



Submission No. 01

(Seahawk Romeo Facilities)

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**Australian Government**

**Department of Defence**

# **AIR 9000 PHASE 8 MH-60R SEAHAWK FACILITIES**

**HMAS ALBATROSS, NOWRA, NSW;  
FLEET BASE WEST (HMAS STIRLING)  
GARDEN ISLAND, WA; AND  
TWOFOOLD BAY, EDEN, NSW**

**Statement of Evidence  
to the  
Parliamentary Standing Committee  
on Public Works**

Canberra, Australian Capital Territory

March 2013

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# AIR 9000 PHASE 8 MH-60R SEAHAWK FACILITIES

## Need for the Works

### Identified Need

1. Project AIR 9000 Phase 8 will acquire 24 MH-60R Seahawk (hereinafter referred to as “MH-60R”<sup>1</sup>) maritime combat helicopters with associated support systems and additional explosive ordnance storage capacity necessary for MH-60R operations. The MH-60R will replace the existing maritime combat helicopter capability provided by the Royal Australian Navy’s (RAN) 16 aging S-70B-2 Seahawk helicopters.<sup>2</sup>
2. The new MH-60R aircraft will provide Navy with advanced anti-submarine warfare and anti-surface capabilities through the use of a sophisticated sensor suite, torpedoes and air-to-surface missiles.<sup>3</sup>
3. The MH-60R is a ‘military-off-the-shelf’ capability being procured under a Commonwealth Government agreement with the United States of America. All MH-60R aircraft will be delivered in standard United States Navy military-off-the-shelf configuration with minor modifications to suit unique Australian requirements.
4. Second Pass approval for the MH-60R project was announced by the Minister for Defence on 16 June 2011. The first seven MH-60R aircraft will be delivered by December 2014, with the full fleet of 24 aircraft to be delivered by August 2016. The existing RAN Fleet of S-70B-2 Seahawk aircraft will be progressively withdrawn from active service as part of the transition to the MH-60R. The first S-70B-2 Seahawk was withdrawn from service in December 2012.
5. The MH-60R will operate from both HMAS *Albatross*, Nowra, NSW and HMAS *Stirling*, Rockingham, WA. The primary MH-60R operating base will be HMAS *Albatross*, the main operating base for the RAN Fleet Air Arm.

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<sup>1</sup> MH-60R is the aircraft model where “MH” is Multi-mission Helicopter, “60” represents the Aircraft designator (Hawk family of helicopters), and “R” or “Romeo” is the Aircraft Variant.

<sup>2</sup> The MH-60R will replace the S-70B-2 as the primary ADF rotary wing anti-submarine warfare capability in addition to overcoming the anti-surface warfare capability gap brought about by the cancellation of the SH-2G (A) Super Seasprite project.

<sup>3</sup> MH-60R weapons systems include air-launched Mk54 torpedoes and Hellfire air-to-surface missiles.

6. HMAS *Albatross* is home to the existing S-70B-2 Seahawk aircraft fleet operated by 816 Squadron (816 SQN). 816 SQN will transition to the MH-60R and support eight embarked operational Flights. The newly established 725 Squadron (725 SQN) will be the MH-60R operational training squadron in support of MH-60R aircrew training. Facilities to support the training of MH-60R crew and maintenance staff and to support the operations and maintenance of up to 18 MH-60R aircraft will be required at HMAS *Albatross*.

7. HMAS *Stirling* will provide a land based operating site on the west coast and will support up to four of the embarked MH-60R aircraft when disembarked (together with their flight support detachments<sup>4</sup>) and squadron training detachments operating from that location at any one time. Facilities to support the operations and maintenance of up to four MH-60R aircraft will be required at HMAS *Stirling*.

8. With the introduction of the MH-60R capability, Defence will also introduce the new Mk54 lightweight torpedo into service. The introduction of these new torpedos will place an increased demand on existing Defence explosive ordnance storage facilities on the east and west coasts giving rise to a requirement for additional explosive ordnance storage, maintenance and testing capacity at HMAS *Stirling* and the Explosive Ordnance Depot, Twofold Bay, Eden, NSW.

## **Options Considered to Fulfil the Identified Need**

9. A range of options were analysed during design development and are discussed below:

- a. **HMAS *Albatross***. A total of 3 options (with 3 sub-options) for proposed works at HMAS *Albatross* were considered:
  - i. Option 1: adaptive reuse of existing facilities for the MH-60R training and working accommodation including:
    - (a) the S-70B-2 Seahawk Simulator facility;
    - (b) the Training Authority Aviation facility; and
    - (c) K and L Hangars.
  - ii. Option 2: adaptive reuse of existing facilities (A and B Hangar) or new construction on the A and B Hangar precinct; and

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<sup>4</sup> To operate effectively, safely and at full capability, each MH-60R requires a "flight support detachment" consisting of RAN personnel including qualified aircraft maintainers, technicians and ground support staff to conduct operational maintenance, replenishment of aircraft consumables, refuelling, weapons loading and pre and post flight checks.

- iii. Option 3: new construction at a greenfield site at HMAS *Albatross* located at the western pad and involving a new access road to the MH-60R precinct from Braidwood Road.
- b. **HMAS *Stirling***. The options considered included different combinations of new build, adaptive reuse and extension works.
- c. **Explosive Ordnance Siting**. Locations examined include HMAS *Stirling*; Orchard Hills Explosive Ordnance Complex, NSW; the Twofold Bay Explosive Ordnance Depot; Myambat, NSW; HMAS *Albatross*; and Cultana, SA.

## **Reasons for Adopting the Proposed Course of Action**

### **HMAS *Albatross* Option 1: Adaptive reuse of existing facilities for the MH-60R training and working accommodation**

10. The existing S-70B-2 Seahawk simulator facility, Training Authority Aviation facility, and K and L Hangars were considered under this option as these facilities are currently being used for operational, training, administration and maintenance activities for similar aircraft (and the basic training helicopter).

11. Site investigations have confirmed that the existing S-70B-2 Seahawk Simulator facility's internal dimensions will not accommodate the larger MH-60R full motion flight simulators. The S-70B-2 Seahawk Simulator facility would require extensive modification and extension to the existing building together with compliance upgrades to accommodate the MH-60R full motion flight simulators. The S-70B-2 Seahawk Simulator site is not able to accommodate an extension due to existing site boundary constraints and any such works would severely disrupt concurrent training on the existing S-70B-2 Seahawk. For these reasons, the existing S-70B-2 Seahawk Simulator building and site were not preferred as the location for the MH-60R training facility.

12. In considering reuse of the existing Training Authority Aviation building, potential cost efficiencies arising from the reuse of existing classrooms and amenities were identified. However, the site is not able to accommodate the necessary building extension to accommodate all of the MH-60R full motion flight simulators, training devices and equipment making collocation of the entire training system unachievable.



Subsequent site investigations indicated that construction of a new MH-60R administration and hangar building near the existing Training Authority Aviation building was not possible due to site spatial constraints. For these reasons, reuse of the existing Training Authority Aviation building and site was not the preferred option.

13. K and L Hangars are currently being used for operational, administrative and maintenance activities in support of the S-70B-2 Seahawk aircraft, which will not be phased out until after introduction of the MH-60R, as well as the AS350BA basic training helicopter operated by 723 Squadron. The reuse of K and L Hangars at HMAS *Albatross* would require the relocation of the operational, administrative, training and support activities provided by 816 and 723 Squadrons to enable major refurbishment works to commence. The need to relocate 816 and 723 Squadrons and then undertake refurbishment works of the K and L Hangar facility would impose major cost impacts and program delays for MH-60R. K and L Hangars are also proposed for adaptive reuse for the planned Air 9000 Phase 7 Helicopter Aircrew Training System (HATS) Project and anticipated to require less refurbishment to support this system. For these reasons, the existing K and L Hangar site was not identified as the preferred option.

### **HMAS *Albatross* Option 2: Adaptive reuse of existing facilities (A and B Hangar) or new construction on the A and B Hangar precinct**

14. HMAS *Albatross* A and B Hangars are currently used as a temporary storage facility for decommissioned RAN Sea King helicopters, Sea King replacement parts and maintenance items not suitable for use on other aircraft types. A and B Hangars were constructed circa 1942. Adaptive reuse of A and B Hangars would involve significant modification and upgrade works to achieve compliance with the National Construction Code - Building Code of Australia (NCC-BCA), Defence Manual of Fire Protection Engineering (MFPE) and the *Work Health and Safety Act (WH&S) 2011* (Cth). Adaptive reuse of A and B Hangars was therefore assessed as a non-viable option due to the estimated cost premiums required to deliver a facility that fully complies with legislative and regulatory requirements.

15. The A and B Hangar precinct had previously been identified as a suitable site for the proposed new MH-60R facilities. The A and B Hangar precinct was

considered to afford efficiencies through utilising existing base engineering services,<sup>5</sup> reuse of existing flightlines and aircraft pavements. Subsequent airfield planning analysis has, however, confirmed that building / runway clearance set-back requirements would result in the encroachment of the proposed MH-60R facilities into the HMAS *Albatross* domestic zone precinct.<sup>6</sup> This option would also require additional expenditure for civil works for the re-alignment of existing HMAS *Albatross* internal roads, relocation and replacement of existing facilities including the McKenzie Building (accommodation facility), the Fleet Air Arm Museum storage hangar and the K.E. Clarkson sporting field. A and B Hangar precinct site remediation work would also be required for this option.

16. For these reasons, the building of new facilities at the A and B Hangar precinct was not identified as the preferred option.

### **HMAS *Albatross* Option 3: New construction at the western pad**

17. The western pad is a greenfield site within existing site boundaries of HMAS *Albatross* that avoids replacement costs and program delays as there is no need to relocate existing functions or capabilities to accommodate the new MH-60R precinct.

18. A new build facilities solution at the western pad provides the opportunity to combine the activities of 816 and 725 Squadrons into a single facility and adopt a more efficient facility design solution. This combined single facility will achieve economies of scale through a reduction in the total number of MH-60R aircraft workshops, aircrew survival equipment storage areas, aircraft spare parts and consumables holding and preparation areas, Ground Support Equipment storage, tool control work spaces and technical libraries, as well as associated savings in manpower costs from the centralisation of maintenance activities and functions.

19. Construction of new facilities at the western pad was assessed as the superior option as it allowed co-location of MH-60R administration and training facilities, aircraft hangars and workshops. This site and design solution represents a significantly lower schedule risk and a lower capital and whole of life cost than the A and B Hangar precinct. The proposed design solution will provide efficiencies

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<sup>5</sup> Existing HMAS *Albatross* base engineering services include, high voltage electricity reticulation, water, sewerage and gas

<sup>6</sup> HMAS *Albatross* domestic zone includes on Base accommodation, Junior Sailors Mess, Canteen and sporting fields.

during the works program without compromising the design of the MH-60R facilities in order to fit within any pre-established siting constraints.

20. The western pad option will require a separate access road to the HMAS *Albatross* MH-60R precinct from Braidwood Road. Preliminary consultations with stakeholders and regulatory authorities<sup>7</sup> were conducted during September 2012 with details set out later in this Statement of Evidence.

21. Overall, the western pad was considered superior to both options 1 and 2 for the construction of facilities to support the MH-60R and was identified as the preferred option.

### **HMAS *Stirling*: Helicopter Support Facility**

22. With the introduction of the MH-60R, the HMAS *Stirling* Helicopter Support Facility is to support up to four embarked MH-60R aircraft when disembarked (together with their flight support detachments<sup>8</sup>) and squadron training detachments operating from that location at any one time.

23. This level of activity represents an increase from current S-70B-2 Seahawk operations from HMAS *Stirling*, necessitating the refurbishment and construction of an extension of the existing Helicopter Support Facility (HSF). Options considered for the proposed HMAS *Stirling* Helicopter Support Facility included a mix of adaptive reuse, extension works and new build to optimise capital and whole of life costs for infrastructure, and sought to deliver a more efficient facility design solution.

24. The preferred option involves the refurbishment of the existing helicopter hangar to provide increased capacity to store up to four MH-60R aircraft in the “rotors spread” configuration and the refurbishment and extension of the existing workshops. The proposed works will also involve extension of the existing Helicopter Support Facility administration building through construction of two new administration work space annexes.

25. The proposed works at the Helicopter Support Facility will provide upgraded security treatments for the administration building, maintenance and

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<sup>7</sup> Shoalhaven City Council and Roads and Maritime Services (NSW).

<sup>8</sup> To operate effectively, safely and at full capability, each MH-60R requires a “flight support detachment” consisting of RAN personnel including qualified aircraft maintainers, technicians and ground support staff to conduct operational maintenance, replenishment of aircraft consumables, refuelling, weapons loading and pre and post flight checks.

workshop areas, which are required as a higher security classification is applicable to the MH-60R than the S-70B-2 Seahawk.

26. Proposed works at the Helicopter Support Facility will also involve the relocation of the car park. The preferred option provides a minimum cost solution while maximising construction program efficiencies.

### **HMAS *Stirling*: Torpedo Maintenance Facility**

27. The existing HMAS *Stirling* Torpedo Maintenance Facility requires minor modification and extension to incorporate a torpedo maintenance line that will support introduction of the Mk54 air-launched torpedo into Australian Defence Force (ADF) service for use by the MH-60R. A small additional equipment storage area is proposed to be included as part of the Torpedo Maintenance Facility works. The existing Torpedo Maintenance Facility is the only ADF munitions facility capable of maintaining and servicing the Mk54 torpedos. Construction of a new purpose built facility exclusively for maintaining and servicing the Mk54 torpedos is not considered necessary. Each of the above mentioned works represent a practical, low cost approach that achieves an efficient and effective use of Commonwealth resources.

### **Explosive Ordnance Siting**

28. Additional explosive ordnance facilities are required to store the increased quantities of guided weapons and munitions necessary to support MH-60R operations. The existing explosive ordnance storage network does not have capacity to accommodate these additional requirements. There is a need for explosive ordnance facilities on both the east and west coasts in support of MH-60R operations. Based on the functional and specialist nature of the requirements for explosive ordnance storage, a refurbishment option was not considered appropriate. Further, refurbishment of existing buildings would not have provided any additional capacity. The project is adding a new capability<sup>9</sup> to the ADF weapons inventory requiring an expansion to the explosive network storage capacity. The increase to the explosive network storage cannot be absorbed – thus the requirement to build additional storehouses.

29. A number of siting locations were considered for new explosive ordnance facilities including at HMAS *Albatross* and HMAS *Stirling*. Other siting locations of

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<sup>9</sup> Air launched Mk54 torpedoes

the Twofold Bay Explosive Ordnance Depot; Orchard Hills, NSW; Myambat, NSW; and Cultana, SA were also considered.

30. The Defence sites at Twofold Bay, Eden, and HMAS *Stirling* were considered as the most suitable locations to provide the additional explosive ordnance storage capacity necessary for the MH-60R operations due to their relative proximity to MH-60R operations. HMAS *Albatross* was assessed as not having adequate capacity to service the additional explosive ordnance storage needs. Sites at Orchard Hills, NSW; Myambat, NSW; and Cultana, SA were assessed as not representing ideal locations to support MH-60R operations due to remoteness, additional cost to implement extended logistical resupply lines and, the cost and risk of transporting explosive ordnance over long distances over public roads.

## **Historical Background**

31. **HMAS *Albatross*** - The HMAS *Albatross* site, then a Royal Australian Air Force (RAAF) airfield, commenced operations on 7 May 1942. In 1944, the base was transferred to the Royal Navy and was commissioned as Royal Navy Air Station HMS *Nabbington*. The base reverted to RAAF control in 1946, and in 1948 was commissioned as Royal Australian Naval Air Station *Albatross*.

32. Today, HMAS *Albatross* is the RAN's only Naval Air Station. It is the centre of the Royal Australian Navy's maritime aviation capability. 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.

33. **HMAS *Stirling*** - The planning of HMAS *Stirling* began in 1969. Works included the 4.3km causeway linking the Garden Island site with the mainland and construction of the wharves, workshops and accommodation facilities including the new Fleet Base West. The base was formally commissioned on 28 July 1978.

34. Today, HMAS *Stirling* is one of the RAN's largest bases with a workforce of more than 2,300 service personnel, 600 Defence civilians and 500 long-term contractors. Twelve Fleet units including the RAN's *Anzac* Class frigates and *Collins* Class submarines are stationed at HMAS *Stirling*. HMAS *Stirling* is also the site of the ADF Torpedo Maintenance Facility.

35. **East Coast Ammunition Complex, Twofold Bay** - In October 2003, a purpose built ship to shore explosive ordnance handling wharf was opened at Twofold Bay, Eden on the south coast of New South Wales. The wharf has dual use as both a military and civilian facility and caters for the ammunitioning of RAN ships based or operating on the east coast. Also constructed in the Twofold Bay hinterland is an explosives storage and maintenance depot, 17km inland from the wharf.

### **Environmental and Heritage Impact Assessments**

36. An Environmental Impact Assessment report prepared in September 2012 details the environmental and heritage impact of the proposed works at HMAS *Albatross*, HMAS *Stirling* and Twofold Bay, Eden.

37. The environmental assessment reviewed the potential impact of the new works on visual amenity, traffic management, soil contamination, noise, water quality, waste management, air quality, flora and fauna at the proposed sites. The environmental assessment concluded that low risks of environmental impact are predicted in relation to ecology at HMAS *Albatross*, HMAS *Stirling* and Twofold Bay, Eden. The implementation of recommended mitigation measures as contained within the Environmental Impact Assessment report will effectively manage these risks.

38. The heritage assessment included a review of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (Cth) database, the Australian Heritage database, the Register of the National Estate and the NSW and WA State Heritage Registers. The heritage assessment concluded that there will be minimal impact on historical, indigenous archaeological or heritage values at the proposed sites and that impacts can be addressed by appropriate mitigation measures. The proposed facilities are located within existing disturbed sites at the Defence bases, with sites chosen in areas to limit heritage impacts.

39. All proposed works will be undertaken in accordance with Defence Environmental Policy. The Defence Environmental Protection Assessment directorate considered the proposed redevelopment, and advised that referral will not be required under the EPBC Act.

40. A Construction Environmental Management Plan and Operational Environmental Management Plan will be raised and construction works will comply

with the requirements of the project's Environment Assessment Report and the Environment Clearance Certificate.

## **Key Legislation**

41. The following key legislation is relevant to this project:
- a. *Defence Act 1903* (Cth);
  - b. *Native Title Act 1993* (Cth);
  - c. *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (Cth);
  - d. *Fair Work (Building Industry) Act 2012* (Cth)
  - e. *Work Health and Safety Act (WH&S) 2011* (Cth);
  - f. *Work Health and Safety Act (WH&S) 2011* (NSW);
  - g. *Occupational Health, Safety and Welfare Act 1984* (WA);
  - h. *Disability Discrimination Act 1992* (Cth); and
  - i. *Fair Work Act 2009* (Cth);
42. The design of the proposed works will comply with all relevant and current Defence Standards, Australian Standards, Codes and Guidelines including the following:
- a. National Construction Code - Building Code of Australia (NCC-BCA);
  - b. Defence Manual of Fire Protection Engineering (MFPE);
  - c. Defence Estate Quality Management System policies and processes;  
and
  - d. eDEOP101 – Department of Defence Explosives Regulations.

## **Impact on the Local Community**

43. The project is anticipated to have a positive economic impact on the Shoalhaven NSW, Rockingham WA and Eden NSW regions. Construction will employ a diverse range of skilled consultants, contractors and construction workers over the construction period. This will have flow-on benefits to local small and medium businesses over the three regions. It is estimated that the project will create site based opportunities in each of the regions as follows:
- a. HMAS *Albatross*, Shoalhaven Region, Nowra, NSW. An average of 100 full-time jobs over a period of approximately 16 months peaking at approximately 260 full time jobs;

- b. HMAS *Stirling*, Rockingham Region, Garden Island, WA. An average of 15 - 20 full-time jobs for each of the three project elements over a period of approximately 46 months, peaking at approximately 45 full time jobs; and
- c. Twofold Bay, Eden Region, NSW. An average of 15 full-time jobs over a period of approximately 6 months, peaking at approximately 25 full time jobs.

44. Introduction of the MH-60R capability at HMAS *Albatross*, HMAS *Stirling*, and Twofold Bay is anticipated to result in minimal disruption to the local communities. The progressive transition from S-70B-2 aircraft to the replacement MH-60R is not anticipated to result in an increase to the total number of aircraft movements originating from HMAS *Albatross*. MH-60R flight operations from HMAS *Albatross* are anticipated to involve predominately maritime flight training within approved off-shore military training / exercise areas off Jervis Bay, NSW. Similarly, aircraft movements from HMAS *Stirling* will involve predominately embarked ships Flights operating within the off-shore maritime environment. The increase to explosive ordnance storage facilities at both HMAS *Stirling* and Twofold Bay are anticipated to result in minimal disruption to the local communities.

45. Each proposed AIR9000 Ph8 site remains isolated from residential areas. HMAS *Albatross* is bounded by State Forest and environmental reserves to the east and west of the Naval Air Station. The area immediately adjacent to the proposed MH-60R site located at the western pad contains a purpose designed and built Aviation Technology Park industrial area to support deeper level aircraft maintenance for both ADF and Civil fixed and rotary wing aircraft. HMAS *Stirling* is similarly remotely located from any adjacent population centres on Garden Island, some 5 Kilometres from Rockingham WA. Due to safety and explosive ordnance licensing conditions, Twofold Bay NSW is remotely located with no residential areas within close proximity.

46. Minimal disruption to each of the local communities for each of the proposed MH-60R sites is anticipated due to the physical isolation of the bases and indirect access from the bases or establishments to major trunk roads.



## **Consultation with Stakeholders**

47. Consultation has occurred, or will occur, with the list of stakeholders at Attachment 1.

48. Key consultations were undertaken with the Roads and Maritime Services (NSW) and Shoalhaven City Council for the new separate access point to the HMAS *Albatross* MH-60R precinct from Braidwood Road. Written approval in-principle of the proposed separate access point to the HMAS *Albatross* MH-60R precinct from Braidwood Road has been provided by Roads and Maritime Services (NSW) and Shoalhaven City Council (which owns and operates Braidwood Road). Initial advice provided by Shoalhaven City Council has indicated that no land acquisition, leasing arrangements or licensing agreements are required for the new access point to the HMAS *Albatross* MH-60R precinct from Braidwood Road.

## **Public Consultation**

49. Defence will convene public consultation sessions at each AIR9000 Ph 8 MH-60R site prior to commencement of the proposed construction works.

## **Purpose of the Works**

### **Project Location**

50. The proposed works will be undertaken at the following Commonwealth owned and Defence controlled establishments:

- a. HMAS *Albatross* which is located approximately 6km south west of Nowra on the south coast of NSW;
- b. HMAS *Stirling* which is located on Garden Island approximately 5km from Rockingham, WA; and
- c. Twofold Bay Explosive Ordnance Depot which is located to the south of Twofold Bay, approximately 20km from Eden on the south coast of NSW.

51. A plan showing the location of each Defence establishment is at Attachment 2. The sites of the proposed works for HMAS *Albatross*, HMAS *Stirling* and the Twofold Bay Explosive Ordnance Depot are at Attachments 3, 11 and 17 respectively.

### **Project Objectives**

52. The key objectives of this project are to:

- a. support operational, training and maintenance needs for the life of type of the MH-60R helicopters by providing cost effective, functional, safe and energy efficient facilities that incorporate flexible and adaptable designs to meet future requirements; and
- b. undertake approved facilities construction works with minimal interference to base<sup>10</sup> or establishment<sup>11</sup> operations.

### **Detailed Description of the Proposed Scope of Work**

53. Five scope elements are proposed to meet the needs of the AIR 9000 Phase 8 MH-60R Facilities Project.

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<sup>10</sup> HMAS *Albatross*, Nowra NSW and, HMAS *Stirling*, Garden Island WA.

<sup>11</sup> Explosive Ordnance Depot, Twofold Bay, near Eden NSW

### **Element 1 – Romeo Training Centre at HMAS Albatross**

54. The proposed Romeo Training Centre will provide instructional facilities for MH-60R training systems. The Romeo Training Centre has been designed to include two full motion flight simulators<sup>12</sup> and fixed-base part-task trainers (as detailed below) for MH-60R aircrew and maintainer conversion training. Students and maintainer instructional personnel will be accommodated in the Romeo Training Centre, while the aircrew instructional personnel will be based with the training squadron, 725 SQN, in the proposed new Squadron Complex (Scope Element 2). In total, eight fixed-base part-task trainers and training devices are planned to be housed in the Romeo Training Centre including:

- a. two Tactical Operational Flight Trainers, each consisting of an Operational Flight Trainer full motion flight simulator, a fixed-base Weapons Tactical Trainer, and an instructor station;
- b. Rear Crew Trainer;
- c. Avionics Maintenance Trainer, that will incorporate a Weapons Loading Trainer;
- d. Composite Maintenance Trainer;
- e. BRomeo<sup>13</sup> complete aircraft maintainer trainer; and
- f. a legacy Landing Safety Officer part-task trainer.

55. The Romeo Training Centre has been designed to accommodate a student and instructor population of 205 personnel. It will include office spaces, classrooms with computer based training, meeting rooms, resource rooms, storage, library, general amenity areas, break out areas, kitchenettes, and ablutions; small electrical and mechanical workshop areas; and ancillary spaces for server rooms, a reception area and building services.

56. The proposed Romeo Training Centre will be a new two storey building co-located with the proposed Squadron Complex in a new precinct at the western pad at HMAS Albatross.

57. As part of the scope of the proposed combined facility, a separate access road to the HMAS Albatross MH-60R precinct from Braidwood Road is proposed to

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<sup>12</sup> Two full motion Tactical Operational Flight Trainers will be procured, installed and commissioned under the MH-60R capability acquisition project.

<sup>13</sup> "BRomeo" is a static aircraft training device permanently housed in the dedicated Romeo Training Centre aircraft hangar used for aircraft maintenance training.

be constructed. A new car park for 550 cars that will be shared between the Romeo Training Centre and the Squadron Complex facilities is also proposed.

58. Plans for the proposed works are shown at Attachments 4 to 7.

### **Element 2 – Squadron Complex at HMAS Albatross**

59. The proposed Squadron Complex includes the provision of:
- a. hangar facilities with hangar capacity for up to 18 aircraft;
  - b. administration facilities including headquarters working accommodation for both the operational support squadron (816 SQN) and the operational training squadron (725 SQN);
  - c. workshop facilities that will provide operational and intermediate level maintenance areas for both 816 SQN and 725 SQN. These include:
    - (1) structural repair workshop;
    - (2) avionics workshop;
    - (3) survival equipment workshop and stores;
    - (4) role equipment workshop and stores;
    - (5) test equipment, tool store and tool control office; and
    - (6) Ground Support Equipment (GSE) workshop and stores.
  - d. aircraft pavements and flight line that will provide aircraft parking for a total of eight MH-60R aircraft.

60. The proposed Squadron Complex will accommodate a total workforce population of 368 personnel. It will also include classrooms, meeting rooms, resource rooms, storage, conference and briefing rooms, technical library, general amenity areas, break out areas, kitchenettes and ablutions, small electrical and mechanical workshop areas, ancillary spaces for server rooms, a reception area and building services.

61. The proposed Squadron Complex will be co-located with the proposed Romeo Training Centre in a new precinct on the western pad at HMAS Albatross. Plans for the proposed works are shown at Attachments 8 to 10.

**Element 3 – Torpedo Maintenance Facility at HMAS *Stirling***

62. The proposed Torpedo Maintenance Facility works are required to conduct torpedo maintenance and testing. The proposed works comprise minor internal modifications to the existing Torpedo Maintenance Facility at HMAS *Stirling* to meet the specific needs of the MH-60R torpedo maintenance requirements and a small extension to the facility for equipment storage. Existing administration and amenities will be utilised. The site of the proposed works is shown at Attachment 11 and plans of the proposed works are shown at Attachment 16.

**Element 4 – Explosive Ordnance Storage Facility at HMAS *Stirling* and Twofold Bay, Eden**

63. The proposed works include construction of two new Earth Covered Building explosive ordnance storehouses at HMAS *Stirling* and one new Earth Covered Building at the Twofold Bay Explosive Ordnance Depot within the existing explosive ordnance storage area at each site.

64. Plans for the proposed works and site locations are shown at Attachments 17 and 18.

**Element 5 – Helicopter Support Facility at HMAS *Stirling***

65. The proposed works at the HMAS *Stirling* Helicopter Support Facility include:

- a. the upgrade of existing helicopter storage hangars, and extension of the workshop and storage space;
- b. the expansion and refurbishment of the administration area for additional personnel, crew rooms, mission planning and maintenance functions required for visiting aircraft detachments; and
- c. provision of an additional 53 car parking spaces for staff and visiting aircraft detachments.

66. The proposed Helicopter Support Facility will be a single storey facility designed to accommodate 117 personnel. The site of the proposed works is shown at Attachment 11 and plans of the proposed works are shown at Attachments 12 to 15.

### **Public Transport**

67. None of the three sites are directly serviced by public transport. As a result, personnel are required to use private means for transport to and from the bases.

### **Local Road and Traffic Concerns**

68. For HMAS *Albatross*, a new security access point is proposed from Braidwood Road to service the MH-60R facilities. There will be a requirement for minor road improvements along Braidwood Road to access the MH-60R precinct. A traffic management study undertaken during the project development phase has confirmed that the traffic impact on Braidwood Road is minimal and the new access point will reduce potential traffic issues at the HMAS *Albatross* main gate on *Albatross* Road.

69. For the proposed works at HMAS *Stirling* and Twofold Bay Explosive Ordnance Depot, the traffic impact during both the construction period and subsequent operations will be negligible. This is due to the smaller scope of these works and/or their remote location.

### **Zoning and Local Approvals**

70. The proposed HMAS *Albatross* western pad works fall within the boundaries of Commonwealth owned land with the exception of road works off Braidwood Road for the proposed new base security access point. Consultations with zoning and local authorities have confirmed that the preliminary design solution for the road works on Braidwood Road is acceptable to both Roads and Maritime Services (NSW) and Shoalhaven City Council and no land acquisition, leasing arrangements or licensing agreements are required.

71. The HMAS *Stirling* and Twofold Bay explosive ordnance sites were subjected to detailed analysis which confirmed that siting of the new Earth Covered Buildings remains within existing explosive ordnance safety arcs.

## **Planning and Design Concepts**

72. The design philosophy adopted for the proposed facilities at all MH-60R sites incorporates the following considerations:

- a. provision of cost effective, functional and energy efficient designs suitable for the climate of the site and of a style compatible with existing base / establishment aesthetics;
- b. adoption of conventional construction techniques and materials commonly used by the construction industry and consistent with those already utilised on the base / establishment;
- c. maximum use of existing engineering services infrastructure to minimise capital costs;
- d. utilisation of readily available and durable materials that achieve low cost maintenance solutions;
- e. recognition of site constraints, security requirements, the established zone plan, building functional relationships to existing facilities and MH-60R operational needs; and
- f. planning services and structural design to provide maximum floor layout flexibility.

73. Internal Fit-out Design Principals (excluding explosive ordnance storehouses) will incorporate the following considerations:

- a. the buildings should provide a pleasant and stimulating work environment which encourages good work practices and staff interaction;
- b. internal planning of spaces should contribute to efficient operation and allow for a flexible and adaptive work environment able to cope with ongoing changes in both operations and technology;
- c. breakout spaces, amenities and meeting rooms should be located in close proximity to work areas; and
- d. design should allow ease of adaptability of internal spaces over time.

## **Structural Design**

74. The structural design shall meet the relevant Australian Standards, the requirements of the Defence Estate Quality Management System and consider the

local geotechnical profile. The structural design provides for a low cost solution that allows for future modifications to the facilities while considering the critical program requirements for the construction works. For the building extension works, the solution provides consistency with the existing structural design treatments.

75. The proposed new building works at HMAS *Albatross* will consist of steel-framed hangar structures and concrete ground floor and first floor slabs for the office, training and workshop areas. Roofs are to be metal clad.

76. Internal walls are non-load bearing stud frames lined with plasterboard. Non-load bearing block walls will be used in workshop areas.

77. The proposed extension works for the Helicopter Support Facility at HMAS *Stirling* will use a reinforced concrete ground floor with a metal deck roof.

78. The proposed extension works at the Torpedo Maintenance Facility at HMAS *Stirling* consist of reinforced concrete tilt up walls with reinforced concrete slabs on ground and a metal roof. The new secure areas will be constructed of reinforced concrete in accordance with the relevant Defence standards.

79. The proposed Earth Covered Building works will be completed in accordance with ADF mandated safety requirements for Explosive Ordnance storage facilities as laid out in eDEOP101.

## **Materials and Furnishings**

80. Materials have been selected on the basis of robustness, low maintenance requirements, low life cycle costs, ease of replacement and repair, and suitability for off-site pre-fabrication and modular assembly.

81. External walls for the new building works at HMAS *Albatross* will be a mixture of precast concrete panels, metal cladding and curtain wall glazing. A metal panel sun screening system will be installed to improve environmental performance of the buildings. Roof fittings have been selected for their resilience to environmental conditions.

82. Materials for the extension works at the Torpedo Maintenance Facility at HMAS *Stirling* are similar to the existing buildings and comprise suitable precast concrete walls and metal roofing. For the Helicopter Support Facility, use of face brick, metal clad walls and metal roofing will be selected for their corrosion resistance to the very severe marine environment at HMAS *Stirling*.



## **Mechanical Services**

83. The mechanical services for the new buildings and extensions have been designed according to operational function and needs. The mechanical service systems are to provide mandatory ventilation, thermal comfort and air quality conditions in accordance with specific user needs and the National Construction Code – Building Code of Australia.

84. For the proposed combined Romeo Training Centre and Squadron Complex at HMAS *Albatross* the mechanical services include:

- a. a central high efficiency air cooled chiller and gas fired hot water generator heating plant;
- b. ducted air conditioning systems using ceiling variable air volume terminal units for administration areas and classrooms;
- c. mechanical extraction to ablution areas;
- d. a dedicated air cooling system for communications rooms;
- e. mechanical ventilation to workshop facilities and store rooms to supplement natural ventilation, where necessary;
- f. natural ventilation for hangars with heating provided via in-floor heating;
- g. ducted air conditioning systems for training simulator rooms;
- h. floor mounted computer room air conditioning units for computer training rooms which will supply air via an underfloor air supply; and
- i. control and monitoring of all air conditioning systems through a Building Management System.

85. The proposed Torpedo Maintenance Facility refurbishment will be integrate ventilation requirements within the existing ducted air cooled air conditioning systems. The proposed extension works for the equipment store will be naturally ventilated.

86. For the proposed Helicopter Support Facility, the mechanical services include:

- a. a ducted air conditioning system using ceiling variable air volume terminal units in administration areas;
- b. mechanical extraction to ablution areas;

- c. a dedicated wall mounted split air conditioning system to communications rooms;
- d. mechanical ventilation to workshop facilities and store rooms to supplement natural ventilation, where necessary; and
- e. control and monitoring of all air conditioning systems through the (existing?) Building Management System.

87. The proposed Explosive Ordnance Storage Facility buildings are a non-occupied naturally ventilated space.

### **Hydraulic Services**

88. Hydraulic services are to comply with the requirements of the Defence Estate Quality Management System and Australian Standards. The proposed hydraulic and gas connections for the MH-60R facilities at HMAS *Albatross* and HMAS *Stirling* will use existing trunk hydraulic and gas networks.

89. The sewer connection for the proposed MH-60R facilities at HMAS *Albatross* will connect to Shoalhaven Council trunk services and infrastructure. Initial advice provided by Shoalhaven City Council has indicated that no land acquisition, leasing arrangements or licensing agreements will be required. At HMAS *Stirling*, the connection for the Helicopter Support Facility will be to the existing? standalone treatment facility. The proposed Earth Covered Buildings at HMAS *Stirling* and Twofold Bay Explosive Ordnance Depot will not require specific sewer connections. There are no adjustments to existing sewer services required at the Torpedo Maintenance Facility.

90. Potable water will be connected to existing supply. For the proposed facilities at both HMAS *Albatross* and the HMAS *Stirling* Helicopter Support Facility, rainwater will be collected and stored in storage tanks and plumbed for use in toilet flushing and minor landscape irrigation. There are no adjustments required to potable water supply at the Torpedo Maintenance Facility and Earth Covered Buildings.

### **Electrical Services**

91. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements.

92. All electrical systems will demonstrate proven reliability and performance, ease of maintenance and replacement, energy efficiency and cost effectiveness, and will comply with current standards. The high voltage supply to HMAS *Albatross* will be undertaken as part of the HMAS *Albatross* Redevelopment project.

93. Electrical infrastructure and new switchboards will have spare capacity to allow for future growth. Sub-metering will be included. The new meters at HMAS *Albatross* will be monitored through a new Building Management System to support an active energy management program on the site.

94. Specific attention will be given to ensuring electrical services for the explosive storehouses at Twofold Bay and HMAS *Stirling* meet Defence mandated safety requirements.

## **Fire Protection**

95. The respective local Fire Brigades at HMAS *Albatross*, HMAS *Stirling* and Twofold Bay<sup>14</sup> have (or are in the process) of being consulted for the proposed works at these sites. The proposed fire detection systems, indication panels, emergency and exit lighting and Aqueous Film-Forming Foam fire protection systems will suit the existing HMAS *Albatross*, HMAS *Stirling* and Twofold Bay systems. All construction and fire protection will comply with the National Construction Code – Building Code of Australia, the Defence Manual of Fire Protection Engineering and all other applicable codes and Australian standards.

96. Bushfire protection will be provided by building all structures in accordance with the Australian Standard AS 3959 – 2009 ‘Construction of buildings in bushfire prone areas’. The exposure to bushfire was determined by reference to standard tables of vegetation type and slope for specified weather conditions and a level of construction selected in compliance with the National Construction Code - Building Code of Australia approved methodology to suit the setback distance from unmanaged vegetation.

97. The design includes the installation of automatic fire alarm and detection systems as required by the Defence Manual of Fire Protection Engineering. The fire indicator panel in each of the buildings will be monitored centrally on base.

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<sup>14</sup> Rural Fire Service Bega Valley District Office consultative process scheduled for week commencing 4 March 2013.

## **Acoustics**

98. The new proposed facilities will comply with the National Construction Code – 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. Where required, 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**

99. Proposed new landscape works will complement and enhance the character of each site. The landscape design will focus on a functional, low maintenance approach with the use of indigenous plants. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices in accordance with local environmental conditions and the Construction Environmental Management Plan.

## **Other Civil Works**

100. Civil engineering including grading and stormwater piped drainage and run off will comply with the Defence Estate Quality Management System and the Australian Rainfall and Runoff Manual, Volume 1 and Volume 2.

## **Environmental Sustainability of the Project**

101. 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.

102. Defence policy is to incorporate best practice Ecologically Sustainable Development principles, where possible, on all projects. This requires an initial capital investment during the development stage of the project to ensure the design, materials and delivery methods are consistent with Ecologically Sustainable Development principles. Defence Ecologically Sustainable Development principles will be applied to each project element to achieve environmentally positive outcomes and benefits from the project, particularly in the areas of water use reduction, energy use reduction, waste minimisation, emissions reduction, pollution prevention, indoor environment quality and choice of environment friendly materials.

103. 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.

104. The following general Ecologically Sustainable Development directions form the basis of the sustainable design features of the project and will be implemented:

- a. recycling of construction and demolition waste;
- b. use of paints, flooring, carpets, adhesives and sealants with low Volatile Organic Compound emissions;
- c. engineered timber products with low or zero formaldehyde emissions;
- d. thermal insulation and refrigerant products with zero Ozone Depletion Potential;
- e. water efficient fixtures, toilets and appliances;
- f. toilet and urinal flushing with rainwater where possible;
- g. solar hot water systems with gas boost to provide domestic hot water;
- h. lighting controls with time clocks, motion sensors and daylight sensors to minimise wasted energy;
- i. external lighting to reduce light pollution and be energy efficient with time clocks and daylight sensing controls;
- j. plant species to be low water use, indigenous and drought resistant;
- k. efficient heating, ventilation and air conditioning (HVAC) systems;
- l. natural ventilation to hangar facilities;
- m. maximisation of natural daylight where possible; and

- n. provision of metering and sub metering to capture the energy and water consumption of each building and monitor against predicted consumption.

## **Energy Targets**

105. The Ecologically Sustainable Development targets and requirements for Defence projects shall comply with the Defence Building Energy Performance Manual.

106. All new offices and offices subject to major refurbishment are required to comply with the minimum energy performance standards in the Energy Efficiency in Government Operations Policy for office buildings greater than 2,000 m<sup>2</sup>. These buildings will be designed, constructed, operated and maintained to ensure that they use energy efficiently and comply with:

- a. Section J: Energy Efficiency requirements of the National Construction Code/ Building Code of Australia 2012 (NCC/BCA 2012);
- b. Defence Green Building Requirements (DGBR); and
- c. the Energy Efficiency in Government Operations (EEGO) policy.

107. The Energy Efficiency in Government Operations policy has exceptions for Defence facilities due to Defence security implications, functional requirements, diverse energy loads due to equipment use and extended operational hours. As the facilities are primarily used as operational and educational facilities they are unable to be rated under NABERS and, therefore, will be exempted from the requirements stipulated in the Energy Efficiency in Government Operations. It is also expected that due to the unique security and energy requirements, a NABERS rating will not be appropriate for the proposed office facilities in HMAS *Stirling* and HMAS *Albatross*.

108. Ecologically Sustainable Development objectives and solutions are considered in design to reduce the impact on the wider environment through the use of sustainable design and construction techniques and management systems that will reduce energy consumption and the use of natural resources by:

- a. 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;

- b. 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, bicycle racks and green landscaping spaces to increase user amenity;
- c. providing efficient heating, cooling and lighting solutions to reduce the environmental footprint of the site;
- d. providing efficient solutions to reduce water requirements;
- e. sub-metering of energy sources linked to a Building Management System;
- f. sub-metering in accordance with the Defence Energy Management Strategy and the requirements of the Energy Efficiency in Government Operations (EEGO);
- g. spaces with intermittent and variable occupancy separately zoned with presence detection control and/or CO<sub>2</sub> demand control ventilation;
- h. minimum energy efficiency ratings of 3.5 stars for dishwashers and 4 stars for refrigeration;
- i. water sources to be metered and linked to the Building Management System; and
- j. compliance with Ecologically Sustainable Development principles within the Defence Building Energy Performance Manual.

### **Measures to Reduce Energy and Water Use**

109. Passive design features, embedded in building design throughout the project, include:

- a. optimal orientation of buildings, shading, thermal mass, insulation and glazing to reduce energy consumed by active heating and cooling through appropriate use of solar gains throughout the year;
- b. maximal use of natural light within all buildings and artificial lights linked with daylight sensors to limit energy use;
- c. use of rainwater captured on site for the majority of toilets and landscaping in order to reduce the amount of potable water consumed;

- d. water efficient taps and toilets rated as at least 4 Star Water Efficiency Labelling and Standards (WELS) and showerheads rated as 3 Star WELS;
- e. “Energy Star” compliant appliances and equipment installed where available;
- f. solar hot water systems with gas boost (where available) to provide preheating for domestic hot water;
- g. use of low energy lamps for artificial lighting in buildings and lighting control systems sensors and time switches to minimise energy usage<sup>15</sup>; and
- h. installation of energy metering to separately monitor the regulated and unregulated energy usage of each building and all the main loads as required by the Defence Building Energy Performance Manual, November 2011. Metering will be linked back to the Building Management System to allow monitoring of energy consumption.

### **Details of Compliance with Local, State/Territory and Commonwealth Water and Energy Policies**

110. All new buildings will be designed, constructed, operated and maintained in order to use energy and water as efficiently as possible and comply with the following statutory and Defence requirements:

- a. Parts J1 – J8 of Section J of the National Construction Code – Building Code of Australia 2012.
- b. Building Energy Performance Manual, November 2011.
- c. The Energy Efficiency in Government Operations (EEGO) policy.
- d. Defence Energy Policy.
- e. Department of Defence Water Management Strategy.

111. Lighting control, metering and power densities are in accordance with the Defence Manual of Infrastructure Engineering Electrical and National Construction Code – Building Code of Australia.

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<sup>15</sup> The power usage of the lighting shall comply with the National Construction Code – Building Code of Australia



## **Reuse of Existing Structures**

112. The existing Torpedo Maintenance Facility and Helicopter Support Facility at HMAS *Stirling* will be modified to provide an efficient solution to the capability requirements. It is not feasible to reuse existing facilities at HMAS *Albatross* for the Romeo Training Centre, Squadron Complex and Explosive Ordnance Storage.

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

113. There are no major demolition works proposed by the project. Works are either new build or refurbishment and extension of existing buildings. The proposed refurbishment and extension works to the Torpedo Maintenance Facility and Helicopter Support Facility require minor internal demolition works. The proposed Helicopter Support Facility extension works will require the existing car park to be replaced.

## **Provisions for People with Disabilities**

114. Access and facilities for the disabled will be provided in accordance with the National Construction Code – Building Code of Australia, Disability Discrimination Act (DDA) Access to Premises Code 2010, Australian Standard AS1428.1-2009 and Defence's policy 'Disabled Access and Other Facilities for Disabled Persons'. Disabled access to all buildings is required. Passenger elevators will be provided in the proposed HMAS *Albatross* Romeo Training Centre and adjoining Squadron Complex.

115. Disabled access to and connections between buildings and facilities at all MH-60R sites, including car parking, will also be designed in accordance with relevant access standards.

116. eDEOP 101, Section 4, Regulation 4.1 outlines the conditions for employment within an explosive ordnance area, including disabled persons suitability for employment. Consequently, dispensation for disabled access to Explosive Ordnance Storehouses will be sought.

## **Childcare Provisions**

117. The project will not result in any increase of personnel at HMAS *Albatross*, HMAS *Stirling* or Twofold Bay. There is no provision for child care facilities as part of the project.

## **Workplace Health and Safety Measures**

118. The facilities to be provided under this project will comply with Department of Defence Work Health and Safety policy, the *Work Health and Safety Act (WHS) 2011*, Work Health and Safety (Commonwealth Employment - National Standards) Regulations and the Defence Work Health and Safety manual (where applicable).

119. In accordance with *Fair Work (Building Industry) Act (Cth)*, contractors will be required to hold full work health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme. All construction sites will be secured to prevent access during the construction period. No special or unusual public safety risks have been identified.

120. A safety in design management process has been undertaken as part of the design phase for this project. The safety in design risk register identifies any risks and hazards then records mitigation treatments (elimination or control measures) necessary to reduce any construction or operational risks and hazards.

## **Cost Effectiveness and Public Value**

### **Cost Effectiveness**

121. The recommended approach is a cost effective solution as it represents best value for money in relation to its whole of life costs. The proposed solution is based on a thorough design and value management process that determined the minimal cost solution to achieve the key Defence capability requirements from the range of options considered.

122. Key outcomes that provide for an efficient capital and operational cost solution include:

- a. the siting and co-location of the Romeo Training Centre and Squadron Complex at HMAS *Albatross*;
- b. the refurbishment of and extension to the existing Torpedo Maintenance Facility and Helicopter Support Facility at HMAS *Stirling*; and
- c. the siting and scope of the Explosive Ordnance Storage Facility at HMAS *Stirling* and Twofold Bay, Eden.

## **Project Budget**

123. The total estimated cost of this project is \$201.3 million, excluding Goods and Services Tax, which includes all development and delivery costs including management and design fees, construction costs, information communication technology, furniture, fittings and equipment, contingencies, and an allowance for escalation.

124. The Net Personnel and Operating Costs for the completed facilities are anticipated to be approximately \$9.2 million per annum at mature state.

## **Details of Project Delivery System**

125. A Project Manager / Contract Administrator has been appointed by the Commonwealth to manage the proposed works and administration of the contracts for design and construction. A Design Services Consultant has been appointed to prepare the design and cost plan for the works. Separate Head Contractors will be appointed to construct each of the project elements with a single Head Contractor being utilised for all works at HMAS *Albatross*.

126. Each Head Contractor will deliver the project works in accordance with, but not limited to; all current Building Code 2013, Commonwealth Procurement Rules, National Construction Code – Building Code of Australia, Australian Standards, and Work Health and Safety legislation (where applicable).

## **Construction Schedule**

127. Subject to Parliamentary approval of the project, construction will be staged to commence in late 2013 and be completed by mid 2017.

128. The project milestones are based on the operational dates required for the Torpedo Maintenance Facility, Romeo Training Centre and Squadron Complex

facilities. Delivery of the Explosive Ordnance Storage and Helicopter Support Facility are based on staging the works within the Air 9000 Phase 8 expenditure spread across the forward years up to financial year 2016/17.

### **Public Value**

129. The proposed works contribute significantly to Navy capability outputs by providing effective new and reused facilities at HMAS *Albatross*, HMAS *Stirling* and Twofold Bay that fully support the capability requirements of the MH-60R.

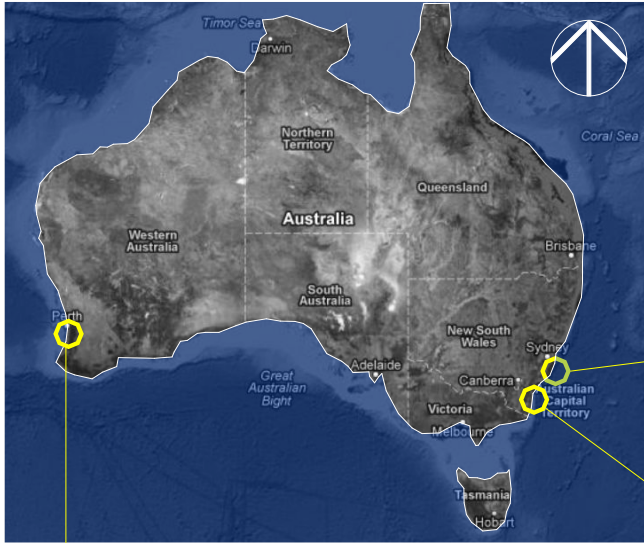
130. Existing facilities have been reused where they feasibly meet the operational needs of the Navy and minimise operating costs and environmental impacts. The cost of investment, both in capital and operating terms, has been optimised in a number of proposed purpose designed facilities.

### **Revenue**

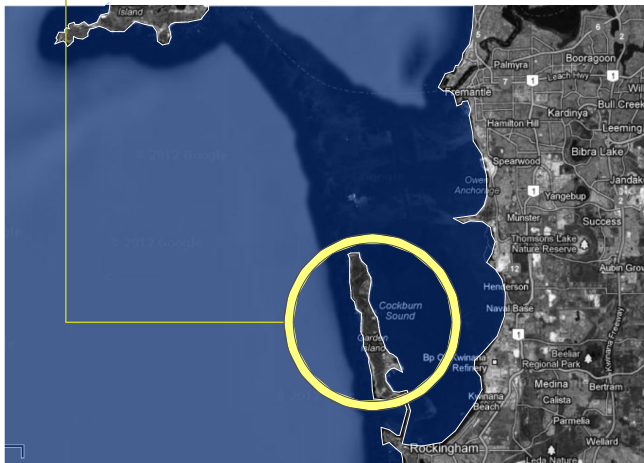
131. No revenue will be derived from this proposal.

## Attachment 1 – Stakeholder List

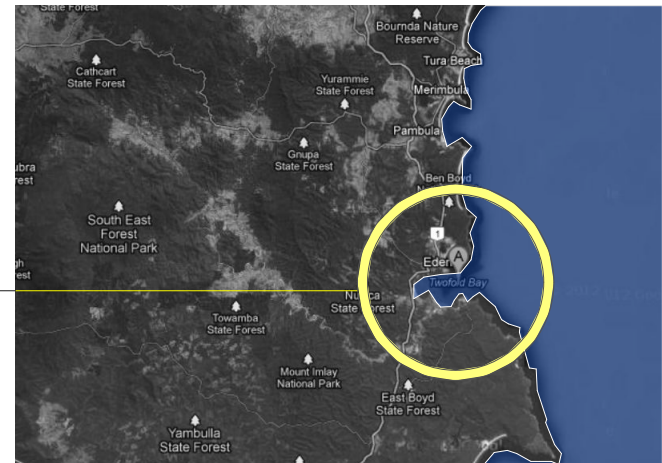
- (a) Mrs Joanna Gash MP, Federal Member for Gilmore;
- (b) The Honourable Gary Gray MP, Federal Member for Brand;
- (c) The Honourable Dr Mike Kelly MP, Federal Member for Eden-Monaro;
- (d) The Honourable Shelley Hancock MP, New South Wales State Member for the South Coast;
- (e) The Honourable Mark McGowan MP, Western Australian State Member for Rockingham;
- (f) The Honourable Andrew Constance MP, New South Wales State Member for Bega;
- (g) Shoalhaven City Council;
- (h) Rockingham City Council;
- (i) Bega Valley Shire Council;
- (j) Roads and Maritime Services NSW;
- (k) Fire and Rescue New South Wales;
- (l) Fleet Base West (HMAS Stirling) Fire Brigade Western Australia;
- (m) Rural Fire Service Bega Valley District Office;
- (n) Indigenous groups;
- (o) Service providers of Electricity, Gas, Water, Sewer and Stormwater;  
and
- (p) Local communities at each AIR9000 Ph 8 MH-60R Site.



**HMAS ALBATROSS - NOWRA**

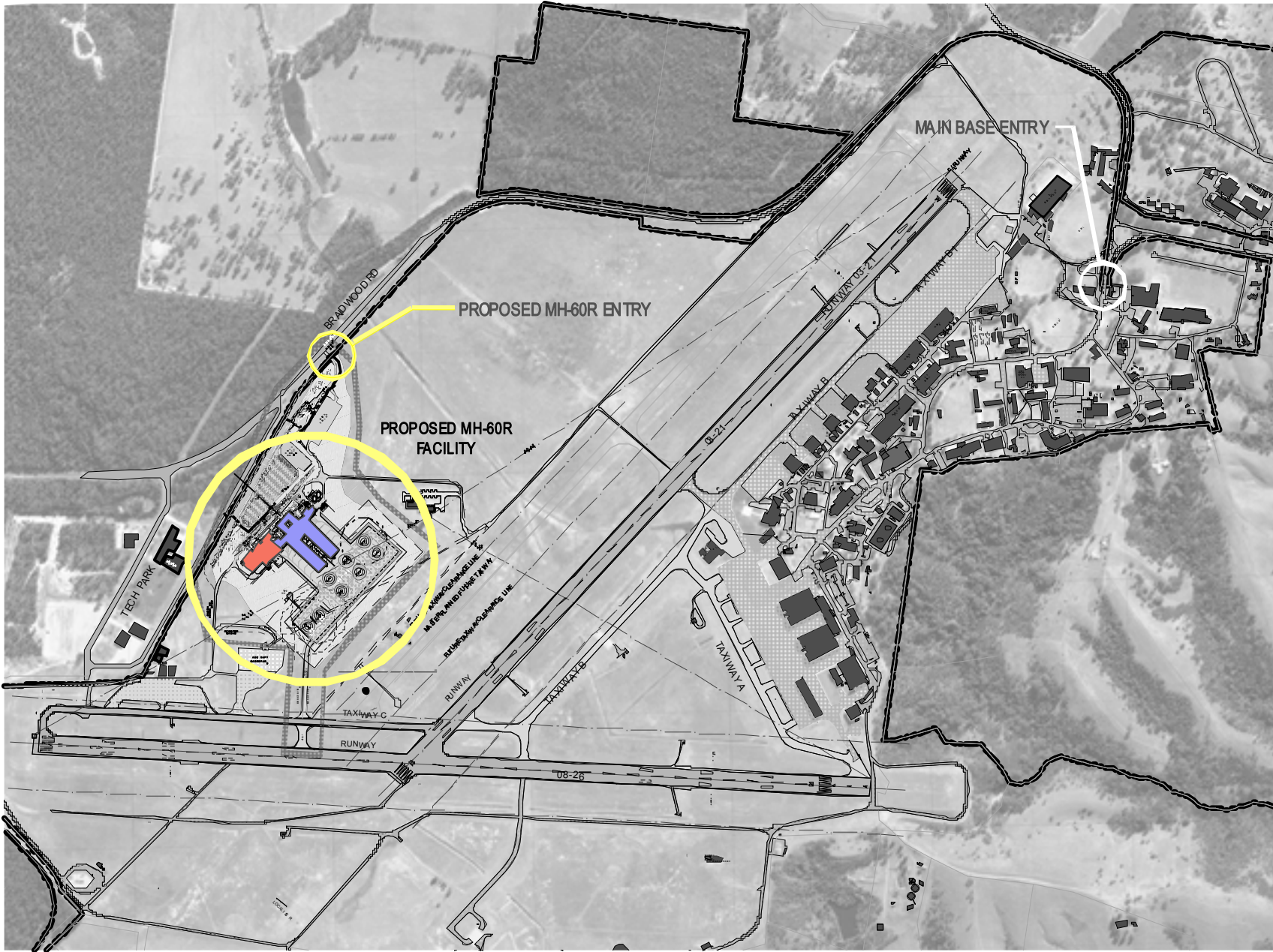


**HMAS STIRLING  
GARDEN ISLAND - PERTH**



**TWOFOLD BAY - EDEN**





- ROMEO TRAINING CENTRE
- SQUADRON COMPLEX BUILDING









COLOUR LEGEND:

- TRAINING DEVICES
- ADMINISTRATION AREAS
- WET AREAS
- PLANT ROOM / SERVICES
- ADJOINING SQUADRON COMPLEX

ROOM DESCRIPTION

1. HANGAR SPACES
2. SUPPORT SPACES / WORKSHOPS
3. OFFICE AREA
4. CLASSROOM / TEACHING DEVICE
5. CONFERENCE / MEETING ROOM
6. AMENITIES
7. PLANT SERVICES
8. TRAINING DEVICES



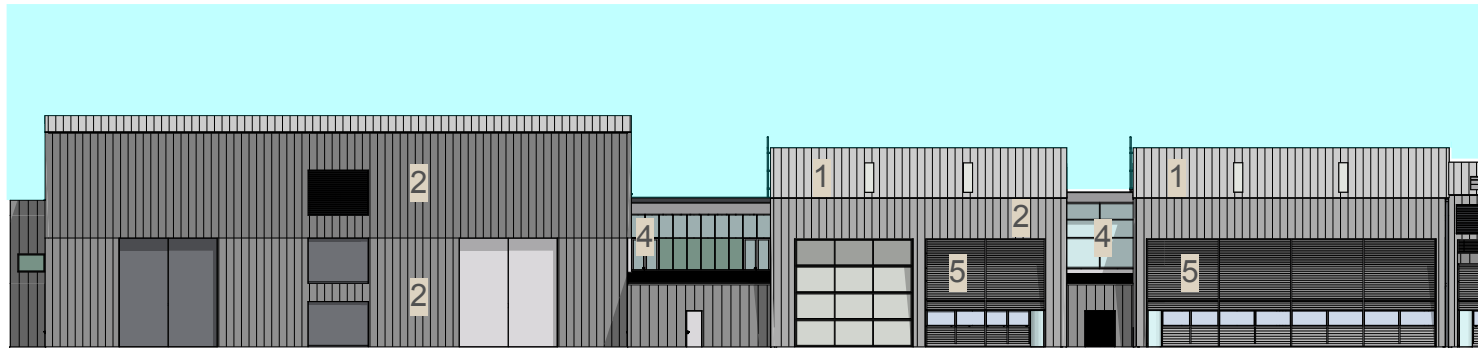
COLOUR LEGEND:

- TRAINING DEVICES
- ADMINISTRATION AREAS
- WET AREAS
- PLANT ROOM / SERVICES
- ADJOINING SQUADRON COMPLEX

ROOM DESCRIPTION

1. HANGAR SPACES
2. SUPPORT SPACES / WORKSHOPS
3. OFFICE AREA
4. CLASSROOM / TEACHING DEVICE
5. CONFERENCE / MEETING ROOM
6. AMENITIES
7. PLANT SERVICES
8. TRAINING DEVICES

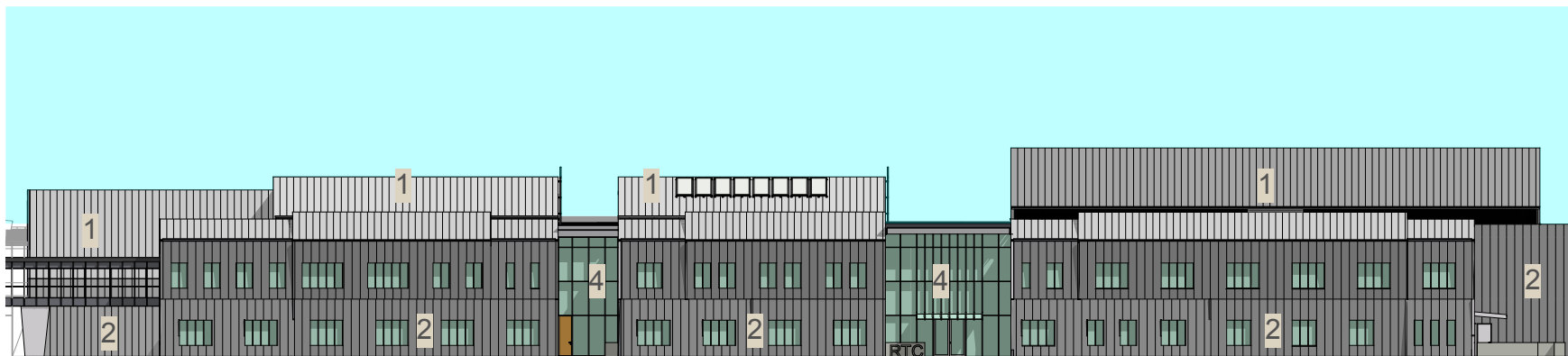




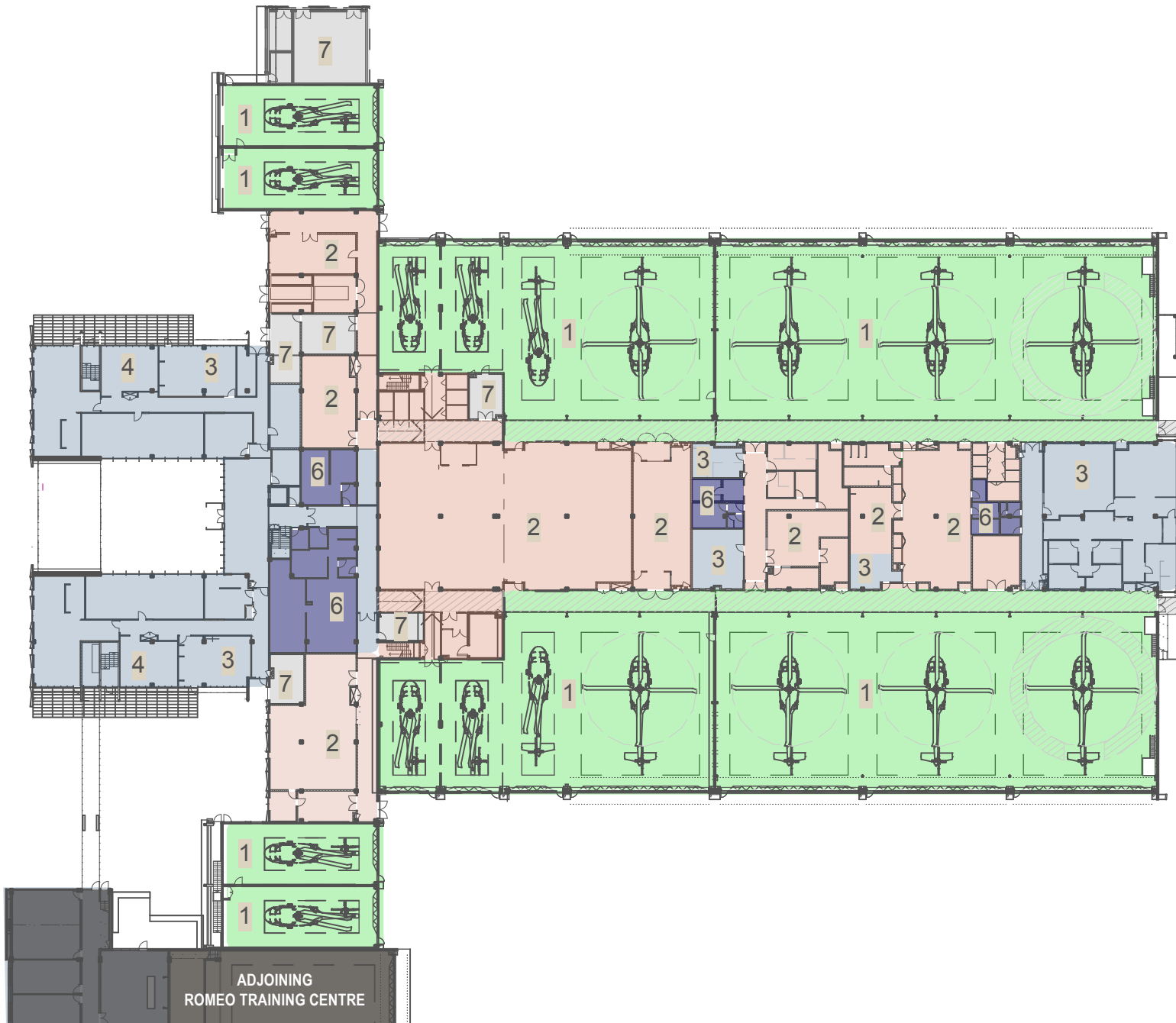
SOUTH ELEVATION

MATERIALS LEGEND:

- 1. METAL ROOF SHEETING
- 2. METAL WALL SHEETING
- 3. FIBRE CEMENT SHEETING
- 4. GLAZING
- 5. HANGAR DOOR
- 6. BRICKWORK
- 7. PRE CAST CONCRETE
- 8. ALUMINIUM LOUVRES



NORTH ELEVATION



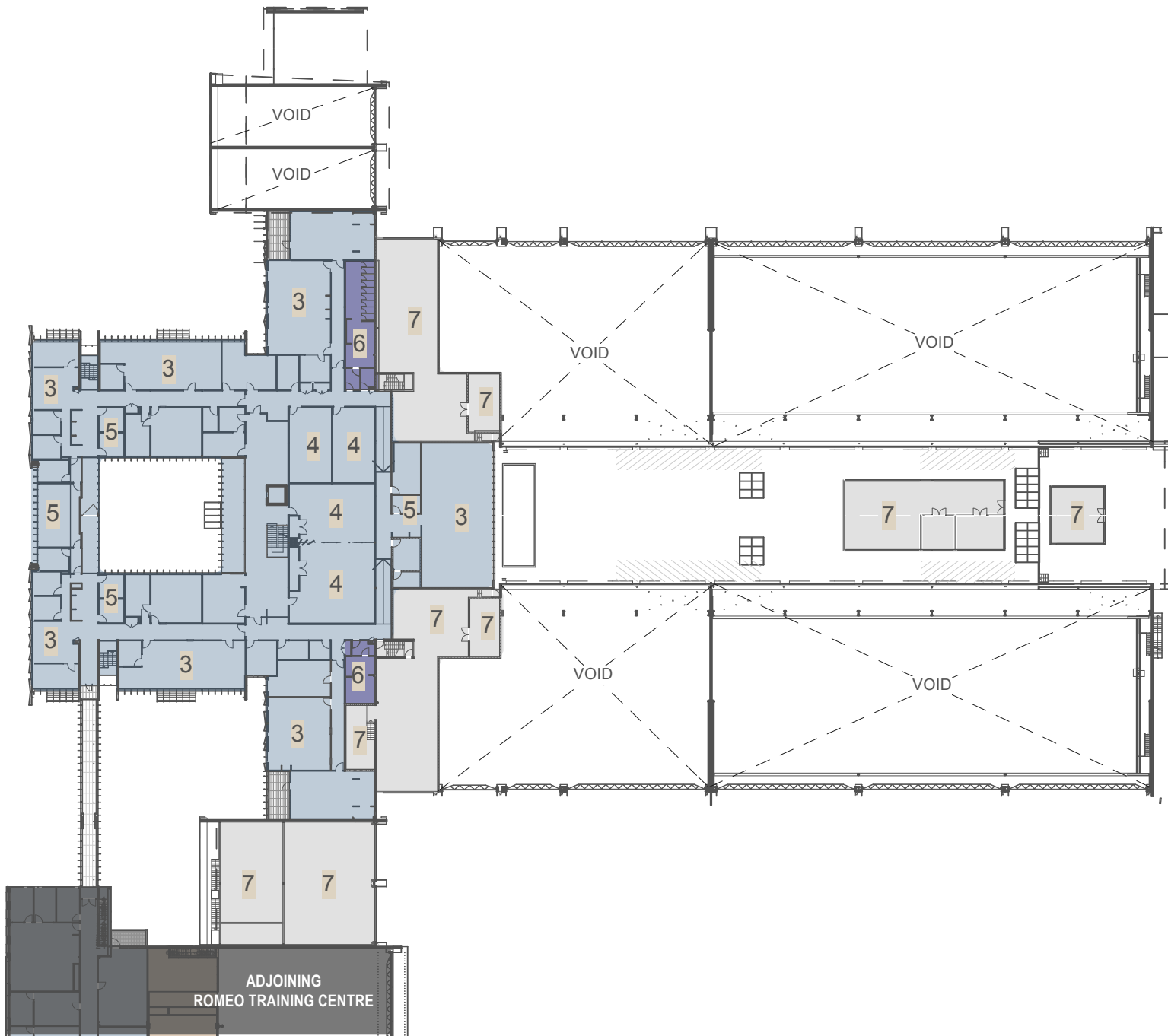
COLOUR LEGEND:

- HANGARS
- HANGAR SUPPORT
- TRAINING DEVICES
- ADMINISTRATION AREAS
- WET AREAS
- PLANT ROOM / SERVICES
- ADJOINING ROMEO TRAINING CENTRE

ROOM DESCRIPTION

1. HANGAR SPACES
2. SUPPORT SPACES / WORKSHOPS
3. OFFICE AREA
4. CLASSROOM / TEACHING DEVICE
5. CONFERENCE / MEETING ROOM
6. AMENITIES
7. PLANT SERVICES
8. TRAINING DEVICES





COLOUR LEGEND:

- HANGARS
- HANGAR SUPPORT
- TRAINING DEVICES
- ADMINISTRATION AREAS
- WET AREAS
- PLANT ROOM / SERVICES
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7. PLANT SERVICES
8. TRAINING DEVICES

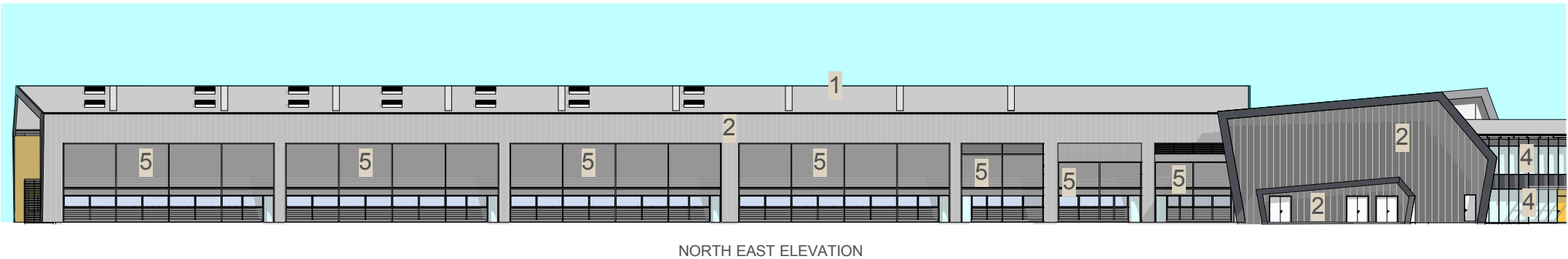




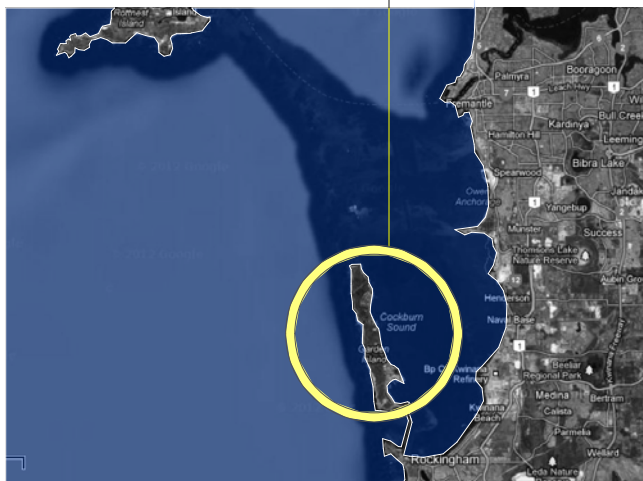
NORTH WEST ELEVATION

MATERIALS LEGEND:

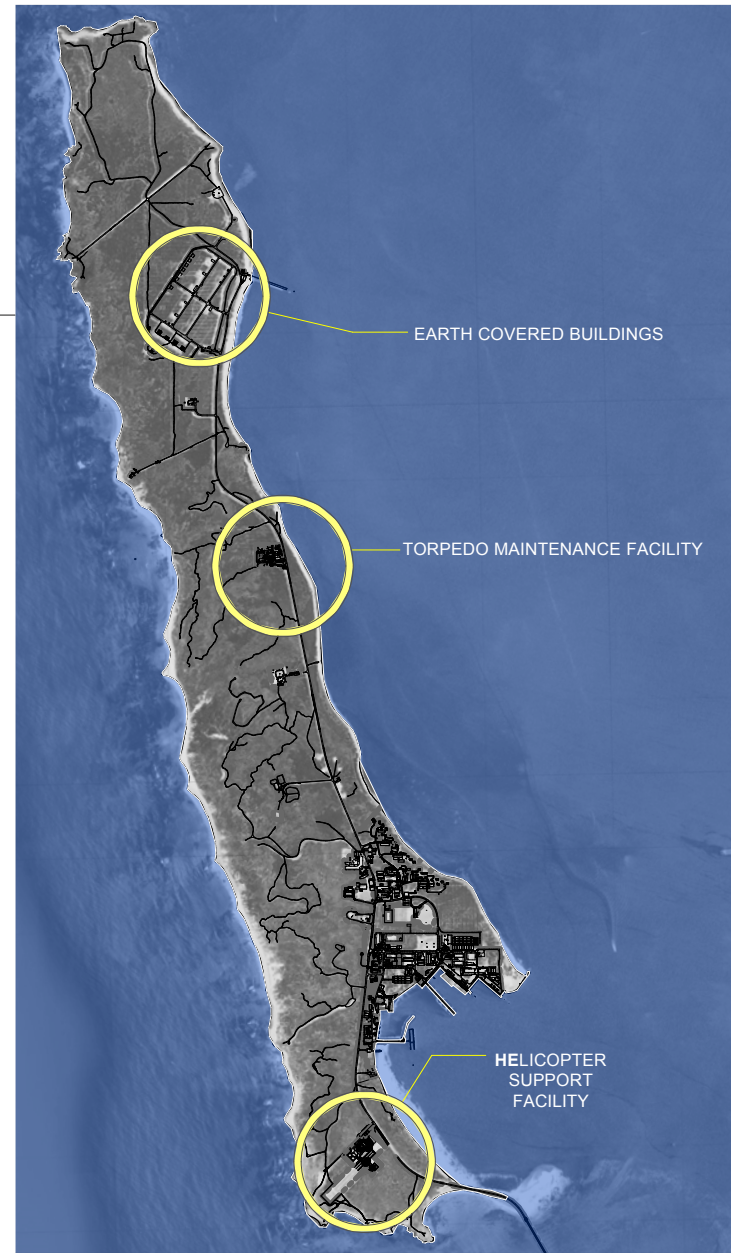
- 1. METAL ROOF SHEETING
- 2. METAL WALL SHEETING
- 3. FIBRE CEMENT SHEETING
- 4. GLAZING
- 5. HANGAR DOOR
- 6. BRICKWORK
- 7. PRE CAST CONCRETE
- 8. ALUMINIUM LOUVRES



NORTH EAST ELEVATION

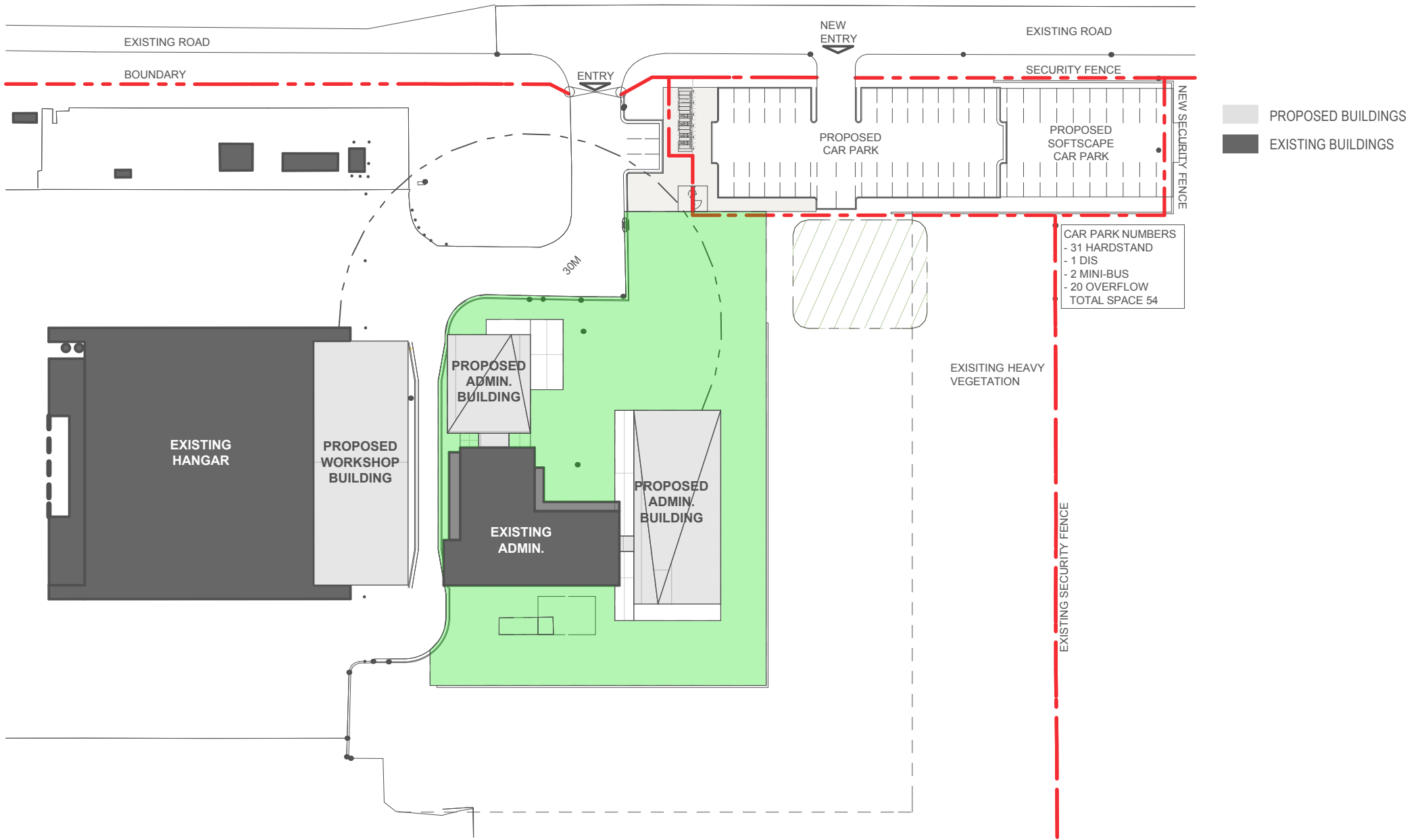


**HMAS STIRLING  
GARDEN ISLAND - PERTH**



**HMAS STIRLING  
LOCATION OF PROPOSED FACILITIES**



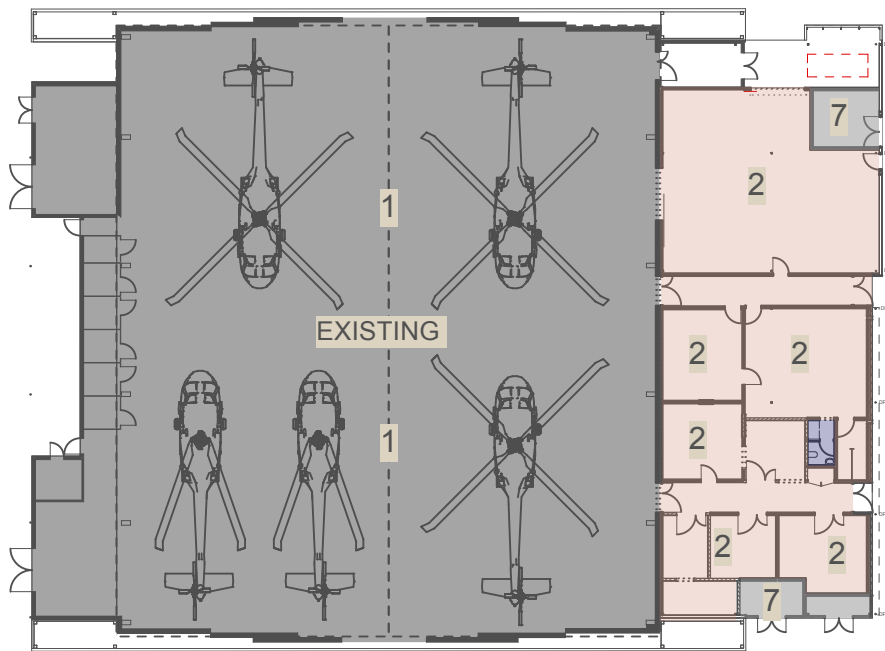


CAR PARK NUMBERS  
 - 31 HARDSTAND  
 - 1 DIS  
 - 2 MINI-BUS  
 - 20 OVERFLOW  
 TOTAL SPACE 54









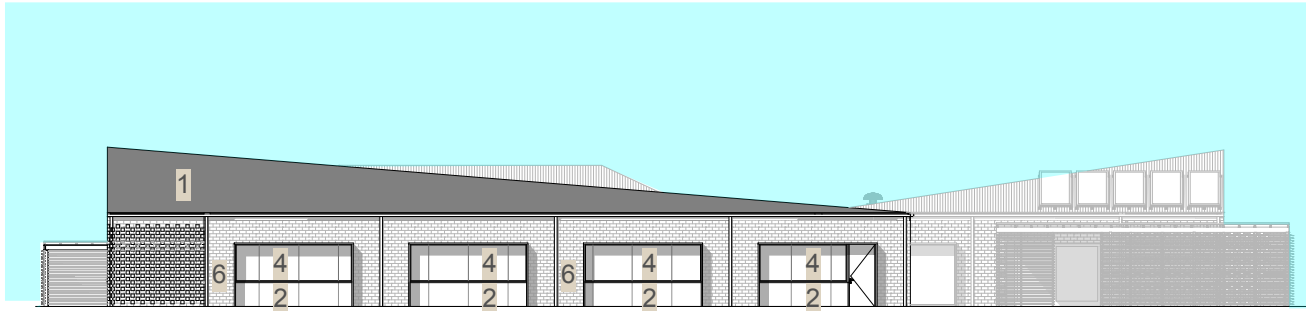
COLOUR LEGEND:

- HANGAR SUPPORT
- ADMINISTRATION AREAS
- WET AREAS
- PLANT ROOM / SERVICES
- EXISTING BUILDING TO BE REFURBISHED

ROOM DESCRIPTION

1. HANGAR SPACES
2. SUPPORT SPACES / WORKSHOPS
3. OFFICE AREA
4. CLASSROOM / TEACHING DEVICE
5. CONFERENCE / MEETING ROOM
6. AMENITIES
7. PLANT SERVICES
8. TRAINING DEVICES

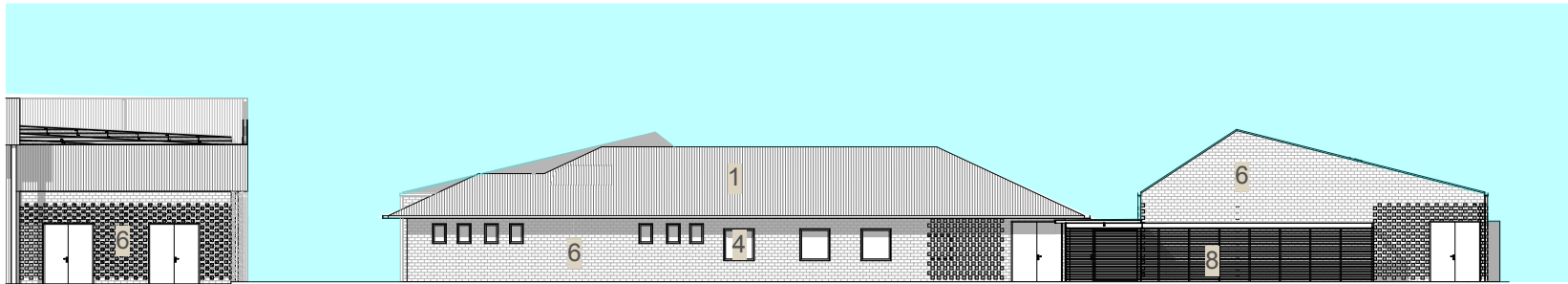




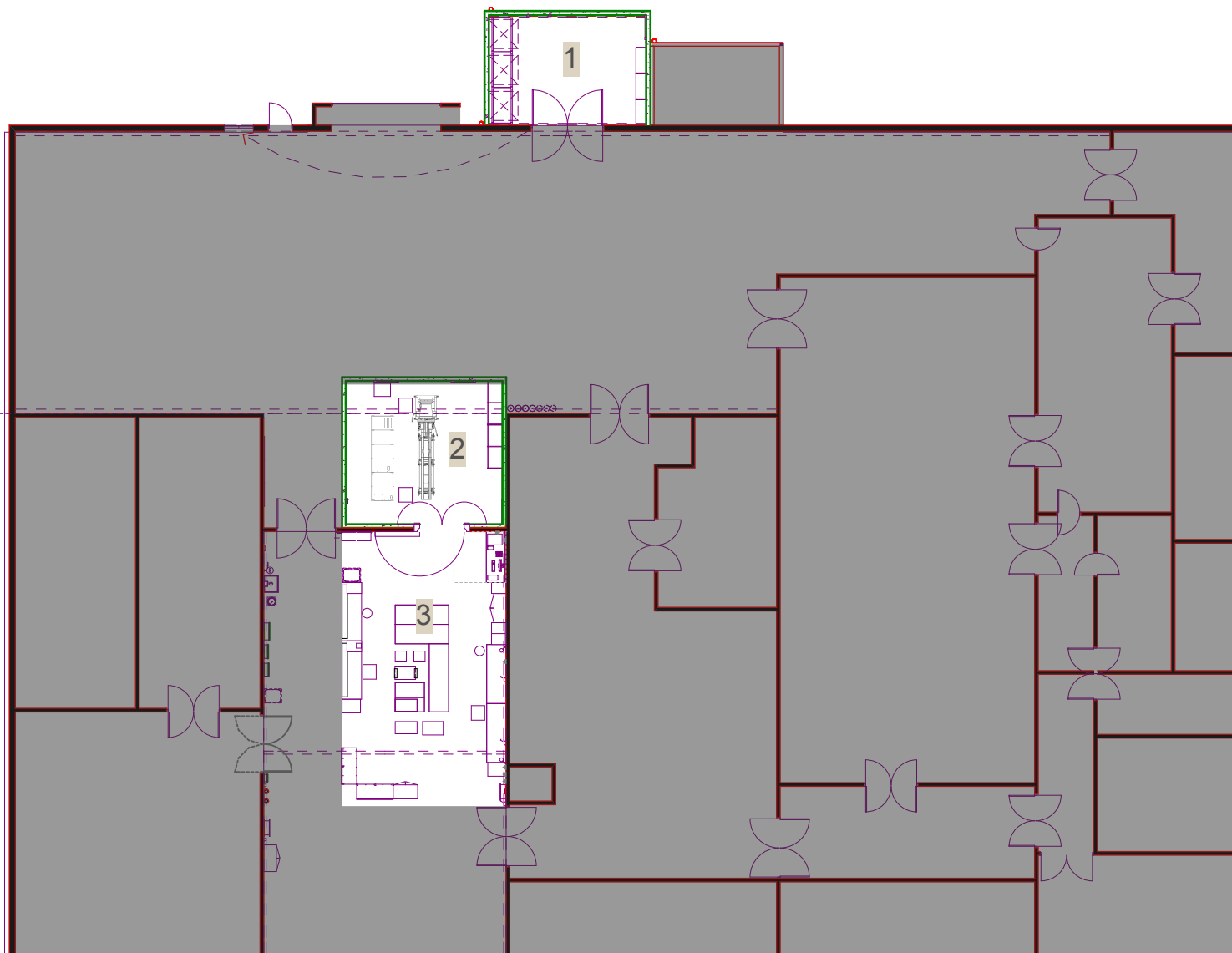
NORTH EAST ELEVATION

MATERIALS LEGEND:

- 1. METAL ROOF SHEETING
- 2. METAL WALL SHEETING
- 3. FIBRE CEMENT SHEETING
- 4. GLAZING
- 5. HANGAR DOOR
- 6. BRICKWORK
- 7. PRE CAST CONCRETE
- 8. ALUMINIUM LOUVRES



SOUTH EAST ELEVATION

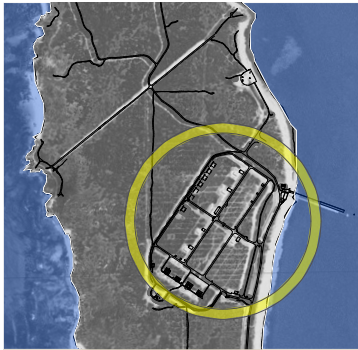


ROOM DESCRIPTION:

- 1. GROUND SUPPORT EQUIPMENT BAY
- 2. MK 54 SYSTEM TEST ROOM
- 3. MK 54 WORK AREA

■ EXISTING BUILDINGS

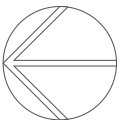
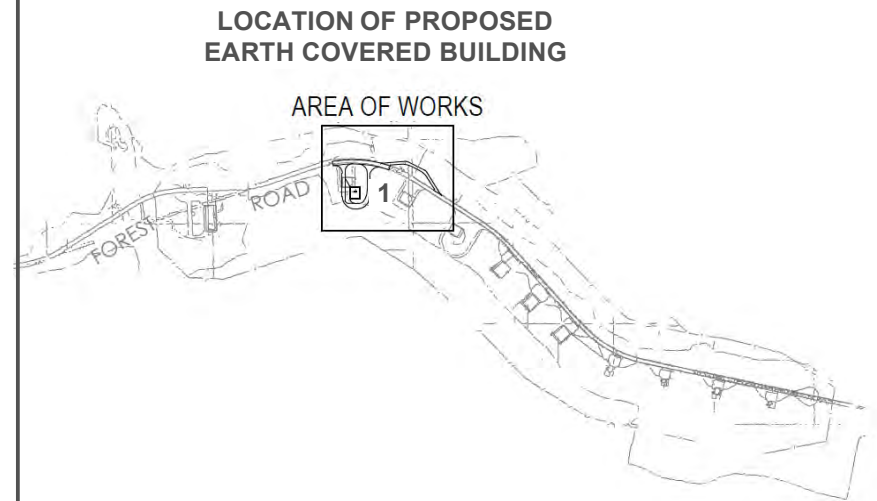
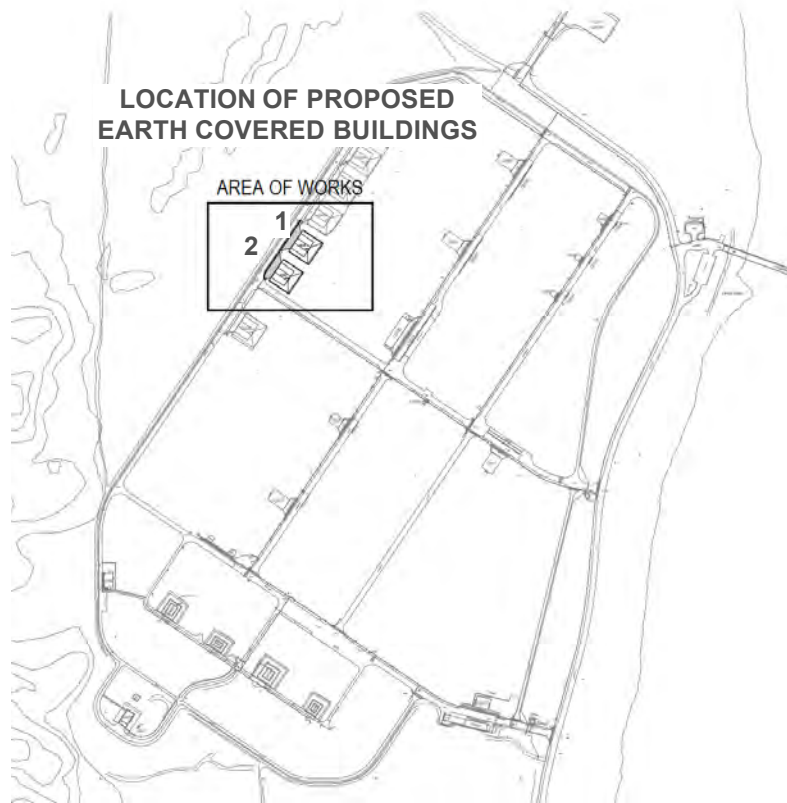


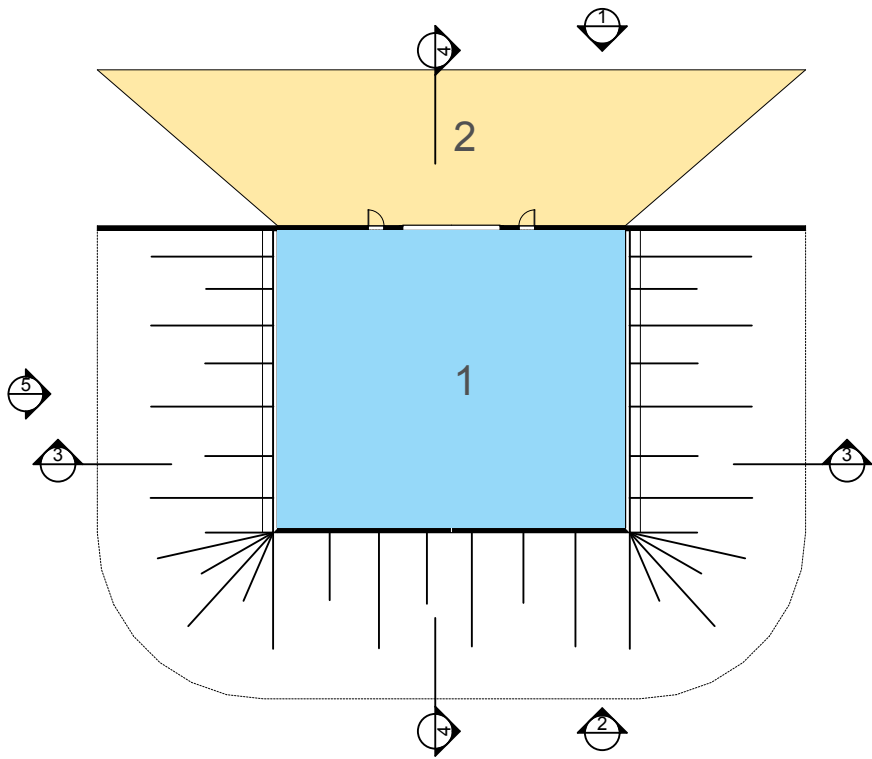


HMAS STIRLING



TWOFOLD BAY - EDEN

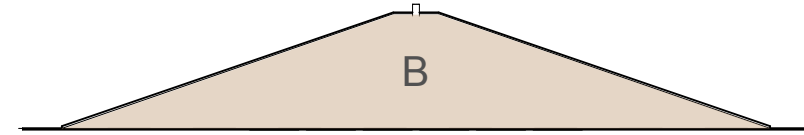




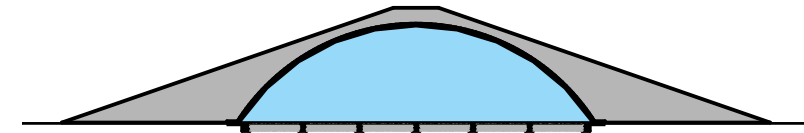
PLAN - PROPOSED EARTH COVERED BUILDING



1 - FRONT ELEVATION



2 - REAR ELEVATION



3 - SECTION A



4 - SECTION B



5 - SIDE ELEVATION

COLOUR LEGEND:

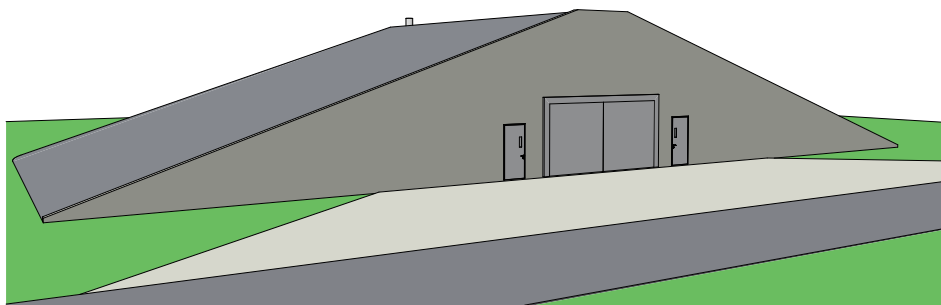
- STORE
- LOADING APRON
- CONCRETE
- MEMBRANE

ROOM DESCRIPTION:

1. STORE
2. LOADING APRON

MATERIALS LEGEND:

- A. CONCRETE
- B. MEMBRANE



EARTH COVERED BUILDING - PERSPECTIVE

