

**Submission No. 1**

*al* (HMAS Albatross)

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**Australian Government**

**Department of Defence**

# HMAS ALBATROSS REDEVELOPMENT

Nowra, New South Wales

Statement of Evidence

to the

Parliamentary Standing Committee

on Public Works

Canberra, Australian Capital Territory

August 2011

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# HMAS *Albatross* Redevelopment

## Need for the Works

### Identified Need

1. The proposed HMAS *Albatross* Redevelopment project will upgrade and replace ageing, obsolete and, in some cases, potentially unsafe infrastructure to improve the functionality and capability of facilities at HMAS *Albatross* to support training and operations.
2. All of the works described are essential to meet the project objectives. The progressive deterioration of engineering services, and the continued use of ageing and ineffective facilities give the redevelopment a high priority.
3. The project will improve the performance of the base by upgrading trunk engineering services necessary to support Naval operations; improve base security; upgrade buildings and facilities to support operational capability; provide an improved working environment; provide new facilities to enhance present and future planning of the site; and upgrade aged facilities to contemporary standards.

### Options Considered for Meeting the Need

4. To meet the identified need, Defence has considered the options of building new or refurbishing existing facilities. For most of the proposed works, the option to alter and add to existing facilities and infrastructure to meet functional requirements has been assessed as being cost effective and most feasible. Several new facilities are proposed where retention and reuse of existing facilities was determined not to be cost effective.

### Historical Background

5. HMAS *Albatross*, formerly a Royal Australian Air Force airfield, commenced operations on 7 May 1942. In late October 1944, the base was transferred to the Royal Navy for its Pacific based Fleet Air Arm and was commissioned as Royal Navy Air Station, HMS *Nabbington*.

The base reverted to Royal Australian Air Force control in March 1946, and in 1948 the base was commissioned as the Royal Australian Naval Air Station HMAS *Albatross*.

6. HMAS *Albatross* is the centre of the Royal Australian Navy's maritime aviation capability, supporting the operations of one training helicopter squadron and two operational helicopter squadrons. HMAS *Albatross* also accommodates the Headquarters Fleet Air Arm, the Navy Aviation Training Authority, the Navy Aviation Systems Program Office, the Australian Joint Acoustic Analysis Centre, the Navy Tactical Electronic Warfare Support Section, the Aircraft Maintenance and Flight Trials Unit, the Army Parachute Training School, the Fleet Air Arm Museum, and the Navy's Historic Flight.

### Heritage Impact

7. A North Jervis Bay Heritage Management Plan, which includes HMAS *Albatross*, was prepared in June 2006 and reviewed in 2009. The Defence Estate Policy and Environment Branch has considered the proposed redevelopment in relation to the Heritage Management Plan and the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*, and advised that a referral will not be required under the Act for the proposed scope.
8. HMAS *Albatross* is not listed on the Commonwealth Heritage List. However, buildings and infrastructure located in the Gangway Precinct and the aircraft hangars C, D, E and F have some historical and cultural value. Demolition of these hangars is required as they impact on the required setbacks and clearances from the runways, and their demolition is considered acceptable as there are better examples of this form of hangar elsewhere on the Defence Estate. Archival recording, consisting of measured drawings and photographs, will be undertaken prior to the demolition of these existing facilities, as agreed with the Defence Estate Policy and Environment Branch.

### Environmental Impact

9. An Initial Environmental Review prepared in 2008 identified limited ecological value due to extensive disturbance and development of the base over the years. As a result no significant concerns with the proposed works have been identified, other than potential soil contamination from demolished buildings (bonded-asbestos fragments) or hydrocarbons

related to airfield operations. It is not anticipated that a referral will be required under the *Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)*.

10. The design of the proposed works has specifically considered the outcomes and recommendations of the Initial Environmental Review and has incorporated features to mitigate environmental impacts. In respect to environmental issues, the project will: optimise the construction footprint to minimise loss of vegetation; conduct contamination investigations for the proposed footprint of all in-ground services; undertake a hazardous material survey for structures requiring demolition or refurbishment; and harvest, recycle, treat and discharge stormwater produced during the project construction. Resource consumption will be minimised by complying with the Defence Green Building Requirements.
11. The proposed redevelopment will be managed in accordance with the Defence Environmental Management framework. The Managing Contractor's environmental procedures for construction activities will be required to comply with the approved Construction Environmental Management Plan. A Defence Environmental Clearance Certificate will be issued prior to commencing construction activities.

## Key Legislation

12. 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)*.
13. 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 policies and processes.

## Impacts on Local Communities

14. The project will have a positive economic impact on the Shoalhaven Region. The project will employ a diverse range of skilled consultants, contractors and construction workers in Nowra and the surrounding region over the construction period. It is estimated that the project will create the opportunity for approximately 90 full-time jobs over a period of 40 months, peaking at approximately 270 full time jobs. This will provide a positive impact for small and medium businesses in the region.
15. Minimal disruption to the local community is anticipated during construction, due to the physical isolation of the base and direct access from the base to main roads. Defence will convene public meetings to inform local residents about the proposed redevelopment.

## Consultation with Stakeholders

16. Consultation has occurred, or will occur, with the list of stakeholders at Attachment 1.
17. Defence has consulted with the Shoalhaven City Council regarding the roadworks at the base front entry.
18. Defence is continuing to consult with Endeavour Energy (previously Integral Energy) to augment and improve the power supply capacity and reliability to the base. An application has been submitted by Defence to Endeavour Energy to increase the electrical supply to the base from 11kV to the more reliable 33kV supply.



## Purpose of Works

### Project Location

19. The site is the Royal Australian Navy Air Station HMAS *Albatross*, Deposited Plan 1002996, Albatross Road, Nowra, NSW.
20. HMAS *Albatross* is located ten kilometres south-west of Nowra NSW, 176 kilometres south of Sydney. The base is located on 929 hectares of land to the south of Braidwood Road, Albatross Road and BTU Road. A location map is at Attachment 2.

### Project Objectives

21. The aim of the project is to undertake works to facilities, infrastructure and engineering services that require replacement, refurbishment, upgrading or modification to meet projected base operational and support capabilities for the next 30 years. The underground engineering services have not been upgraded base-wide since the base commenced operations in 1942.
22. Priority will be given to upgrade and refurbishment of the engineering services, with the remaining elements focusing on works that will deliver operational efficiencies, address occupational health and safety issues, and personnel support requirements.

### Project Description and Scope of Works

23. The project elements are described in the following paragraphs and are broadly illustrated at Attachments 3 and 4.

#### **Project Element 1 – Upgrade Base Fire Alarm System**

24. The proposed upgrade of the base fire alarm system will provide a single alarm monitoring point and connect facilities that are not presently connected to the fire alarm network.
25. This element will provide a higher level of fire safety for personnel and facilities at HMAS *Albatross* by having all facilities connected to the system. The system will be provided with fibre optic equipment which will improve base wide emergency monitoring and response times at the base Fire Station.

**Project Element 2 – Upgrade Electricity, Water, Gas, Sewerage, Irrigation and Security Engineering Services**

26. The proposed upgrades to the engineering infrastructure services at HMAS *Albatross* will ensure that the condition and capacity of those services is sufficient to support the continued operation of the base into the future and remains compliant with the current codes and standards.
27. The upgrading comprises repair and replacement of existing services, and provision of new services in order to minimise maintenance costs. The upgraded services will be sized appropriately to support future planned increases in capability.
28. The proposed engineering infrastructure services upgrade includes:
- (a) improving the electrical services by:
    - i. increasing the electrical supply from 11kV to 33kV and capacity from 4,500 kVA to 20,000 kVA, replacing the existing high voltage switchgear and reconfiguring existing cabling to eliminate bottlenecks in the electrical distribution network;
    - ii. building two new Incoming Switching Stations (ISSs); and
    - iii. upgrading and extending the Central Emergency Power Station to support Navy operations during periods of power failure;
  - (b) installation of a new potable water system throughout the base, retaining recent water installations that are in good condition;
  - (c) installation of a new fire service, connected to the existing deluge system, pressurised and monitored automatically to activate hydrant pumps;
  - (d) extension of the existing natural gas system to remove the need for liquid petroleum gas tanks and to improve the reliability and capacity of the gas network;
  - (e) replacement and/or repair of the trunk sewerage system to restore the integrity of the system;
  - (f) repairing the existing treated effluent irrigation system to the existing Parachute Drop Zone (further explanation of this work is covered under Project Element 8); and

- (g) upgrading the security network, in accordance with the Defence Security Manual, by providing redundancy and an ability to extend the system to cater for future capabilities proposed for the base.

### **Project Element 3 – Upgrade Defence Restricted and Secret Networks**

- 29. Remediation of the existing aged Defence Restricted Network (DRN) and Defence Secret Network (DSN) passive infrastructure is proposed to make it compliant with Defence computing standards and allow for future expansion. The proposed passive network upgrade will provide compliant cabling, internal communications rooms, new communication cabinets, and network infrastructure.

### **Project Element 4 – Upgrade Telecommunications**

- 30. Upgrade of the base telecommunications infrastructure is proposed to provide a reliable communications system for the entire base.
- 31. The existing telecommunications system is currently at full capacity and is unreliable. Some of the existing network is copper based and the system as a whole cannot be readily expanded for future capabilities.
- 32. The proposed works include provision of compliant and upgraded single mode optic fibre cabling, a new internal communication room, new communications cabinets and a network structure that meets the Defence telecommunications standards. Allowance will be made for future expansion of the network.

### **Project Element 5 – Upgrade Stormwater System**

- 33. In high intensity storm events, stormwater runoff from surrounding and upstream areas creates flooding on the base, in particular inundating areas along Swordfish Road and the existing adjacent hangars. Flows from these storms are predominantly of short duration and high velocity, generally flooding the airfield once every 18 months, thus disrupting fixed wing aviation operations at the base.
- 34. Defence proposes to augment the existing stormwater system with new infrastructure to detain, divert, and improve storm water flows to reduce flood events experienced on aircraft movement surfaces and buildings. The proposed works will also address current issues

associated with condition and capacity of the infrastructure, enhancing water recycling and treatment.

35. The proposed upgrade of the base stormwater system involves:
- (a) diverting, detaining, and collecting stormwater runoff from all catchments to reduce peak runoff through the base road system to the airfield;
  - (b) modifying, repairing, cleaning and removing impediments to drainage in the areas of new and redeveloped facilities and along the flood prone areas within the base;
  - (c) flood mitigation, principally by constructing a detention basin on the existing AFL oval, to provide a 1 in 100 year flood protection to all habitable buildings identified within the base; and
  - (d) provision of adequate storage capacity for harvesting storm water to be reused for irrigation purposes.

**Project Element 6 – New Hot Refuelling Point**

36. There are no existing facilities that provide aircraft hot refuelling in HMAS *Albatross*. Hot refuelling allows aircraft to fuel while their engines are operating. This provides training efficiencies as helicopters are able to be kept flying longer thus alleviating the need for additional helicopters, and reducing congestion near the hangars and taxiway caused by the existing refuelling operations.
37. The proposed works will increase training tempo, modernise operational facilities, address current operational inefficiencies, and provide enhanced environmental fuel management. The proposed works include:
- (a) construction of two hot refuelling point hardstands with integrated fire fighting and spill control systems for refuelling of rotary wing aircraft only;
  - (b) master planning to allow for a possible future extension to the facility, for a further two hot refuelling points (total of four hot refuelling points);
  - (c) construction of a new underground oil and fuel separator to provide storage of recovered material awaiting removal and treatment;
  - (d) construction of a bunded vehicle pad for fuel and oil waste collection vehicles in the unlikely event that spilt oil or fuel needs to be removed from the separator for treatment;

- (e) provision of new lighting that is fully compatible with airfield lighting and night visibility requirements of the airfield to allow 24 hour, seven days per week refuelling;
- (f) provision of a fuel control building to allow operators to control the delivery of fuel to aircraft via the hot refuelling point; and
- (g) provision of a new access road that will provide all weather access to the new hot refuelling points and adjacent existing helicopter wash facility, eliminating the need for motor vehicles to use taxiways.

#### **Project Element 7 – New Fuelling Pipeline**

- 38. Currently refuelling is undertaken at various points across the taxiway network using base fuel tanker vehicles to transport and offload F44 aviation turbine fuel to aircraft. This requires a one kilometre round trip from the base bulk fuel storage tanks, which is an inefficient use of the tanker fleet and personnel.
- 39. The proposed fuelling pipeline will significantly reduce the need for fuel transfers by road tanker. Fuel will be delivered directly to the hot refuelling points via a ring main. In addition to reducing the need for road tanker refuelling, the recirculation capability will maintain fuel quality and reduce the extent of testing and fuel flushing required. A tanker loading bay is proposed to allow hot refuelling to continue in the rare event of a failure with the pipeline supply, allowing operations to continue uninterrupted.
- 40. The proposed fuelling pipeline will enhance environmental management associated with fuel handling, improve safety during refuelling, and reduce the need for fuel tankers to attend, by providing a new fuel pipeline between the Hot Refuelling Points (Element 6) and the base fuel farm.

#### **Project Element 8 – Upgrade Parachute Drop Zone**

- 41. The proposed Parachute Drop Zone upgrade will enhance Defence training capability and reduce operating costs associated with the existing deteriorated surface. The proposed upgrade will minimise the risk of injury to Parachute Training School trainees and instructors by improving the landing surface, thus enhancing Defence's duty of care obligations to those personnel.

42. The proposed works include civil works to remove ruts from the surface, the provision of new topsoil, ground coring, and the application of fertiliser to better support the grass cover. This will improve the surface condition to provide a softer and more sustainable landing surface. The upgrade to the existing treated effluent irrigation system supports the maintenance of the landing surface, by softening the landing surface through increased irrigation. The location of the Parachute Drop Zone is indicated at Attachment 4.

**Project Element 9 – Extend the Australian Joint Acoustic Analysis Centre**

43. The Australian Joint Acoustic Analysis Centre provides operational acoustic analysis and acoustic training for the Australian Defence Force (ADF). The existing building does not provide sufficient space or amenity for existing staff, nor sufficient technical analysis and training space required to support its function.
44. To improve functionality, the existing building is proposed to be extended on the north-east corner to accommodate existing staff and equipment. Some minor internal refurbishment and upgrades to the existing communications network are also proposed. This will allow the building to meet current and anticipated modest growth in staff levels of the organisation. The proposed works are shown at Attachment 5.

**Project Element 10 – New Air Movements Section**

45. The Air Movement Section provides working accommodation and processing space for visiting aircrews. The Section is currently accommodated in transportable buildings adjacent to the airfield. The existing facility lacks ablutions and the aircrew briefing rooms have no office equipment or access to Defence computer networks.
46. HMAS *Albatross* handles approximately 900 air movements per annum through the existing air movement facility. HMAS *Albatross* regularly hosts visiting operating aircraft that use the nearby East Australian Exercise Area, including some international flights. The project proposes to provide a new facility including:
- (a) a modest transit lounge facility for personnel embarking and disembarking through HMAS *Albatross*;
  - (b) an area from which visiting aircrew can operate, including provision for access to Defence computer networks;

- (c) space for customs and quarantine activities required to support point of entry operations for overseas aircraft;
- (d) storage for specialist ground support equipment for cargo loading; and
- (e) nearby apron space to accommodate visiting aircraft.

47. Plans of the proposed works for the Air Movements Section are shown in Attachments 6 and 7.

**Project Element 11 – Upgrade Roads and Infrastructure**

48. The base perimeter road provides all weather access inside the perimeter security fence. The road is essential for access to the air traffic control tower, the Parachute Training School hangars, the explosive ordnance stores, the sewage treatment plant, the Parachute Drop Zone and the west pad training area.
49. The proposed works will upgrade ageing and damaged roads and improve access to facilities around the edge of the airfield on the base perimeter road. The proposed upgrade will provide a number of vehicle overtaking bays and relocate the existing roadway outside of the flight strip at the end of one of the runways, in accordance with the Defence Aviation Safety Manual (DASM).

**Project Element 12 – New Front Entry, and Relocate Navy Security Personnel (1<sup>st</sup> Lieutenants and Coxswains)**

50. The proposed works at the front entry include reconfiguration of the base entrance, provision of new access control facilities, and the provision of new pass issue facilities.
51. The existing base entrance is within 25 metres of other buildings and able to be approached directly by vehicles at high speed. The existing arrangement for parking outside the base boundary to obtain access passes is also inefficient. The entrance requires modification to allow SAFEBASE measures to be implemented. This includes approaches designed to slow and control traffic, and a dedicated vehicle inspection bay.
52. Uniformed duty security personnel (First Lieutenants) are currently accommodated in Building 66, which also houses the base armoury. The building's condition and the presence

of asbestos-containing material make refurbishment unviable. As a result, the existing building is proposed to be demolished as part of this project element.

53. The Naval Police Coxswains organisation and contracted security personnel need to be relocated to improve base security. These elements will relocate into the existing building currently utilised by the Joint Logistic Command Clothing Store, that is proposed to be refurbished. The refurbished facility is also proposed to include the addition of a new armoury to store current holdings, additional entitlements not currently held owing to space limitations, and sufficient space to store weapons for visiting Australian Defence Force personnel.
54. Plans of the proposed works are shown in Attachments 8 and 9.

#### **Project Element 13 – New Clothing Store**

55. The existing clothing store facility at HMAS *Albatross* has been adapted from its previous role as the base Victualling Store and no longer has the capacity to perform its current function. The role of the facility has changed from servicing the base Navy personnel to a regional distribution centre for all three Services. This change requires a substantially larger facility than is afforded by the current clothing store.
56. The project proposes to provide a new Clothing Store to service both HMAS *Albatross* and HMAS *Creswell* and meet the regional requirements of ADF personnel, including issuing of flying suits. The Clothing Store is proposed to be located in the new Base Support Precinct (Project Element 14), alongside complementary banking and other base support services. Plans of the proposed works are shown in Attachments 10 and 11.

#### **Project Element 14 – New Base Support Precinct**

57. The proposed new Base Support Precinct will co-locate all retail support elements and address inappropriate zoning of the existing canteen and adjacent car park area that is located in the airside support zone. The existing canteen and Junior Sailors Club facility on base is beyond its useful life, and is not readily accessible by foot from the 'working' areas of the base. A traffic study undertaken to inform the design process, recommended the existing canteen site as being one of three sites strategically located to satisfy the longer term parking requirements



at HMAS *Albatross*. The proposed redevelopment will demolish the existing canteen to allow space for the creation of a carpark in the future.

58. The proposed Base Support Precinct will provide new facilities for the canteen, Junior Sailors Club, main base auditorium, base library, two credit unions, hairdressing salon and post office, including short-term car parking.
59. The Junior Sailors Club will be located in close proximity to the living-in accommodation and Junior Sailors' messing facilities. The club will have an autonomous bar, lounge and games area dedicated to the junior members of base staff.
60. The proposed base auditorium will provide a main auditorium space, separable into three discrete smaller auditoria, with meeting rooms and a staged area with audio visual systems. This functional arrangement will be able to facilitate large group meetings (up to 300 personnel) such as addressing all base personnel, or multiple smaller group meetings (up to 110 personnel). The facility will be used for briefings and training purposes. Plans of the proposed works for the Base Support Precinct are shown in Attachments 10 and 11.

#### **Project Element 15 – New Headquarters Fleet Air Arm**

61. Headquarters Fleet Air Arm (HQ FAA) is the operational headquarters that commands all Navy operational aviation elements. HQ FAA currently operates from a building previously utilised for squadron administration, which is functionally inefficient to accommodate current and projected HQFAA staff numbers.
62. The existing HQ FAA Workshop incorporated in the building as part of the Fleet Aviation Engineering Unit function causes significant disruption to the administration function due to poor acoustic isolation.
63. The proposed HQ FAA project element relocates the Fleet Air Arm command elements to a new building on the site of the existing redundant avionics building, alongside Base Command (Project Element 18), and located centrally on the base in relation to existing and future operational squadrons. The HQFAA Workshop is relocated to a new building located next to Incoming Switching Station 2. Plans of the proposed works are shown in Attachments 12 to 15 inclusive.

**Project Element 16 – New Defence Support Facility**

64. The Garrison Support elements, including Defence Support (Facilities, Contracts and Environment), the Garrison Support Contractor and the Comprehensive Maintenance Support Contractor, are currently located in separate facilities across the base, resulting in functional inefficiencies.
65. A new facility is proposed to provide for the co-location of the Garrison Support Services Contractor, the Comprehensive Maintenance Service Contractor and Defence Support Group contract management staff. The proposed facility will be located adjacent to the front gate to enhance contractor accessibility.
66. Plans of the proposed works for the Defence Support Facility are shown in Attachments 16 and 17.

**Project Element 17 – New Fitness Track**

67. The timed run element of the Defence physical fitness tests at HMAS *Albatross* are currently conducted over an uneven bituminised surface shared with vehicles on the base perimeter road. The route takes personnel along a northern section of the perimeter road, including under the northern end of the approach to the runway.
68. Physical fitness is a mandated requirement for Defence uniformed personnel and a fitness track that allows continual supervision for occupational health and safety purposes while conducting walk and run components of physical fitness testing is essential.
69. The project proposes to provide a safe dedicated fitness track for training and testing activities to support physical fitness training requirements. This will enhance the ability of the trainers to control training, conduct testing and assist in the reduction of lower limb injuries caused by the existing uneven rough surfaces used for testing.
70. The proposed work will provide a 400 metre all weather fitness track, to the north of the existing Gymnasium facility. The proposed site of the Fitness Track is indicated on Attachment 3.

**Project Element 18 – Refurbish Base Administrative Support Building**

71. The existing Administrative Support building accommodates the headquarters of HMAS *Albatross* and the associated functions of base command. The building was constructed during the late 1990s and requires a mid-life upgrade, in particular the renewal of air-conditioning services.
72. The project proposes to refurbish the existing air handling plant, upgrade building security and provide a minor reconfiguration to the Customer Support Centre to improve service delivery and address the condition of existing building services.

**Project Element 19 – New Sporting Facility**

73. The previous sporting facility was condemned and demolished due to the presence of asbestos containing materials and the uneconomical cost of repair and refurbishment.
74. A new Sporting Facility is proposed that includes change rooms, amenities, and a storage facility for sports equipment. The new facility will support the fitness requirements of base personnel, and will broaden the range of team-sport activities available to the base population.
75. Plans of the proposed works for the Sporting Facility are shown in Attachment 18.

**Project Element 20 – Demolitions**

76. One of the fundamental objectives of the redevelopment project is the removal of below standard airside facilities facing the apron along Taxiway B comprising:
  - (a) hangars C, D, E and F;
  - (b) the Corrosion Control Building;
  - (c) the Spares Store; and
  - (d) minor buildings associated with the above structures.
77. The proposed demolitions will improve airfield safety, as the current structures encroach into required airfield setbacks and clearances; reduce associated ongoing maintenance liabilities; and provide airside development space for future capabilities.

### **Project Element 21 – Realignment of Swordfish Road**

78. Under this work element the southern section of Swordfish Road is proposed to be realigned to increase the utility of airside land for future development in the vicinity of hangars C, D, E, and F. Realignment of the road, combined with the demolition of these hangars, increases the ability to redevelop the airside land in the future with new facilities that no longer encroach on the airfield setbacks. Existing engineering services will also be relocated along the new alignment to facilitate the connection of future facilities. The proposed work also includes the demolition of the redundant section of Dunning Road. Plans of the proposed realignment are shown at Attachment 19.

### **Project Element 22 – Sycamore Road Property Works**

79. 25C Sycamore Road is a recently acquired property located adjacent to the base. The property provides a buffer zone for existing facilities against potential bushfires along parts of the northern boundary. The proposed works comprise demolition of the existing house, relocation of the base perimeter fence and construction of a new boundary road. Plans of the work are shown at Attachment 20.

## **Details and Reasons for Site Selection**

80. 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.

## **Public Transport**

81. HMAS *Albatross* 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.

## **Local Road and Traffic Concerns**

82. The proposed redevelopment does not increase personnel or vehicle numbers accessing the base. Other than modest natural growth, Defence does not foresee significant change in the current use or personnel numbers in the coming years.

83. The impact of construction traffic on the local traffic network external to the base will be minimal, although there may be disruption to traffic on the base resulting from the upgrade to underground engineering services that typically follow the road corridors. A comprehensive staging and traffic management plan has been developed to limit and control the amount of disruption to manageable levels during construction.
84. The proposed Entry and Gatehouse works will improve the off-road queuing space for vehicles waiting to enter the base and parking for people requiring passes. Road works comprising a new roundabout on Albatross Road will address security concerns identified as part of the Base Security Improvement Program.
85. A Traffic Management Study has been undertaken on the base. The Traffic Management Study:
- (a) identifies and recommends a road hierarchy;
  - (b) provides a vehicle parking strategy in order to rationalise the current inadequate parking situation;
  - (c) reports on the scaling and configuration of the Front Entry; and
  - (d) identifies traffic circulation difficulties within the base area.
86. The Traffic Management Study has informed the siting of various aspects of the project, including Project Element 14 Base Support Precinct, and identified a number of suitable future car parking locations. The Traffic Management Study will guide future development at HMAS *Albatross*.

### Zoning, Local Approvals and Land Acquisition

87. The proposed works at HMAS *Albatross*, other than the proposed front entry road works, are within the boundaries of the site that is Commonwealth owned and Defence controlled land.
88. The proposed road works and construction of the roundabout to the base front entry are on Council controlled land. The Shoalhaven City Council has been consulted regarding the works and has been formally advised that the works will be funded by the project and transferred to the Council at no cost. There is currently in principle agreement, however a formal agreement is yet to be signed.

89. The proposed redevelopment does not require acquisition of additional land or involve any land disposal actions. There will be no change to existing land use conditions at the base.

### Planning and Design Concepts

90. The general philosophy adopted for the design of the proposed facilities incorporates the following considerations:
- (a) provision of cost effective and functional facilities of energy efficient design suitable for the climate of the site and of a style compatible with the existing base aesthetics;
  - (b) adoption where possible of conventional construction techniques and materials, in particular those commonly used by the construction industry and consistent with those already utilised on the base;
  - (c) maximum use of existing infrastructure and facilities to minimise capital costs;
  - (d) utilisation of readily available and durable materials that combine long life while minimising maintenance;
  - (e) recognition of site constraints, security requirements, the established zone plan, functional relationships to existing facilities and operational determinants; and
  - (f) planning services and structure design to accommodate flexibility.

### Structural Design

91. The new buildings at HMAS *Albatross* will be steel-framed structures with concrete floor slabs and metal deck roofs. Internal walls are non-load bearing frames, lined with plasterboard to provide maximum flexibility in future layout.

### Materials and Furnishings

92. External walls for new buildings will be a mixture of concrete panels, and metal cladding with curtain wall glazing. A metal louvre sun screening system will be installed to improve environmental performance of the buildings. Roofing and rainwater fittings have also been selected for their resilience to the coastal environment.
93. Existing buildings will be extended in face brick walls and steel roofs to match the existing buildings as much as possible.

## Mechanical Services

94. The mechanical services for each new building have been designed according to the function and needs of each building. The purpose of the mechanical service systems is to provide mandatory ventilation, thermal comfort and air quality conditions in accordance with specific user needs and the requirements of the Building Code of Australia.
95. The existing mechanical plant to the Base Administration Support Centre and Australian Joint Acoustic Analysis Centre buildings will be upgraded to extend the life of the facilities and improve environmental performance.

## Hydraulic Services

96. The trunk hydraulic and sewer networks will be renewed to ensure the services will operate reliably for the next 30 years. The extension of branch drains to individual existing buildings will not form part of the works. Branch drains will be renewed as part of any future project that seeks to upgrade or refurbish the specific facility. The sewer network will utilise the existing sewage treatment farm and pumping station.
97. Potable water will be connected to the existing supply. Roof water will be collected and stored in above ground storage tanks and plumbed for use in toilet flushing in new buildings and landscape irrigation.

## Electrical Services and Fire Protection

98. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements.
99. Electrical infrastructure and switchboards will have spare capacity to allow for future growth. Sub-metering will be included to each re-used and new building. The meters will be monitored through a new Building Management System, which will support an active energy management program on the site.
100. The high voltage supply to HMAS *Albatross* will be increased to allow for growth in demand and improve the reliability of supply to the base. The project specifically provides for increasing the supply voltage from 11kV to 33kV with two new incoming feeders. The

existing high voltage electrical distribution on base will be upgraded by replacing existing high voltage switchgear and reconfiguring existing cabling to eliminate bottlenecks in the electrical distribution. Additional standby power generation will be provided at the new Central Emergency Power Station to support Navy operations during periods of power failure.

101. Fire protection and detection measures for facilities, in addition to Project Element 1 (Upgrade Base Fire Alarm), will be provided in accordance with Australian Standards and Defence engineering policy requirements. Fire detection systems, indicator panels, emergency and exit lighting will be provided to the new facilities with indicator panels at the base Fire Station. All construction and fire protection will comply with the Building Code of Australia, the Defence Manual of Fire Protection Engineering, and all other applicable Codes and Australian Standards.

### Acoustics

102. The new facilities will comply with the Building Code of Australia and Australian Standards for noise and acoustics. Acoustic separation has been considered between rooms, and walls are being designed to meet user requirements and building functions.
103. 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

104. This proposal will not cause any substantial change in the essential landscape character of the site. Landscaping works will restore areas disturbed during construction and provide general improvement to the built environment. Precautions will be taken to avoid compromising environment sensitivities by adopting landscaping practices in accordance with local environmental conditions and the Construction Environmental Management Plan.

### Water and Energy Conservation Measures

105. 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.

106. 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.
107. All new offices and offices subject to major refurbishment are required to comply with the minimum energy performance standards in the EEGO policy, for office buildings greater than 2,000 m<sup>2</sup>. Buildings to comply are:
  - (a) the Headquarters Fleet Air Arm;
  - (b) the Air Movements administration;
  - (c) Base Support Precinct, and
  - (d) the Front Entry/Defence Support building.
108. These buildings will be designed, constructed, operated and maintained to ensure that they use energy efficiently and comply with:
  - (a) Part I.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) Defence Green Building Requirements (DGBR);
  - (d) The Energy Efficiency in Government Operations (EEGO) policy; and
  - (e) NABERS Energy rating system.
109. Although not specifically identified by legislation, enhanced environmental outcomes will be achieved for all other habitable buildings through the use of Green Building Requirements to guide design.
110. Ecologically Sustainable Development objectives and solutions are considered in the design to reduce the impact on the wider environment by the use of sustainable design and construction techniques and management systems that will reduce energy consumption and the use of natural resources by:

- (a) reusing existing buildings where possible, in preference to new builds, where reuse of the building meets user requirements;
- (b) demand mitigation and management by means of passive design solutions, energy efficient heating, ventilation and air-conditioning (HVAC), lighting, water efficient fittings and fixtures, recycling and reuse of water, energy & water management, and material selection and minimisation;
- (c) providing high levels of user amenity and indoor environment by means of passive solar design, active design solutions such as high performance lighting design, operational initiatives for users including operational waste management and bicycle racks, and green landscaping spaces to increase user amenity;
- (d) examine alternative technologies to provide heating, cooling and lighting to reduce the environmental footprint of the site;
- (e) examine alternative solutions to reduce water supply to the site;
- (f) examine alternative modes of transport, particularly for internal site transportation; and
- (g) comply with Ecologically Sustainable Development targets and Essential Requirements outlined in the Defence Green Building Requirement document (DGBR) and other ecologically sustainable development requirements specific to the project (including energy target, water target, waste target and Green Star rating target).

111. In addition to the above initiatives, the Defence Essential Requirements for Ecologically Sustainable Development will be incorporated into the new facilities as follows:

- (a) appliances and office equipment to be United States of America EPA 'Energy Star' compliant;
- (b) maximum of 10 W/m<sup>2</sup> or equivalent for lighting to office areas;
- (c) separate digital energy metering for tenanted areas, central services, and computer data centres;
- (d) sub-metering of energy sources linked to a Building Management System;
- (e) sub-metering in accordance with the Defence Energy Management Strategy and the requirements of the Commonwealth Energy Policy (EEGO);
- (f) spaces with intermittent and variable occupancy separately zoned with presence detection control and/or CO<sub>2</sub> demand control ventilation;

- (g) minimum energy efficiency ratings of 3.5 stars for dishwashers and 4 stars for refrigeration; and
- (h) water sources to be metered and linked to the Building Management System.

### **Demolition and Disposal of Existing Structures**

112. The following facilities are proposed to be demolished under the project: Hangars C, D, E and F; Corrosion Control Building; Spares Store; minor buildings associated with the above structures; the Canteen; the Junior Sailors Club; the existing Headquarters Fleet Air Arm; the old Avionic Workshop (on the site of the new HQ Fleet Air Arm); the Engine Repair Section (ERS) Store; the existing demountable Gatehouse building; the existing Naval Security Building (1<sup>st</sup> Lieutenants and Coxswains); and the existing vacant residence on the 25C Sycamore Road property. Demolished materials will be separated and recycled where possible. The proposed demolitions are in accordance with the North Jervis Bay Heritage Management Plan (2009) for the site.

### **Zone Planning**

113. The proposed redevelopment takes into account provision for proposed future developments on base and has been developed in accordance with the approved base Zone Plan.

### **Provisions for People with Disabilities**

114. 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 Disabled Persons'. Passenger elevators will be provided in the new two storey Air Movements, Front Entry/Defence Support, and Headquarters Fleet Air Arm buildings.

### **Childcare Provisions**

115. There is no requirement for childcare facilities, as this project does not increase the base population.

116. A segregated children's playground is provided as part of the Base Support facilities to cater for personnel and their families utilising the Base Canteen, Main Base Auditorium and shopping/banking facilities.

## Occupational Health and Safety Measures

117. 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.
118. 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.
119. The proposed hot refuelling point will have a fixed fire fighting system, removing the need for a fire tender to be in attendance during refuelling. Design certification of the Hot Refuelling facility will be undertaken in accordance with the applicable Defence policies.

## Cost-Effectiveness and Public Value

### Outline of Project Costs

120. The estimated cost of this project is \$192.0 million, excluding Goods and Services Tax, which includes all delivery costs for management and design fees, construction costs, information communication technology, furniture, fittings and equipment, contingencies, and an allowance for escalation.
121. An increase in the net operating costs is expected due to the construction of new and re-used facilities containing more technical and environmentally compliant equipment, upgraded infrastructure and engineering services.

## Details of Project Delivery System

122. 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

123. Subject to Parliamentary clearance of the project, construction is expected to commence in mid-2012 and be completed by mid-2015.

## Public Value

124. The proposed redevelopment contributes significantly to Navy capability outputs by providing effective new and re-used facilities at HMAS *Albatross*.
125. Existing facilities have been re-used where they feasibly meet the operational needs of the Navy 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

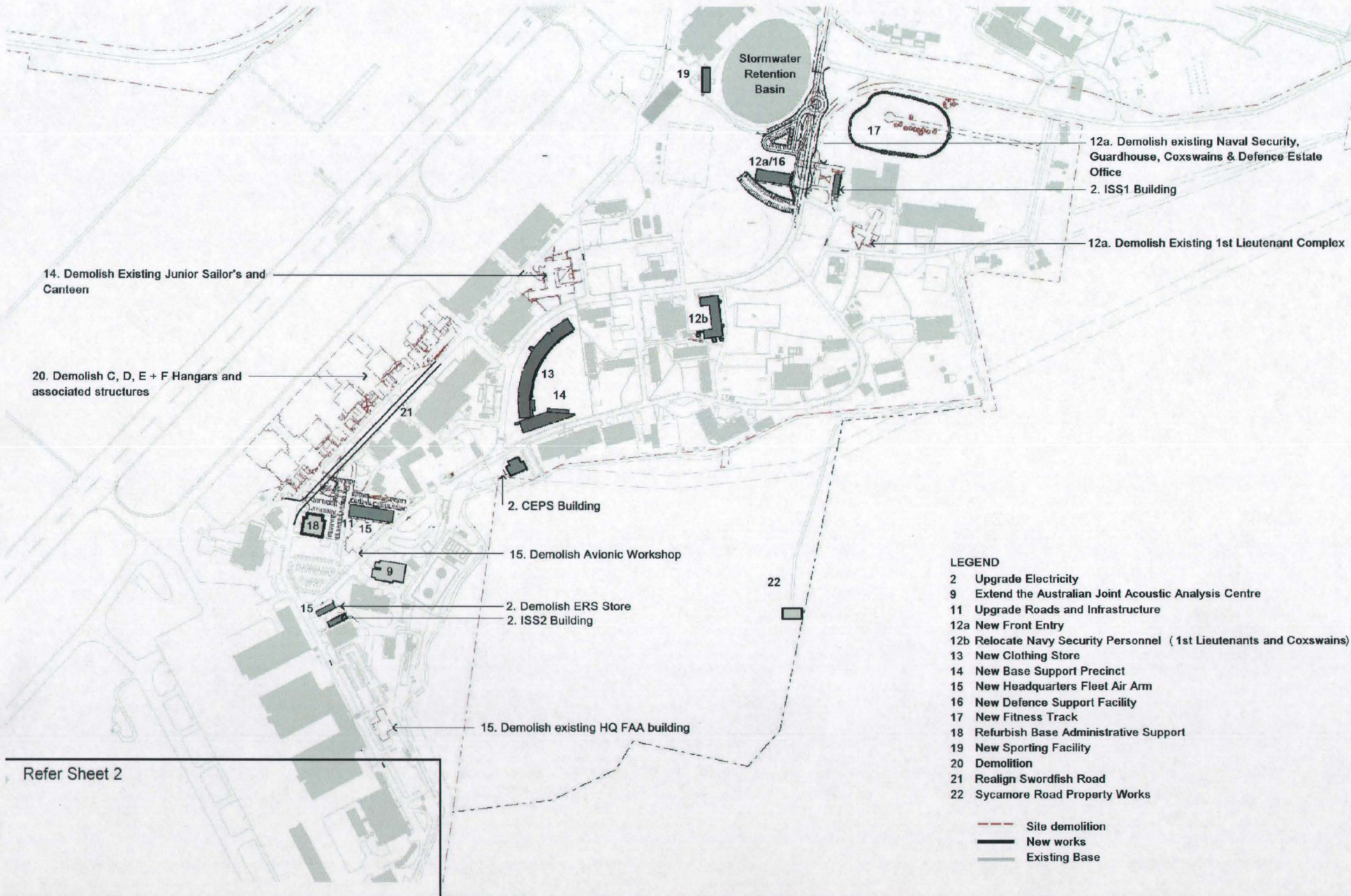
126. No revenue will be derived from this proposal.

## Attachment 1 – Stakeholder List

- (a) The Federal Member for Gilmore, Mrs Joanna Gash MP;
- (b) Legislative Assembly of New South Wales Member for South Coast and Speaker, Mrs Shelley Hancock MP;
- (c) Nowra Local Aboriginal Land Council;
- (d) Shoalhaven City Council;
- (e) Shoalhaven Chamber of Commerce;
- (f) New South Wales Fire Brigade;
- (g) Department of Sustainability, Environment, Water, Population and Communities;  
and
- (h) The Department of Climate Change and Energy Efficiency.

# Attachment 2 – Site Location

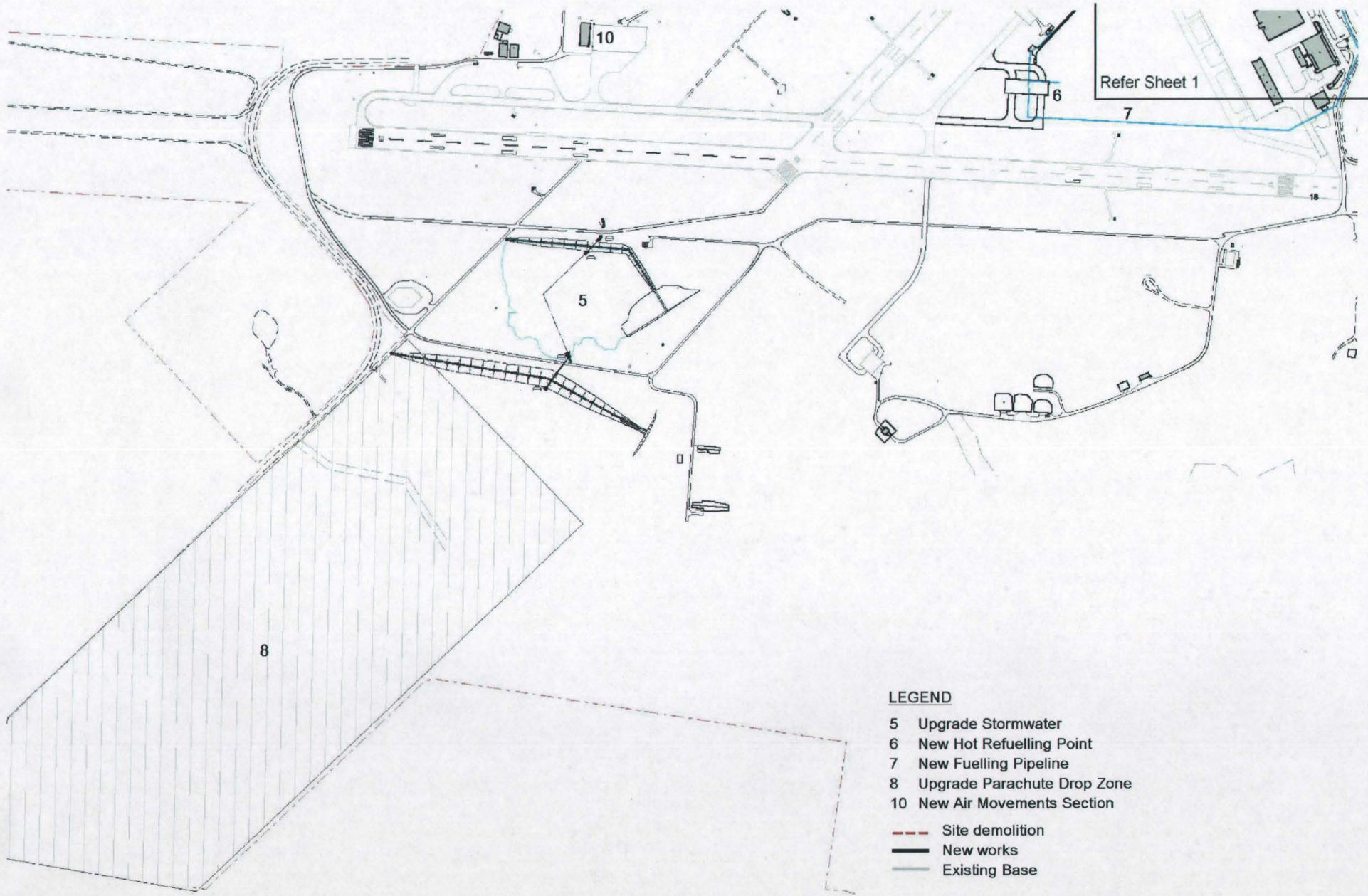




Refer Sheet 2



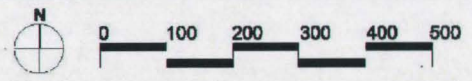


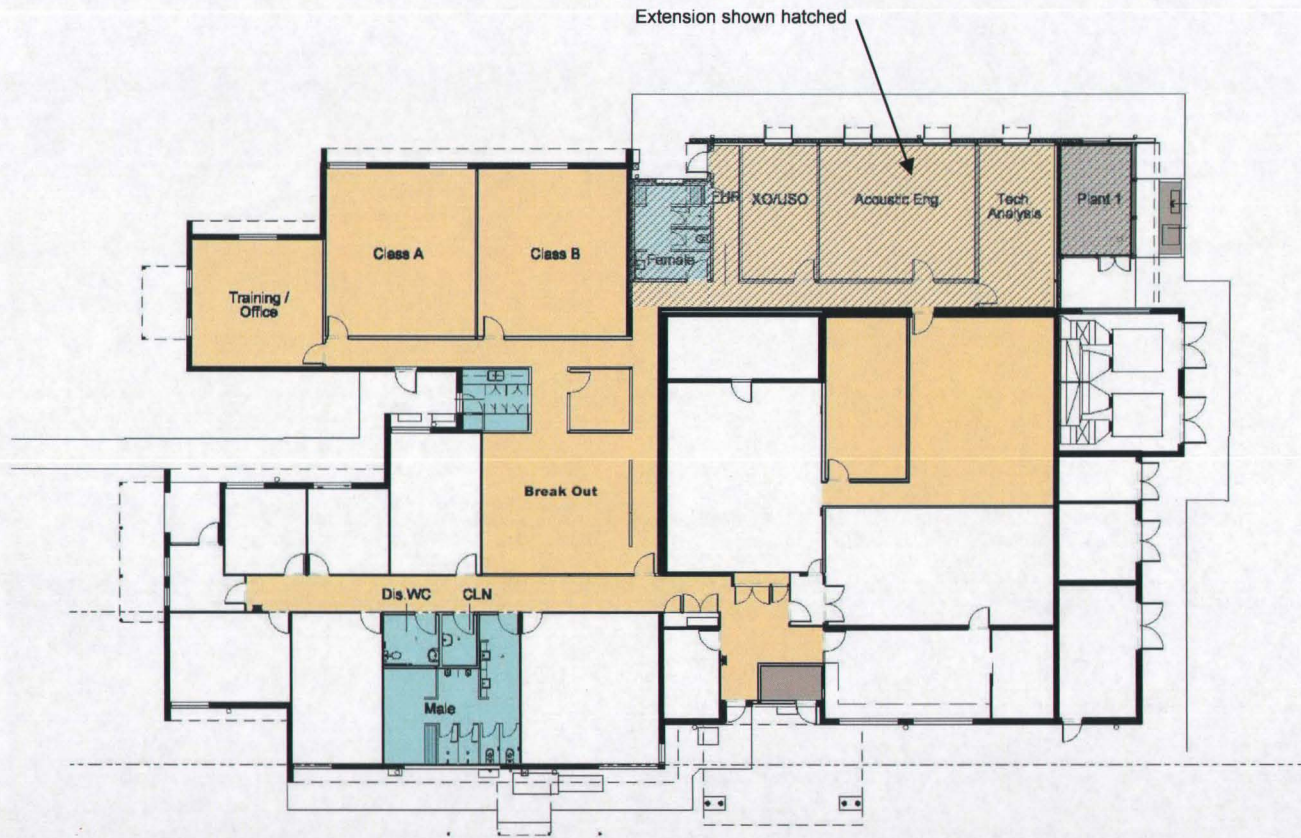


**LEGEND**

- 5 Upgrade Stormwater
- 6 New Hot Refuelling Point
- 7 New Fuelling Pipeline
- 8 Upgrade Parachute Drop Zone
- 10 New Air Movements Section

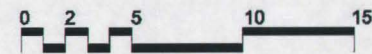
- Site demolition
- New works
- Existing Base



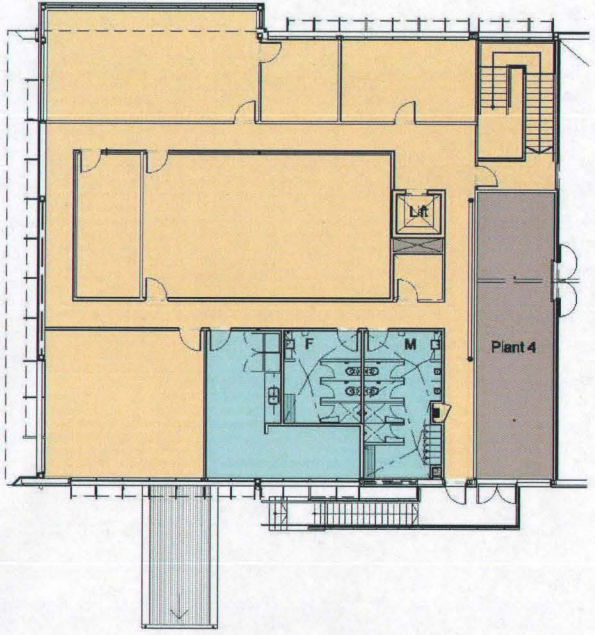


LEGEND

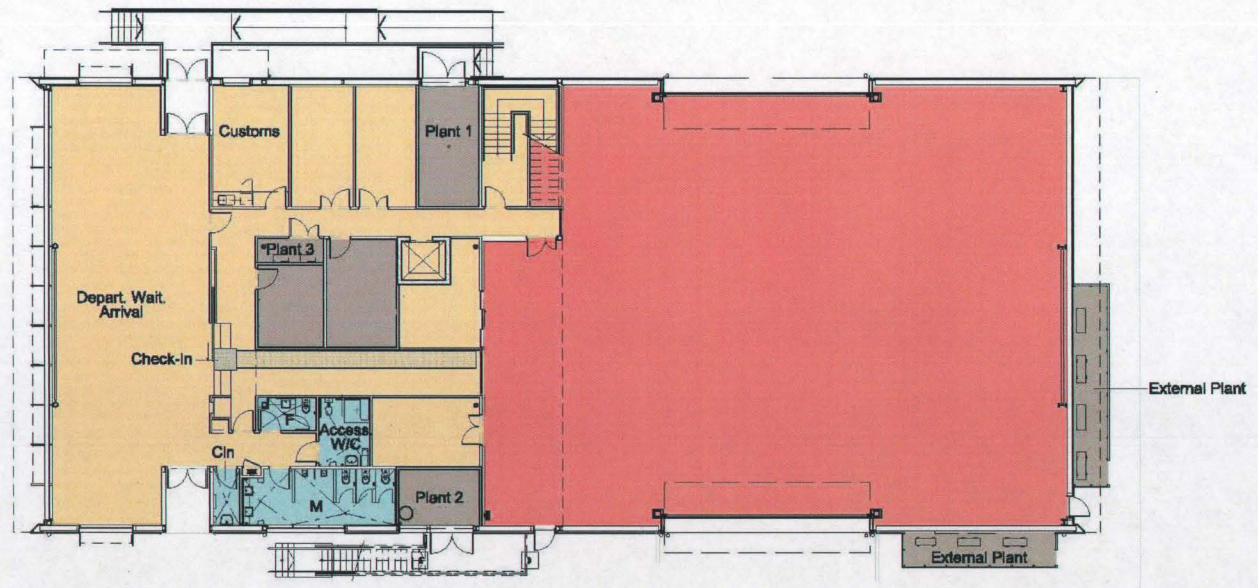
- AJAAC
- Amenities
- Plant



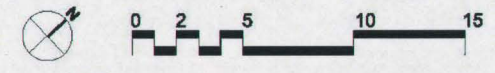
- LEGEND**
- Air Movements
  - Amenities
  - Plant
  - Air Movements Cargo Breakdown



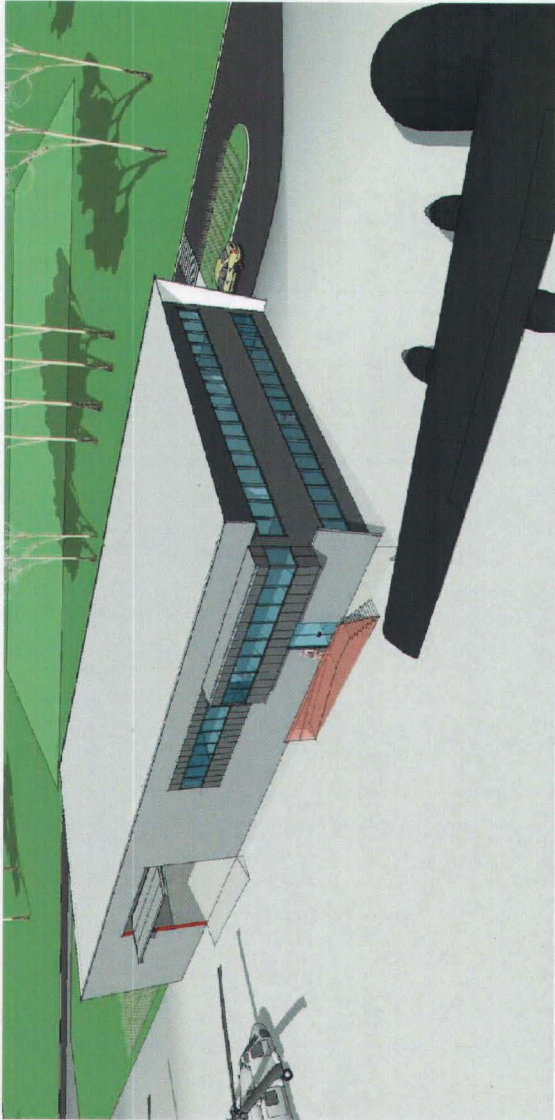
First Floor Plan



Ground Floor Plan



# Attachment 7 – Air Movements Section – Elevations

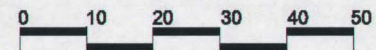
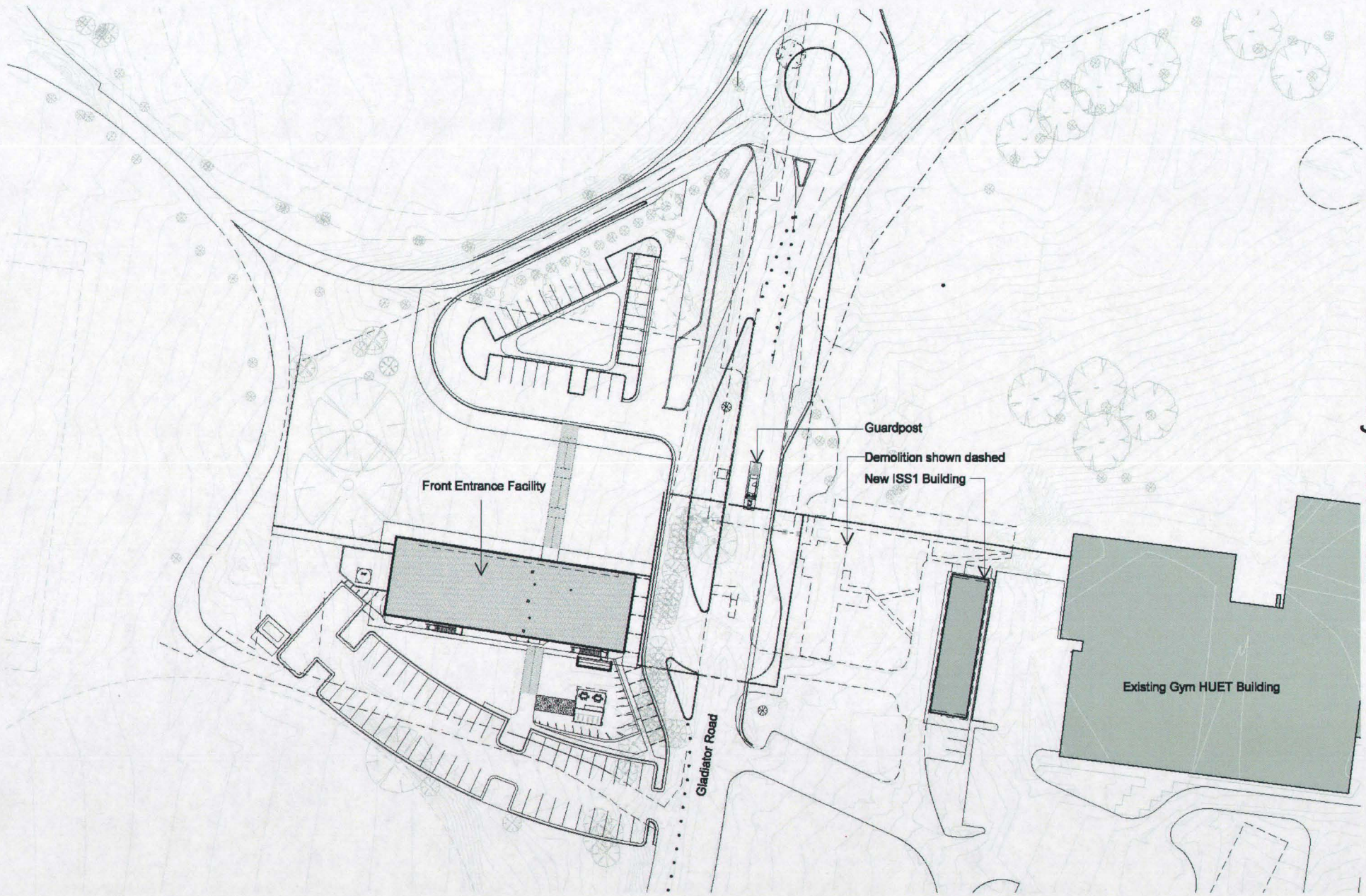


AERIAL VIEW FROM WEST

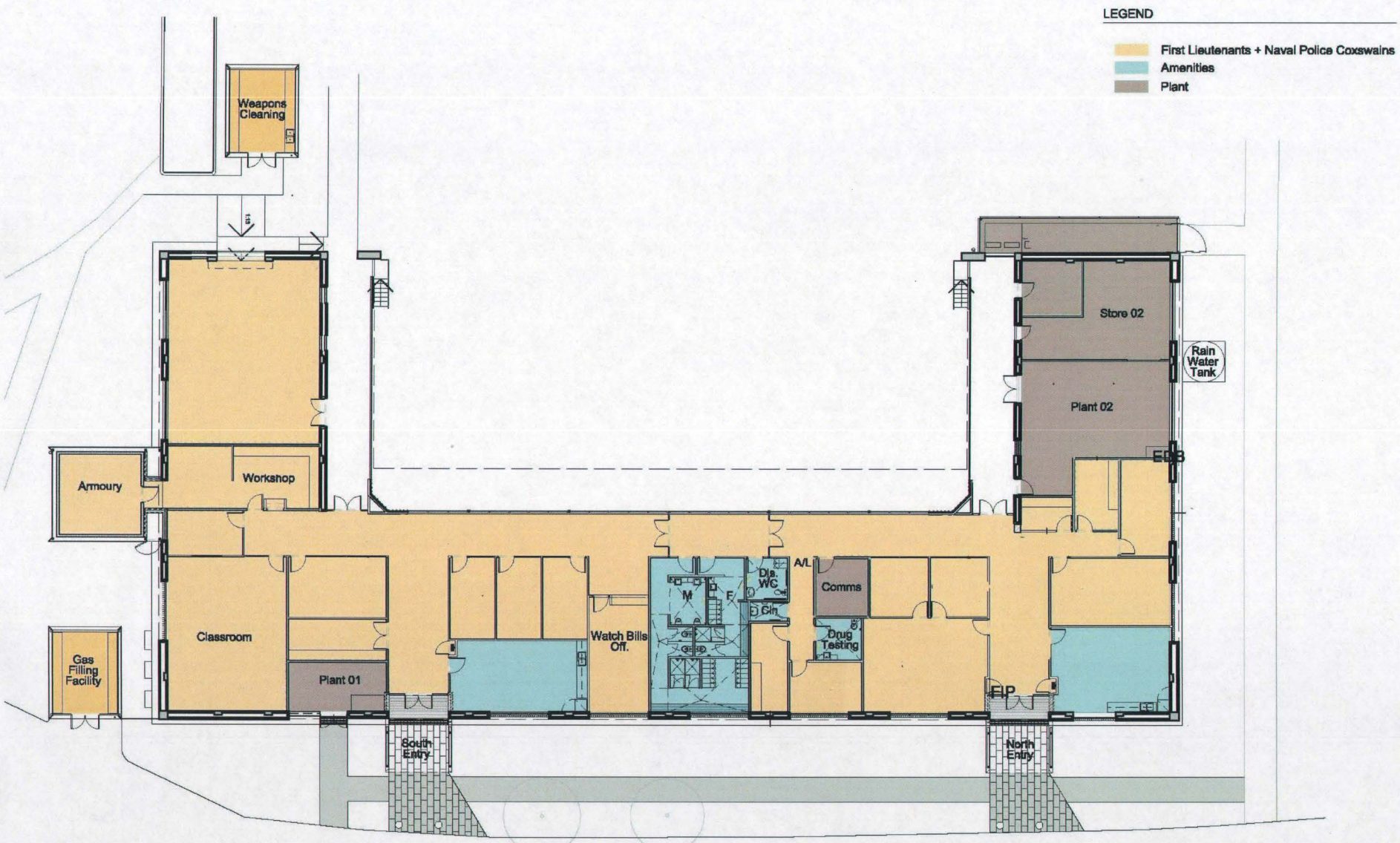


VIEW FROM SOUTH

Attachment 8 – Front Entry Site Plan



Attachment 9 – Refurbished Security Building Plan

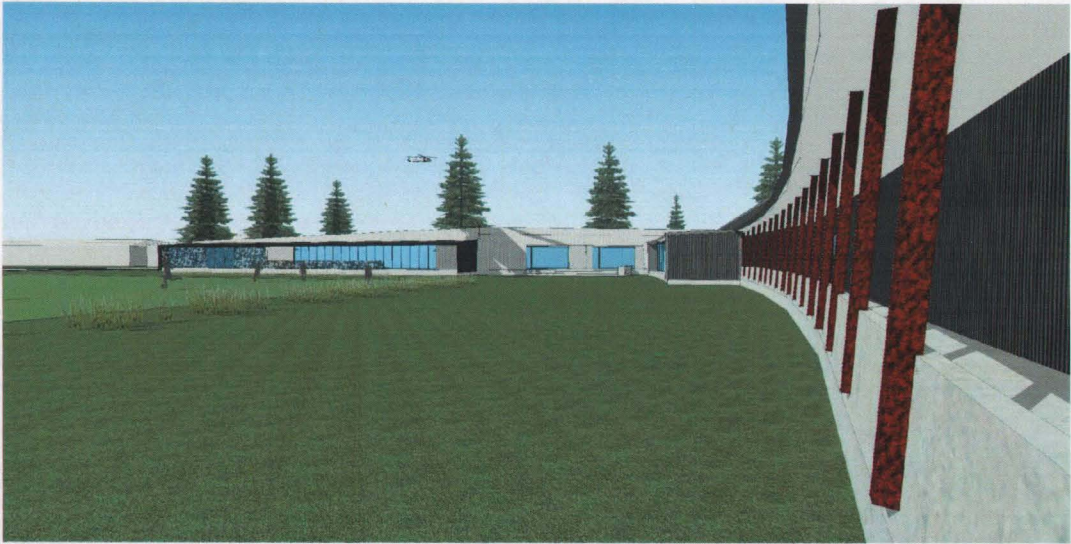




Attachment 11 – Clothing Store/Base Support Precinct -  
Elevations



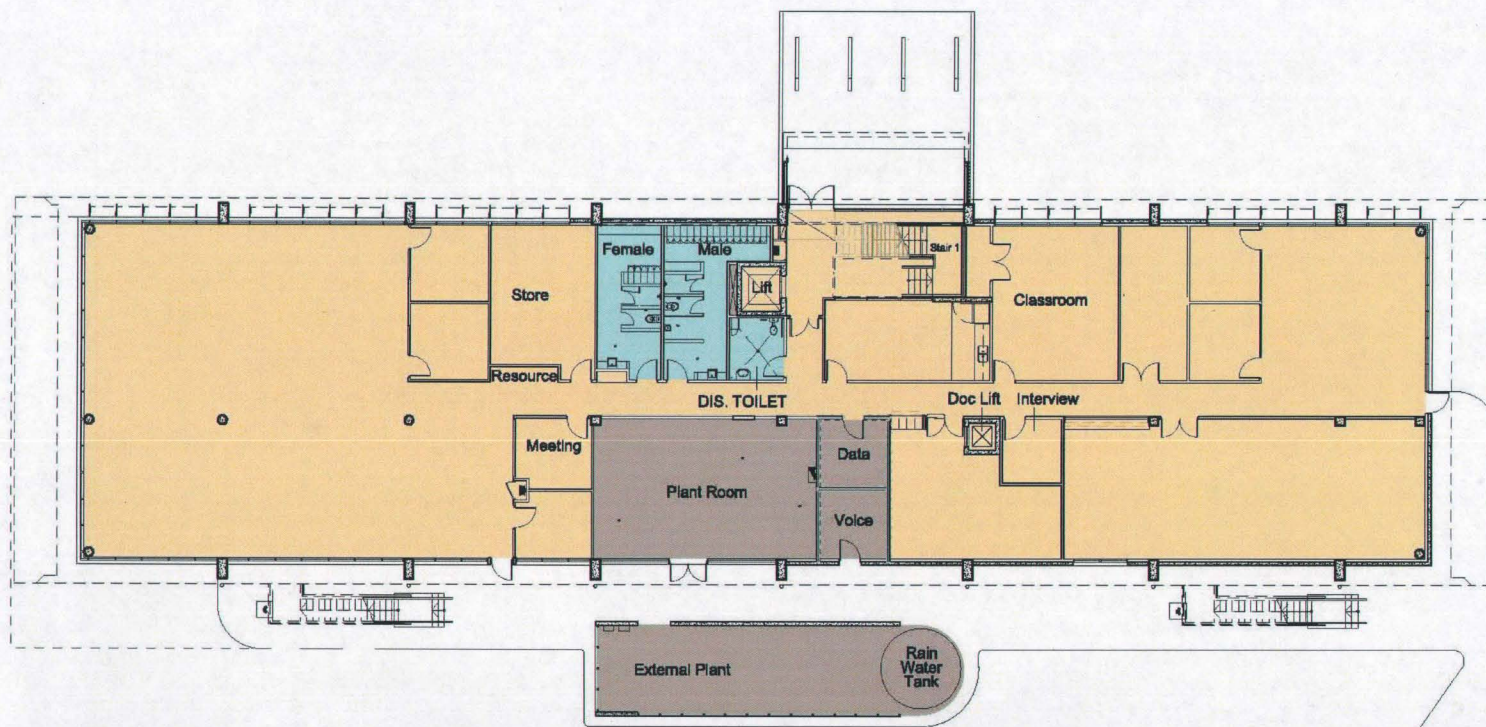
ENTRY FROM WEST



VIEW FROM JUNIOR SAILOR'S CLUB TO CANTEEN

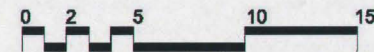


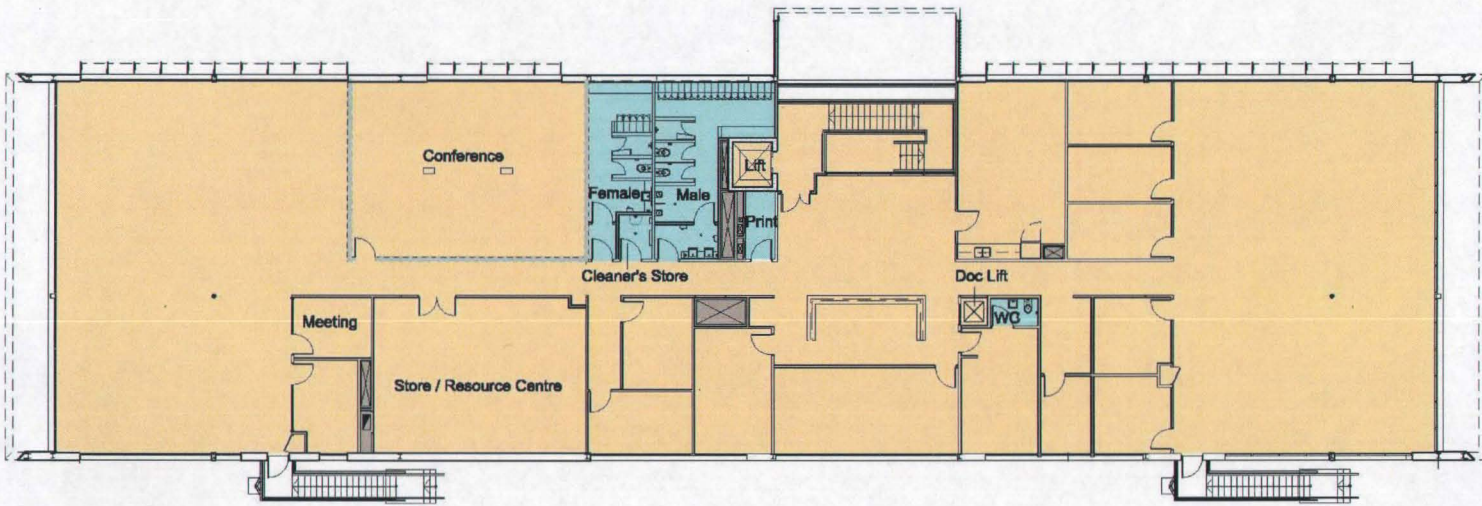
Attachment 12 – HQ FAA Building – Ground Floor



LEGEND

- HQ FAA
- Amenities
- Plant





LEGEND

- HQ FAA
- Amenities
- Plant



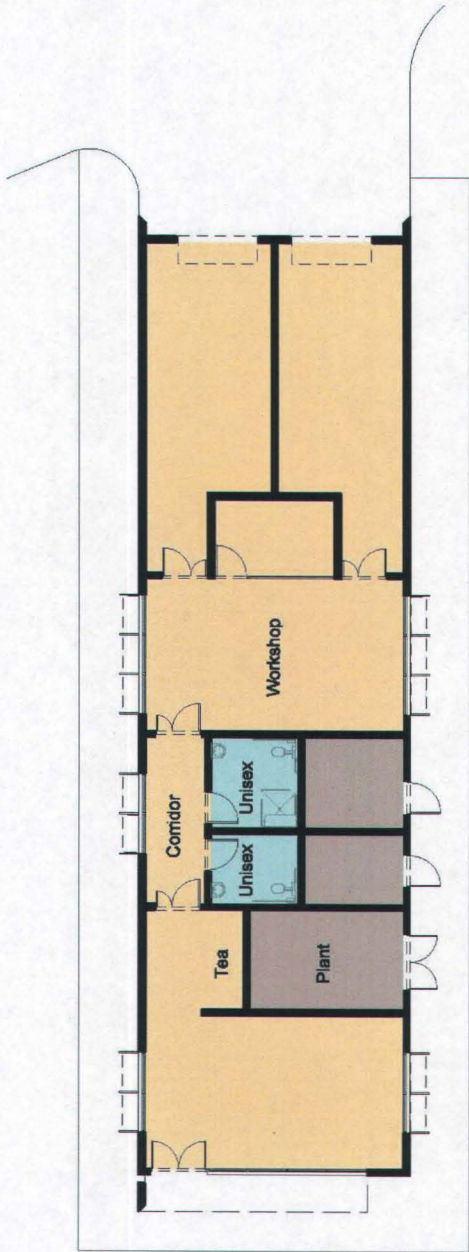


AERIAL VIEW FROM SOUTH EAST

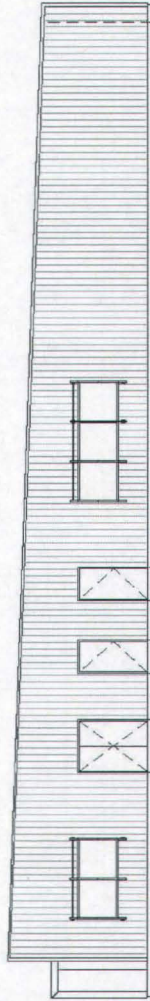


VIEW FROM FRONT CAR PARK

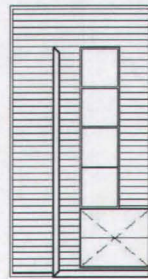
# Attachment 15 – HQ FAA Workshop Plan and Elevation



FLOOR PLAN



SOUTH ELEVATION



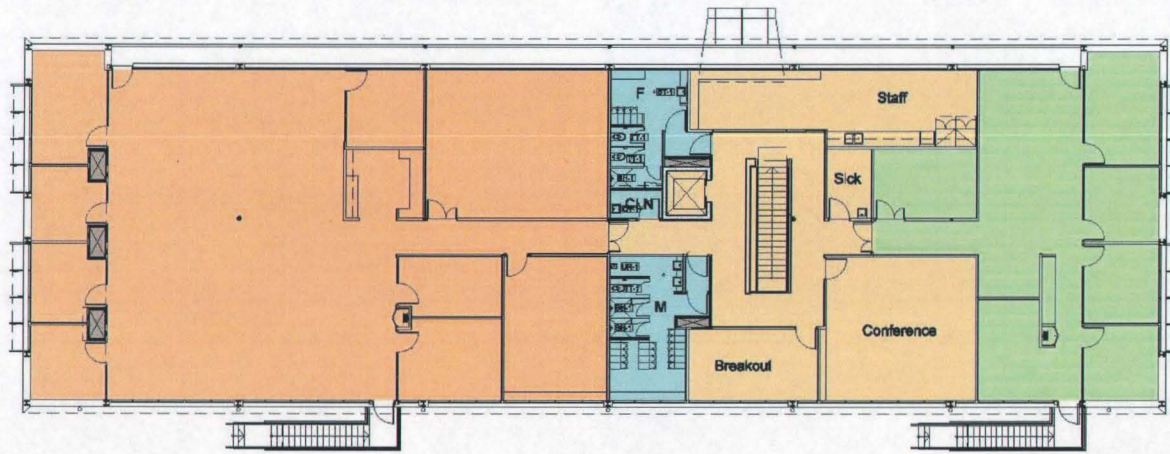
WEST ELEVATION

LEGEND

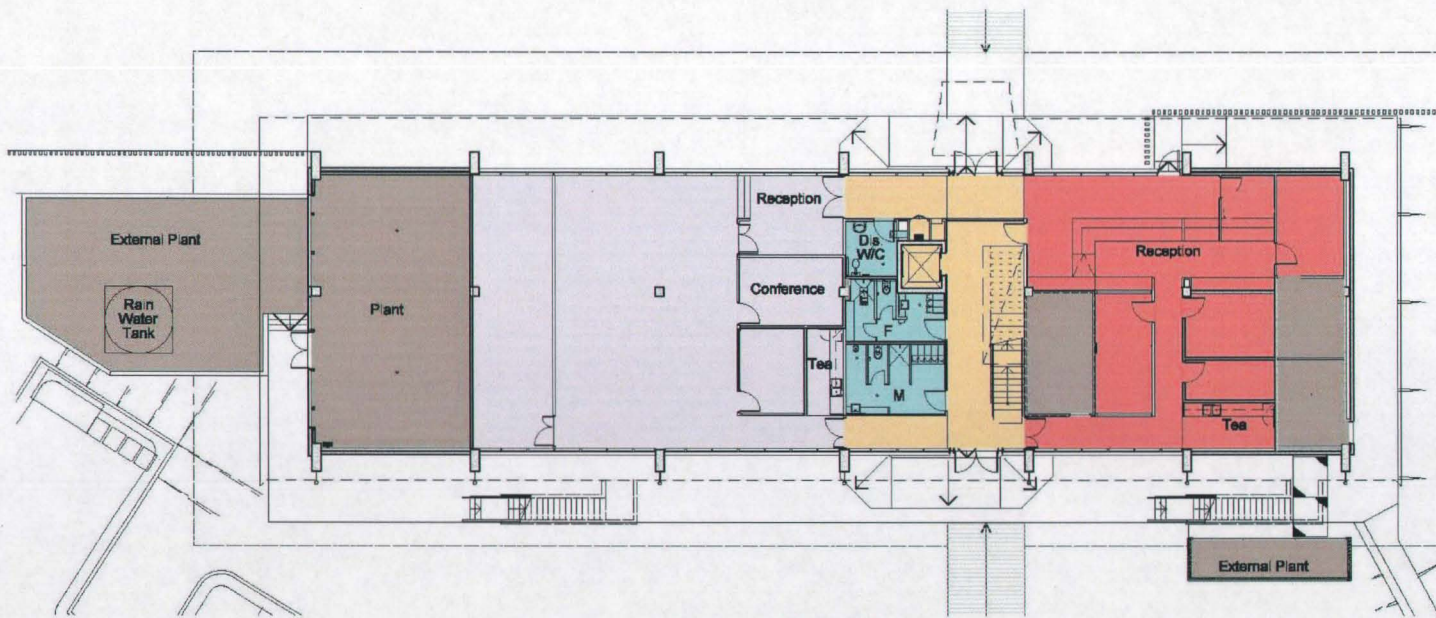
- HQ FAA Wksp
- Amenities
- Plant



# Attachment 16 – Front Entry Building - Plans



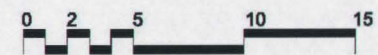
First Floor Plan



Ground Floor Plan

**LEGEND**

- Shared Amenities
- Amenities
- Plant
- Security Pass Office
- CMSC
- GSS Contractor
- DSG

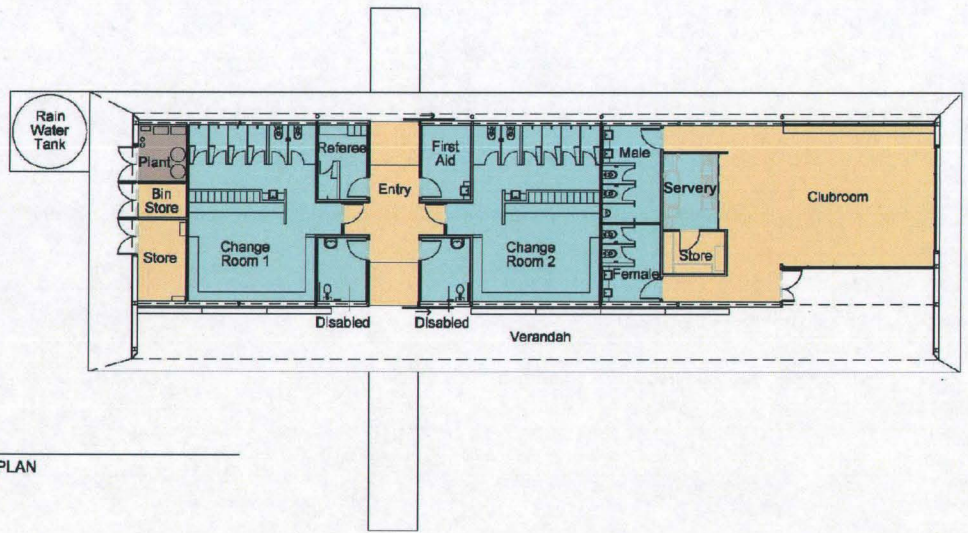




AERIAL VIEW OF ENTRY



VIEW FROM NORTH EAST



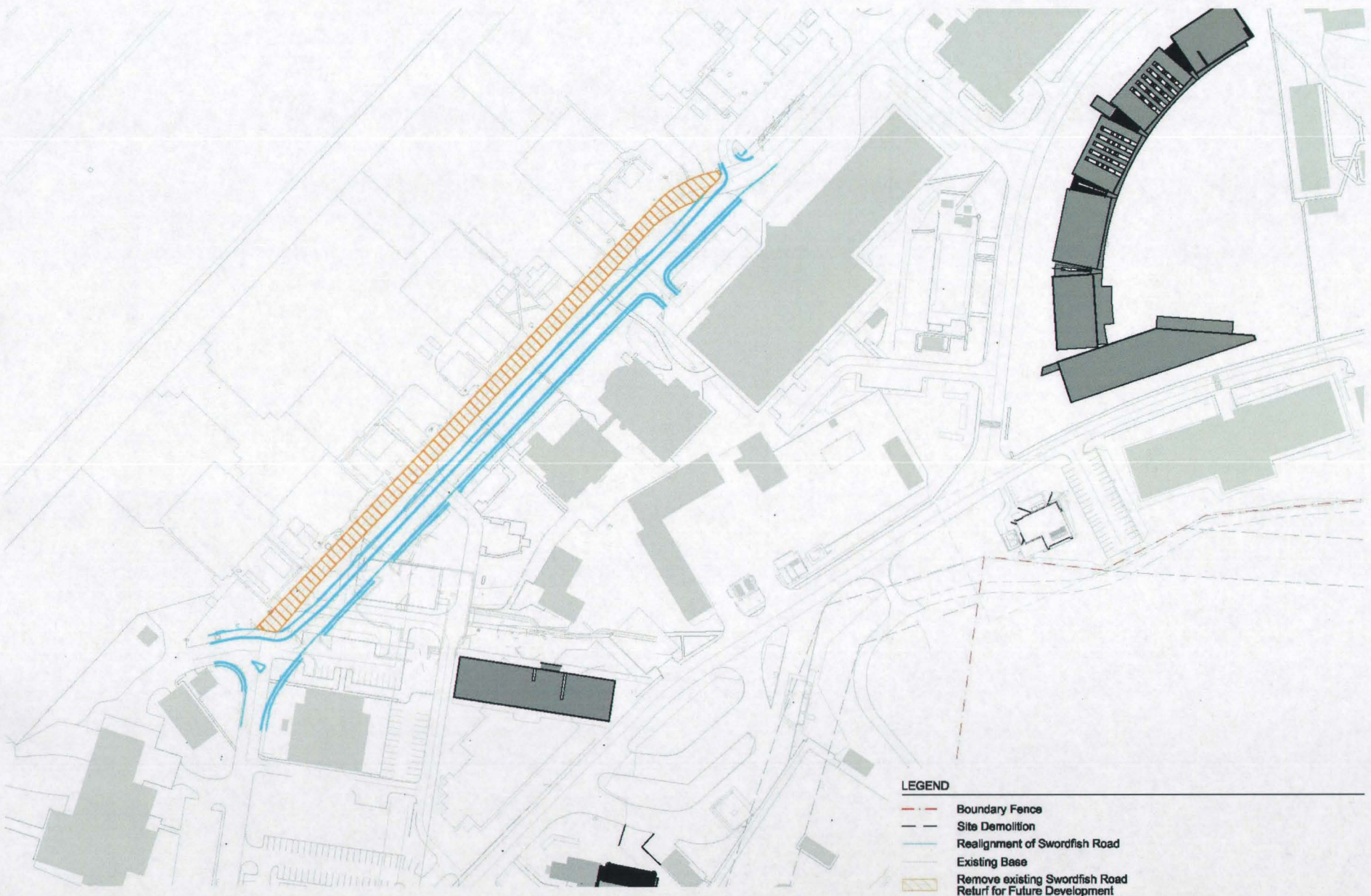
FLOOR PLAN



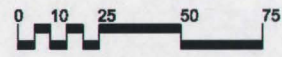
VIEW FROM SOUTH EAST



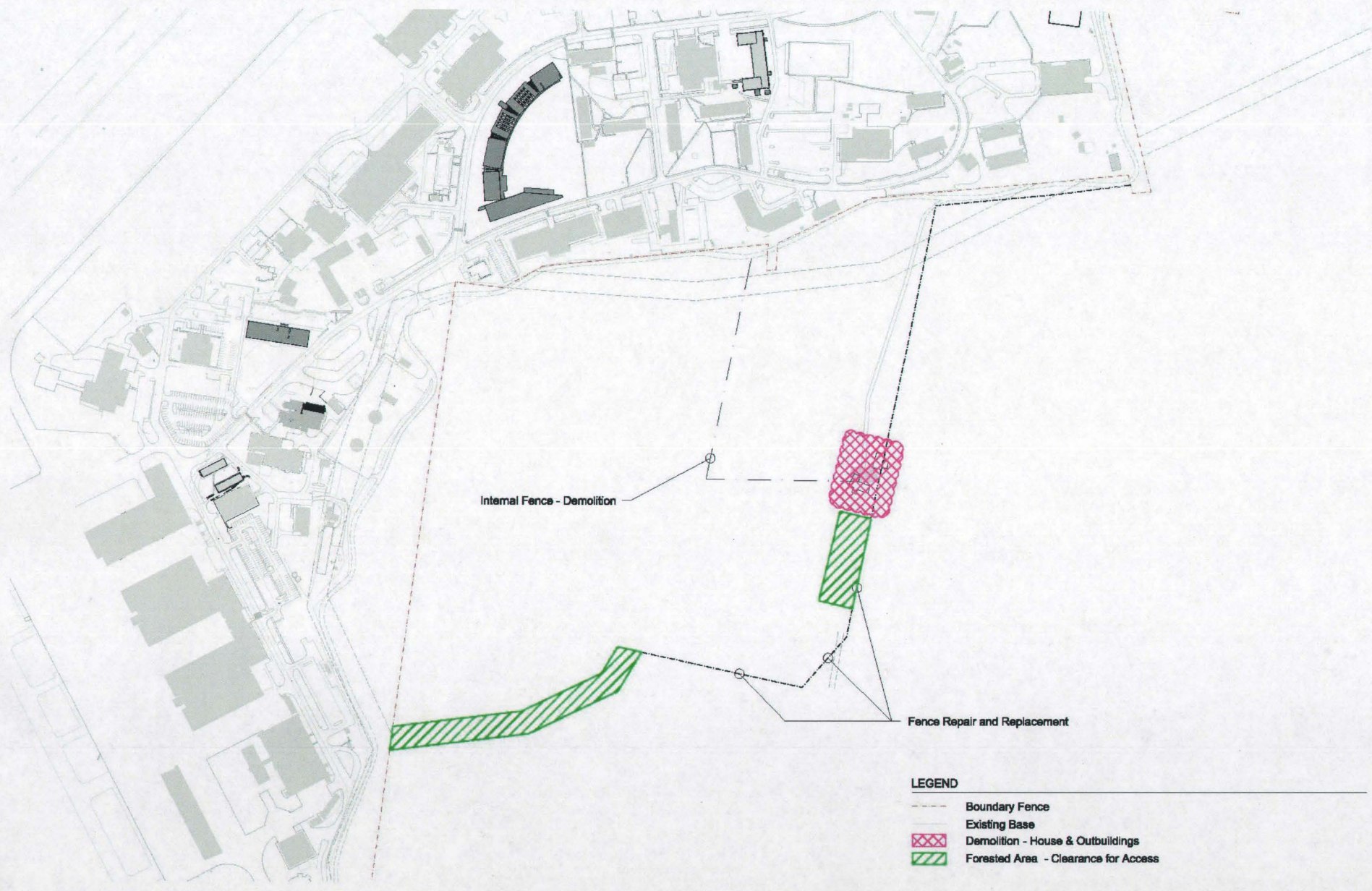
# Attachment 19 – Swordfish Road Realignment Plan



- LEGEND**
- Boundary Fence
  - - - Site Demolition
  - == Realignment of Swordfish Road
  - Existing Base
  - Remove existing Swordfish Road Return for Future Development







**LEGEND**

	Boundary Fence
	Existing Base
	Demolition - House & Outbuildings
	Forested Area - Clearance for Access