



Australian Government

Department of Defence

GROWLER AIRBORNE ELECTRONIC ATTACK CAPABILITY FACILITIES

RAAF Base Amberley, Queensland

Army Aviation Centre Oakey, Queensland

Delamere Air Weapons Range, Northern Territory

STATEMENT OF EVIDENCE TO THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Canberra, Australian Capital Territory

August 2015

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Contents

Identification of the Need	1
Description of Proposal	3
Options Considered to Fulfil the Identified Need	5
Environment and Heritage Assessment	8
Key Legislation	13
Consultation with Key Stakeholders	14
Purpose of the Works	16
Project Objectives	16
Details and Reasons for Site Selection	16
Detailed Description of the Proposed Scope of Works	17
Public Transport, Local Road and Traffic Concerns	25
Zoning and Local Approvals	25
Childcare Provisions	26
Impact on Local Community	26
Planning and Design Concepts	27
Structural Design	28
Hydraulic Services	29
Electrical Services	30
Communications	30
Fire Protection	31
Acoustics	31
Security	32
Environmental Sustainability of the Project	33
Landscaping	35
Energy Targets	36
Work Health and Safety Measures	36
Cost Effectiveness and Public Value	37
Outline of Project Costs	37
Details of Project Delivery System	37
Construction Program	38
Public Value	38
Revenue	39
Attachments	
1. Base Locality Plan	
2. Site Plan – RAAF Base Amberley	
3. Site Plan – Army Aviation Centre Oakey	
4. Site Plan – Delamere Air Weapons Range	
5. Floor Plan – 6SQN Ground Floor	
6. Floor Plan – 6SQN Level 1	

7. Floor Plan – Electronic Attack Pod Workshop and Store
8. Floor Plan – 1SQN Refurbishment
9. Floor Plan and Elevation – Flight Line Shelters
10. Site Plan – Aircraft Apron, Ground Support Equipment Shelters and In-Ground Hydrant Fuel System
11. Floor Plan – Air Combat and Electronic Attack System Program Office Ground Floor
12. Floor Plan – Air Combat and Electronic Attack System Program Office Level 1
13. Floor Plan – Intermediate Level Maintenance
14. Floor Plan – Guided Weapons System Program Office, Alternate Mission Equipment Maintenance Section and Seat Bay
15. Floor Plan – Cubic, Wheel and Tyre Shop, Air Refuelling Section and External Fuel Tank Workshop
16. Floor Plan – Super Hornet Retail Warehouse
17. Floor Plan – Tactical Operational Flight Trainer
18. Floor Plan – Car Park
19. Floor Plan – Mobile Threat Training Emitter System Oakey
20. Floor Plan – Delamere Range Control Complex Plan
21. Floor Plan – Delamere Range Operation Centre
22. Floor Plan – Delamere Central Facilities
23. Floor Plan – Delamere Permanent & Visitor Recreation Room
24. Floor Plan – Mobile Threat Training Emitter System Delamere Permanent Accommodation
25. Floor Plan – Delamere Visitor Accommodation
26. Floor Plan – Mobile Threat Training Emitter System Delamere Maintenance Building
Maintenance Building
27. Floor Plan – Mobile Threat Training Emitter System Delamere Vehicle Shelter
28. Floor Plan – Authentic Defence Radar System Storage Shelter
29. Floor Plan – Authentic Defence Radar System Emitter Shelter
30. Floor Plan – Typical Mobile Threat Training Emitter System Emitter Site

Growler Airborne Electronic Attack Capability Facilities

Identification of the Need

1. The EA-18G Growler is an airborne electronic attack aircraft capable of providing force level electronic warfare support by disrupting, deceiving or denying a broad range of military electronic systems, including radars and communications. The EA-18G Growler aircraft is based on the F/A-18F Super Hornet airframe and will be fitted with additional avionics, enhanced radio frequency receivers, an improved communications suite and radio-frequency jamming pods which enable it to jam enemy systems.
2. 12 new-build EA-18G Growler aircraft will operate in conjunction with air, land and sea forces. The capability will reduce the risk to forces and improve their situational awareness. The aircraft will be able to support the full spectrum of Defence tasks, from peacetime evacuations to major conflicts. It will provide a complementary capability to the F/A-18F Super Hornet and the future F-35A Lighting II aircraft.

Background

3. Project AIR 5349 Phase 3 is the delivery of the EA-18G Growler capability including facilities and advanced training systems. AIR 5349 Phase 3 has had multiple stages which inform the facilities requirement, being sought for approval to deliver under this project:
 - a. AIR 5349 Phase 3 Stage 1 was the modification of 12 F/A 18F Super Hornet aircraft to EA 18G Growler configuration. Option 3A of the Air Combat Capability Transition Plan was approved in April 2013 to acquire 12 new-build Growler aircraft rather than upgrading Super Hornet aircraft

as originally intended. The Air Combat Capability Transition Plan included a Growler facilities component; and

- b. AIR 5349 Phase 3 Stage 2 incorporates Growler Enabling Capabilities, including the approval of facilities to support the aircraft and associated training components such as the Mobile Threat Training Emitter System. The RAAF Base Amberley facilities component of Stage 2 was expanded to incorporate the additional aircraft whilst also including modification of existing Super Hornet facilities to account for the extension of their life-of-type to 2030. The Mobile Threat Training Emitter System, which enables the training of Growler crews in realistic electronic attack scenarios, includes facilities at Army Aviation Centre Oakey and Delamere Air Weapons Range as part of the Growler Enabling Capabilities.

Supporting Growler Operations at RAAF Base Amberley, Army Aviation Centre Oakey and Delamere Air Weapons Range

4. The first EA-18G Growler aircraft is scheduled to be delivered to Australia in February 2017 with the Initial Operating Capability milestone scheduled for July 2018. The aircraft will be based at RAAF Base Amberley and will be operated by No. 6 Squadron (6SQN), an element of No. 82 Wing (82WG).
5. 82WG is the strike and reconnaissance wing of the Royal Australian Air Force. 82WG is headquartered at RAAF Base Amberley, Queensland and is part of Air Combat Group. 82WG currently operates F/A-18F Super Hornet multirole fighters and Pilatus PC-9 forward air control aircraft. Units within 82WG include No. 1 Squadron (1SQN) and 6SQN, both currently operating the F/A-18F Super Hornet, and No. 4 Squadron (4SQN), operating the PC-9. When 6SQN transitions to the EA-18G Growler aircraft all F/A-18F Super Hornet aircraft will transfer to 1SQN.
6. The facilities requirements to support the introduction of the Growler capability include:

- a. operational, administration, logistics, and operational level maintenance facilities for 6SQN;
 - b. minor adjustment to existing 1SQN facilities to account for the F/A-18F Super Hornet aircraft being transferred from 6SQN once the F/A-18G Growler aircraft have been delivered;
 - c. working accommodation for Air Combat and Electronic Attack System Program Office;
 - d. simulator training facilities;
 - e. intermediate level maintenance facilities;
 - f. warehousing;
 - g. administration and operations facilities for the Mobile Threat Training Emitter System at Army Aviation Centre Oakey and Delamere Air Weapons Range; and
 - h. associated support services and infrastructure.
7. In August 2015, the Government approved the project inclusive of funding.

Description of Proposal

8. The Growler Airborne Electronic Attack Capability Facilities Project proposes to adaptively reuse facilities as well as construct new facilities that are fit for purpose, compliant and provide value for money. The Project will also provide civil works, infrastructure / essential service works, landscaping and conduct demolition works.
9. The proposed facilities at RAAF Base Amberley are to be located on 'brownfield' sites in the vicinity of the central 'fast jet' apron. This will allow enhanced command and control from 82WG and improved operational efficiencies between 1 SQN and 6 SQN. The proposed Army Aviation Centre Oakey facilities are adaptive reuses of existing facilities. The proposed Delamere Air Weapons Range facilities are new facilities located on 'greenfield' sites dispersed throughout the Range.

10. The proposed elements of the project are as follows:

a. Operational Facilities:

- i. office working accommodation;
- ii. aircraft hangar;
- iii. workshops;
- iv. operations area;
- v. electronic attack pod storage and maintenance;
- vi. aircraft apron;
- vii. aircraft shelters;
- viii. aircraft refuelling system;
- ix. external fuel tank storage; and
- x. ground support equipment shelters.

b. Training Facilities:

- i. aircraft flight simulators;
- ii. maintenance training;
- iii. Mobile Threat Training Emitter System at Army Aviation Centre Oakey; and
- iv. Mobile Threat Training Emitter System at Delamere Air Weapons Range.

c. Support Facilities:

- i. Air Combat and Electronic Attack System Program Office;
- ii. intermediate level maintenance facilities;
- iii. warehouse;
- iv. car parking; and
- v. base services and infrastructure.

Project Location

11. RAAF Base Amberley is located 6 km southwest of the Ipswich Central Business District (CBD) and 35 km southwest of Brisbane CBD in South East Queensland. A Base Locality Plan showing the location of RAAF Base Amberley is at Attachment 1.
12. A RAAF Base Amberley Site Plan showing the location of the facilities is at Attachment 2. The proposed RAAF Base Amberley facilities are to be located adjacent to the central 'fast jet' apron. Plans of the proposed facilities are shown at Attachments 5 to 18.
13. Army Aviation Centre Oakey is located 160 km west of Brisbane, and 29 km west of Toowoomba, in South East Queensland. A Base Locality Plan showing the location of Army Aviation Centre Oakey is at Attachment 1. An Army Aviation Centre Oakey Site Plan showing the location of the facilities is at Attachment 3. Plans of the proposed facilities are shown at Attachment 19.
14. Delamere Air Weapons Range is located 140 km southwest of Katherine, and 450 km south of Darwin, in the Northern Territory. A Base Locality Plan showing the location of Delamere Air Weapons Range is at Attachment 1. A Delamere Air Weapons Range Site Plan showing the location of the facilities is at Attachment 4. Plans of the proposed facilities are shown at Attachments 20 to 30.

Options Considered to Fulfil the Identified Need

15. To meet the identified need, Defence has considered a number of options that include the adaptive reuse of existing facilities and the construction of new facilities at RAAF Base Amberley, Army Aviation Centre Oakey and Delamere Air Weapons Range.

RAAF Base Amberley

16. The main facilities at RAAF Base Amberley will be located within or adjacent to the central fast jet apron. The adaptive reuse of existing 6SQN facilities at RAAF Base Amberley was not considered to be a feasible option as the existing facilities do not provide the appropriate level of functionality or security. The preferred option for 6SQN facilities is the construction of a new facility on a brownfield site within the central fast jet apron precinct immediately to the south of the recently constructed 1SQN facilities.
17. The preferred option for the aircraft simulator facility is to construct an extension to the existing simulator facility at RAAF Base Amberley. The preferred option for the Intermediate Level Maintenance facilities and the warehouse is adaptive reuse of existing facilities at RAAF Base Amberley.
18. The preferred option for the Air Combat Electronic Attack System Program Office is the construction of a new two storey building adjacent to 82WG, 1SQN and 6SQN. This site is a brownfield site which is currently occupied by a 40 year old building which has been identified for demolition. An alternate greenfield site was considered; however, the use of the preferred site provided greater functionality, and preserves existing undeveloped areas on the base.
19. The aircraft apron, ground support equipment shelters and in-ground hydrant refuelling system will all be new construction as an extension to existing facilities. The two aircraft shelters will be new facilities located to the south of the three existing fast jet aircraft shelters.
20. The preferred option for the car parking at RAAF Base Amberley is a central multi-storey car park located 200m southwest of the proposed 6SQN location and 300m south of the Air Combat Electronic Attack System Program Office location.

Army Aviation Centre Oakey

21. The adaptive reuse of existing facilities at Army Aviation Centre Oakey is the preferred option as existing facilities are available and suitable for the Mobile Threat Training Emitter System Oakey requirements.

Delamere Air Weapons Range

22. The adaptive reuse and / or relocation of existing facilities at Delamere Air Weapons Range was considered, but the options did not meet the RAAF need due to:
 - a. the existing facilities are within the proposed range safety templates;
 - b. the existing facilities no longer meet the functional needs of the Range,
 - c. the existing facilities no longer meet current building standards; and
 - d. much of the material comprising the existing facilities has deteriorated and would no longer be suitable for reuse.
23. The preferred option for Mobile Threat Training Emitter System Delamere Air Weapons Range facilities is to contribute to the proposed Delamere Air Weapons Range Redevelopment Project for the construction of new range facilities in the immediate vicinity of the existing range entry and to relocate all supporting capabilities and infrastructure accordingly. The Mobile Threat Training Emitter System emitter sites and associated access roads will also be provided to support the provision of training for the EA-18G Growler at the Range.

Environment and Heritage Assessment

Overview of Assessment Process

24. **RAAF Base Amberley.** An Environmental Review was completed for the Project at the RAAF Base Amberley site in October 2014. The Environmental Review identified a number of minor risks such as heritage impacts and interaction with fauna at the site, and recommended appropriate mitigation measures for inclusion into the Environmental Assessment Report. The Environmental Assessment Report will then inform the Construction Environmental Management Plan and the Environmental Clearance Certificate, both of which will reduce environmental impacts during construction. Recommended mitigation measures include:
- a. the provision of offset planting to mitigate vegetation clearing occurring as a result of the proposed development;
 - b. adherence to Defence's existing Weed Management Control Program to prevent the spread of weeds through mishandling of removed vegetation;
 - c. the natural dispersal of local fauna and provision of a suitably qualified 'wildlife spotter' during any land clearing activities;
 - d. a testing regime for contaminated soil during any excavation activities;
 - e. the washing of construction vehicles, plant and equipment during construction to minimise the spread of fire ants;
 - f. the implementation of anti-bird nesting measures during construction;
 - g. the completion of all required soil contamination assessments and if required, the removal or treatment of contaminated soil; and
 - h. the relocation of buildings of heritage significance.
25. During the Planning Phase of the Project a series of site investigations were undertaken. These included:

- a. a Contamination Assessment of the proposed site; and
 - b. a Tree Survey and Species Assessment.
26. Each of these site investigations assessed their relative risks in relation to the Project and made practical and cost effective recommendations for mitigating the risks and meeting all legislative and policy requirements.
27. The Contamination Assessment of the proposed site identified that soil contaminate concentrations were within acceptable limits. RAAF Base Amberley is within a Fire Ant Restricted Area and restrictions apply to the methods of excavation, spoil handling and movement of spoil. In accordance with Queensland Government requirements the Contractor will be required to attend Fire Ant General Awareness training, develop and obtain approval of a Fire Ant risk management plan and demonstrate their competency before commencing any earth works.
28. The Tree Survey and Species Assessment was undertaken to determine what level of compensatory planting and wildlife habitat will be required. The findings of this survey and assessment require compensatory planting.
29. In January 2014 Defence referred the RAAF Base Amberley Flight Line Master Plan under the *Environmental Protection Biodiversity and Conservation (EPBC) Act*. The referral related to the removal of heritage buildings at RAAF Base Amberley to release brownfield sites adjacent to the airfield for future flight line development. In June 2015 the Department of the Environment approved the removal of heritage buildings, with a number of conditions, including the archival recording of the heritage buildings and the relocation of a number of buildings to another site at RAAF Base Amberley.
30. Following the completion of the RAAF Base Amberley Flight Line Master Plan *EPBC Act* referral, the Environmental Review and supplementary assessments, Defence produced and approved an Environmental Assessment Report for the Project that outlines a series of recommendations to ensure compliance with the *EPBC Act* and Defence environmental policies and procedures.

31. **Delamere Air Weapons Range.** A draft Environmental Report was completed in March 2015 for the Delamere Air Weapons Range. The key focus areas of the report were ecology, indigenous heritage assessment, contamination, fauna and flora management and air and water quality. The draft Environmental Report identified that there was some risk to the project relating to ecology, contamination, and indigenous heritage. These risks are discussed in more detail below.
32. The remaining environmental and heritage risks identified in the draft Environmental Report were defined as minor and will be effectively managed through the existing Defence Regional Environmental Management System, preparation of a comprehensive Construction Environmental Management Plan, and application of the Environmental Compliance Certificate process.
33. There are a number of vulnerable species that can potentially occur at Delamere. Previous surveys in 2000 and 2008 did not locate any threatened flora species, though several species were recorded within 10km of the Range. The ecological assessment of the proposed impact sites conducted as part of the Environmental Review did not record any threatened flora species or habitat.
34. A diverse array of fauna, consistent with the region and habitat availability, has been recorded at Delamere Air Weapons Range. This includes a number of nationally significant fauna. The site assessment conducting most recently identified two endangered or threatened species of fauna at Delamere Air Weapons Range:
 - a. Gouldian Finch (*Erythrura gouldiae*); and
 - b. Crested Shrike-tit (*Falcunculus frontatus whitei*).
35. To mitigate any potential environmental impacts as identified in both the Environmental Review and Environmental Assessment Report, and any future investigations, the Project will be managed in accordance with:
 - a. the Defence Environmental Management Framework, including compliance with the Regional Environmental Management System;

- b. a Construction Environmental Management Plan (to be developed by the construction contractor and to include all environmental procedures for construction activities); and
 - c. an Environmental Clearance Certificate to be issued by Defence following submission of the Construction Environmental Management Plan and prior to any construction related activities being undertaken on the sites.
36. Based on the outcomes of the draft Environmental Report, it is not anticipated that a referral will be required under the *EPBC Act*.
37. **Army Aviation Centre Oakey.** No environmental or heritage impacts have been identified from the adaptive reuse of existing facilities for this project at the Army Aviation Centre Oakey.

Indigenous and Non Indigenous Heritage

38. **RAAF Base Amberley.** RAAF Base Amberley has a number of heritage listed facilities and structures that demonstrate the design and operation of pre and early World War Two (WWII) Air Bases. In order to achieve the aim of the RAAF Base Amberley Flight Line Master Plan and to free up valuable land adjacent to the airfield for redevelopment, a number of heritage structures are proposed to be removed. Defence subsequently submitted an EPBC Referral, which resulted in a 'controlled action' decision from the Department of Environment (EPBC Reference No. 2014/7123). The Department of Environment notified Defence of the Assessment on 9 June 2015, and has approved (with conditions) the removal of heritage buildings at RAAF Base Amberley.
39. The Environmental Review that was undertaken for the Project noted that the Project will impact on matters of natural or non-indigenous heritage, specifically a P1-type timber hut and two Starter Cartridge stores. As directed in the EPBC Referral decision notice, the Project will undertake the relocation of the P1-type timber hut and one Starter Cartridge Store.

40. Although it is unlikely that the Project will impact on any indigenous heritage values, there are areas on the eastern side of RAAF Base Amberley that have known indigenous heritage values. RAAF Base Amberley has existing procedures in place for the 'chance discovery' of any heritage material, which will be followed on the discovery of any items of possible indigenous or non indigenous heritage value.
41. **Army Aviation Centre Oakey.** The works at the Army Aviation Centre Oakey are limited to the adaptive reuse of two existing buildings. As such, the Project will not impact on any indigenous heritage values.
42. **Delamere Air Weapons Range.** Delamere Air Weapons Range contains a number of culturally sensitive sites of significance to the Wardaman People, the Traditional Owners of the area. The Delamere Air Weapons Range, Range Standing Orders addresses the requirements for use and management of these identified areas and sites to ensure protection of their heritage and cultural values.
43. The use of Delamere Air Weapons Range is also subject to an Indigenous Land Use Agreement, and in accordance with this agreement, The Traditional Owners have been engaged through the Aboriginal Areas Protection Authority and the Northern Land Council to provide clearances to the sites for the proposed works.
44. Field survey activities have identified that the preferred site for the Range Control complex is in an area with low density artefact scatter that will require management during construction. A creek crossing on a road that is not part of the preferred option may also have some artefact occurrence due to erosion of upstream sites. No works are currently planned in areas of known significance and this has been confirmed by the provision of Authority Certificates through the Aboriginal Areas Protection Authority.
45. In accordance with the Indigenous Land Use Agreement, Defence will also seek a capability statement from the Wardaman People identifying their skills and experience that may be relevant to any contracting opportunities associated with the proposed works. Defence will subsequently ensure that the Wardaman

People are made aware of any relevant contracting opportunities, and that tenders consider the employment of Aboriginal people that may have skills appropriate to the works.

46. Prior to the establishment of the Delamere Air Weapons Range, the site was used for pastoral purposes associated with Delamere Station and Willeroo Station. During the development of the Environmental Review no other non-indigenous land uses were identified.

Key Legislation

47. The following key legislation is relevant to this project:
- a. *Environmental Protection and Biodiversity Act 1999 (Cth);*
 - b. *Building and Construction Industry Improvement Amendment (Transition to Fair Work) Act 2012 (Cth);*
 - c. *Work Health and Safety Act 2011 (Cth);*
 - d. *Disability Discrimination Act 1992 (Cth);*
 - e. *Fair Work Act 2009 (Cth); and*
 - f. *Fair Work (Building Industry) Act 2012 (Cth).*
48. The design of all proposed project facilities also complies with all relevant Australian Standards, Codes and Guidelines including National Construction Code, 2015 (inclusive of the Building Code of Australia).

Consultation with Key Stakeholders

49. Consultation has occurred with key Defence stakeholders as follows:

- a. Air Force Headquarters - Advice on project scope and operational requirements;
- b. Capability Development Group – Advice on project scope and operational requirements;
- c. Defence Material Organisation (now known as the Capability Acquisition and Sustainment Group) - Advice on project scope and operational requirements;
- d. Headquarters Air Command - Advice on operational requirements and user requirements;
- e. Growler Transition Office - Advice on project scope, user requirements, transition arrangements and decanting issues;
- f. Headquarters Combat Support Group - Advice on user requirements;
- g. 82WG, RAAF Base Amberley - Advice on user requirements;
- h. 23 Squadron, RAAF Base Amberley - Advice on base operations and requirements;
- i. Senior Australian Defence Force Officer, Army Aviation Centre Oakey - Advice on base operations and requirements;
- j. 17 Squadron, RAAF Base Tindal - Advice on Delamere Air Weapons Range operations, range requirements and user requirements;
- k. Infrastructure Division – Advice on Zone and Precinct Planning requirements, site selection, and environment, heritage and engineering policy / compliance requirements;

- l. Defence Support Queensland – Consideration of regional issues and concerns;
 - m. Defence Support Northern Territory – Consideration of regional issues and concerns;
 - n. Defence Security Agency - Advice on physical security policy; and
 - o. Chief Information Officer Group – Advice on Information Communications Technology policy and costing.
50. Defence has also developed a community consultation and communication strategy that recognises the importance of providing local residents, statutory authorities and other interested stakeholders an opportunity to provide input into, or raise concerns relating to the proposed Project. Community consultation is planned to be conducted during September 2015.
51. The people and groups currently identified for consultation are listed below.
 - a. Federal Member for Blair Hon Shayne Neumann MP;
 - b. Federal Member for Groom Hon Ian Macfarlane MP;
 - c. Federal Member for Lingiari Hon Warren Snowdon MP;
 - d. State Member for Ipswich West Mr Jim Madden;
 - e. State Member for Condamine Mr Patrick Weir;
 - f. State Member for Katherine Hon Willem Westra van Holthe;
 - g. State Member for Stuart, Hon Bess Nungarrayi;
 - h. Ipswich City Council Mayor Paul Pisasale;
 - i. Toowoomba City Council Mayor Paul Antonio;
 - j. Katherine Town Council Mayor Fay Miller;

- k. Victoria Daly Regional Council Steven Hennessy;
- l. Katherine Chamber of Commerce;
- m. Local Property Owners/Managers, Dilinya Land Trust, Traditional Owners;
- n. Queensland Department of Transport and Main Roads;
- o. Local Environmental Groups , including the Australian Koala Foundation;
and
- p. Community Information Forums

Purpose of the Works

Project Objectives

- 52. The purpose of this project is to provide purpose built facilities and adaptively reused facilities that are fit for purpose, compliant and provide value for money in order to support the introduction of the EA-18G Growler Airborne Electronic Attack capability.

Details and Reasons for Site Selection

- 53. **RAAF Base Amberley.** The proposed sites within RAAF Base Amberley were selected due to their close proximity to the existing F/A-18F Super Hornet facilities. This presents the best use of land for operational effectiveness with respect to 82WG, 1SQN and 6SQN, and the Base as they relate to day to day operations of each facility and the EA-18G Growler capability.
- 54. A RAAF Base Amberley Site Selection Board was conducted on 2 December 2014, where appropriate Defence delegates agreed to the proposed sites for the new facilities at RAAF Base Amberley.
- 55. **Army Aviation Centre Oakey.** The proposed sites for the Mobile Threat Training Emitter System Army Aviation Centre Oakey facilities are an adaptive reuse of existing facilities, and as such a Site Selection Board was not required. Written approval for the use of the facilities for Mobile Threat Training Emitter

System Army Aviation Centre Oakey was received from the Manager Regional Estate Planning on 21 November 2014.

56. **Delamere Air Weapons Range.** A Delamere Air Weapons Range, Range Siting Board was conducted in February 2015 to assess a number of locations for the Range Control complex and the Mobile Threat Training Emitter System Emitter Sites at the Delamere Air Weapons Range. The sites as shown are those recommended by the Board and subsequently endorsed by RAAF on 19 May 2015. Key users and operators of the Range, as well as Defence Support Group personnel attended the Board. Advice was provided to the Board from subject matter experts from throughout Defence in accordance with the formal Defence site selection process.
57. Due to the presence of Gouldian Finch habitat at two of the original sites, the proposed Mobile Threat Training Emitter System Emitter Sites 4 and 5 were moved to an alternative location that was approved during a Supplementary Range Siting Board. The Delamere Air Weapons Range Site Selection Board was subsequently approved by Assistant Secretary Estate Planning on 15 July 2015.

Detailed Description of the Proposed Scope of Works

58. This project proposes thirteen scope elements. Details of each scope element are as described below.
59. **RAAF Base Amberley.** The eleven scope elements proposed for RAAF Base Amberley are as described below.

Project Element 1: 6SQN

60. This scope element includes the construction of new, purpose built facilities for 6SQN to meet their working accommodation requirements at RAAF Base Amberley.
61. The 6SQN facility will be a two storey building comprising a hangar with four aircraft maintenance bays, administration and executive offices, aircrew

operations areas and offices, briefing and meeting rooms, logistics and workshop spaces, amenities, ablutions and building services spaces. The building will be located within the central fast jet apron precinct at RAAF Base Amberley, to the south of the recently constructed 1SQN facilities.

62. The construction of a new 6SQN facility will necessitate the relocation of a P1 type timber hut and a Starter Cartridge store, along with the establishment of a temporary car park. The floor plans are illustrated in Attachments 5 and 6.
63. Associated infrastructure and essential services to support the proposed facilities will also be provided. The facilities will be secured within the central fast jet high security precinct.

Project Element 2: Electronic Attack Pod Workshop

64. This scope element includes the construction of new, purpose built facilities for the storage and preparation of the electronic attack pods.
65. The electronic attack pod workshop will be a single storey building which will comprise a large open plan workshop, an administration office, a secure store, a deliveries area, ablutions and amenities. The electronic attack pod store is a covered store area for the pod containers. The floor plan is illustrated in Attachment 7.
66. The buildings will be located immediately to the south of 6SQN with flight line access, and will be within the central fast jet apron precinct and will include associated infrastructure and essential services to support the proposed facilities. The facilities will be secured within the central fast jet high security precinct.

Project Element 3: 1SQN Internal Refurbishment

67. This element consists of the internal refurbishment of the following area within the existing 1SQN facility:
 - a. expansion of the capacity of the Air Life Support Section, include a wet room for immersion suits;

- b. new flight line laptop charging station; and
 - c. additional day lockers for maintenance staff.
68. All works will be conducted within the existing 1SQN building and will be coordinated with the 1SQN operations and security requirements. The floor plan is illustrated in Attachment 8.

Project Element 4: Flight Line and Ground Support Equipment Shelters

69. This scope element includes the construction of two new, purpose built aircraft shelters for the storage of the Growler aircraft at RAAF Base Amberley. Each shelter will allow six Super Hornet Growler or Joint Strike Fighter aircraft to be parked.
70. The aircraft shelters include aircraft tie down points, earthing points, refuelling points, fire protection, aircraft power, lighting, compressed air and security cameras. The floor plan is illustrated in Attachment 9.
71. The aircraft shelters will be located to the south of the three existing aircraft shelters, with a space left between the existing and the new shelters for the parking of visiting aircraft to be shared by 1SQN and 6SQN.
72. The scope element also includes the construction of additional ground support equipment shelters and additional external fuel tank storage. These will be provided by construction of new facilities and by the extension of existing facilities. The ground support equipment shelters consist of covered steel framed storage areas for the storage of equipment. The floor plan is illustrated in Attachment 10.
73. The works will include associated infrastructure and essential services to support the proposed facilities.

Project Element 5: Aircraft Apron

74. This scope element includes the construction of new, purpose built aircraft apron for 6SQN with a 40 year design life. All existing pavement, both asphalt and

concrete will be replaced, which will allow the regrading of the aprons levels and will allow for the installation of a suitable stormwater solution.

75. The existing sections of concrete within the area are 40 years old and are beyond their design life.
76. The works will also include new security fencing and gates, and the appropriate airfield lighting and line marking. The plan is illustrated in Attachment 10.

Project Element 6: In-Ground Aircraft Hydrant Refuelling System

77. This scope element includes the construction of new, purpose built in-ground hydrant refuelling system for 6SQN to replace the existing system that is over 40 years old and is no longer considered to be a compliant system due to its material and its design. The system will connect the existing RAAF Base Amberley Fuel Farm to the new aircraft shelters refuelling system.
78. The system will allow for future connection and expansion both within the fast jet central apron, and to the south for the planned location of the Battlefield Airlifter aircraft facilities. The plan is illustrated in Attachment 10.

Project Element 7: Air Combat and Electronic Attack System Program Office

79. This scope element includes the construction of new, purpose built facilities for the Air Combat Electronic Attack System Program Office to meet their working accommodation requirements at RAAF Base Amberley.
80. The facility will be a two storey building which contains office accommodation for Commonwealth and Contractor personnel, briefing and meeting rooms, amenities, ablutions and building services spaces. The floor plans are illustrated in Attachments 11 and 12.
81. The construction of a new Air Combat Electronic Attack System Program Office will necessitate the demolition of an existing building which has passed its useful building life.

Project Element 8: Intermediate Level Maintenance and Super Hornet Retail Warehouse

82. This scope element includes the construction of new, purpose built facilities for intermediate level maintenance functions to be carried out at RAAF Base Amberley. This scope element also includes the refurbishment of a warehouse to provide suitable logistics warehousing for the Super Hornet and Growler capabilities at RAAF Base Amberley.
83. The intermediate level maintenance works include:
- a. internal alterations to the Alternate Mission Equipment Maintenance Section facility;
 - b. relocation of the Cubic Australia contractor facilities to within the existing 6SQN building to allow for the expansion of the Guided Weapons System Program Office facility;
 - c. relocation of the US Custodian Store to allow for the expansion of the Guided Weapons System Program Office facility;
 - d. internal expansion of the Guided Weapons System Program Office facility;
 - e. expansion of the Seat Bay maintenance facility;
 - f. relocation of the Wheel and Tyre Workshop to allow for the expansion of the Hydraulics/Pneumatics Workshop;
 - g. internal expansion of the Hydraulics/Pneumatics Workshop;
 - h. internal expansion of the Air Life Support Workshop;
 - i. internal addition of two new Oxygen System Repair Rooms;
 - j. internal expansion of the Advanced Targeting Forward-Looking Infrared Workshop; and

- k. construction of a Testing Room for the next generation Consolidated Automated Support System.

84. The floor plans are illustrated in Attachments 13 to 16.

Project Element 9: Tactical Operational Flight Trainer

- 85. This scope element includes the construction of new, purpose built facilities for additional EA-18G Growler aircraft simulator requirements at RAAF Base Amberley.
- 86. The existing single storey simulator building will be expanded to the east. The expansion will incorporate a simulator hall for four Growler simulators, instructor and aircrew offices, a computer room, briefing and debriefing rooms, an instructor console room and store rooms. The floor plan is illustrated in Attachment 17.
- 87. Associated infrastructure / essential services to support the proposed facilities, including a dedicated chiller plant facility to support the air conditioning requirements.

Project Element 10: Car Parking

- 88. This scope element includes the construction of new, purpose built multi-story car parking facilities for RAAF Base Amberley.
- 89. The multi-storey car park will provide for up to 1200 parking spaces with multiple entry and exit points for both vehicles and pedestrians. The car park will be centrally located adjacent to the flight line to make the best use of high value land areas near the flight line. The floor plan is illustrated in Attachment 18.
- 90. Disabled car parks and support services will be provided in accordance with the Building Code of Australia.

Project Element 11: Base Services and Infrastructure

91. The following upgrades to base services and infrastructure will be provided to RAAF Base Amberley:
- a. replacement of the existing pumps with new pumps for the base fire water supply system; and
 - b. upgrades to the site wide communications infrastructure to support the new facilities.
92. **Army Aviation Centre Oakey.** The one element proposed for Army Aviation Centre Oakey is described below.

Project Element 12: Mobile Threat Training Emitter System Oakey

93. This scope element includes the adaptive reuse of two existing buildings at Army Aviation Centre Oakey which will be suitable for use by the contractor who will provide the training support. The scope elements proposed for Army Aviation Centre Oakey are as described below:
- a. office working accommodation and ablutions for 15 personnel;
 - b. covered parking for six vehicles;
 - c. covered parking for six trailers; and
 - d. vehicle electronics workshop.
94. The floor plan is illustrated in Attachment 19.
95. **Delamere Air Weapons Range.** The scope elements proposed for Delamere Air Weapons Range are described below.

Project Element 13: Mobile Threat Training Emitter System Delamere Air Weapons Range

96. The scope elements include the construction of new, purpose built facilities at Delamere Air Weapons Range to support the training of the Growler capability.

The main scope elements proposed for Delamere Air Weapons Range are as described below:

- a. **Range Operations Centre.** This facility provides operations rooms and administrative spaces for the range, including a modest increase to account for Mobile Threat Training Emitter System support capability for the E/A-18G Growler. It includes a shared briefing room, ablutions, medical aid station and kitchenette. The intention is to deliver this element via a contribution to the Delamere Air Weapons Range Redevelopment Project;
- b. **Range Control Living Accommodation.** This facility provides living accommodation for permanent range staff and visitors, and recreation facilities. Mobile Threat Training Emitter System personnel have been provided a separate block of permanent accommodation, but share a single large kitchen and dining facility that includes a large gym area. There is a shared recreation lounge for both the Delamere Air Weapons Range and Mobile Threat Training Emitter System staff. The intention is to deliver this element via a contribution to the Delamere Air Weapons Range Redevelopment Project;
- c. Mobile Threat Training Emitter System maintenance workshop;
- d. Mobile Threat Training Emitter System vehicle shelter;
- e. Authentic Defence Radar System storage and emitter shelters;
- f. Vehicle wash bay and loading ramp. The intention is to deliver this element via a contribution to the Delamere Air Weapons Range Redevelopment Project due to additional vehicle numbers as a result of the Mobile Threat Training Emitter System being based at the Range; and
- g. Mobile Threat Training Emitter System emitter sites and access roads.

97. Plans are illustrated in Attachments 20 to 30.

Public Transport, Local Road and Traffic Concerns

98. As a result of the Project there will be a small increase to the local base and area population at RAAF Base Amberley, Army Aviation Centre Oakey and Delamere Air Weapons Range.
99. A traffic analysis has been completed on the internal road network at RAAF Base Amberley which has shown no adverse effects on the road networks around the Base.
100. During construction there will be an increase to the number of large vehicles that enter the bases to deliver material to the sites. Construction management controls will mitigate the effects of this increased traffic on the local road networks. At RAAF Base Amberley this will involve the use of a dedicated construction access gate off Hansens Road to prevent delays to the area around the main gate of RAAF Base Amberley.
101. During the construction phase of the project at Delamere Air Weapons Range there will be an increase to the number of large vehicles that use the Buntine Highway to deliver material to site. Construction management controls will mitigate the effects of this on local road users by coordinating the delivery schedule.
102. The Delamere Air Weapons Range population will increase following the project and a new slip lane will be constructed on the Buntine Highway at the main entry to decrease the interference with through traffic and increase the safety for Range personnel.

Zoning and Local Approvals

103. **RAAF Base Amberley.** The sites approved for all project scope elements at RAAF Base Amberley are located within the Flight Line North Zone and the Industry (1) Zones as defined within RAAF Base Amberley Strategic Analysis and Zone Options Report. The intended function and use of all project elements are consistent with this zoning.

104. **Delamere Air Weapons Range.** The Delamere Air Weapons Range sites approved for all project scope elements are all located within a Training Support Zone as defined within the RAAF Tindal and Delamere Zone and Precinct Plan (2007). The intended function and use of all project elements are consistent with this zoning.

Childcare Provisions

105. Childcare facilities are currently available on RAAF Base Amberley and in the local Ipswich area. There are no requirements for additional childcare facilities as a result of this project, with the existing facilities meeting the current and known future needs of the Base.
106. The staff at Delamere Air Weapons Range supporting the Mobile Threat Training Emitter System will be civilian contractors who will be expected to travel to site weekly. There are no childcare facilities at the Range.

Impact on Local Community

107. **RAAF Base Amberley.** RAAF Base Amberley has a long standing and good relationship with the local Ipswich community. There are a number of accommodation options for the additional personnel moving to RAAF Base Amberley including on-base accommodation, rental accommodation in the local area and Defence married quarters. This project is not expected to have a significant effect on the overall accommodation availability in the local area.
108. **Army Aviation Centre Oakey.** The Mobile Threat Training Emitter System Oakey facilities will be operated by civilian contractor staff who will have their own accommodation and messing arrangements. Due to the small number of personnel involved, it is not expected to have a significant effect on the overall accommodation availability in the local area at Oakey.
109. **Delamere Air Weapons Range.** The Mobile Threat Training Emitter System Delamere facilities will be operated by civilian contractor staff who will be accommodated at Delamere Air Weapons Range in the accommodation facilities to be constructed at part of this project.

110. The construction works are expected to provide opportunities for local small and medium enterprises to provide services in the construction, labour hire and manufacturing industries particularly in South East Queensland and the Northern Territory regions.
111. In accordance with the Indigenous Land Use Agreement, Defence will seek a capability statement from the Wardaman People identifying their skills and experience that may be relevant to any contracting opportunities associated with the Delamere Air Weapons Range works. Defence will subsequently ensure that the Wardaman People are made aware of any relevant contracting opportunities at Delamere Air Weapons Range, and that tenders consider the employment of Aboriginal people that may have skills appropriate to the works.

Planning and Design Concepts

112. Planning and design concepts have been developed to support the functional requirements to support the introduction and operation of the EA-18G Growler Airborne Electronic Attack capability. These criteria and objectives, formulated as part of the design process, include the following:
 - a. the layout of the facilities for work flow functional efficiency;
 - b. the interaction between the various elements that constitute the EA-18G Growler capability; and
 - c. security and safety requirements of people and equipment.
113. Based on these planning objectives, the following design principles were adopted:
 - a. where possible orientate all buildings north-south with long axis east-west;
 - b. recognise that the operations of the Squadron are characterised by regular deployments of aircraft, followed by required maintenance;

- c. continued enhancement of a fast jet precinct for operations, support and training within and adjacent to the RAAF Base Amberley central fast jet apron;
 - d. the design, structure, servicing and siting of buildings should allow for future expansion where possible;
 - e. develop functionally appropriate zones where possible, separating offices from industrial facilities, such as workshops, aircraft aprons; and
 - f. separating pedestrian movements from aircraft and vehicle movement areas.
114. Access and facilities for the disabled will be provided in accordance with the Building Code of Australia, Australian Standard AS1428 – *Design for Access and Mobility* and the Defence policy ‘Disabled Access and Other Facilities for Disabled Persons’. The facilities will be fully compliant with legislation and will include accessible kitchens, toilets and shower facilities.

Structural Design

115. The key considerations taken into account in carrying out the structural design are:
- a. maintaining and enhancing the operational effectiveness of each facility;
 - b. ensuring the design for each building is fit for purpose;
 - c. cost-effectiveness over the whole of life of the Project;
 - d. minimisation of in-service maintenance requirements;
 - e. minimisation of risks inherent in the design (both safety and economic risks); and
 - f. maintaining flexibility of the use of internal spaces where appropriate.
116. The structural design of the proposed apron, hardstands, access roads and the building structures has taken into account local geotechnical conditions and are

in accordance with all relevant Australian Standards and Codes. Appropriately qualified and experienced geotechnical and structural engineers have been engaged in the design of the proposed facility.

Hydraulic Services

117. Hydraulic Services on Defence establishments will conform to the requirements of all applicable legislation, regulations, codes of practice and guidance publications (Regulations) relevant to Queensland and Northern Territory, and all relevant standards (Standards).
118. Hydraulic Services installations will comply with relevant Australian standards, for the type of the installation or equipment to be used. Where Australian Standards are not available, recognised international or overseas national standards will be used where they are relevant to the type of installation or equipment and to the installation conditions in Australia.
119. The design employed will seek to ensure hydraulic equipment will be readily and adequately supported in Australia and where possible, in the local Defence Region. Spare parts will be readily available in Australia for major hydraulic equipment.
120. Hydraulic installations will allow for suitable and easy access for the purpose of operation, maintenance, repair and replacement. Allowance for plant layouts and equipment space will address associated Building Code of Australia and Work Health Safety legislation requirements.
121. Designs will incorporate safe means of access to hydraulic equipment including items mounted in roof voids and ceiling voids, in high spaces or above operational equipment.
122. At RAAF Base Amberley and Army Aviation Centre Oakey, the water will be supplied to the proposed facilities from an adjacent water main that services the precincts.
123. At Delamere Air Weapons Range, water will be supplied to the proposed facilities from a bore located on the Range. A final location of the bore has yet to

be determined and is subject to an ongoing hydrological survey. This service will connect to the Range Control complex via in-ground infrastructure.

Electrical Services

124. At RAAF Base Amberley and Army Aviation Centre Oakey, the electrical supply to the proposed facilities will be from the existing electrical network on the Base. Investigations have confirmed that there is adequate capacity on the network for the new facilities.
125. At Delamere Air Weapons Range, there are no reticulated electrical services to the site. The electrical supply to the proposed facilities will be from a new Central Power Station to be constructed. A number of options for the Central Power Station were investigated. It has been established that a hybrid solar /diesel system provides the most energy efficient and whole-of-life cost effective solution.
126. The electrical design has been undertaken in accordance with all relevant Australian Standards, all applicable Legislation, Regulations, Codes of Practice and Guidance Publications relevant in Queensland and Northern Territory, and stated Defence requirements.

Communications

127. RAAF Base Amberley and Army Aviation Centre Oakey are serviced by a well development communications infrastructure network. Works at RAAF Base Amberley will include the enhancement of the site wide communications infrastructure network, whilst the small nature of the works at Army Aviation Centre Oakey has resulted in no network upgrade requirements.
128. Delamere Air Weapons Range requires a wide range of communications services to operate safely and effectively. In addition to the Defence Restricted and Secret computer networks, a number of other networks are supported. All of these will require relocation or refresh:

- a. safety radio network;
 - b. air-ground-air radio network;
 - c. microwave target scoring network;
 - d. wireless local communications network; and
 - e. Bureau of Meteorology reporting network.
129. Telstra is planning to shortly commence works on a new mobile phone tower adjacent to the Range Control Complex as part of Defence Project JP2047 – Terrestrial Communications Network. This is a new capability that will enhance Range support communications.

Fire Protection

130. The RAAF Base Amberley and Army Aviation Centre Oakey Fire Services have been consulted in developing this proposal to ensure fire fighting capabilities are not adversely impacted in an emergency and that their training and accreditation are not affected by construction activities. Where required, the new facilities will be connected to the existing base wide fire alarm network.
131. Delemare Air Weapons Range is in a remote location and neither a RAAF nor civilian fire fighting service is available to respond to an emergency. RAAF Base Tindal Fire Services have been consulted in developing infrastructure to support deployment of fire services to the Range during major exercises.
132. The fire engineering design has been undertaken in accordance with all relevant Australian Standards, all applicable Legislation, Regulations, Codes of Practice and Guidance Publications relevant in Queensland and Northern Territory, and stated Defence requirements.

Acoustics

133. The principal standard governing acoustic treatment for this project is the Australian Standard AS 2021–2000 *Acoustics – Aircraft noise intrusion –*

Building Siting and Construction. Due to the functional requirements for the Project – such as direct access to the flightline, sightlines along the aircraft apron, and the desire for natural light, it will not be possible to meet all of the requirements of AS 2021-2000.

134. Building orientation and construction methods for the building envelope have been designed to provide an acceptable level of noise attenuation amenity to the new site buildings. The Acoustic Design strikes a balance between adherence to all facets within AS2021 and functional requirements including:
 - a. Noise criteria for “maintenance areas” (e.g. the hangar spaces) have been relaxed in order to permit direct connectivity of these areas to the outside; and
 - b. Noise criteria for some private offices will align with the open offices criteria of 65dBA rather than a AS2021 typical 55dBA value in order to permit the location of these rooms closer to the façades whilst allowing the integration of vision glazing in the building façade.
135. Within the proposed buildings, acoustic privacy of partitioning is provided in accordance with AS/NZS ISO 717.1 - *Acoustics—Rating of sound insulation in buildings and of building elements*. Acoustic privacy has been determined based on the function within each of the spaces and the level of privacy required.
136. For Mobile Threat Training Emitter System Delamere Air Weapons Range limited acoustic isolation from external sources has been incorporated into the working accommodation. Due to the nature of range operations, exposure to high noise is very limited. However all accommodation has been designed to meet the required sound levels.

Security

137. There is no public access to the proposed facilities and entry to the proposed facilities will be through the controlled access points at RAAF Base Amberley, Army Aviation Centre Oakey and Delamere Air Weapons Range. The individual buildings on site been designed for the appropriate security classification as stipulated by Defence requirements.

138. The works at Delamere Air Weapons Range will provide a boundary fence to portions of the Range with appropriate signage to support the security of the Range and safety of persons neighbouring the Range.

Environmental Sustainability of the Project

139. 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.
140. This project has addressed Commonwealth policy by adopting cost-effective and ecologically sustainable development practices as a key objective in the design of the new facilities. The remote nature of Delamere has provided particular opportunities to apply sustainable and cost effective power supply and waste management practices.
141. The ecologically sustainable measures for the Project are balanced with other requirements for Defence buildings, including security and Work Health Safety considerations to ensure that Defence's operational capability is not compromised. All buildings are designed and will be constructed, operated and maintained to ensure that they use energy efficiently considering their required use.
142. To achieve this, buildings will comply with:
- a. Section J of Volume One of the Building Code of Australia, National Construction Code 2014; Energy Efficiency.
 - b. Part 3.12 of Volume Two of the Building Code of Australia, National Construction Code 2014; Energy Efficiency.

- c. The Energy Efficiency in Government Operations Policy; and
 - d. Defence Green Building Requirements Policy.
143. The goal will be to maximise return on upfront investment while also aiming to minimise ongoing maintenance and operational requirements. The Design team has conducted an ecologically sustainable development workshop with Defence stakeholders to determine what opportunities were available to the Project. Whole of Life costing has also been considered and built into the design.
144. All energy sources supplying the buildings will be individually metered and linked to a control and monitoring system allowing Defence to better manage and monitor environmental performance. Sub-metering will be provided in accordance with the Defence Energy Management Strategy, and the requirements of the Commonwealth Energy Policy.
145. The following is a snapshot of some of the initiatives identified for consideration in the designs associated with the Project:
- a. energy and water metering for ongoing monitoring and management purposes;
 - b. zoning and control methodology for air-conditioned areas e.g. Carbon dioxide monitoring, economy cycle;
 - c. localised air-conditioning plant in combination with high-efficiency equipment and variable speed drives to ensure output matches demand;
 - d. energy efficient lighting used in conjunction with tighter zoning and control methodology e.g. daylight or motion sensing;
 - e. gas/solar boosted hot water systems for amenities;
 - f. rainwater harvesting and water efficiency rating scheme rated fixtures to reduce potable water consumption;
 - g. energy efficient building fabric construction to achieve thermal and acoustic insulation requirements;

- h. use of mechanically-assisted or natural ventilation and natural lighting (e.g. skylights) wherever practical;
- i. specification of sustainable internal and external finishes e.g. plantation timber, low-volatile organic compound paints;
- j. specification of high star-rated appliances available from Australian manufacturers;
- k. connecting into the existing Base Management System network, which allows for centralised monitoring and control of building systems;
- l. soil cut and fill volumes will be balanced;
- m. electrical power at Delamere will be provided by a hybrid solar/diesel Central Power Station;
- n. building orientation will be designed to maximise solar efficiencies;
- o. mixed mode climate control is proposed for all occupied office areas; and
- p. all facilities will include energy and water efficient plant and fixtures.

Landscaping

- 146. Landscaping design has been included in all new building elements, where appropriate and functional. Landscaping works will also be completed to restore areas disturbed during construction and provide general improvement to the built environment.
- 147. Landscaping design will focus on a functional, low maintenance and water sensitive approach using plants that are indigenous to the area. An establishment period will be included in the landscaping contract to ensure the landscaping elements are maintained and to ensure effective and efficient propagation.
- 148. Landscaping practices will be adopted to be sympathetic with local environmental and operational conditions. Clear contractual constraints will also be placed upon the Contractor to address issues, adopt appropriate practices and to deliver promised services under the Construction Environmental Management Plan.

149. Planting will be undertaken to compensate for trees removed as part of the construction activities at RAAF Base Amberley at a ratio of five new trees for each tree removed. Appropriate plantings will be undertaken in consultation with Defence's Regional Environmental Officer who has assisted in identifying appropriate species and locations. Furthermore, it is envisaged that the compensatory planting will enhance the green corridor to the Bremer River and for wildlife transiting through the Base.

Energy Targets

150. There are no applicable energy targets for this proposal.

Work Health and Safety Measures

151. The proposed facilities to be provided under this project will comply with Department of Defence's Work Health and Safety Policy, the *Work Health and Safety Act (WHS) 2011 (Cth)*, Work Health and Safety (Commonwealth Employment - National Standards) Regulations and the Defence Work Health and Safety Manual.
152. In accordance with Section 35(4) of the *Building and Construction Industry Improvement Act 2005 (Cth)*, contractors will also 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.
153. Safety aspects of this proposal have been addressed during the design process and have been documented in a Safety in Design Report completed by the Managing Contractor. No special or unusual public safety risks have been identified in this process. The managing contractor will also be required to submit a Safety Plan for the construction phase and prior to the start of any construction activities.

Cost Effectiveness and Public Value

Outline of Project Costs

154. The estimated out-turn cost of the Project is \$348.6 million, excluding Goods and Services Tax. This estimate includes the construction costs including escalation allowances, professional service fees, design, construction and Defence contingencies and information technology equipment.
155. Existing facilities have been re-used where possible, minimising the total capital expenditure, while achieving the required functional capability.
156. Ecologically sustainable development principles have been incorporated into the design of the proposed facilities to achieve greater efficiencies and reduced costs over the design life.
157. Under this project, the Net Personnel Operating Costs (NPOC) have been estimated for the new and upgraded facilities. NPOC analysis provides an estimate of the mature annual cost of operating facilities. The cost estimate becomes the basis of an ongoing, indexed budget transfer for the operation of the facilities being delivered by the Growler Facilities project.

Details of Project Delivery System

158. A Project Manager / Contract Administrator has been appointed by the Commonwealth to manage the project works and associated administration of the contracts during the Planning Phase. Subject to Parliamentary approval, value for money assessments and satisfactory performance of the Project Manager / Contract Administrator, the Commonwealth may extend the Project Manager / Contract Administrator Contract into the Delivery Phase of the works at RAAF Base Amberley, Army Aviation Centre Oakey and Delamere Air Weapons Range.
159. A Managing Contractor has been engaged to undertake the design of the facilities, which have been completed to 50%. Subject to Parliamentary approval of the Project, value for money assessments and satisfactory performance, the

Commonwealth may extend the Managing Contractors Contract into the Delivery Phase of the Project at RAAF Base Amberley and Army Aviation Centre Oakey.

160. The delivery of the works at Delamere Air Weapons Range is expected to be delivered separately to the works at RAAF Base Amberley and Army Aviation Centre Oakey. The Mobile Threat Training Emitter System Delamere works are planned to be delivered under a single contract with the Delamere Air Weapons Range Redevelopment Project in order to maximise efficiencies and achieve better value for money in delivery in this remote area.
161. Subject to Parliamentary approval of the Project and value for money assessment, the Commonwealth will engage a Managing Contractor to service the Delivery Phase of the Project at Delamere Air Weapons Range.

Construction Program

162. Subject to Parliamentary approval of the Project, construction at RAAF Base Amberley and Army Aviation Centre Oakey is expected to be delivered in two phases in order to align with the available funding for the project. The first phase will commence in the first half of 2016, and will be complete by the end of 2017 and shall deliver all facilities to meet Initial Operating Capability of the E/A-18G Growler capability. The second phase of construction at RAAF Base Amberley is expected to commence in the second half of 2020, and will be complete by mid 2021 and shall deliver all facilities to meet Final Operating Capability of the E/A-18G Growler capability.
163. Subject to the separate Parliamentary approval of the Delamere Air Weapons Range Redevelopment Project, construction at Delamere Air Weapons Range is expected to commence in the first half of 2016 with construction completed by the first half of 2018.

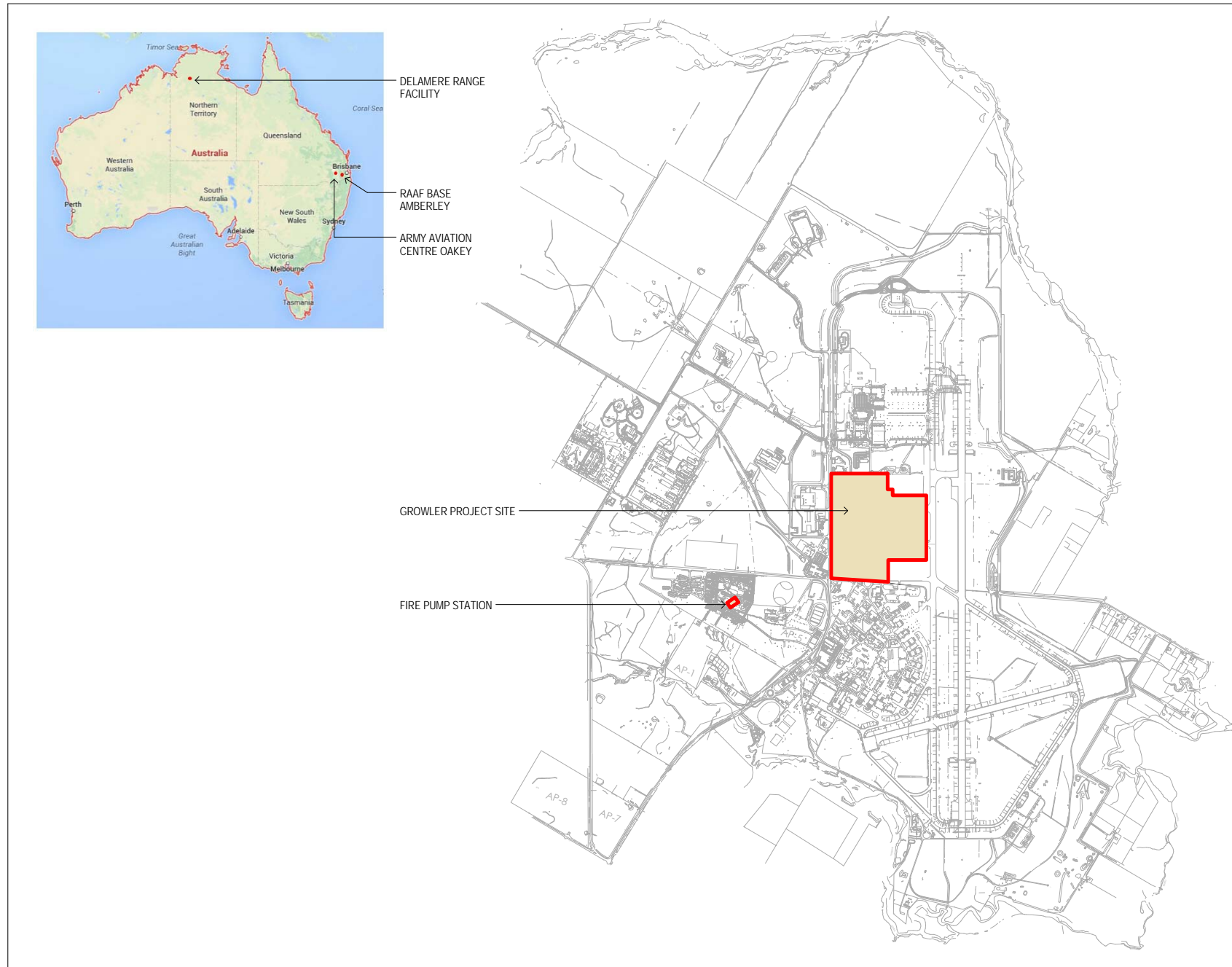
Public Value

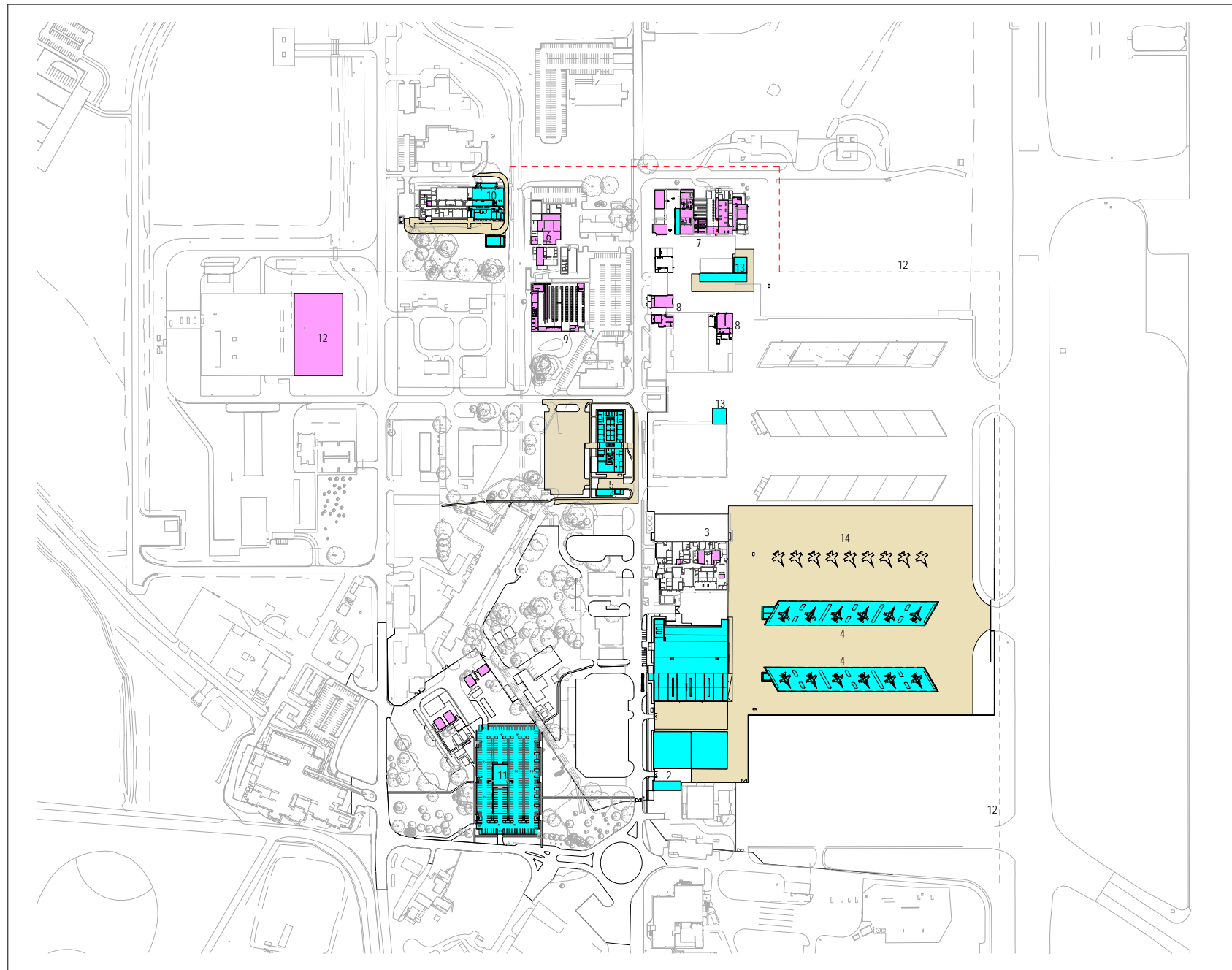
164. The proposed facilities will support the introduction and operation of the EA-18G Growler airborne electronic attack aircraft.

165. The Project will also employ a diverse range of skilled consultants, contractors and construction workers. The project will provide opportunities for up-skilling and job training to improve individual skills and employability on future projects.
166. In accordance with the Indigenous Land Use Agreement, Defence will seek a capability statement from the Wardaman People identifying their skills and experience that may be relevant to any contracting opportunities associated with these works. Defence will subsequently ensure that the Wardaman People are made aware of any relevant contracting opportunities, and that tenders consider the employment of Aboriginal people that may have skills appropriate to the works.

Revenue

167. No revenue will be derived from this Project.





PROJECT WORKS LEGEND

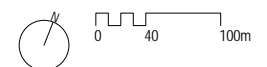
- NEW CONSTRUCTION
- EXISTING AREA MODIFIED
- NEW APRON/ PAVING

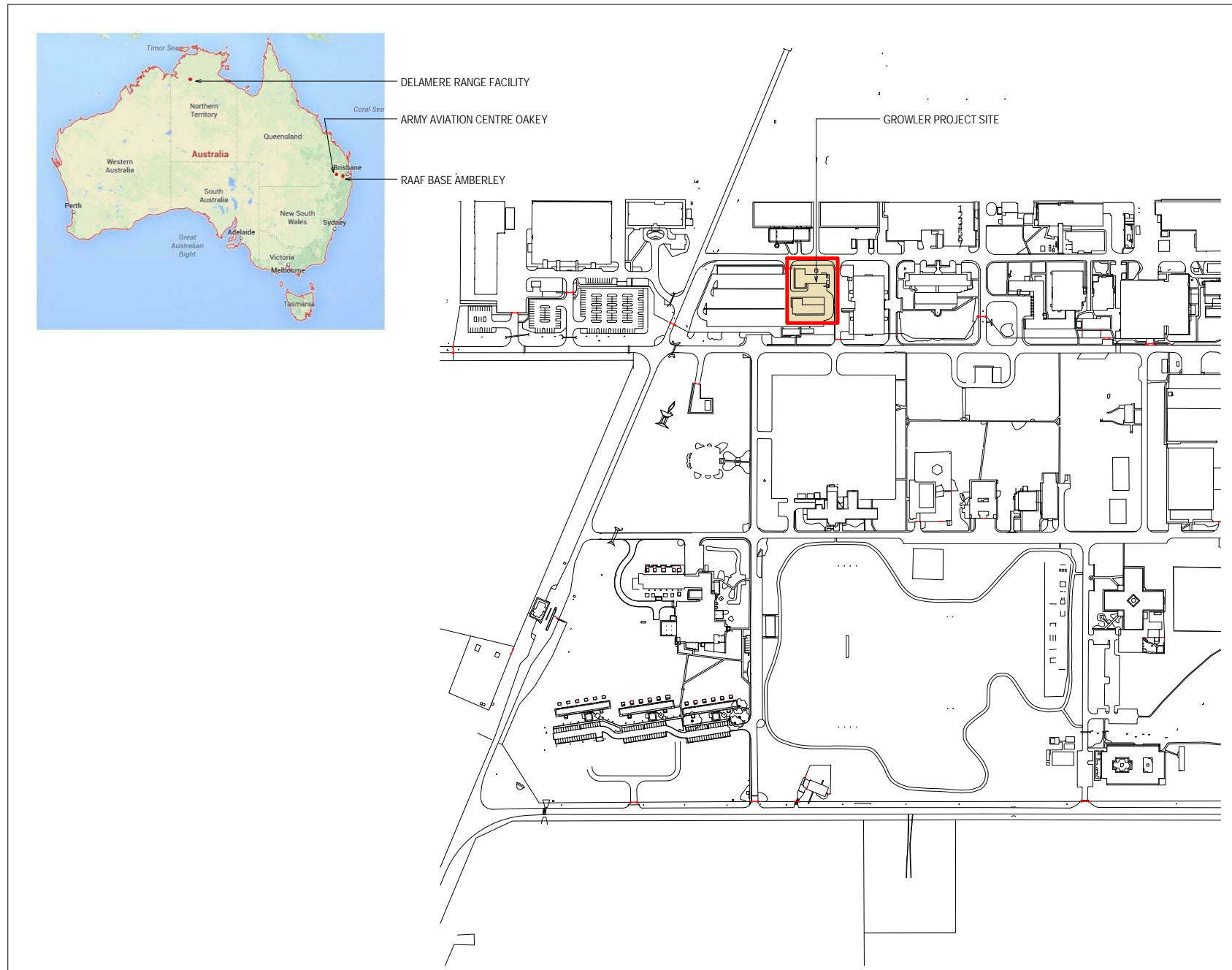
- 6SON
- POD SHOP , POD STORE & GSE SOUTH
- 1SON
- FLIGHT LINE SHELTERS
- AIR COMBAT & ELECTRONIC ATTACK SYSTEM PROGRAM OFFICE
- INTERMEDIATE LEVEL MAINTENANCE
- GUIDED WEAPONS SYSTEM PROGRAM OFFICE, ALTERNATE MISSION EQUIPMENT MAINTENANCE SECTION & SEAT BAY
- CUBIC, WHEEL & TYRE SHOP, AIR REFUELLING STORE & EXTERNAL FUEL TANK WORKSHOP
- SUPER HORNET RETAIL WAREHOUSE
- TACTICAL OPERATIONAL FLIGHT TRAINER
- CAR PARK
- FUEL SYSTEM
- GSE NORTH, EXTENAL FUEL TANK STORE
- AIRCRAFT APRON

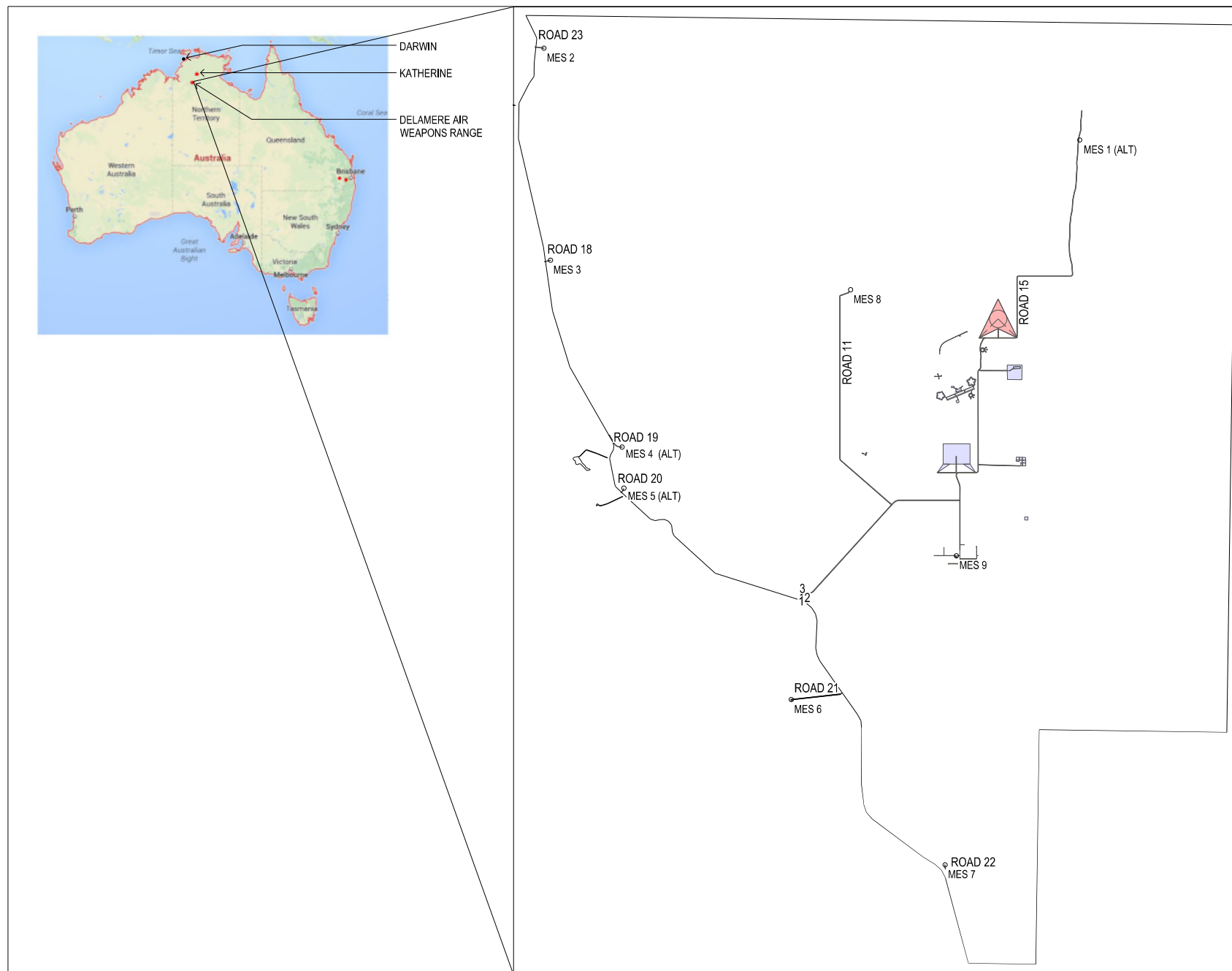
ATTACHMENT 2 | SITE PLAN
| RAAF BASE AMBERLEY

ATTACHMENT 2

SITE PLAN
RAAF BASE AMBERLEY





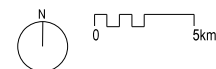


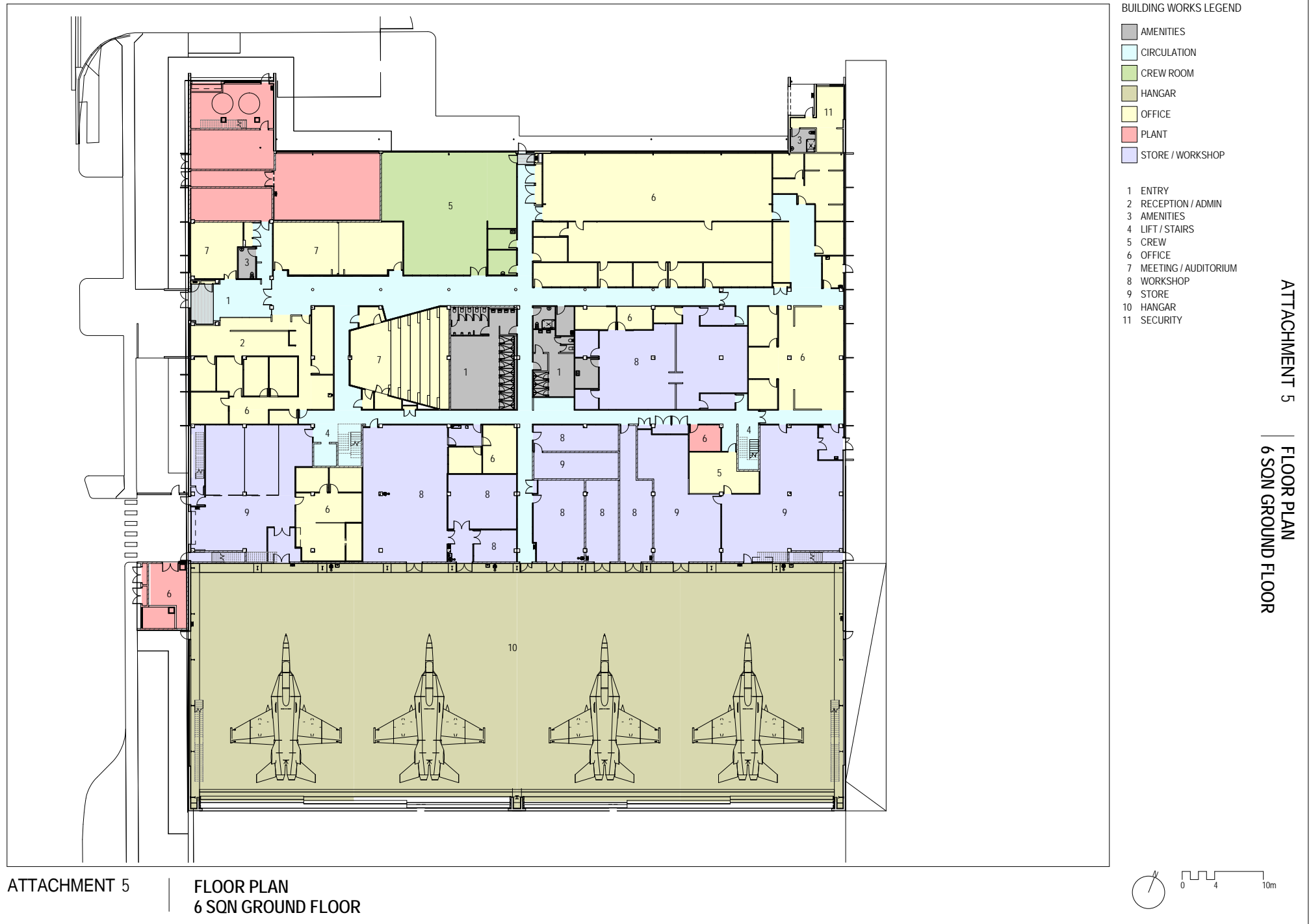
- 1 RANGE OPERATIONS CENTRE
- 2 MAINTENANCE AREAS & WORKSHOPS
- 3 RANGE CONTROL ACCOMMODATION

ATTACHMENT 4 | SITE PLAN
DELAMERE AIR WEAPONS RANGE

ATTACHMENT 4

SITE PLAN
DELAMERE AIR WEAPONS RANGE



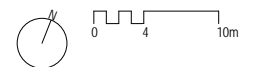




BUILDING WORKS LEGEND

- AMENITIES
 - CIRCULATION
 - CREW ROOM
 - HANGAR
 - OFFICE
 - PLANT
 - STORE / WORKSHOP
- ENTRY
 - RECEPTION / ADMIN
 - AMENITIES
 - LIFT / STAIRS
 - CREW
 - OFFICE
 - MEETING / AUDITORIUM
 - WORKSHOP
 - STORE
 - HANGAR
 - SECURITY

ATTACHMENT 6 | FLOOR PLAN
6 SQN LEVEL 1



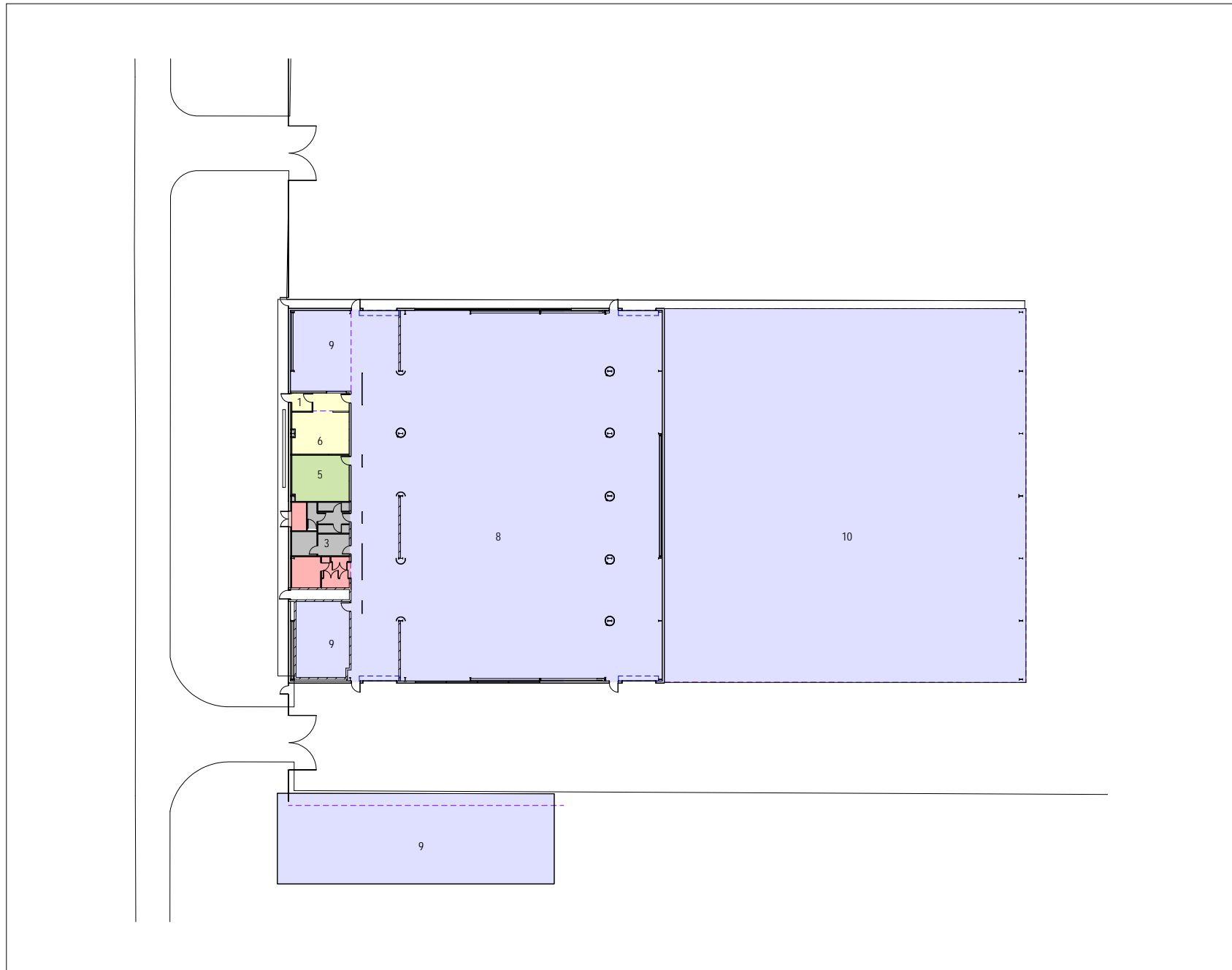
BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- HANGAR
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE
- 10 GROUND SUPPORT EQUIPMENT

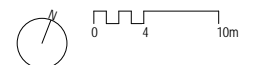
ATTACHMENT 7

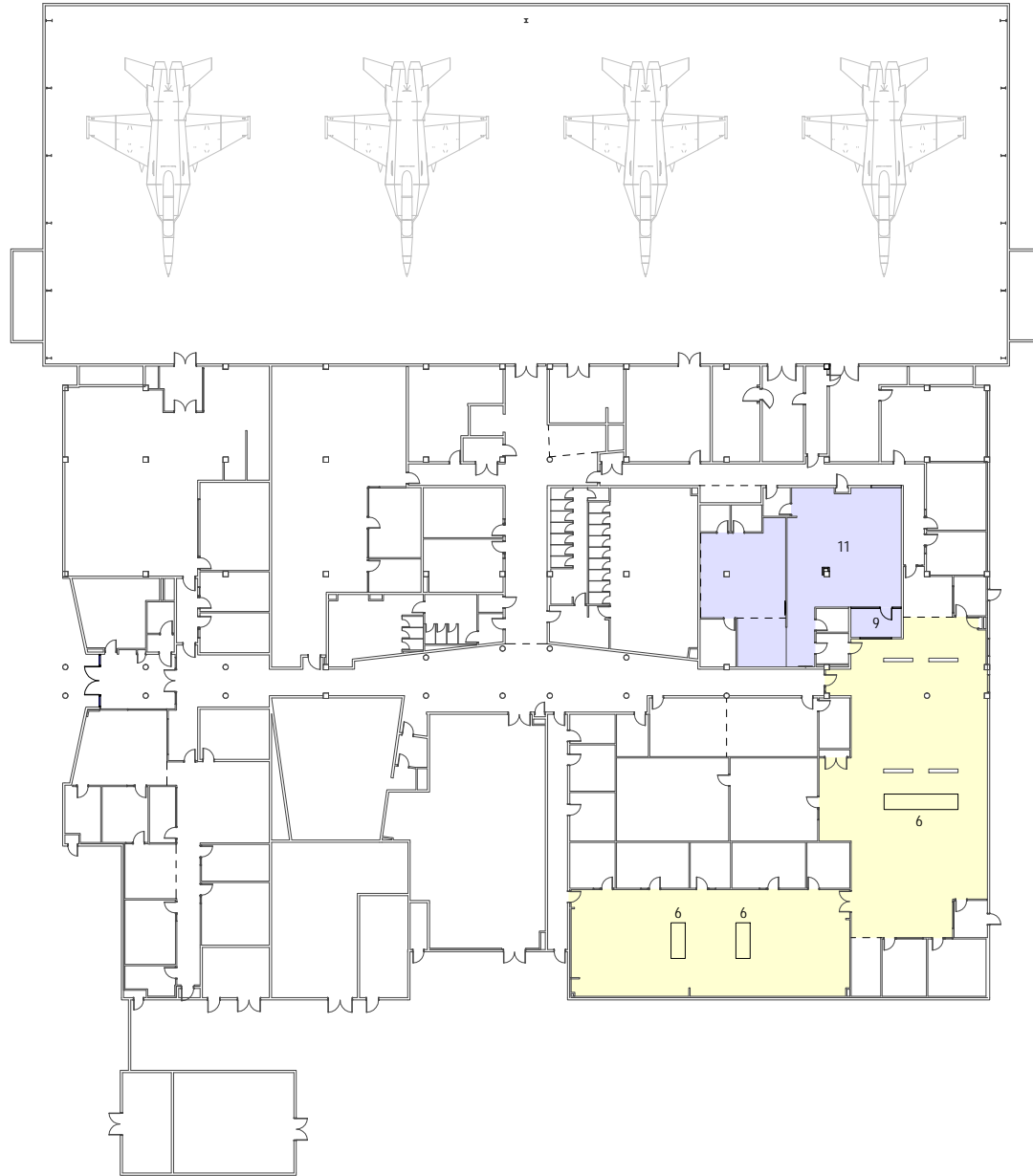
FLOOR PLAN
POD SHOP, POD STORE & GROUND SUPPORT
EQUIPMENT SHELTER SOUTH



ATTACHMENT 7

FLOOR PLAN
POD SHOP, POD STORE & GROUND SUPPORT EQUIPMENT SHELTER SOUTH





BUILDING WORKS LEGEND

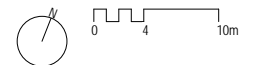
- AMENITIES
- CIRCULATION
- CREW ROOM
- HANGAR
- OFFICE
- PLANT
- STORE / WORKSHOP

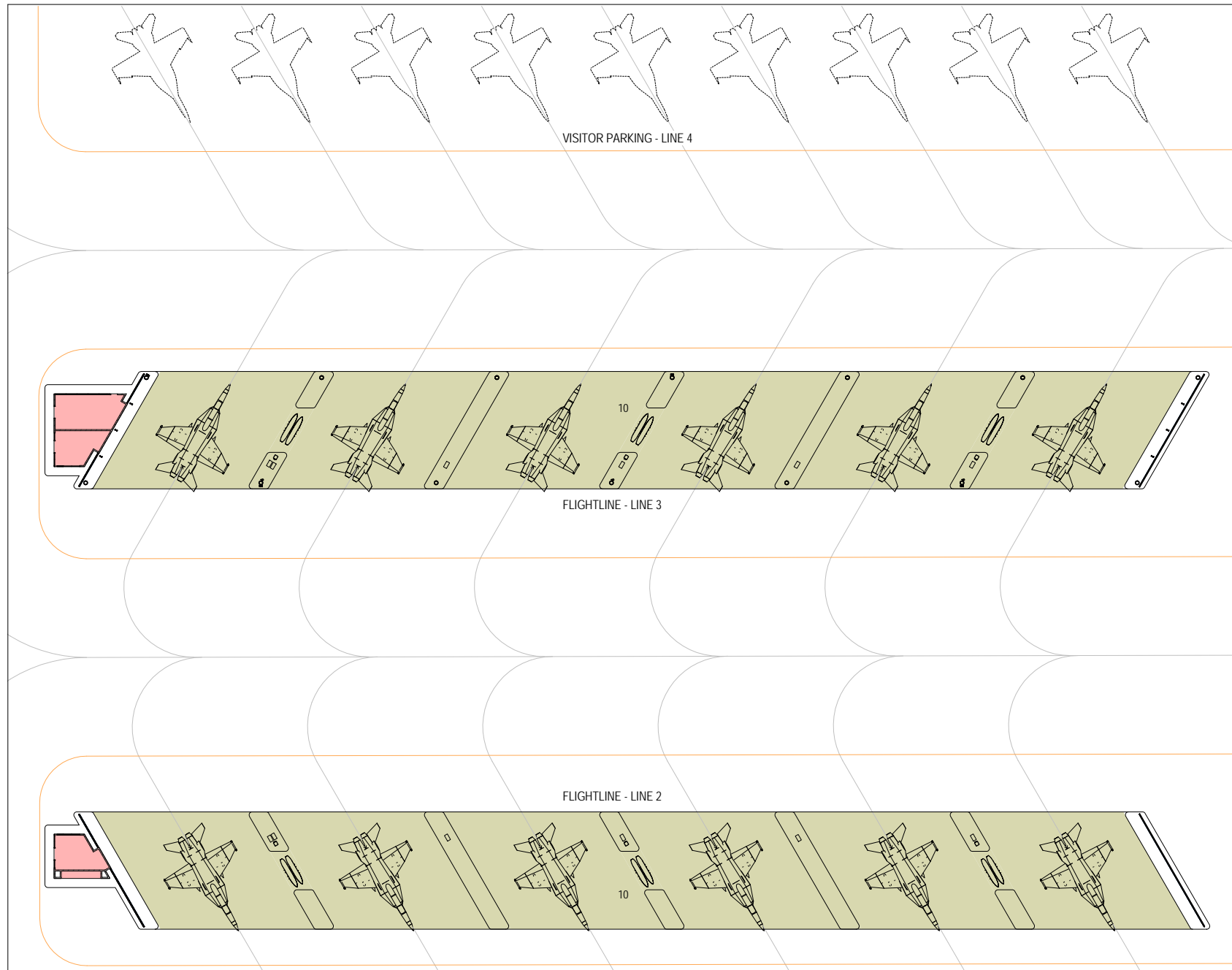
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE JOINERY
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE
- 10 HANGAR
- 11 LIFE SUPPORT NAVIGATION & MAINTENANCE/ STORE

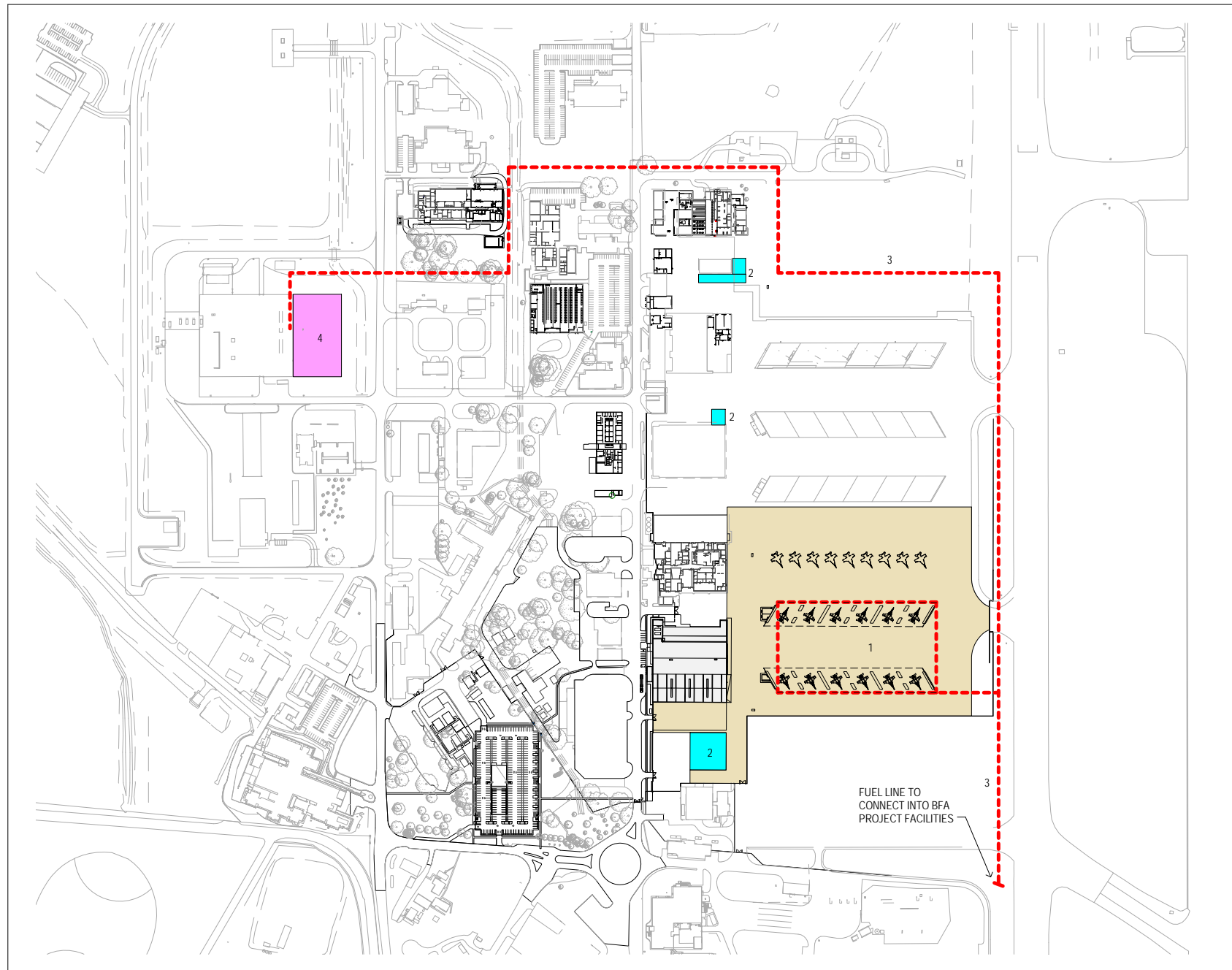
ATTACHMENT 8 | FLOOR PLAN
1 SQN REFURBISHMENT

ATTACHMENT 8

FLOOR PLAN
1 SQN REFURBISHMENT







PROJECT WORKS LEGEND

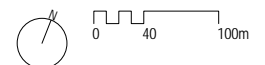
- NEW CONSTRUCTION
- EXISTING AREA MODIFIED
- NEW APRON/PAVING

- 1 AIRCRAFT APRON
- 2 GROUND SUPPORT EQUIPMENT SHELTERS
- 3 IN-GROUND HYDRANT FUEL SYSTEM
- 4 FUEL FARM

ATTACHMENT 10 | SITE PLAN
AIRCRAFT APRON, GROUND SUPPORT EQUIPMENT
SHELTERS AND IN-GROUND HYDRANT FUEL SYSTEM

ATTACHMENT 10

SITE PLAN
AIRCRAFT APRON, GROUND SUPPORT EQUIPMENT SHELTERS AND IN-GROUND HYDRANT FUEL SYSTEM



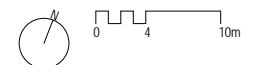


BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- CAR PARK
- OFFICE
- PLANT
- STORE / WORKSHOP

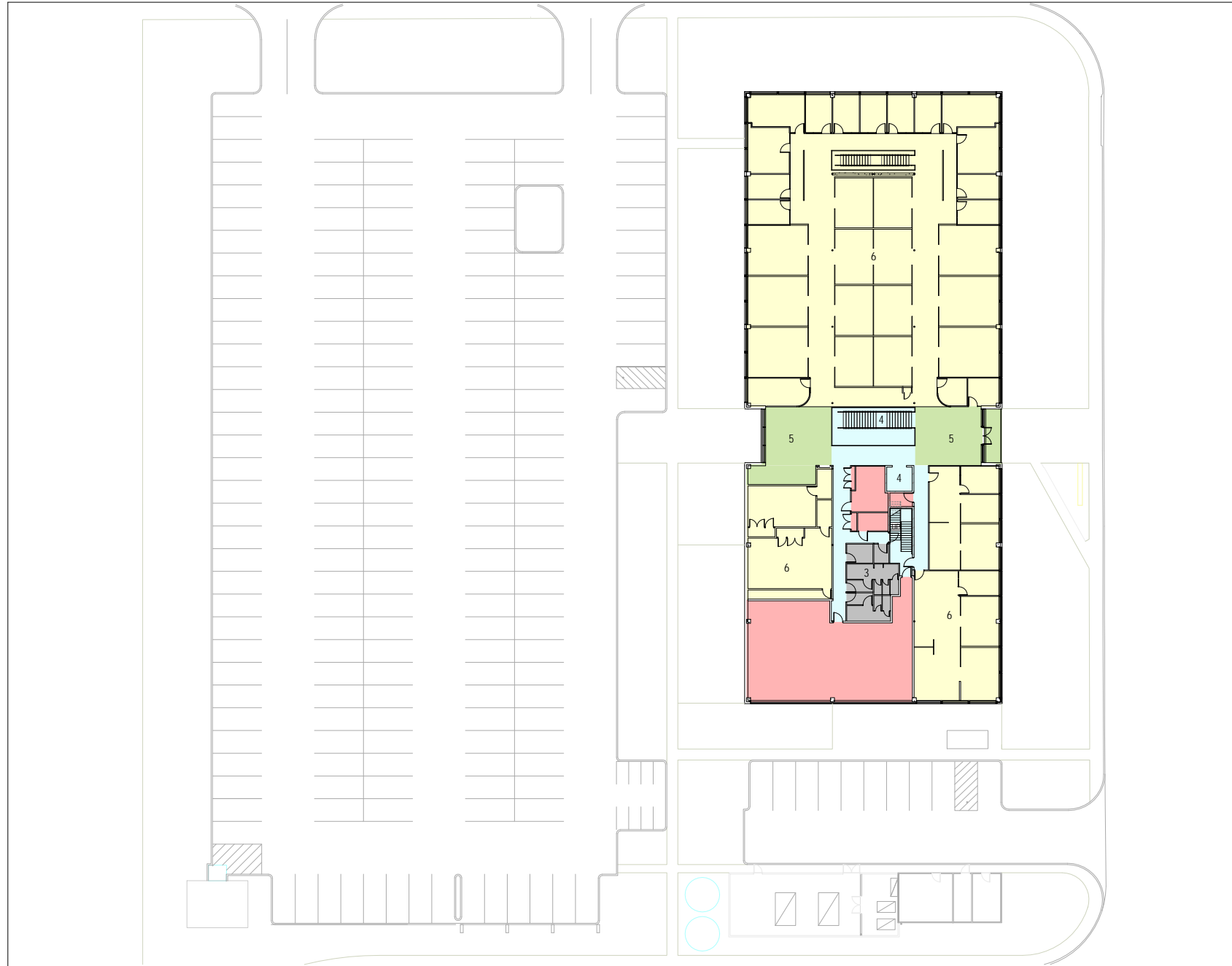
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

ATTACHMENT 11 | FLOOR PLAN
AIR COMBAT AND ELECTRONIC ATTACK SYSTEM
PROGRAM OFFICE GROUND FLOOR



ATTACHMENT 11

FLOOR PLAN
AIR COMBAT AND ELECTRONIC ATTACK SYSTEM PROGRAM OFFICE GROUND FLOOR



BUILDING WORKS LEGEND

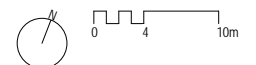
- AMENITIES
- CIRCULATION
- CREW ROOM
- CAR PARK
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

ATTACHMENT 12 | FLOOR PLAN
AIR COMBAT AND ELECTRONIC ATTACK SYSTEM
PROGRAM OFFICE LEVEL 1

ATTACHMENT 12

FLOOR PLAN
AIR COMBAT AND ELECTRONIC ATTACK SYSTEM PROGRAM OFFICE LEVEL 1

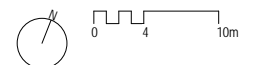
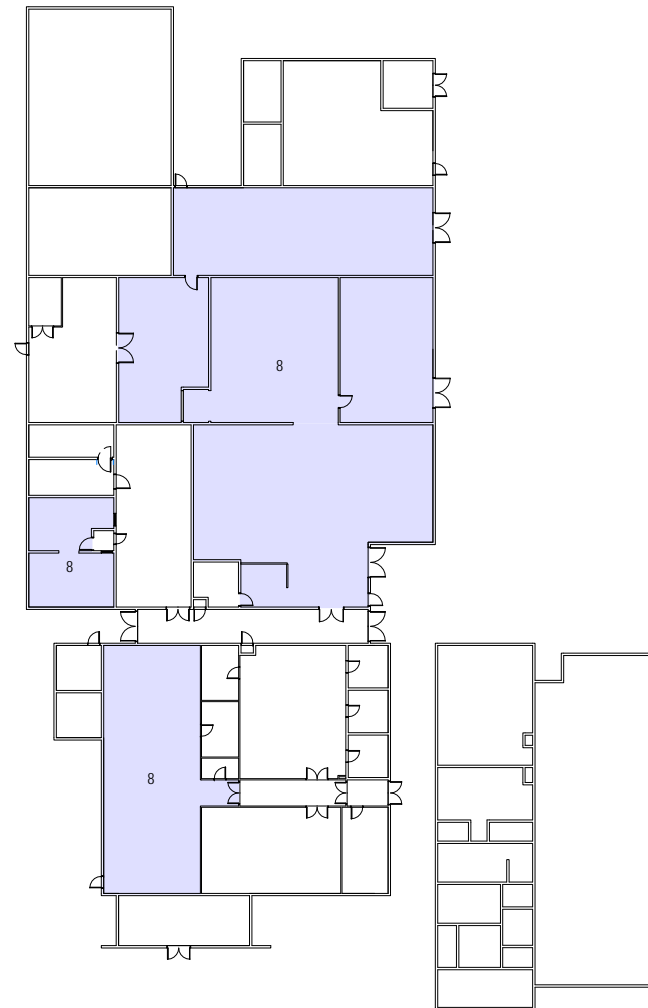


BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- HANGAR
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

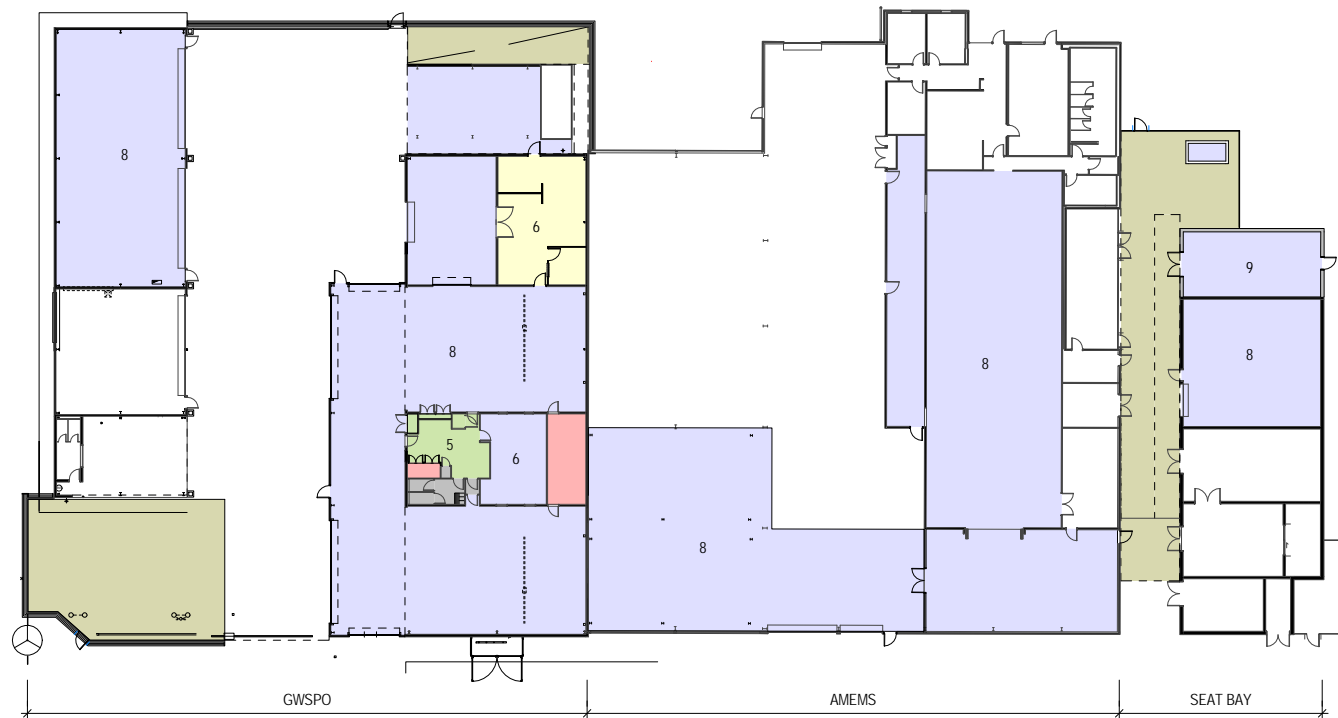
ATTACHMENT 13 | INTERMEDIATE LEVEL MAINTENANCE
FLOOR PLAN



BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- EXTERNAL AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

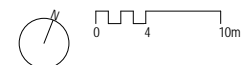


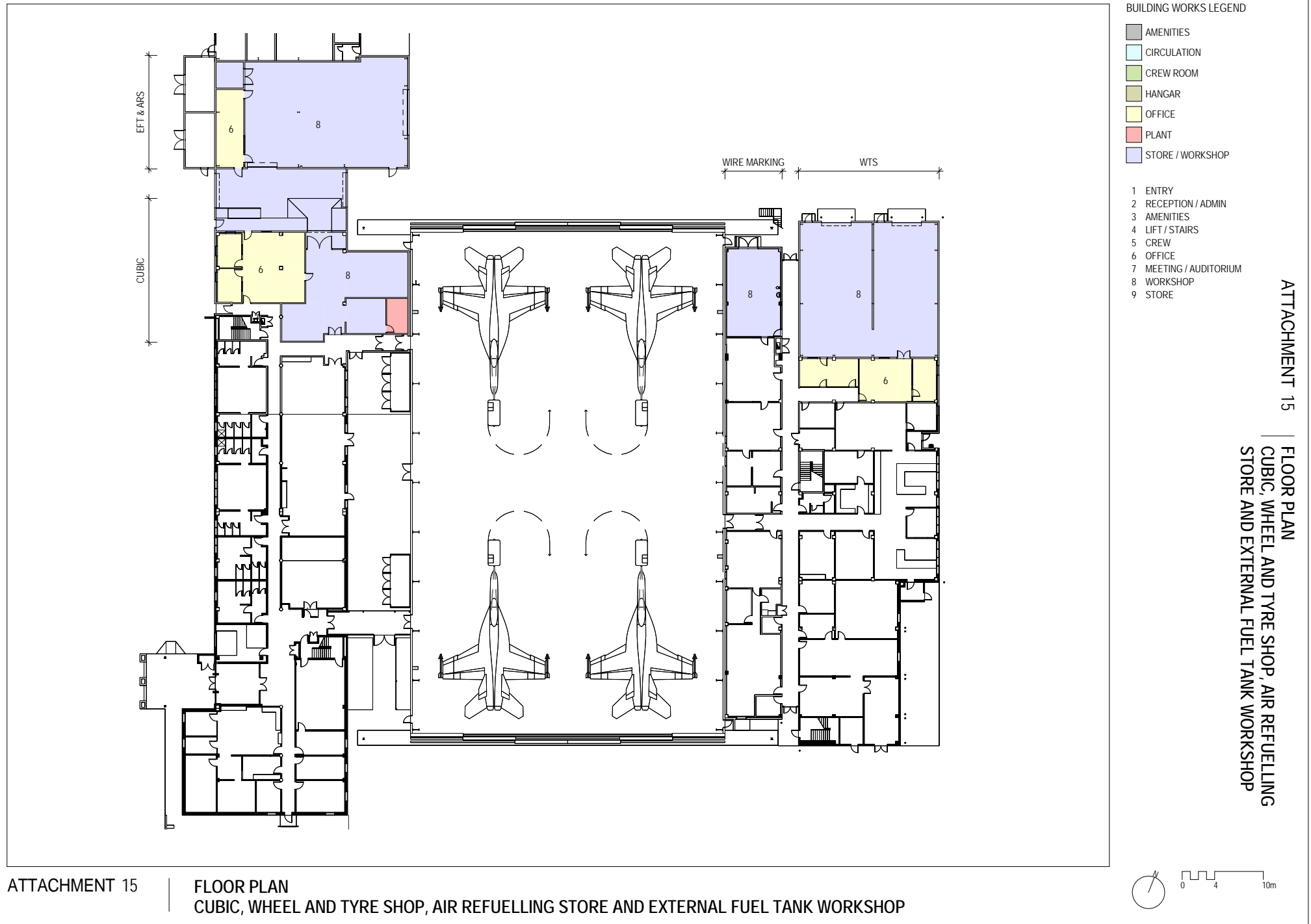
ATTACHMENT 14

FLOOR PLAN
GUIDED WEAPONS SYSTEM PROGRAM OFFICE,
ALTERNATE MISSION EQUIPMENT MAINTENANCE
SECTION & SEAT BAY

ATTACHMENT 14

FLOOR PLAN
GUIDED WEAPONS SYSTEM PROGRAM OFFICE, ALTERNATE MISSION EQUIPMENT MAINTENANCE SECTION & SEAT BAY

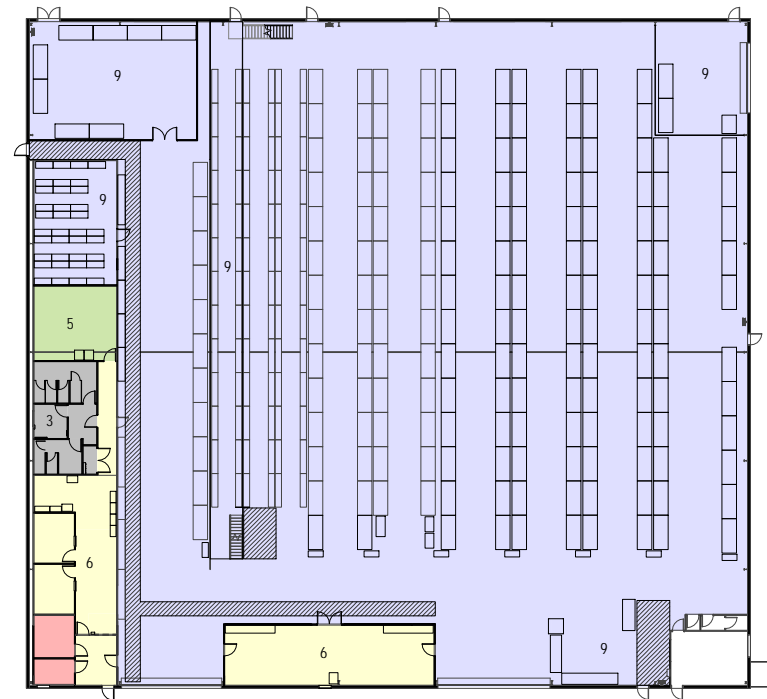




BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- HANGAR
- OFFICE
- PLANT
- STORE / WORKSHOP

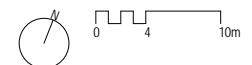
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

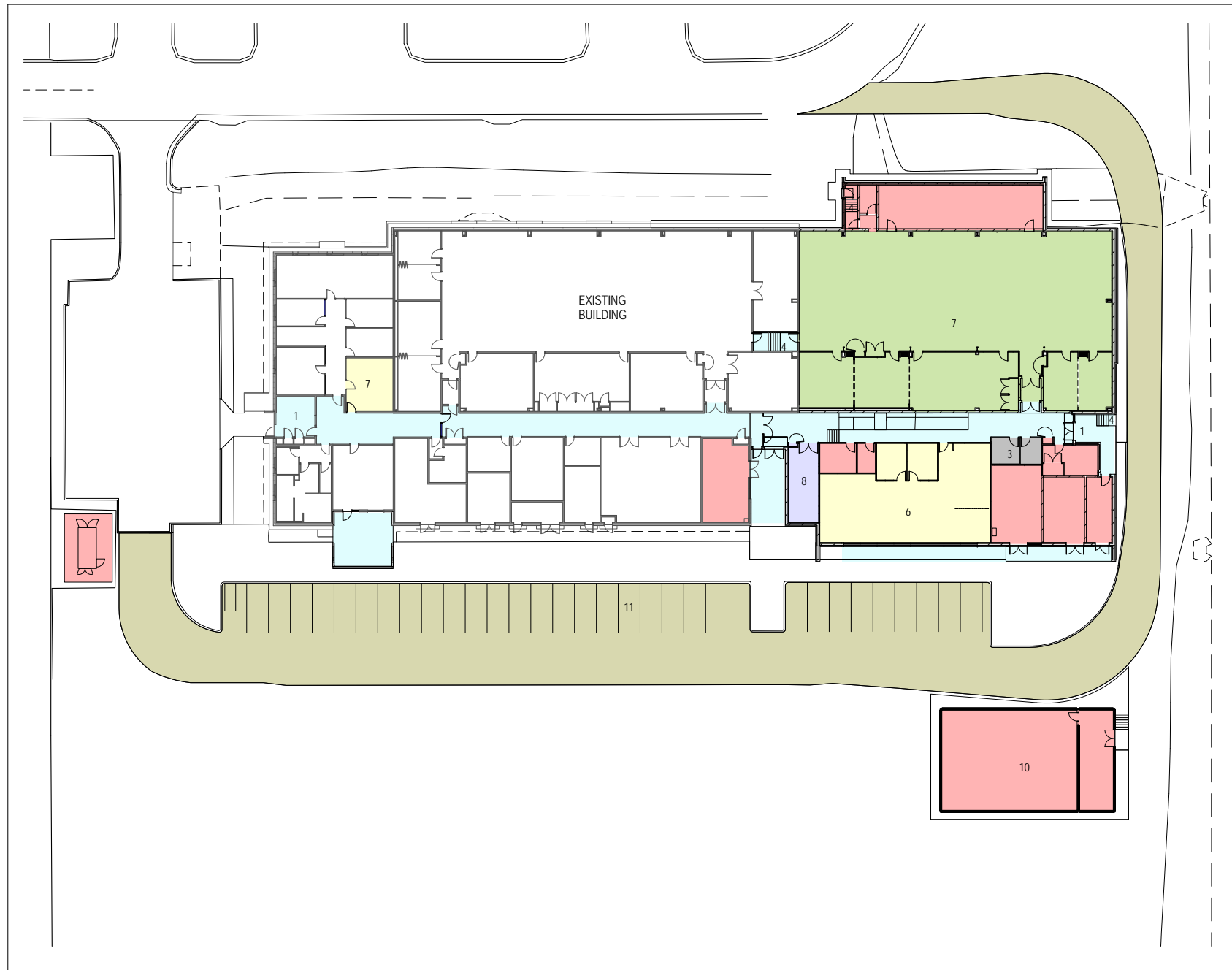


ATTACHMENT 16 | FLOOR PLAN
SUPER HORNET RETAIL WAREHOUSE

ATTACHMENT 16

FLOOR PLAN
SUPER HORNET RETAIL WAREHOUSE





BUILDING WORKS LEGEND

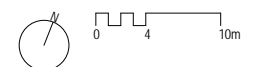
- AMENITIES
- CIRCULATION
- SIMULATOR AREA
- ROAD / CAR PARK
- OFFICE
- PLANT
- STORE / WORKSHOP

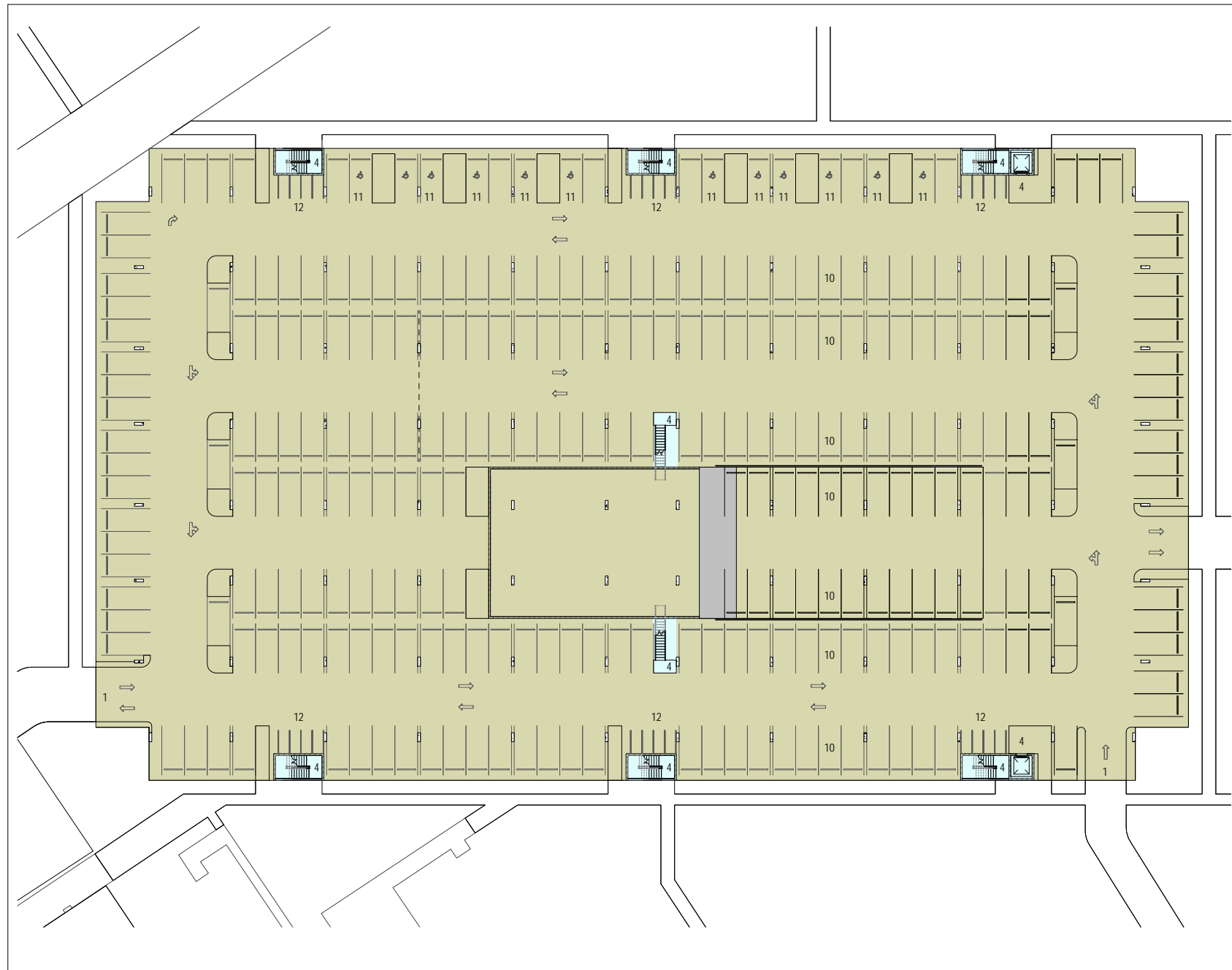
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE
- 10 CHILLER PLANT
- 11 CAR PARK

ATTACHMENT 17 | FLOOR PLAN
TACTICAL OPERATIONAL FLIGHT TRAINER

ATTACHMENT 17

FLOOR PLAN
TACTICAL OPERATIONAL FLIGHT TRAINER





BUILDING WORKS LEGEND

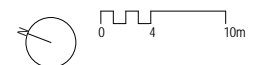
- AMENITIES
- CIRCULATION
- CREW ROOM
- CARPARK
- OFFICE
- PLANT
- STORE / WORKSHOP

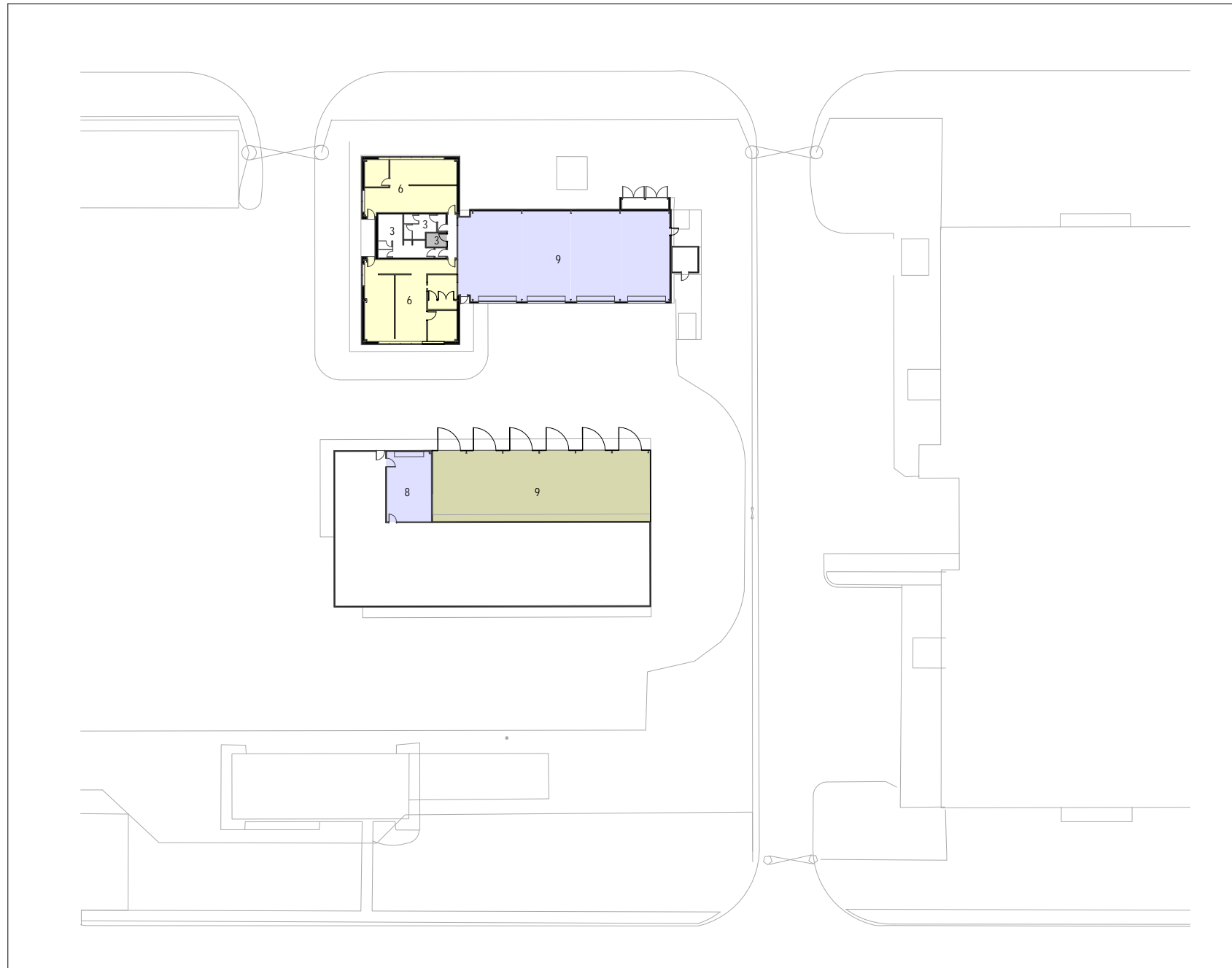
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE
- 10 STANDARD CAR BAYS
- 11 PWD CAR BAYS
- 12 MOTORBIKE BAYS

ATTACHMENT 18 | FLOOR PLAN
CAR PARK GROUND LEVEL

ATTACHMENT 18

FLOOR PLAN
CAR PARK GROUND LEVEL



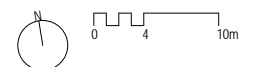


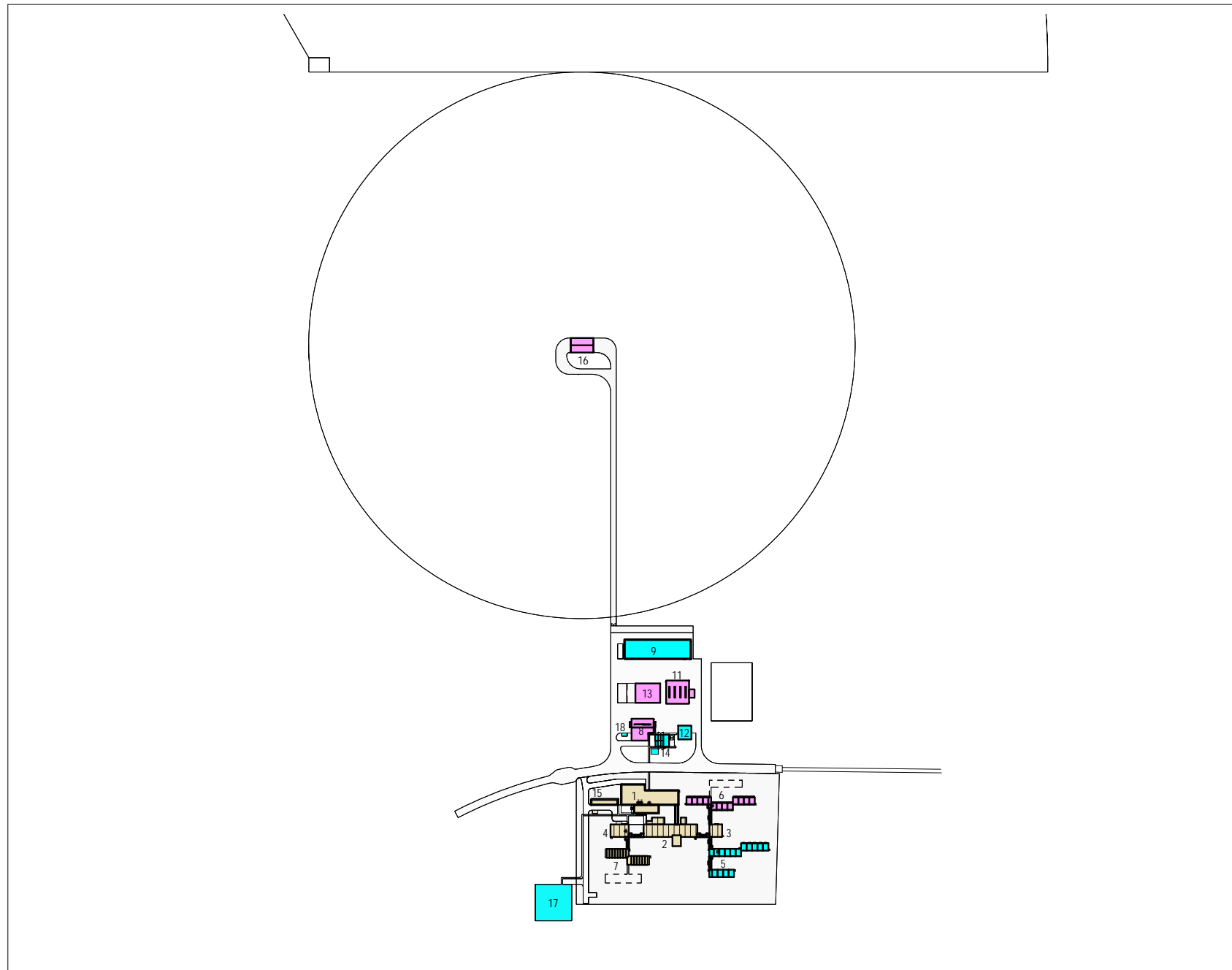
BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- CREW ROOM
- EXTERNAL AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 LIFT / STAIRS
- 5 CREW
- 6 OFFICE
- 7 MEETING / AUDITORIUM
- 8 WORKSHOP
- 9 STORE

ATTACHMENT 19 | FLOOR PLAN
MTES OAKEY





PROJECT WORKS LEGEND

- DELAMERE REDEVELOPMENT
- MTES DELAMERE
- SHARED

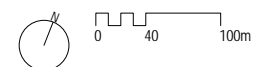
- 1 RANGE OPERATIONS CENTRE
- 2 CENTRAL FACILITIES
- 3 PERMANENT RECREATIONAL FACILITY
- 4 VISITOR RECREATION FACILITY
- 5 DELAWR PERMANENT ACCOMMODATION
- 6 MTES PERMANENT ACCOMMODATION
- 7 VISITOR ACCOMMODATION
- 8 MTES MAINTENANCE BUILDING
- 9 DELAWR MAINTENANCE BUILDING
- 10 COVERED WALKWAYS
- 11 MTES VEHICLE SHELTER
- 12 REFUEL POINT
- 13 ADRS STORAGE SHELTER
- 14 SITE MAIN SWITCHBOARD & GENSET
- 15 VISITOR COVERED PARKING
- 16 ADRS EMITTER SHELTER
- 17 HELIPAD
- 18 INDUSTRIAL WASTE COLLECTION POINT

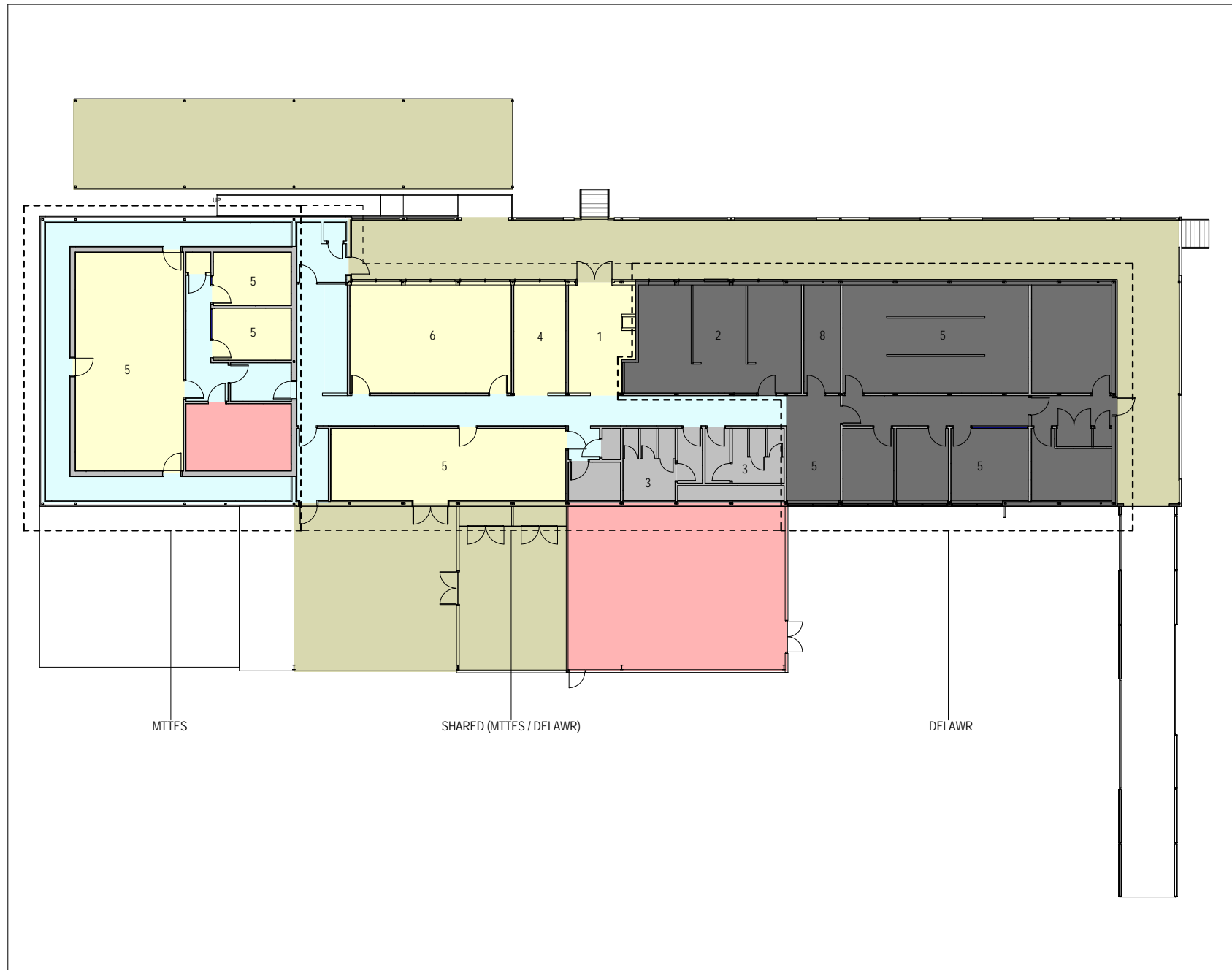
ATTACHMENT 20

SITE PLAN
DELAMERE RANGE CONTROL COMPLEX

ATTACHMENT 20

SITE PLAN
DELAMERE RANGE CONTROL COMPLEX



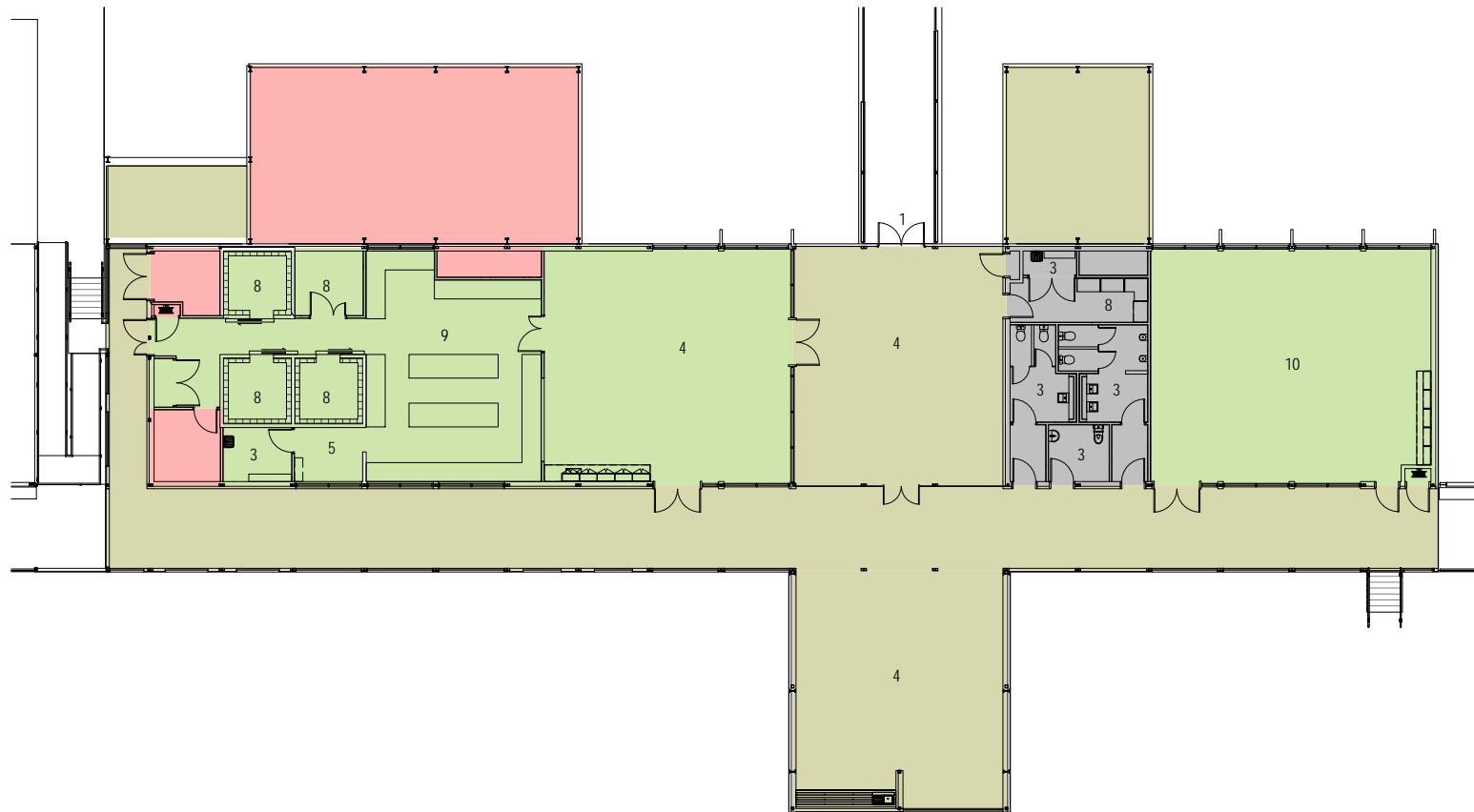


BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION
- UNDER COVERED AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 BREW
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

ATTACHMENT 21 | FLOOR PLAN
| DELAMERE RANGE OPERATIONS CENTRE

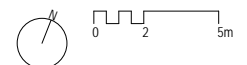


BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION / KITCHEN
- UNDER COVERED AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 DINING
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

ATTACHMENT 22 | FLOOR PLAN
| DELAMERE CENTRAL FACILITIES

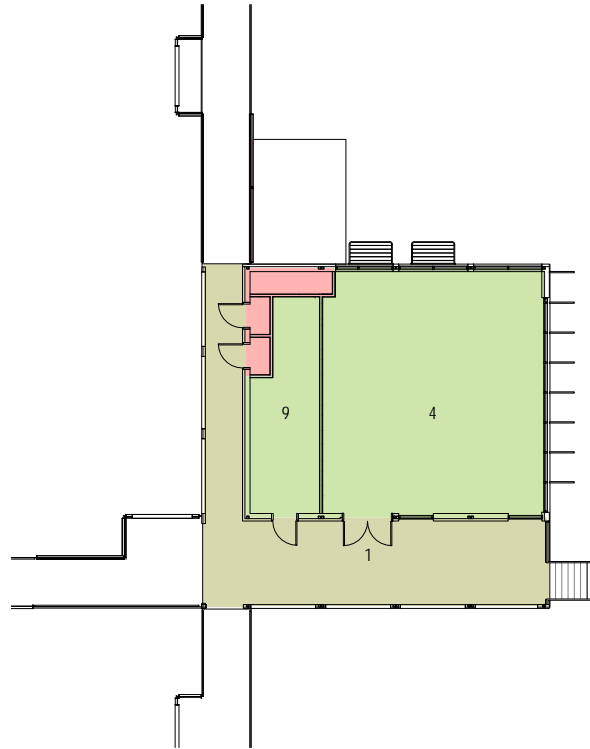


BUILDING WORKS LEGEND

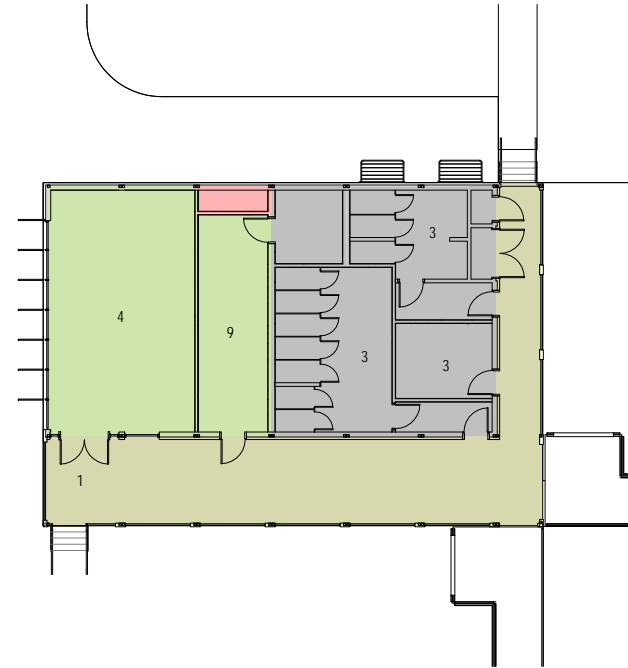
- AMENITIES
- CIRCULATION
- RECREATION / LAUNDRY
- UNDER COVERED AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 RECREATION
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 LAUNDRY
- 10 GYMNASIUM
- 11 ACCOMMODATION

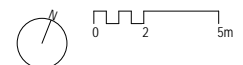
ATTACHMENT 23 | FLOOR PLAN
| DELAMERE PERMANENT AND VISITOR
RECREATIONAL ROOMS

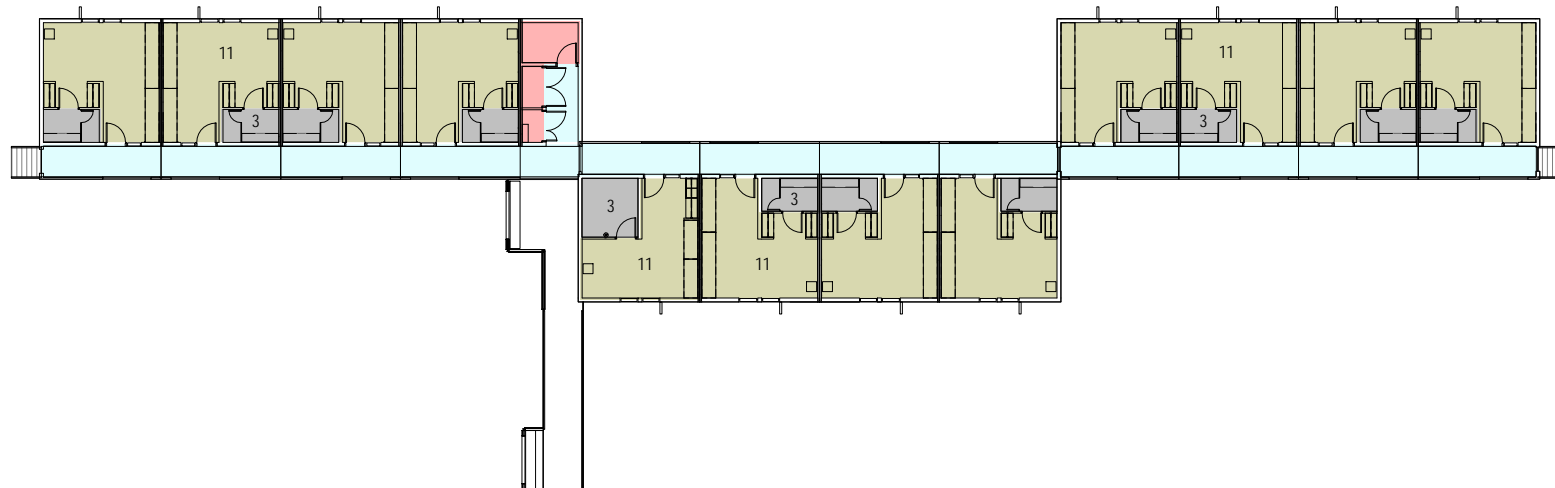


PERMANENT RECREATION ROOM



VISITOR RECREATION ROOM





BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION
- ACCOMMODATION UNIT
- OFFICE
- PLANT
- STORE / WORKSHOP

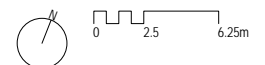
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 RECREATION
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

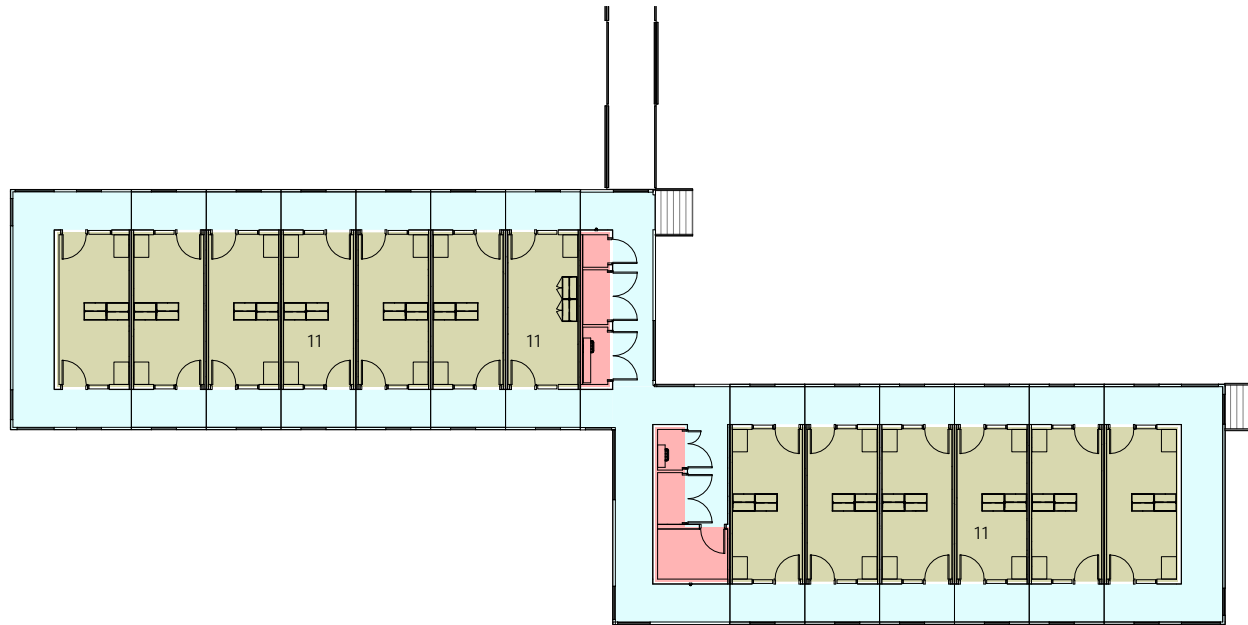
ATTACHMENT 24

FLOOR PLAN
MTES DELAMERE PERMANENT ACCOMMODATION

ATTACHMENT 24

FLOOR PLAN
MTES DELAMERE PERMANENT ACCOMMODATION





BUILDING WORKS LEGEND

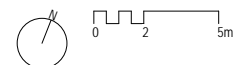
- AMENITIES
- CIRCULATION
- RECREATION
- ACCOMMODATION UNIT
- OFFICE
- PLANT
- STORE / WORKSHOP

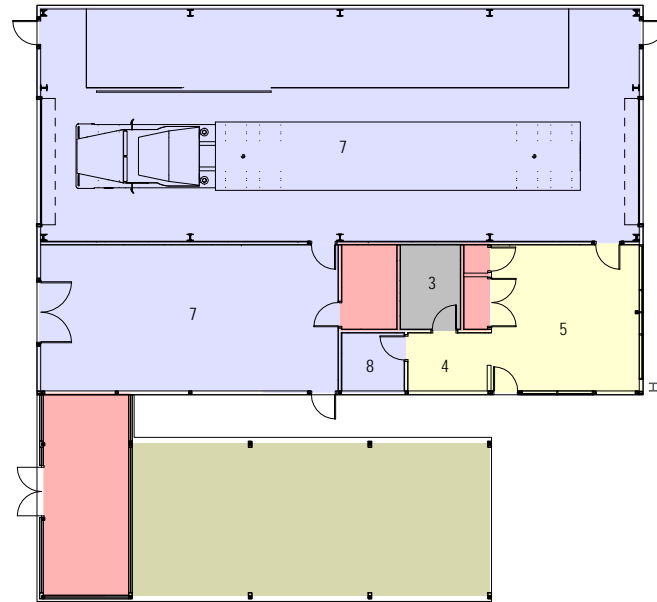
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 RECREATION
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

ATTACHMENT 25 | FLOOR PLAN
| DELAMERE VISITOR ACCOMMODATION

ATTACHMENT 25

FLOOR PLAN
DELAMERE VISITOR ACCOMMODATION





BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION
- UNDER COVERED AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

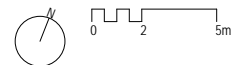
- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 BREW
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

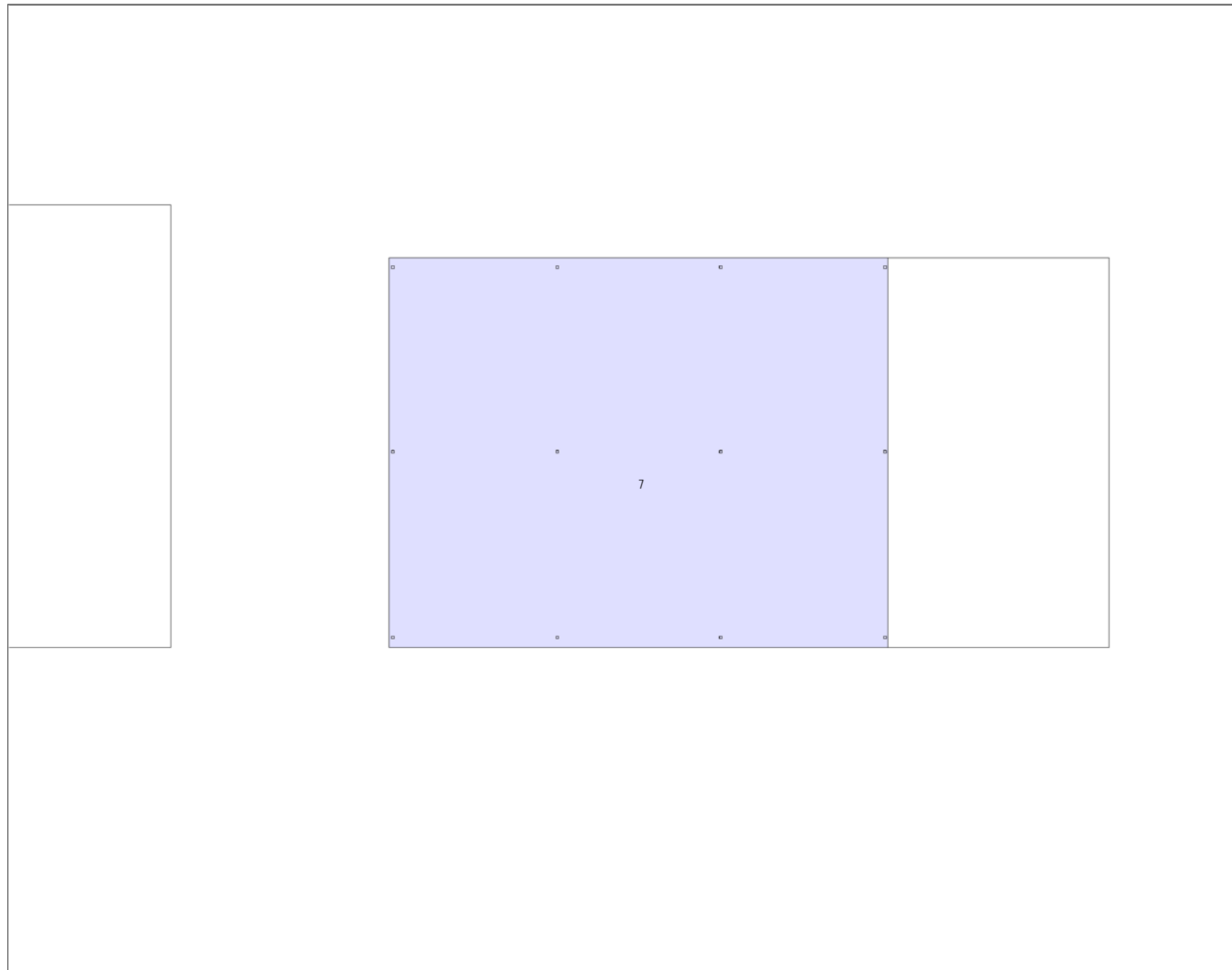
ATTACHMENT 26

FLOOR PLAN
MTES DELAMERE MAINTENANCE BUILDING


ATTACHMENT 26

FLOOR PLAN
MTES DELAMERE MAINTENANCE BUILDING





BUILDING WORKS LEGEND

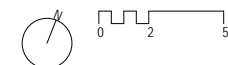
-  AMENITIES
-  CIRCULATION
-  RECREATION
-  ACCOMMODATION UNIT
-  OFFICE
-  PLANT
-  STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 BREW
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

ATTACHMENT 27 | FLOOR PLAN
MTES DELAMERE VEHICLE SHELTER

ATTACHMENT 27

FLOOR PLAN
MTES DELAMERE VEHICLE SHELTER



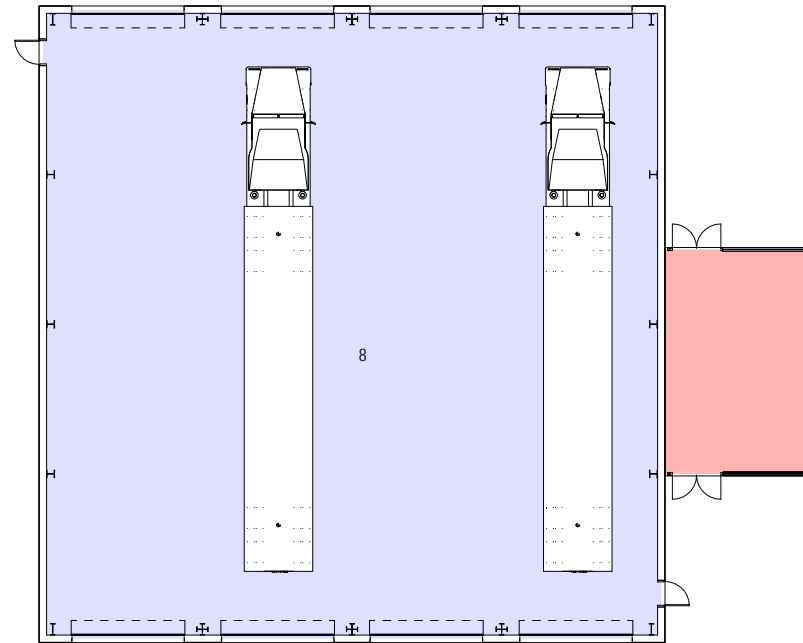
BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION
- UNDER COVERED AREA
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 BREW
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

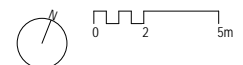
ATTACHMENT 28

FLOOR PLAN
AUTHENTIC DEFENCE RADAR SYSTEM STORAGE
SHELTER



ATTACHMENT 28

FLOOR PLAN
AUTHENTIC DEFENCE RADAR SYSTEM STORAGE SHELTER



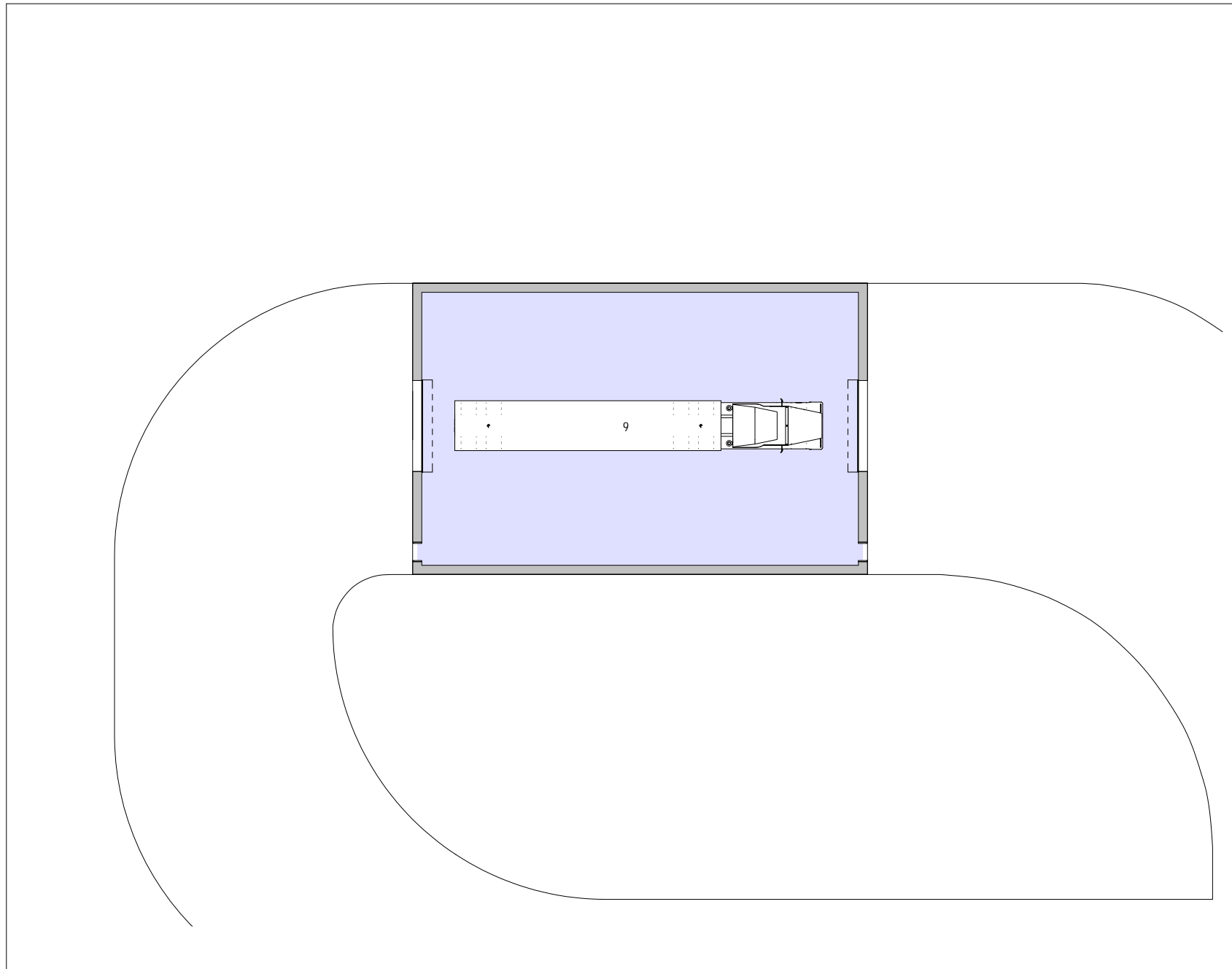
BUILDING WORKS LEGEND

- AMENITIES
- CIRCULATION
- RECREATION
- ACCOMMODATION UNIT
- OFFICE
- PLANT
- STORE / WORKSHOP

- 1 ENTRY
- 2 RECEPTION / ADMIN
- 3 AMENITIES
- 4 BREW
- 5 OFFICE
- 6 MEETING / AUDITORIUM
- 7 WORKSHOP
- 8 STORE
- 9 KITCHEN
- 10 GYMNASIUM
- 11 ACCOMMODATION

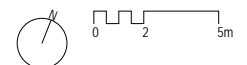
ATTACHMENT 29

FLOOR PLAN
AUTHENTIC DEFENCE RADAR SYSTEM EMITTER
SHELTER



ATTACHMENT 29

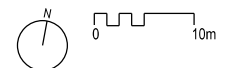
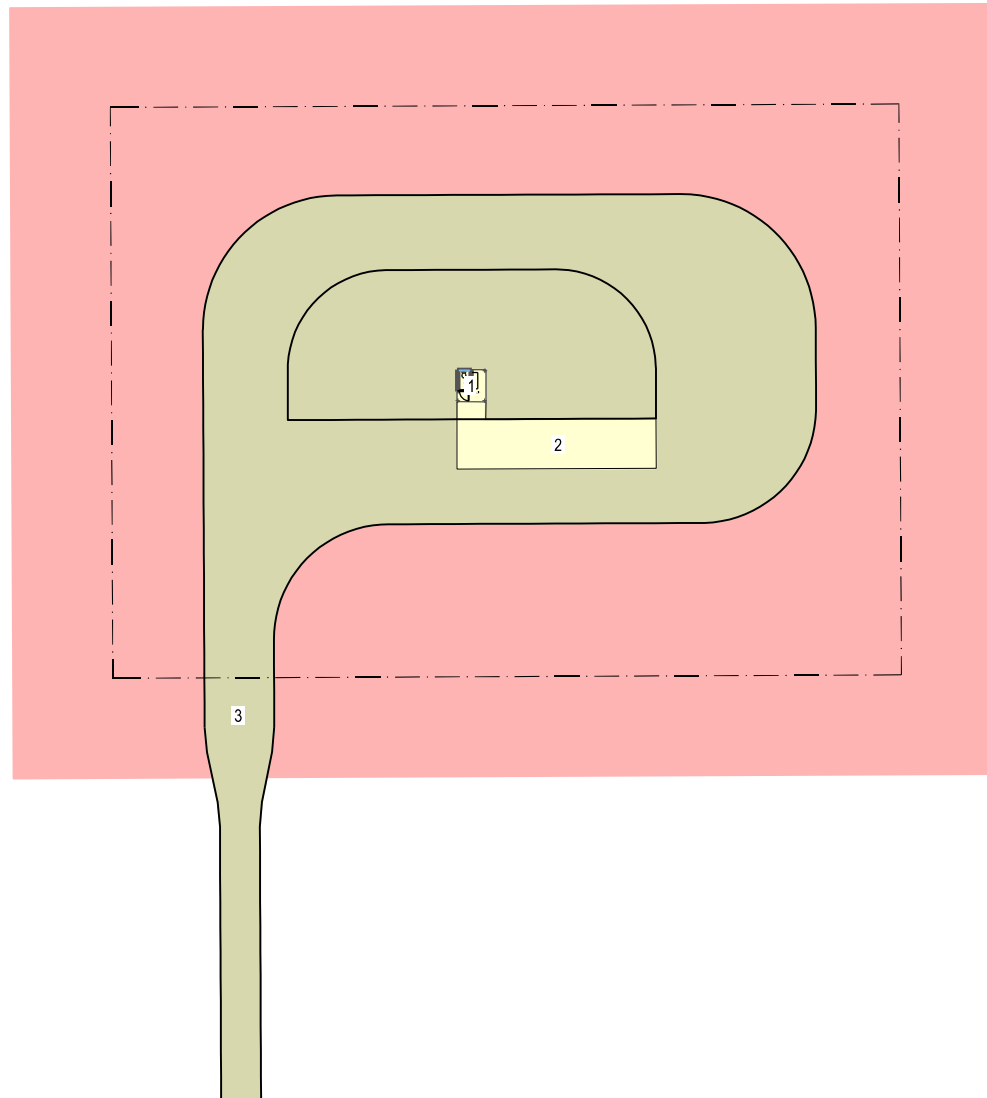
FLOOR PLAN
AUTHENTIC DEFENCE RADAR SYSTEM EMITTER SHELTER



- SITE WORKS LEGEND
- SERVICES INFRASTRUCTURE
 - SEALED PAVEMENT
 - UNSEALED PAVEMENT
 - CONCRETE PAVEMENT
 - CLEARING
 - EXISTING DELAWR FACILITIES

- 1 WC SHELTER
- 2 AUTHENTICS CONCRETE PAD
- 3 UNSEALED PAVEMENT

ATTACHMENT 30 | FLOOR PLAN
TYPICAL MTES EMITTER SITE



ATTACHMENT 30

FLOOR PLAN
TYPICAL MTES EMITTER SITE