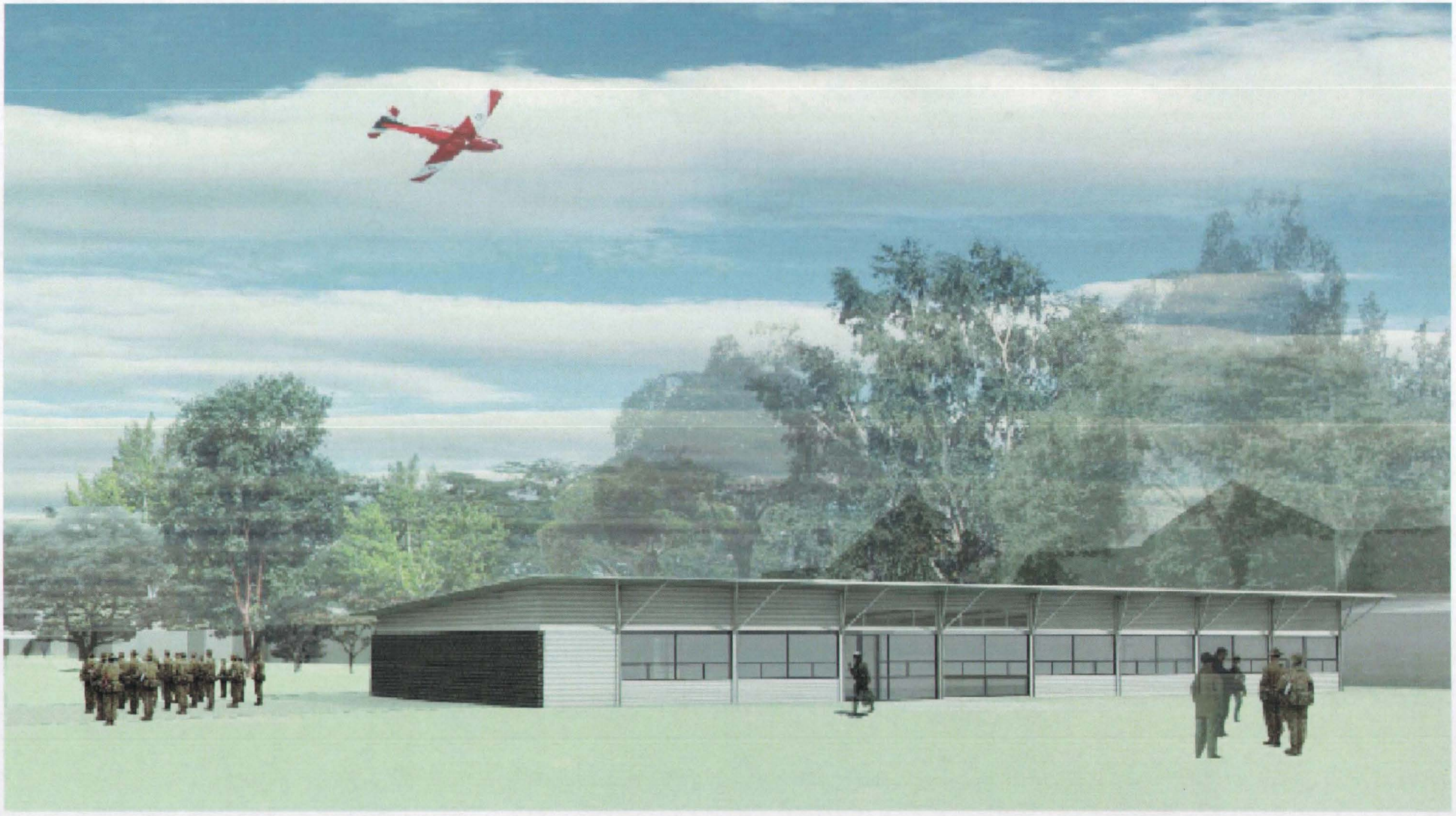
Attachment 4: School of Air Warfare – Floor Plan

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
SCHOOL OF AIR WARFARE (SAW) NEW FACILITIES

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	SAW GROUND FLOOR PLAN	PWC-SOE-SAW-02	JULY 2011	A

SCHOOL OF AIR WARFARE NEW FACILITIES



PERSPECTIVE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
SCHOOL OF AIR WARFARE (SAW) NEW FACILITIES

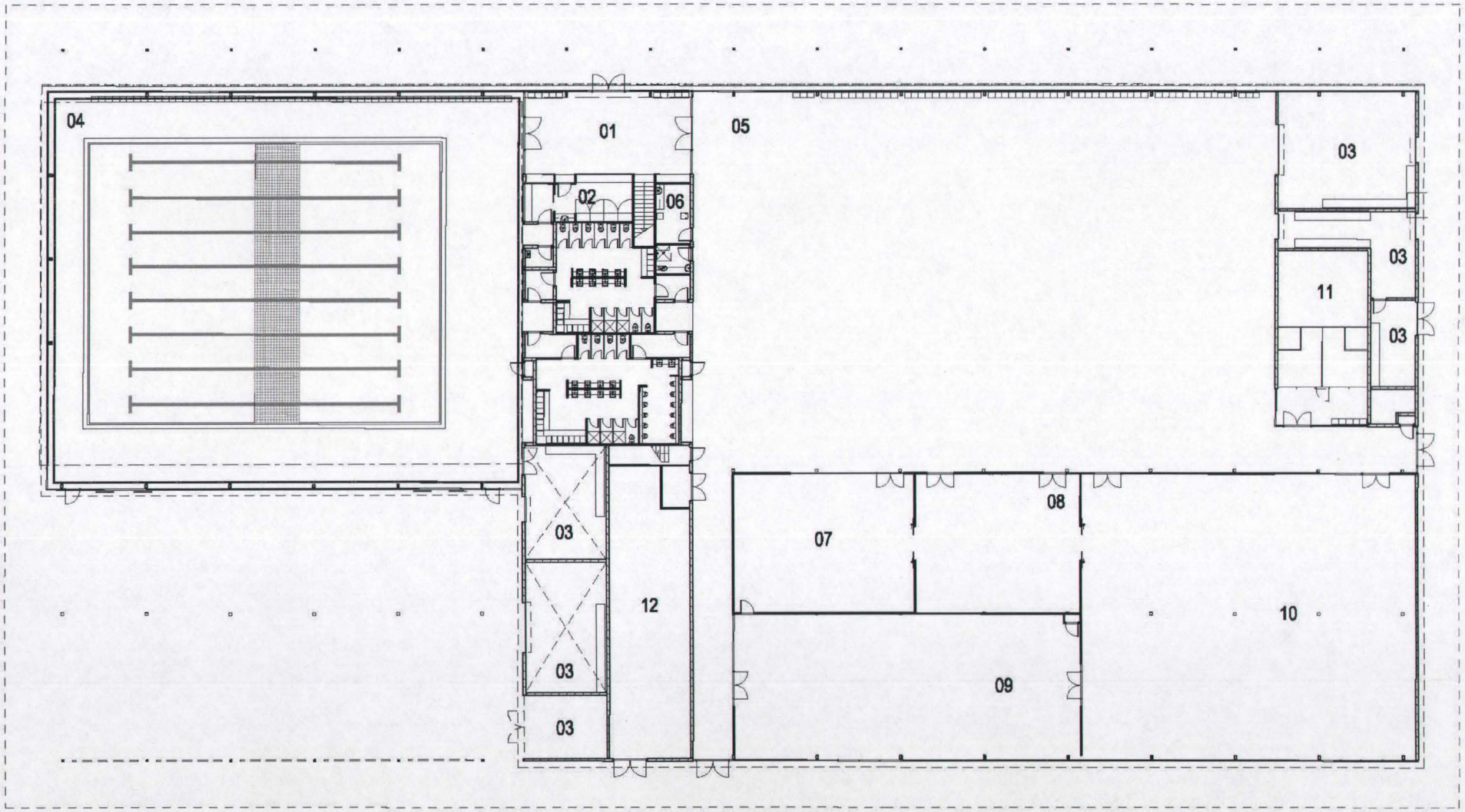
DRAWING	DRAWING NO	DATE	ISSUE
SAW	PWC-SOE-SAW-04	JULY 2011	A

Attachment 5: School of Air Warfare – Perspective

PROPOSED NEW PHYSICAL FITNESS FACILITIES

ROOM LEGEND

01	ENTRY	07	BOXERCISE
02	RECEPTION	08	SPIN STUDIO
03	STORE	09	CARDIO
04	POOL HALL	10	WEIGHTS
05	GYM HALL	11	SQUASH
06	PHYSIOTHERAPIST/ FIRST AID	12	PLANT



TYPICAL GROUND LEVEL FLOOR PLAN (SCALE 1:800)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
PHYSICAL FITNESS FACILITY(PFF)

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	PFF FACILITIES	PWC-SOE-PFF-02	JULY 2011	A

Attachment 6: Physical Training Facilities – Floor Plan

PROPOSED NEW PHYSICAL FITNESS FACILITIES

PERSPECTIVE (NOT TO SCALE)

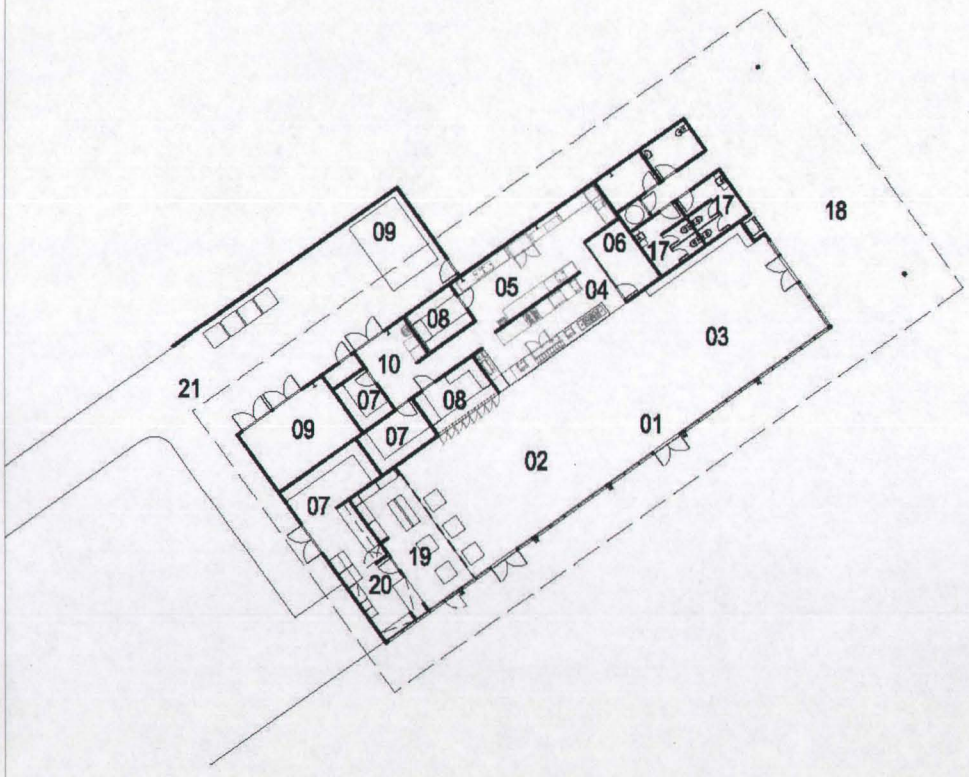
Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
PHYSICAL FITNESS FACILITY(PFF)

DRAWING	DRAWING NO	DATE	ISSUE
PFF FACILITIES	PWC-SOE-PFF-04	JULY 2011	A

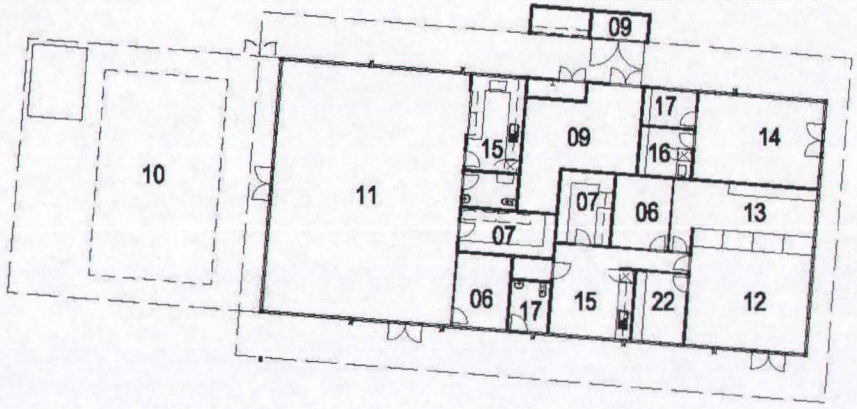
Attachment 7: Physical Training Facilities – Perspective

COMMERCIAL FACILITIES
-CAFE , RETAIL & POST OFFICE



GROUND LEVEL FLOOR PLAN (SCALE 1:800)

COMMERCIAL FACILITIES
-FAMILY GROUP, DEFENCE CREDIT & HAIRDRESSER



ROOM LEGEND

01	ENTRY
02	RETAIL AREA
03	CAFE
04	SERVE
05	KITCHEN
06	OFFICE
07	STORE
08	COLD STORE
09	PLANT
10	OUTDOOR PLAY AREA
11	FAMILY GROUP
12	MEMBER SERVICES
13	TELLERS
14	HAIR
15	BREW
16	STORE + BREW
17	PUBLIC TOILET
18	OUTDOOR CAFE AREA
19	POST OFFICE RETAIL
20	POST OFFICE
21	DELIVERIES LOADING
22	MEETING ROOM

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
COMMERCIAL FACILITIES

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	COMMERCIAL FACILITIES	PWC-SOE-CF-02	JULY 2011	A

Attachment 8: Commercial Facilities – Floor Plan

COMMERCIAL FACILITIES

PERSPECTIVE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
COMMERCIAL FACILITIES (CF)

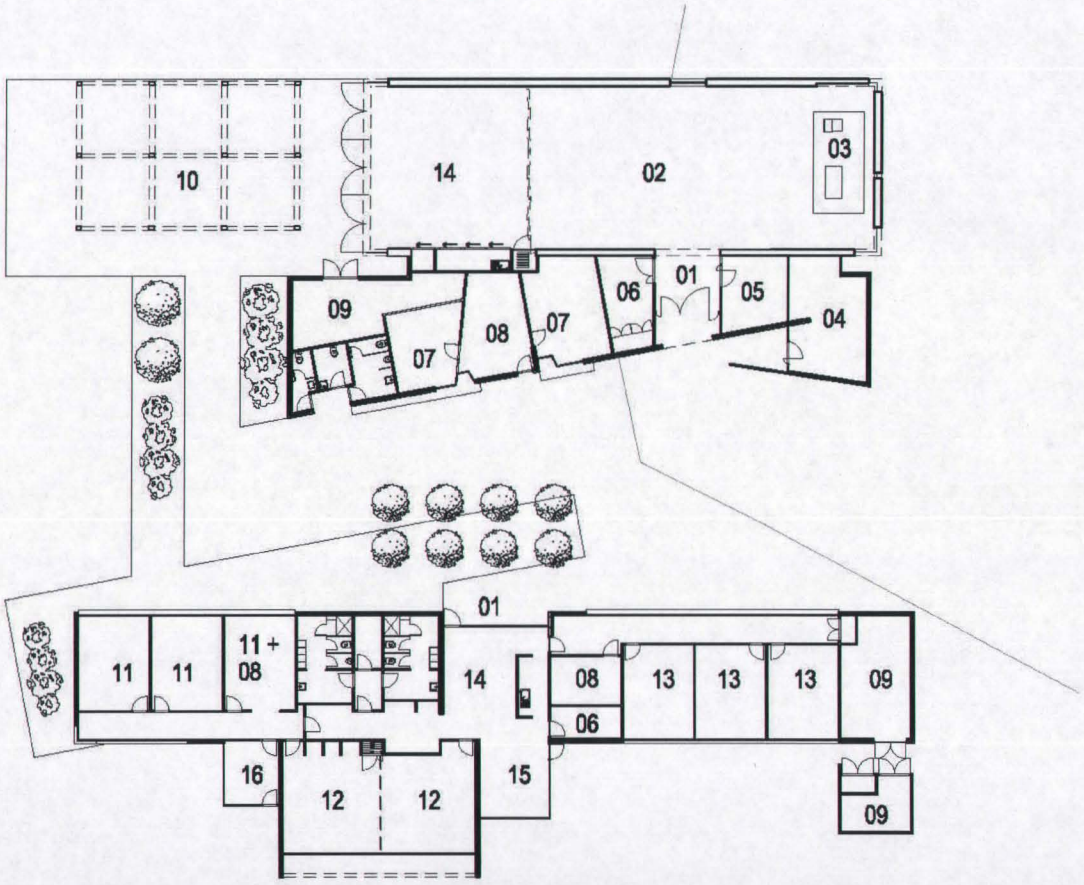
DRAWING	DRAWING NO	DATE	ISSUE
COMMERCIAL FACILITIES	PWC-SOE-CF-04	JULY 2011	A

Attachment 9: Commercial Facilities – Perspective

ROOM LEGEND

01	ENTRY
02	NAVE
03	SANCTUARY
04	PRAYER ROOM
05	VESTRY
06	STORE
07	OFFICE
08	UTILITY
09	PLANT
10	COURTYARD
11	PSYCHOLOGY
12	TRAINING ROOM
13	COUNSELLING ROOM
14	BREAKOUT/BREW
15	MEETING
16	WAITING AREA PSYCHOLOGY

CHAPEL



COMMUNITY SUPPORT FACILITY (CSF)

TYPICAL GROUND LEVEL FLOOR PLAN (SCALE 1:800)

Attachment 10: Chapel and Community Facilities – Floor Plan

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
CHAPEL & COMMUNITY SUPPORT FACILITY (CSF)

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	CSF FACILITIES	PWC-SOE-CSF-02	JULY 2011	A

CHAPEL AND COMMUNITY SUPPORT FACILITY (CSF)

PERSPECTIVE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

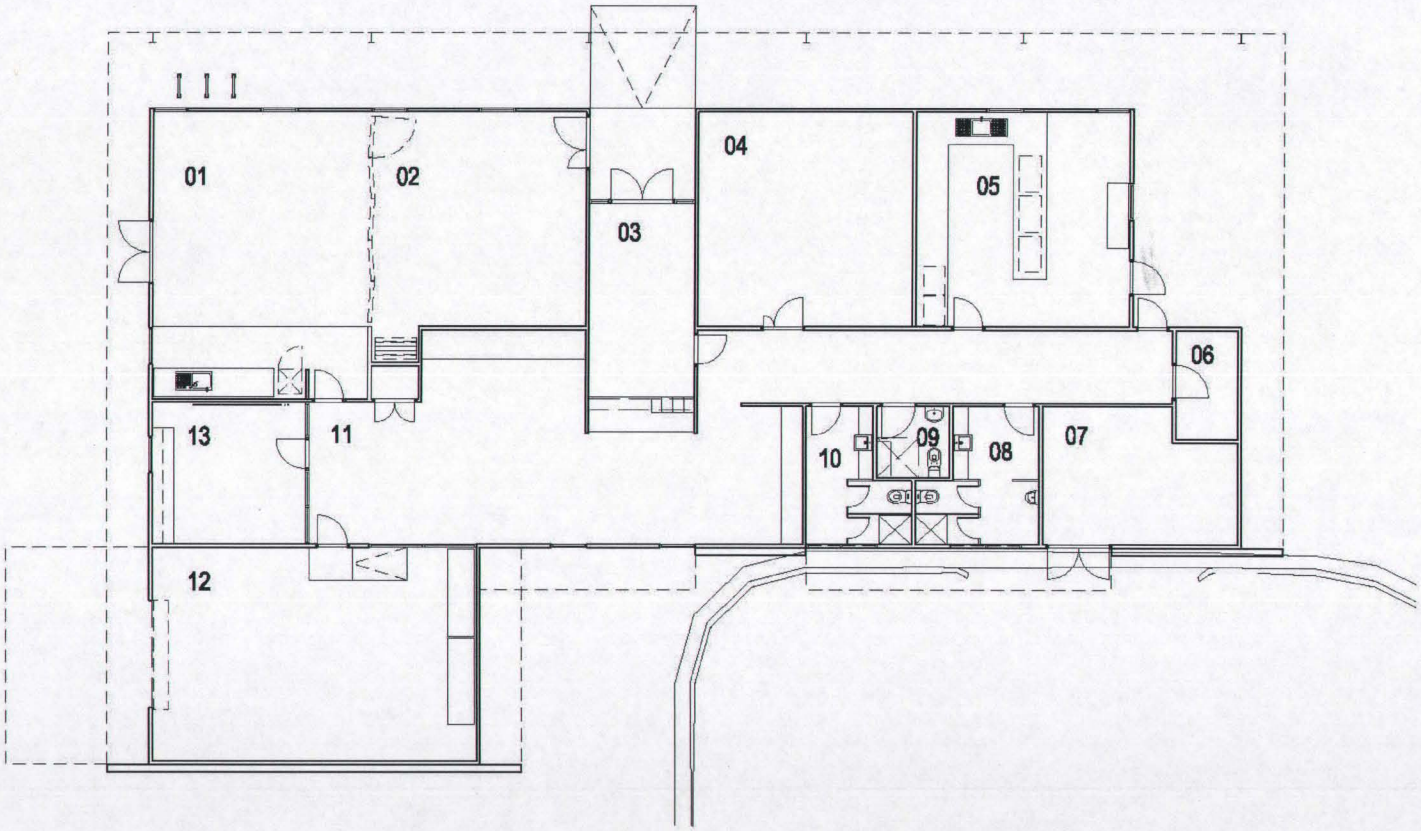
RAAF ESL REDEVELOPMENT
CHAPEL & COMMUNITY SUPPORT FACILITY (CSF)

DRAWING	DRAWING NO	DATE	ISSUE
CSF FACILITIES	PWC-SOE-CSF-04	JULY 2011	A

A: FLIGHTLINE - MECHANICAL ENGINEERING OPERATIONAL MAINTENANCE (MEOMS) FACILITIES

ROOM LEGEND

01	BREW & TRAINING
02	DRIVER TRAINING
03	FOYER
04	ARCHIVE STORE
05	FUEL TEST
06	COMMUNICATIONS
07	PLANT
08	MALE TOILET
09	ACCESSIBLE TOILET
10	FEMALE TOILET
11	TECHNICAL OFFICE & UTILITY
12	TECHNICAL STORE
13	SITE MANAGER



GROUND LEVEL FLOOR PLAN (SCALE 1:400)

Attachment 12: Flight Line Maintenance Facilities
Mechanical Engineering Operational Maintenance – Floor Plan

Australian Government
Department of Defence
Defence Support Group

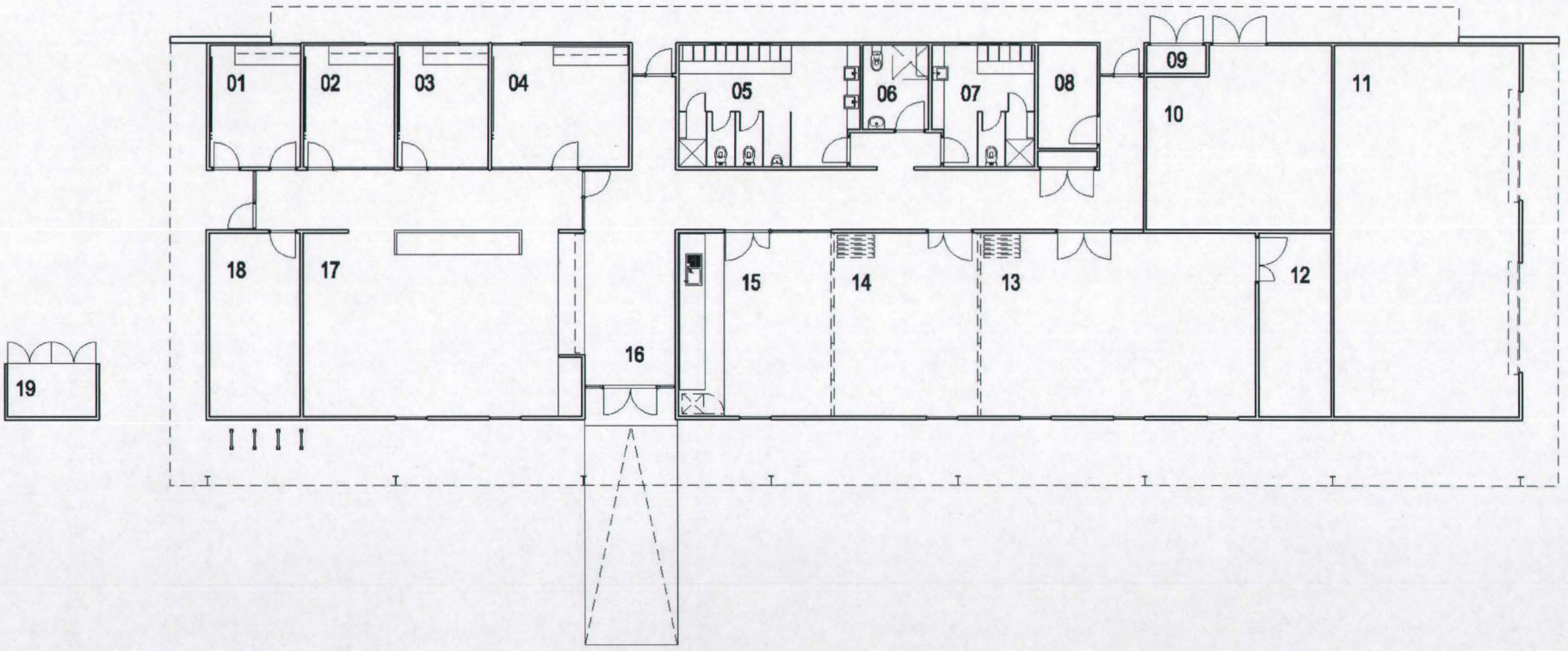
RAAF ESL REDEVELOPMENT
FLIGHTLINE - MECHANICAL ENGINEERING OPERATIONAL MAINTENANCE (MEOMS) FACILITIES

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	MEOMS FACILITIES	PWC-SOE-MEOMS-02	JULY 2011	A

B: FLIGHTLINE - AIRFLITE FACILITIES

ROOM LEGEND

01	REPAIRABLE ITEMS OFFICE
02	TRAINER OFFICE
03	QUALITY ASSURANCE OFFICE
04	SITE MANAGER OFFICE
05	MALE TOILET
06	ACCESSIBLE TOILET
07	FEMALE TOILET
08	COMMUNICATIONS
09	SWITCHBOARD
10	PLANT
11	PROPS ENGINES STORE
12	TRAINING STORE ROOM
13	TRAINING ROOM
14	MEETING
15	BREW ROOM
16	FOYER
17	RECEPTION
18	ARCHIVE
19	WASTE MANAGMENT



GROUND LEVEL FLOOR PLAN (SCALE 1:400)

Attachment 13: Flight Line Maintenance Facilities

Airflite – Floor Plan

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT

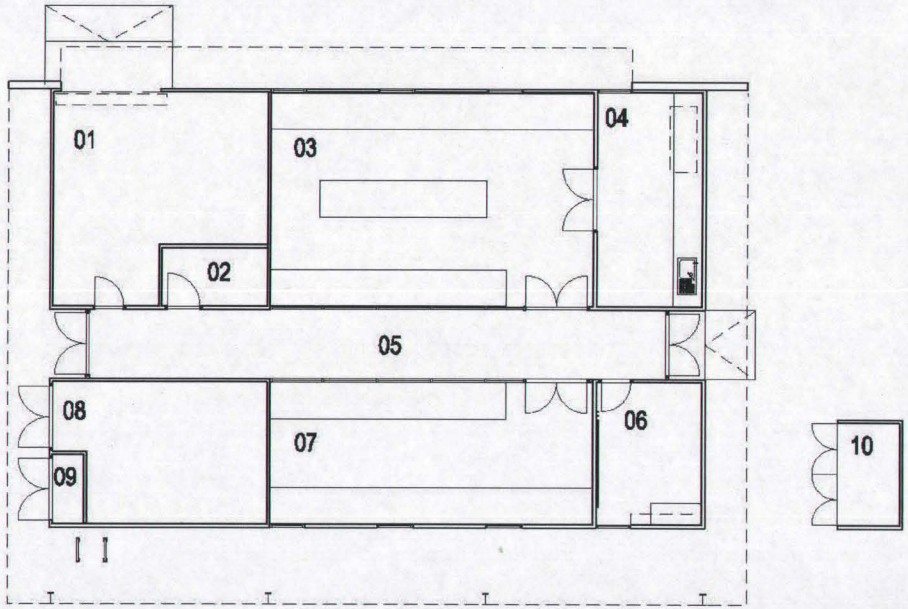
FLIGHTLINE - AIRFLITE FACILITIES (AIR)

NORTH	DRAWING	DRAWING NO	DATE	
	AIR FACILITIES	PWC-SOE-AIR-02	JULY 2011	A

C: OXYGEN WORKSHOP

ROOM LEGEND

01	GAS TANKS STORE
02	COMMUNICATIONS
03	OXYGEN WORSHOP
04	CLEANING ROOM
05	CORRIDOR
06	OFFICE
07	INSTRUMENT TEST ROOM
08	PLANT
09	SWITCHBOARD
10	WASTE MANAGEMENT AREA



GROUND LEVEL FLOOR PLAN (SCALE 1:400)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
FLIGHTLINE - OXYGEN WORKSHOP (OXY)

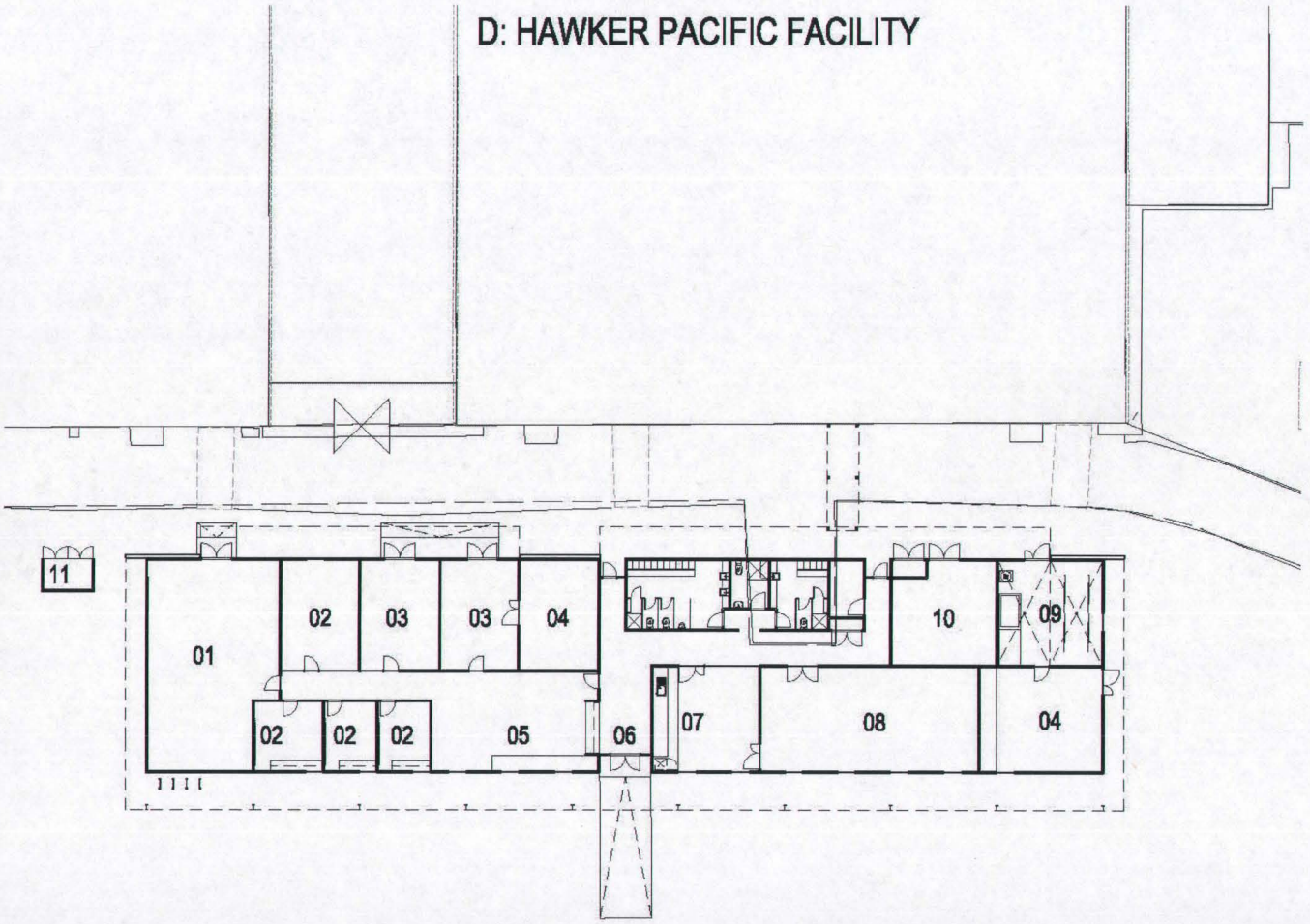
NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	OXY FACILITIES	PWC-SOE-OXY-02	JULY 2011	A

Attachment 14: Flight Line Maintenance Facilities
Oxygen Workshop – Floor Plan

D: HAWKER PACIFIC FACILITY

ROOM LEGEND

01	TECHNICAL STORE
02	OFFICE
03	WORKSHOP
04	STORE
05	RECEPTION
06	FOYER
07	BREW
08	TRAINING
09	WET STORE
10	PLANT
11	WASTE



TYPICAL GROUND LEVEL FLOOR PLAN (SCALE 1:800)

Attachment 15: Flight Line Maintenance Facilities
Hawker Pacific – Floor Plan

Australian Government
Department of Defence
Defence Support Group

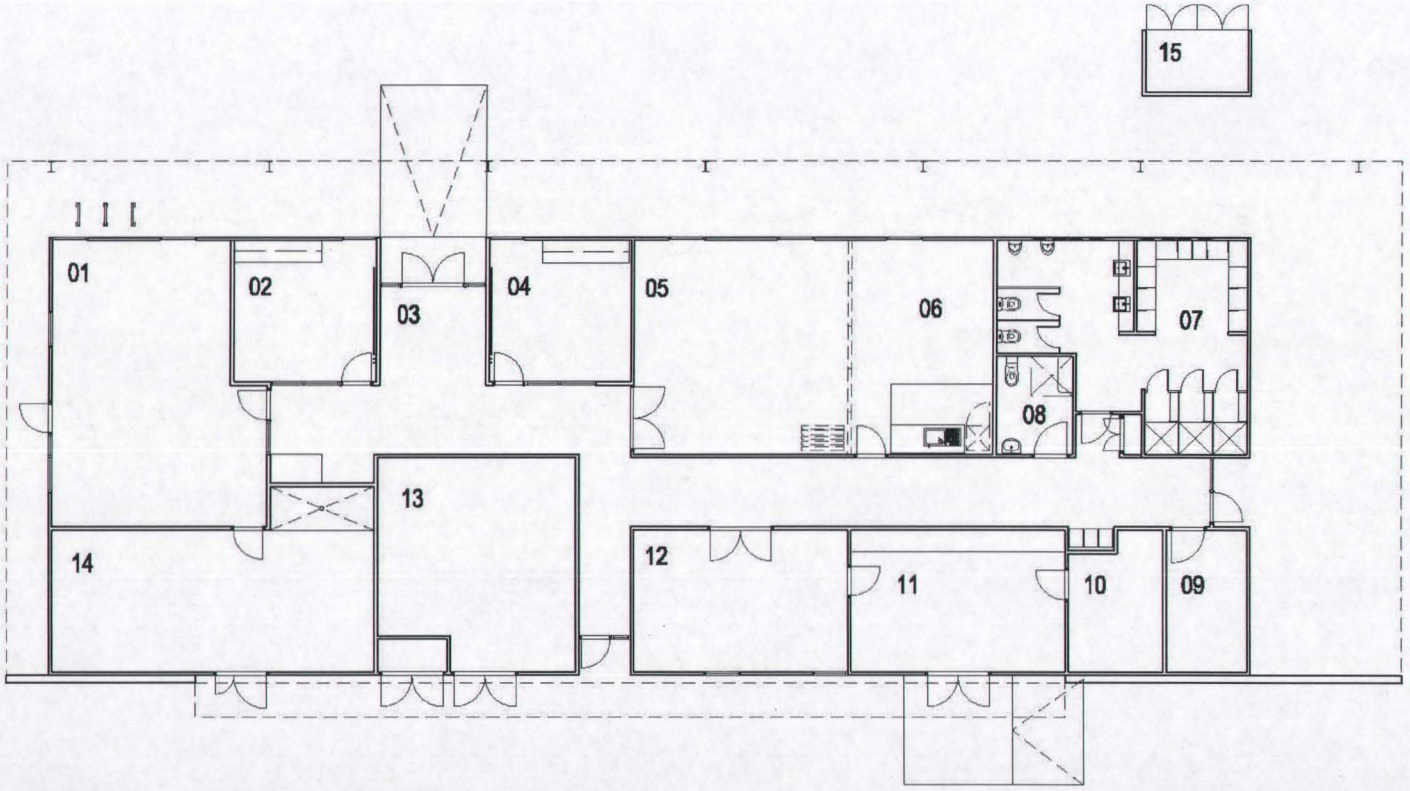
RAAF ESL REDEVELOPMENT
FLIGHTLINE - HAWKER PACIFIC (HAP) FACILITY

NORTH	DRAWING	DRAWING NO	DATE	
	HAP FACILITIES	PWC-SOE-HAP-02	JULY 2011	A

E: SEARCH AND RESCUE FACILITIES

ROOM LEGEND

01	OPERATIONS/PLANNING
02	BASE MANAGER
03	ENTRY
04	CONTRACT MANAGER
05	TRANING ROOM
06	BREW ROOM
07	MALE TOILET/ SHOWER
08	FEMALE / ACCESSIBLE TOILET
09	COMMUNICATIONS
10	ENGINEER STORE
11	ENGINEER WORKSHOP
12	ENGINEER OFFICE
13	PLANT
14	SAFETY EQUIPMENT
15	WASTE MANAGEMENT



GROUND LEVEL FLOOR PLAN (SCALE 1:400)

Australian Government
Department of Defence
Defence Support Group

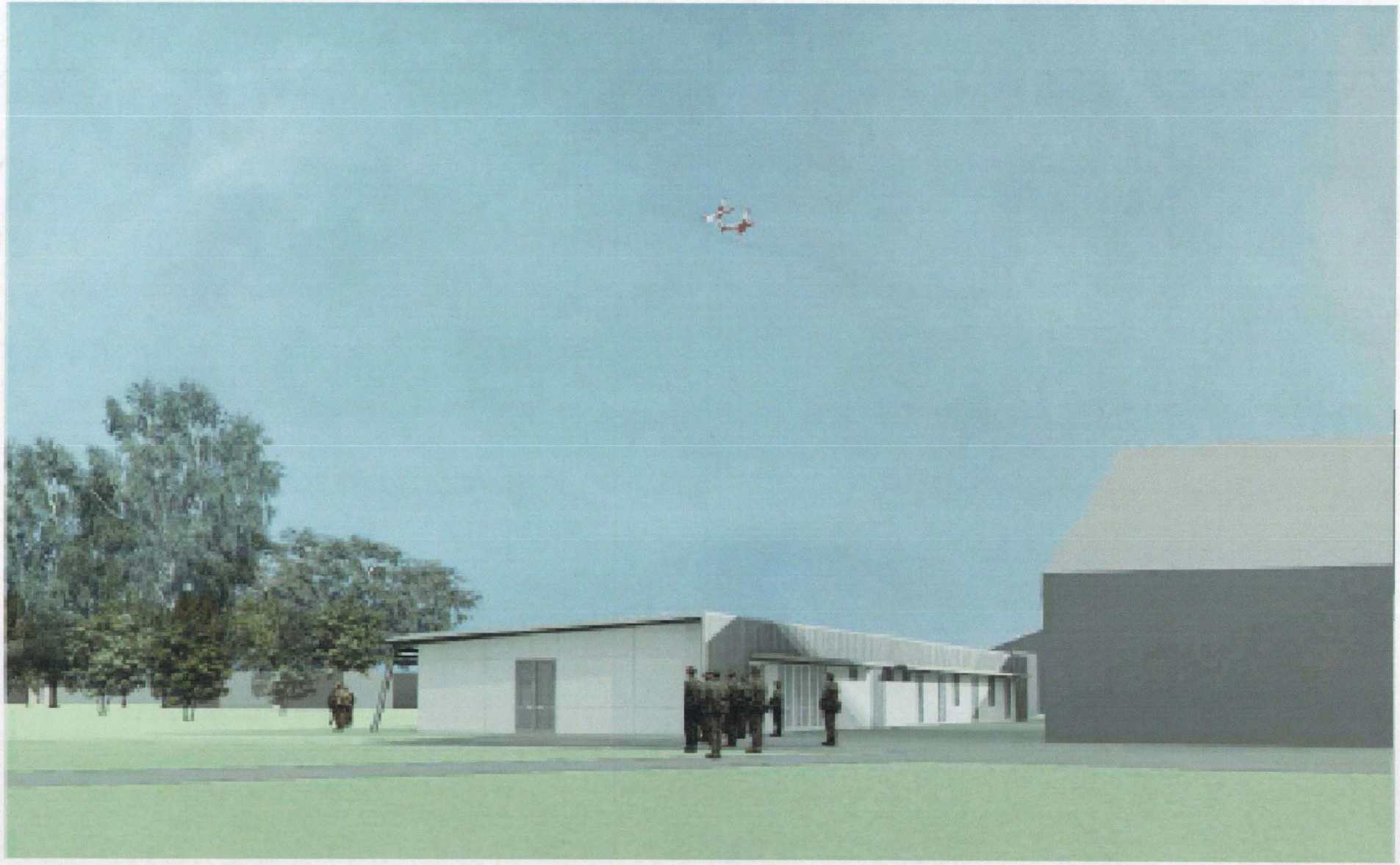
RAAF ESL REDEVELOPMENT

FLIGHTLINE - SEARCH AND RESCUE FACILITIES (SAR)

NORTH	DRAWING	DRAWING NO	DATE	
	SAR FACILITIES	PWC-SOE-SAR-02	JULY 2011	A

Attachment 16: Flight Line Maintenance Facilities
Search and Rescue – Floor Plan

D: HAWKER PACIFIC FACILITY



PERSPECTIVE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

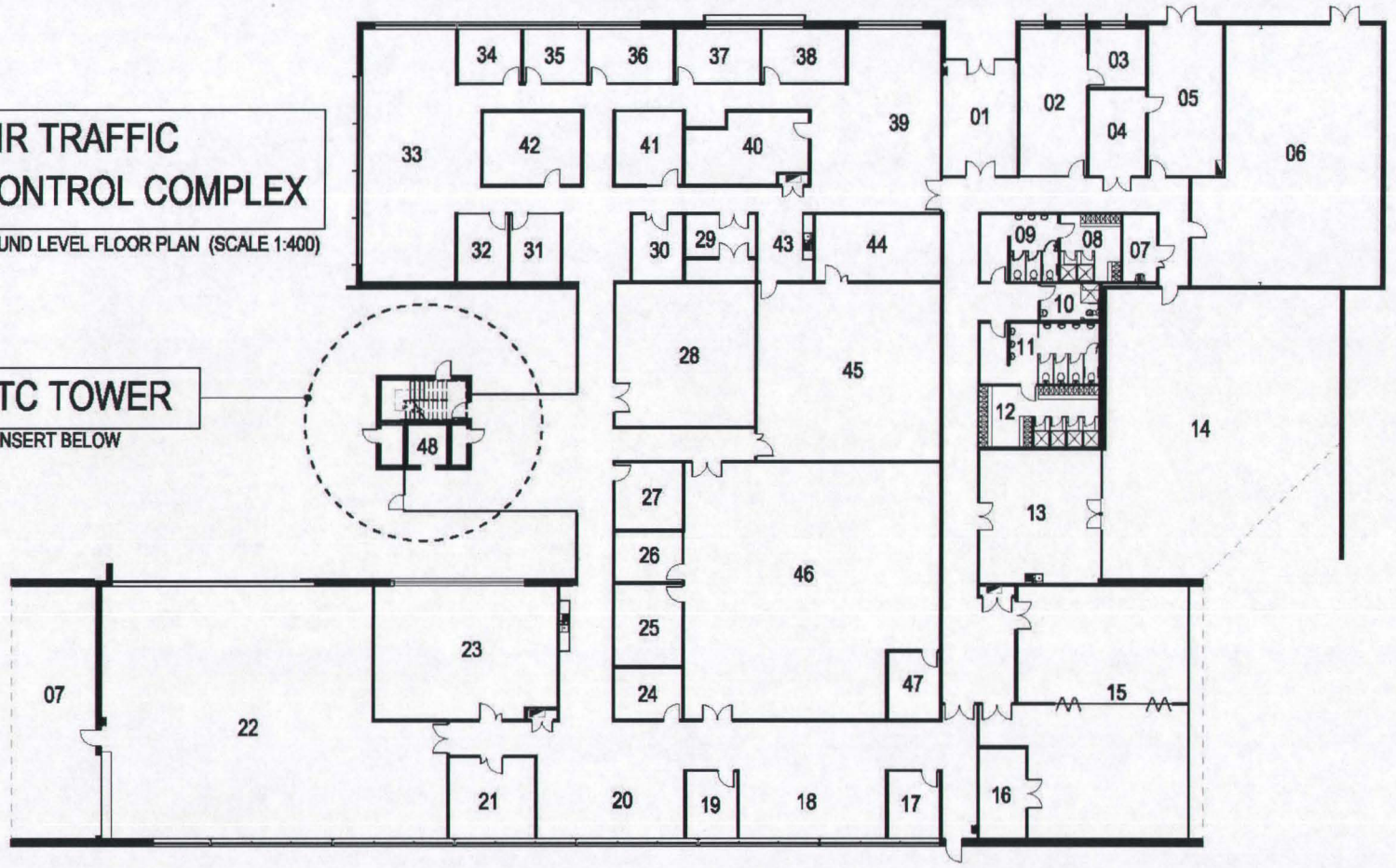
RAAF ESL REDEVELOPMENT
FLIGHTLINE - HAWKER PACIFIC (HAP) FACILITY

DRAWING	DRAWING NO	DATE	ISSUE
HAP FACILITIES	PWC-SOE-HAP-04	JULY 2011	A

Attachment 17: Flight Line Maintenance Facilities – Typical Perspective

AIR TRAFFIC CONTROL COMPLEX

GROUND LEVEL FLOOR PLAN (SCALE 1:400)



ATC TOWER

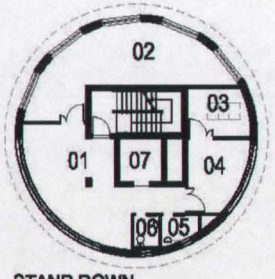
SEE INSERT BELOW

ROOM LEGEND - COMPLEX

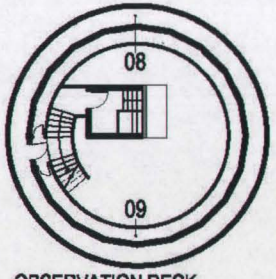
01	FOYER
02	BUREAU OR METEOROLOGY OFFICE 1
03	BUREAU OR METEOROLOGY OFFICE 2
04	SWITCH ROOM
05	PLANT
06	AIRFIELD LIGHTING ROOM
07	CLEANER
08	FEMALE CHANGEROOM
09	FEMALE TOILETS
10	ACCESS TOILET
11	MALE TOILETS
12	MALE CHANGEROOM
13	BREAKOUT / KITCHEN
14	UNDERCOVER TRAINING
15	TRAINING/BRIEFING ROOM
16	STOREROOM
17	OFFICE 12
18	OPEN PLAN WORK AREA
19	OFFICE 13
20	OPEN PLAN WORK AREA
21	BATTERY ROOM
22	DESPATCH & MAINTENANCE
23	PLANT
24	OFFICE 10
25	STOREROOM
26	OFFICE 9
27	OFFICE 8
28	RADIO & TECHNICAL EQUIPMENT ROOM
29	UNINTERRUPTIBLE POWER SUPPLY ROOM
30	COMMUNICATIONS ROOM
31	OFFICE 7
32	OFFICE 6
33	OPEN PLAN WORK AREA
34	OFFICE 5
35	OFFICE 4
36	OFFICE 3
37	OFFICE 2
38	OFFICE 1
39	OPEN PLAN WORK AREA
40	LIBRARY
41	INTERVIEW
42	STOREROOM
43	BREW ROOM
44	APPROACH SIMULATOR
45	APPROACH CONTROL
46	WORKSHOP
47	OFFICE 11
48	LIFT

ROOM LEGEND - TOWER

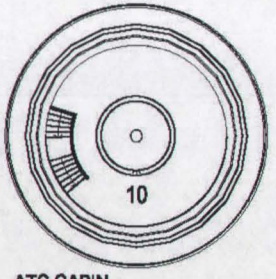
01	STAND DOWN
02	PLANT
03	RADIO EQUIPMENT ROOM
04	DEBRIEFING ROOM
05	AMENITIES
06	AMENITIES
07	LIFT
08	OBSERVATION DECK
09	SERVICES TUNNEL
10	AIR TRAFFIC CONTROL CABIN



STAND DOWN



OBSERVATION DECK



ATC CABIN

AIR TRAFFIC CONTROL TOWER

TOWER FLOOR PLANS (SCALE 1:400)

Attachment 18: Air Traffic Control Complex – Floor Plan

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT

AIR TRAFFIC CONTROL COMPLEX

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	ATCF GROUND FLOOR PLAN	PWC-SOE-ATCF-02	JULY 2011	A

PROPOSED NEW AIR TRAFFIC CONTROL COMPLEX

PERSPECTIVE (NOT TO SCALE)

RAAF ESL REDEVELOPMENT
AIR TRAFFIC CONTROL COMPLEX

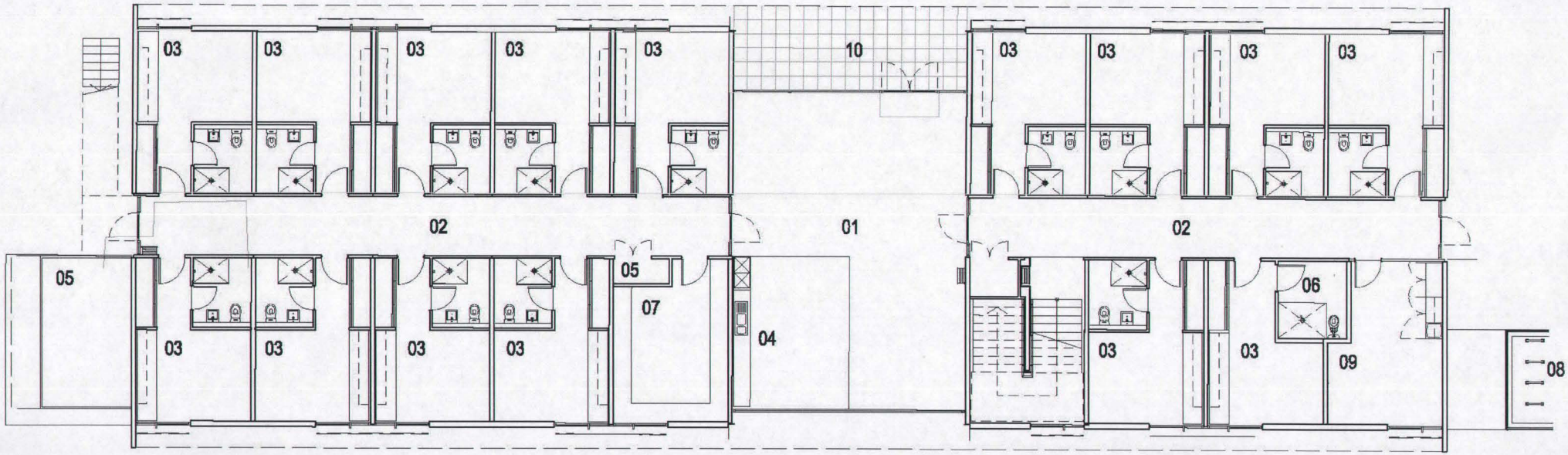
DRAWING	DRAWING NO	DATE	ISSUE
ATCF	PWC-SOE-ATCF-04	JULY 2011	A

Attachment 19: Air Traffic Control Complex – Perspective

ROOM LEGEND

01	FOYER / COMMON ROOM
02	CORRIDOR
03	BEDROOM
04	BREW
05	PLANT
06	ACCESSIBLE TOILET/SHOWER
07	BOX ROOM
08	BICYCLE PARKING
09	LAUNDRY
10	ENTRY

TYPICAL LIVING-IN ACCOMMODATION (LIA)



TYPICAL GROUND LEVEL FLOOR PLAN (SCALE 1:400)

Attachment 20: Living-In-Accommodation– Floor Plan

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
LIVING-IN ACCOMODATION (LIA) NEW FACILITIES

NORTH	DRAWING	DRAWING NO	DATE	ISSUE
	LIA (SAW) GROUND FLOOR PLAN	PWC-SOE-LIA-02	JULY 2011	A

TYPICAL LIVING-IN ACCOMMODATION (LIA)

PERSPECTIVE (NOT TO SCALE)

Australian Government
Department of Defence
Defence Support Group

RAAF ESL REDEVELOPMENT
LIVING-IN ACCOMODATION (LIA) NEW FACILITIES

DRAWING	DRAWING NO	DATE	ISSUE
LIA (SAW)	PWC-SOE-LIA-04	JULY 2011	A

Attachment 21: Living-In-Accommodation– Typical Perspective