Australian Government

Department of Defence

REDFIN Phase 1B Infrastructure - Facilities Required for the New Fleet of Special Operations Vehicles

Campbell Barracks, WA
Holsworthy Barracks, NSW
Defence Establishment Howard Springs, NT
Lavarack Barracks, QLD

STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

Canberra, Australian Capital Territory

June 2015

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REDFIN Phase 1B Infrastructure - Facilities Required for the New Fleet of Special Operations Vehicles

Identification of the Need

Enhanced Special Operations Capability

1. Australian Defence Force (ADF) Special Forces are highly trained and specially equipped forces able to conduct operations at short notice in a range of domestic and international environments. Special Forces give Government a range of strategic options beyond those available through conventional forces.

2. Special Forces may be required to prevent, deter or respond to a threat at short notice, with surgical precision within complex terrain. To achieve this, they require highly capable vehicles, as well as the ability to easily reconfigure the vehicle fit-out to suit a diverse range of tasks. Special Operations also require a fast, reliable and secure communications system that allows for effective passage of information between deployed forces and headquarters elements, both on operations overseas and within Australia.

3. Joint Project 2097 (REDFIN) Phase 1 will introduce into service a range of Special Operations Vehicles (SOV) for improved Special Forces land mobility, and an enhanced communications capability. The units to receive the SOV are the Special Air Service Regiment (SASR), based at Campbell Barracks Perth (WA), and the 2nd Commando Regiment (2 Cdo Regt), based at Holsworthy Barracks, Sydney (NSW). A specialist Australia wide communications network known as a Long Range Patrol Radio System (LRPRS) is also being provided within the REDFIN Phase 1 project, with Fixed Control Stations (FCS) to be located at Darwin, Townsville, Perth and Sydney. The new SOV and equipment being acquired under the REDFIN Project includes:

   a. A fleet of SOV – Special Reconnaissance (Nary SOV) (already delivered);

b. A fleet of SOV – Commando;

c. A fleet of support vehicles;

d. Mobile Information and Communications Technology systems; and

e. Radio communication and data systems and equipment.

4. The new SOV will provide SASR and 2 Cdo Regt with enhancements that support the Special Forces and improve the efficiency of tactical network communications across the full spectrum of Special Operations. The vehicles are highly mobile and are able to be transported in a range of Defence aircraft and ships, allowing the Special Forces to operate in a variety of environments both within Australia and overseas.

5. To support the introduction into service and subsequent operation of the new SOV fleets, suitable infrastructure and support facilities are required to be provided to SASR and 2 Cdo Regt for:

a. the SOV,

b. enhanced communications sub-systems, and

c. the LRPRS FCS network.

Background

6. In December 2006, Government approved the replacement of the SASR Long Range Patrol Vehicle fleet as an accelerated phase of JP 2097, known as Phase 1A. The replacement vehicles supplied under REDFIN Phase 1A (designated Nary SOV) have been delivered and are currently accommodated at Campbell Barracks in a temporary hangar also delivered under Phase 1A.

7. In 2007 the remaining requirements of JP 2097 were passed to JP 2097 Phase 1B. Phase 1B addresses Command, Control, Communications and Computing, Intelligence, Surveillance, Targeting Acquisition and Reconnaissance, and Land Mobility deficiencies, by providing an enhanced communications capability and a modern fleet of SOV. This was approved by Government in July 2014.

8. The infrastructure component of JP 2097 Phase 1B (designated 'REDFIN Phase 1B Infrastructure' project) is to provide the necessary infrastructure to support the new SOV and associated communications capability. This Statement of Evidence to the Parliamentary Standing Committee on Public Works presents a proposal to provide facilities at Campbell Barracks, Holsworthy Barracks, Lavarack Barracks and the Defence Establishment Howard Springs in support of the REDFIN Phase 1B Infrastructure Project.

Facilities required to support REDFIN Phase 1B

SOV - Campbell Barracks

9. The existing Nary SOV supplied to SASR through REDFIN Phase 1A are currently accommodated and managed from temporary facilities that are at capacity. This fleet of vehicles will be supplemented by additional SOV delivered under REDFIN Phase 1B.

10. These existing temporary facilities are subject to a number of specific issues and constraints which make them unsuitable as a long term solution for supporting the ongoing operation of the new the SOV fleet at Campbell Barracks. These specific issues and constraints include the following:

    a. The temporary vehicle hangar facility has a limited design life as it was specifically procured to provide short term (5 year) shelter for the SOV.

    b. Personnel who oversee the command and control of the SOV are accommodated in temporary facilities which are remote from the vehicle hangar and which do not provide required access to the Defence information technology network.

    c. Existing facilities will not accommodate the additional vehicles and enhanced communications sub-systems that will be delivered under the REDFIN Phase 1B Project or the long term working accommodation required to support the SOV fleet.

    d. Ablution and personal storage spaces are remote from the temporary hangar.

    e. The site of the temporary vehicle hangar has been identified for new roads and infrastructure by Project A8947 Campbell Barracks Redevelopment, which will require the temporary hangar to be removed from the site.

11. Due to the issues and constraints noted above, the existing temporary SOV hangar and support facilities at Campbell Barracks are required to be replaced with new and improved facilities that will accommodate the current and expanded SOV fleet.

SOV - Holsworthy Barracks

12. The existing 2 Cdo Regt Special Reconnaissance Vehicles and Long Range Patrol Vehicles at Holsworthy Barracks are to be replaced with larger SOV as part of the REDFIN Phase 1B Project. Consequently, additional space and storage facilities are required to be provided at Holsworthy Barracks to support the new vehicles.

13. Most of the Special Reconnaissance Vehicles and Long Range Patrol Vehicles are currently accommodated in a shared compound at Holsworthy Barracks; however, these existing facilities are subject to a number of specific constraints which make them unsuitable as a long term solution for supporting the ongoing operation of the new SOV fleet at Holsworthy Barracks. These constraints include the following:

    a. There is insufficient space within the existing vehicle storage facilities (hangars) to accommodate all of the SOV.

    b. Existing vehicle storage facilities do not provide the necessary security rating for the long term accommodation of the SOV and enhanced communications capability.

    c. No suitable working accommodation is available to support the SOV and enhanced communications capability.

    d. Existing battery and radio storage facilities cannot accommodate the additional batteries and radios that will be provided with the enhanced communications capability.

    e. Existing armoury will not accommodate the existing vehicle weapons with those expected to be repatriated to the unit.

    f. Existing vehicle loading and inspection ramps are considered unsuitable for use by the SOV.

14. As a result of these constraints, new and / or refurbished facilities are required to be provided to accommodate the SOV at Holsworthy Barracks.

LRPRS FCS

15. In order to ensure effective control of Defence special operations, an enhanced communications system is required. The current LRPRS requires upgrading to support the current global operating environment.

16. In order to provide deployed radio users the geographical coverage required for Special Operations missions and the essential gateway into the Defence Terrestrial Communications Network LRPRS FCS are required to be provided in Campbell Barracks, Perth (WA), Holsworthy, Sydney (NSW), Lavarack Barracks, Townsville (QLD) and Defence Establishment Howard Springs, Darwin (NT).

17. There are existing FCS facilities in Perth (Campbell Barracks), Sydney (Holsworthy Barracks) and Darwin (Defence Establishment Howard Springs) which can be upgraded to provide the required functionality. However, as such facilities do not currently exist in Townsville; a new FCS facility is required in this location.

Description of the Proposal

18. The works proposed to be delivered by the REDFIN Phase 1B Infrastructure project provide new and upgraded facilities and infrastructure to support the introduction, operation and deployment of the new SOV and enhanced communications capability.

19. The facilities include SOV storage facilities (hangars), working accommodation to support the new SOV Fleet, and upgraded and new FCS required for the LRPRS FCS.

20. A Locality Plan showing the location of the four areas where the works are proposed is at Attachment 1, with individual Regional Plans at Attachment 2. The proposed works are categorized into six project elements as follows:

    a. **Project Element 1 – SOV Facilities Campbell Barracks**. Comprises new facilities, working accommodation and support facilities for the SOV.

    b. **Project Element 2 – LRPRS FCS Campbell Barracks**. Comprises upgrading existing FCS facilities.

    c. **Project Element 3 – SOV Facilities Holsworthy**. Comprises new and upgraded facilities, working accommodation and support facilities for the SOV.

d. **Project Element 4 – LRPRS FCS Holsworthy**. Comprises upgrading existing FCS facilities.

e. **Project Element 5** – **LRPRS FCS Lavarack Barracks**. Comprises a new FCS facility.

f. **Project Element 6 – LRPRS FCS Howard Springs**. Comprises upgrading existing FCS facilities.

21. The facilities and infrastructure proposed reflect the security, maintenance and operational requirements of the SOV, the LRPRS FCS and the indirect capability requirements, such as working accommodation and engineering infrastructure works.

Options Considered to Fulfil the Identified Need

22. To meet the identified need, Defence has considered a number of options that include the adaptive reuse of existing facilities and / or the construction of new facilities at the proposed sites.

23. A key Defence project requirement is to deliver a sustainable outcome for the Defence Estate by maximising adaptive reuse of existing Defence facilities, consolidating buildings and functions, demolishing redundant buildings, and refurbishing, extending and upgrading existing infrastructure.

24. On this basis, Defence considered the viability of adaptively reusing existing facilities to meet the needs of the REDFIN Phase 1B Infrastructure Project, rather than constructing new facilities.

25. The option analysis concluded that adaptive reuse of existing facilities is the most appropriate option for the following components of the works:

a. **Campbell Barracks LRPRS FCS facilities.** The scope at Campbell Barracks largely consist of masts and antennas which replace existing antennas of similar size and type located within an existing antenna farm site. In light of this, and given the existing antenna farm site is not proposed to be affected by any anticipated development (e.g. the proposed Campbell Barracks Redevelopment Project), reuse of the existing antenna farm with modifications as required, was considered appropriate.

b. **Holsworthy Barracks SOV storage facilities**. Existing vehicle storage buildings are in reasonable condition and are located in close proximity to each other within the high security precinct of the barracks. They are considered suitable for adaptive reuse as vehicle hangars, so are proposed to be retained for reuse, with minor modifications as required to house the new SOV. The storage capacity of these existing buildings will be supplemented by the construction of a new SOV storage facility (hangar) to meet the increase in number of vehicles from that currently held within the unit. This configuration was considered to provide the best outcome as the reuse of existing assets provided significant capital cost savings.

c. **Holsworthy Barracks LRPRS FCS facilities**. There is an existing antenna farm site, including communications shelter facility, located on the southern side of El Adem Road at Holsworthy Barracks. This site is currently being used for the same antenna farm function and the facility is within a high security area. This site is considered suitable for reuse, with the existing antennas proposed to be replaced by new / upgraded antennas and existing communications conduit to 2 Cdo Regt to be utilised.

d. **Defence Establishment Howard Springs LRPRS FCS facilities**. Given Defence Establishment Howard Springs is an existing purpose built communications facility, there are no functional constraints identified in association with the siting of new antenna facilities at this location. On this basis, it is considered appropriate that the Darwin-based LRPRS FCS facilities be provided at this location, with existing infrastructure (e.g. radio communications room) to be re-used where possible. This proposal is consistent with the existing use of the site and will support Special Forces personnel during training, exercises and deployment.

26. For project elements where adaptive reuse of existing facilities was not considered viable, various siting options were considered in accordance with Defence's established Site Selection Process. This process is designed to give consideration to a range of potential issues for the siting of facilities, with the key driver being the sustainability of the Defence Estate.

27. Consideration of siting options for the new facilities at Campbell Barracks and Holsworthy Barracks was predominately guided by available space and the strong functional linkages between the SOV facilities and key functional areas of SASR and 2 Cdo Regt.

28. However, as there is no existing LRPRS FCS facility in Townsville, siting options were considered at both RAAF Townsville and Lavarack Barracks. A review of the extent of the work required to construct the antenna farm and communications links on RAAF Townsville, together with extensive siting constraints, concluded that this site was significantly less desirable than the proposed site at Lavarack Barracks, which had minimal siting constraints.

Environment and Heritage Assessment

Environmental Impact of the Proposed Works

29. An Initial Environmental Review for the proposed works associated with this project was prepared in 2014, against the *Environment Protection and Biodiversity Conservation Act 1999 (Cth).* The conclusion of the Initial Environmental Review was that a referral under the act was not required for the project. It was also determined that environment risks associated with the project are minor and manageable through the development of site specific Construction Environmental Management Plans.

30. Construction Environmental Management Plans will also be required to comply with the project's Environmental Assessment Report, prepared by the Defence Directorate of Environment Protection and Assessment. These plans also address issues such as traffic management, noise and dust generation, and erosion and sediment control during construction.

Indigenous and Non Indigenous Heritage Considerations

31. The Initial Environment Review also concluded that heritage risks associated with the project are minor and manageable through the development of site specific Construction Environmental Management Plans.

Key Legislation

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

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

    b. *Work Health and Safety Act (WH&S)* 2011 (Cth);

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

    d. *Fair Work Act* 2009 (Cth); and

    e. *Fair Work (Building Industry) Act 2012 (Cth).*

Applicable Codes and Standards

33. The design of the proposed works will comply with all relevant and current Defence standards, Australian standards, codes and guidelines including, but not limited to:

    a. National Construction Code - Building Code of Australia;

    b. Building Code 2013;

    c. Defence Manual of Fire Protection Engineering; and

    d. Defence Estate Quality Management System.

Consultation with Key Stakeholders

34. Defence recognises the importance of providing local residents, statutory authorities and other interested stakeholders an opportunity to provide input into, or raise concerns relating to major projects such as the REDFIN Phase 1B Infrastructure Project.

35. Within Defence, consultation has occurred with the following stakeholders:

    a. Army Headquarters,

    b. Capability Development Group,

    c. Defence Material Organisation,

d. Special Operations Command,

e. SASR,

f. 2 Cdo Regt,

g. Defence Support Operations,

h. Defence Security Authority, and

i. Chief Information Officer Group.

36. Defence has also developed a community consultation and communications 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 project.

37. Community consultations will occur as follows for the areas where works are proposed:

a. **Campbell Barracks**.

(1) Hon Julie Bishop MP, Federal Member for Curtin;

(2) Hon Mr Colin Barnett MLA, State Member for Cottesloe;

(3) City of Nedlands and community members; and

(4) WA utilities providers;.

b. **Holsworthy Barracks**.

(1) Mr Craig Kelly, Federal Member for Hughes;

(2) Ms Melanie Gibbons MP, State Member for Holsworthy;

(3) City of Liverpool and community members; and

(4) NSW utilities providers.

f. **Lavarack Barracks**

(1) Mr Ewen Jones MP, Federal Member for Herbert;

(2) Mr Scott Stewart MP, State Member for Townsville;

(3) Townsville City Council; and

(4) QLD utilities providers.

g. **Defence Establishment Howard Springs**.

(1) Hon Mr Warren Snowden MP, Federal Member for Lingiari;

(2) Mr Gerry Wood MLA, State Member for Nelson;

(3) Litchfield Council; and

(4) NT utilities providers.

Purpose of the Works

Project Objectives

38. The purpose of the project is to provide the infrastructure necessary to support the introduction into service and subsequent operation of the new SOV and enhanced communications capability being provided under Joint Project 2097 (REDFIN) Phase 1.

39. In meeting the purpose of the project, operational effectiveness of ADF Special Forces will be achieved through enhanced mobility and communications.

Details and Reasons for Site Selection

40. The works proposed to be delivered by the REDFIN Phase 1B Infrastructure project include new and adaptively reused facilities across the four sites. The following sections summarise the details and reasons for each of the selected sites.

Campbell Barracks

41. Siting options for facilities at Campbell Barracks have been closely coordinated with the proposed Campbell Barracks Redevelopment Project.

42. The proposed SOV facilities to be delivered at Campbell Barracks have strong functional links with the SASR Operational Support Squadron. For this reason, the site

selected for the proposed SOV facilities is located within the nominated Operational Support Squadron precinct in the Operational Support Zone at Campbell Barracks.

43. The LRPRS FCS at Campbell Barracks consists largely of masts and antennas that replace existing antennas of similar size and type. For these reasons, it was determined that re-use of the existing antenna farm site at Campbell Barracks is the most appropriate approach.

Holsworthy Barracks

44. The Liverpool Military Area Zone Plan (2011), which includes Holsworthy Barracks, identified REDFIN Phase 1B as a future project that would have works delivered within the Barracks. An area of Holsworthy Barracks - Tobruk Lines - was identified as the intended location of the facilities, given the strong functional relationship of SOV to 2 Cdo Regt.

45. The proposed site for the new SOV facilities is located on vacant land within the Special Operations Working Accommodation (SOWA). The nominated location for construction of the new SOV storage facility is a site that has been previously identified for expansion of 2 Cdo Regt.

46. The LRPRS FCS at Holsworthy Barracks, like Campbell Barracks, consists largely of masts and antennas that replace existing antennas of similar size and type. For these reasons, it was determined that re-use of the existing antenna farm site at Holsworthy Barracks is the most appropriate approach.

Lavarack Barracks

47. As identified earlier, siting options for the LRPRS FCS were considered at both RAAF Townsville and Lavarack Barracks; however, Lavarack Barracks was determined to be the most appropriate location for the Townsville LRPRS FCS facilities due to the Obstacle Limitation Service Template (OLST) at RAAF Townsville. The key consideration in siting within Lavarack Barracks was the proximity of the proposed site to an existing radio room within the Barracks. An OLST also ensured that the proposed site did not impact on rotary wing operations conducted within the barracks.

Defence Establishment Howard Springs

48. Defence Establishment Howard Springs is a purpose built communications facility. The introduction of the LRPRS FCS at this site is consistent with the role of the establishment. Siting of the proposed LRPRS FCS was undertaken to ensure no interference with the existing antennas.

Detailed Description of the Proposed Works

49. Detailed site plans for each of the proposed Project Elements are at Attachment 3. The following sections outline the proposed works at each of these sites.

Scope Element 1 – SOV Facilities Campbell Barracks

50. The floor plans of the proposed facilities are included at Attachment 4. The proposed SOV facilities will include the following elements:

    a. secure garaging for SOV, including working accommodation and secure storage for specialist SOV equipment;

    b. hard-standing for containerised SOV stores; and

    c. storage for petrol, oil and lubricants associated with the SOV.

Scope Element 2 – LRPRS FCS Campbell Barracks

51. The layout plans of the proposed facilities are included at Attachment 5. The proposed communications facilities at Campbell Barracks consist largely of masts and antennas that replace existing antennas (of similar size and type), and construction of a new equipment shelter within the existing antenna farm. Minor works within the existing fibre transmission building which support this installation are also proposed.

Scope Element 3 – SOV Facilities Holsworthy Barracks

52. The floor plans of the proposed facilities are included at Attachment 6. The proposed SOV facilities will include the following elements:

    a. secure garaging for SOV including working accommodation for staff assigned to the SOV fleet and secure storage for specialist SOV equipment,

    b. adaptive reuse of two existing hanger spaces for SOV storage,

c. hard-standing for containerised SOV stores,

d. upgrade of an existing loading ramp to meet SOV specifications, and

e. provision of additional ICT and power reticulation to the existing workshop to meet SOV servicing requirements.

Scope Element 4 – LRPRS FCS Holsworthy Barracks

53. The layout plans of the proposed facilities are included at Attachment 7. The proposed communications facilities at Holsworthy Barracks consist largely of masts and antennas that replace existing antennas (of similar size and type). Minor works to run additional cabling between the existing FCS and unit radio room are also required.

Scope Element 5 – LRPRS FCS Lavarack Barracks Works

54. The layout plans of the proposed facilities are included at Attachment 8. The proposed communications facilities at Lavarack Barracks require the establishment of a new FCS as there is currently not one located in Townsville. The proposed works incorporate installation of new antennas and masts, an equipment shelter and cabling to an existing radio room within Lavarack Barracks. This radio room will require refurbishment to accommodate the new FCS requirements.

Scope Element 6 – LRPRS FCS Defence Establishment Howard Springs

55. The layout plans of the proposed facilities are included at Attachment 9. The proposed communications facilities at Defence Establishment Howard Springs consist largely of masts and antennas that replace existing antennas (of similar size and type). Minor works to run additional cabling between the existing FCS and site radio room are also required.

Public Transport, Local Road and Traffic Concerns.

56. There is no increase to base populations as a result of this project. However, during construction there will be an inevitable increase to the number of large vehicles that enter the bases to deliver materials to site. Contractual arrangements within each construction contract will mitigate the effects of this on the local road network through the development of traffic plans within each Site Management Plan.

Zoning and Local Approvals

57. Since all proposed works will occur on Commonwealth land, there will be no change to existing land use conditions. The intended function and use of all project elements are consistent with Defence Zone Plans for the areas the works are proposed.

Childcare Provisions

58. There is no requirement for additional childcare facilities, as this project does not increase base populations.

Impact on Local Community

59. The proposal will generate short-term employment opportunities, predominantly in the building, construction and labour markets in the Perth and Sydney areas. The proposal will also generate some off-site job opportunities through the manufacture and distribution of materials over the construction period. This will provide a positive economic stimulus for small and medium enterprises in areas where work is proposed.

Planning and Design Concepts

60. The general design philosophy for the proposed facilities incorporates the following considerations:

    a. provision of cost effective and functional facilities of energy efficient design suitable for the climate of the site and of a style compatible with the existing base aesthetics;

    b. adoption, where possible, of conventional construction techniques and materials, in particular those commonly used by the construction industry and consistent with those already utilised on the Barracks;

    c. maximum use of existing infrastructure and facilities to minimise capital costs;

    d. use of readily available and durable materials that combine long life while minimising maintenance;

e. infrastructure services planning and structure design taking into account future flexibility, projected demand and Defence policies for reliability and redundancy;

f. recognition of site constraints, security requirements, the established Zone Plan, functional relationships to existing facilities; and

g. planning services and structural design to accommodate flexibility.

Structural Design

61. The proposed new buildings will be steel framed structures with concrete floor slabs and metal deck roofs. In some cases external load bearing masonry and precast panel walls will be used. Where possible, internal walls will be non-load bearing frames lined with plasterboard to provide maximum flexibility for future layout.

Materials

62. External walls for new and extended buildings will be a mixture of precast concrete, metal cladding, masonry and glazing. Metal deck roofing will be used on all new buildings. The materials at Campbell Barracks have been selected for their resilience to the harsh coastal environment.

Hydraulic Services

63. The scope of proposed Hydraulic Services includes, but is not limited to, the provision of:

a. water supply suitable for fire-fighting purposes,

b. water supply suitable for domestic purposes,

c. sewerage drainage service,

d. stormwater drainage service, and

e. reticulated gas service.

64. These Hydraulic Services will comply with AS3500: National Plumbing and Drainage Code of Australia, National Construction Code, Building Code of Australia 2013 and

relevant regulatory authorities' standards as prescribed by the relevant water authorities in Sydney, Perth, Darwin and Townsville.

Electrical Services

65. The electrical supply to the proposed facilities will be from the existing electrical network for each base. Investigations have confirmed that there is adequate capacity within each network for the proposed facilities. The scope of the proposed electrical services comprises site infrastructure and in-building services. The electrical (power and lighting) systems shall conform to the requirements of all applicable legislation, codes of practice and guidance publications relevant to New South Wales, Queensland, the Northern Territory and Western Australia, as well as Defence Standards and Guidelines, specifically the Manual of Infrastructure Engineering – Electrical (MIEE).

Fire Protection

66. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the National Construction Code – Building Code of Australia 2013, the Defence Manual of Fire Protection Engineering, and all other applicable Codes and Standards.

Acoustics

67. The new 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, and partitions are being designed to meet user requirements and building function.

Security

68. Advice from Defence security authorities has been incorporated in the design solutions for the proposed facilities where appropriate. Security Risk Assessments have also informed the proposed designs. As such, the facilities meet appropriate security classifications as stipulated by Defence requirements.

Environmental Sustainability of the Project

69. The Commonwealth is committed to Ecologically Sustainable Development and the reduction in greenhouse gas emissions. Defence reports annually to Parliament on the

energy efficiency targets, established by 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.

70. The Ecologically Sustainable Development targets and requirements shall comply with the Defence Building Performance Manual. The Ecologically Sustainable Development targets and measures for this project have been balanced with other requirements for Defence buildings, such as functional and security requirements, heritage considerations and Work Health and Safety. Defence Ecologically Sustainable Development policies have been addressed by adopting cost effectiveness and Ecologically Sustainable Development as key objectives in the design development and delivery of new facilities.

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

    a. **Energy and greenhouse gas emissions minimisation**: Strategies to address this include adopting passive building design principles for new facilities, use of energy efficient Heating, Ventilation and Air Conditioning, lighting and control systems, natural ventilation, and energy management systems.

    b. **Water use reduction**: The overall aim is to reduce potable water use by specifying water efficient fixtures and fittings, water sensitive landscaping and water management systems (including recharging of the groundwater aquifer at Campbell Barracks).

    c. **Indoor environment to maximise occupant comfor**t: This will be achieved by adopting a number of strategies including provision of daylight to occupied spaces, shading for privacy and glare control, building orientation, and thermal insulation in non-conditioned spaces.

d. **Renewable energy**: Photovoltaic systems are being considered to be installed to supplement mains power supply for some facilities.

Landscaping

72. The proposed landscape design will introduce plant selections that will comprise predominately indigenous vegetation (native and endemic) to minimise water use and to ensure landscapes are durable, sustainable and low maintenance.

Energy Targets

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

Workplace Health and Safety Measures

74. The proposed facilities to be provided under this project will comply with Department of Defence's WHS Policy, the *Work Health and Safety Act (WHS) 2011 (Cth)*, Work Health and Safety (Commonwealth Employment – National Standards) Regulations and the Defence WHS Manual.

75. 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.

76. 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 Design Consultant. No special or unusual public safety risks have been identified in this process. The successful construction contractor will also be required to submit a Safety Plan for the construction phase prior to the start of any construction activities.

Provisions for People with Disabilities

77. Universal access will be provided to all facilities in accordance with the access and mobility provisions of the National Construction Code – Building Code of Australia 2013, Australian Standard AS1428.1 (Parts 1 to 4) and the Defence Policies.

Cost Effectiveness and Public Value

Outline of Project Costs

78. The estimated out-turned cost of this project is $50.5 million, excluding Goods and Service Tax. The cost estimate includes the construction costs, management and design fees, furniture, information communications technology, fitting and equipment, contingencies, and an escalation allowance.

79. Net operating costs associated as a result of the proposed project will increase due to the construction of new facilities.

Details of the Project Delivery System

80. A Project Manager/Contract Administrator has been appointed by the Commonwealth to manage the project works and the associated administration of contracts in the planning phase. A Design Services Consultant has been appointed using the Department of Defence – Design Services Consultant form of contract, to manage design development to meet the needs of Defence user groups in the planning phase.

81. Subject to Parliamentary approval of the project, the works will progress under multiple Head Contract arrangements for each site as follows:

    a. Campbell Barracks SOV facilities,

    b. Holsworthy Barracks SOV facilities, and

    c. LRPRS FCS (at all sites).

82. The proposed Campbell Barracks SOV works will need to be closely coordinated with the proposed Campbell Barracks Redevelopment works. Subject to Parliamentary approval of the Campbell Barracks Redevelopment, it is proposed that the REDFIN SOV facilities works at Campbell Barracks will be included in the Head Contract for this project.

Construction Program

83. Subject to Parliamentary approval of the project, construction is expected to commence in February 2016, with staged completion of facilities occurring between mid-2016 and mid-2018.

Public Value

84. The proposed works will support an important Defence capability need for Special Forces.

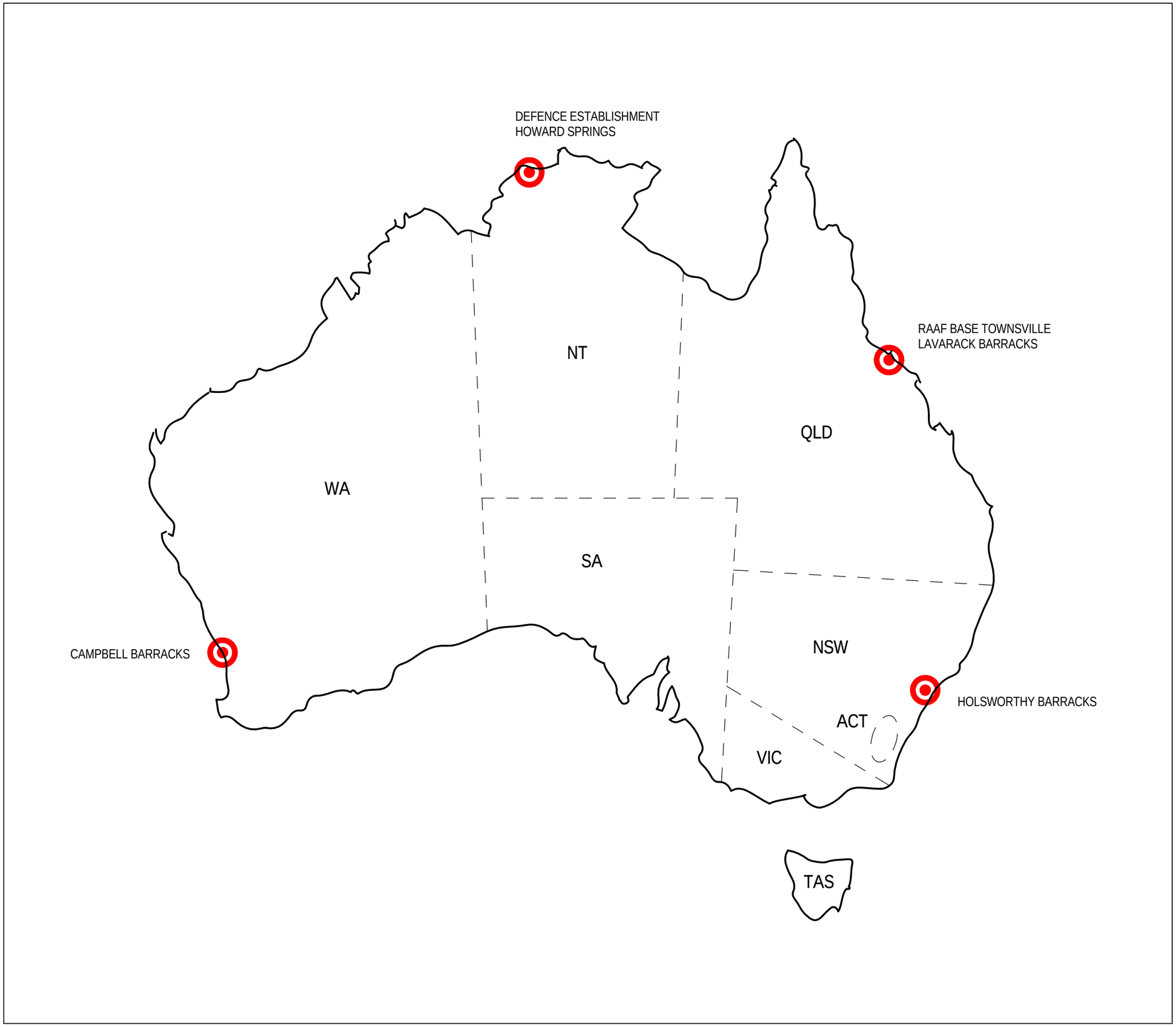
85. The project will also employ a diverse range of skilled consultants, contractors and construction workers that could also include opportunities for up-skilling and job training to improve individual skills and employability on future projects.

Revenue

86. No revenue is expected to be derived from this project.

Attachment 1

Locality Plan



ATTACHMENT 01 | REDFIN - SITE LOCATIONS

Attachment 2

Regional Plans

2-1. Perth Region

2-2. Sydney Region

2-3. Townsville Region

2-4. Darwin-Howard Springs Region

GREATER PERTH

0 10km

SWANBOURNE

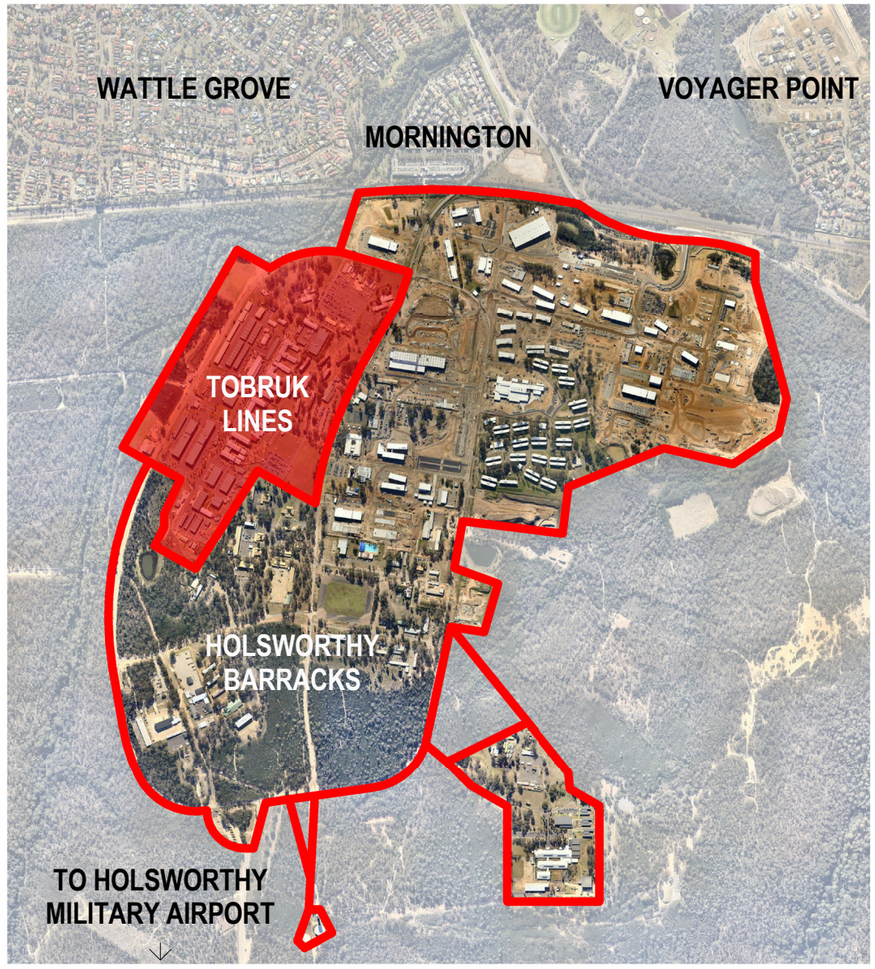
0 500m

N

ATTACHMENT 02-01 | CAMPBELL BARRACKS SITE LOCALITY

GREATER SYDNEY

0 20km



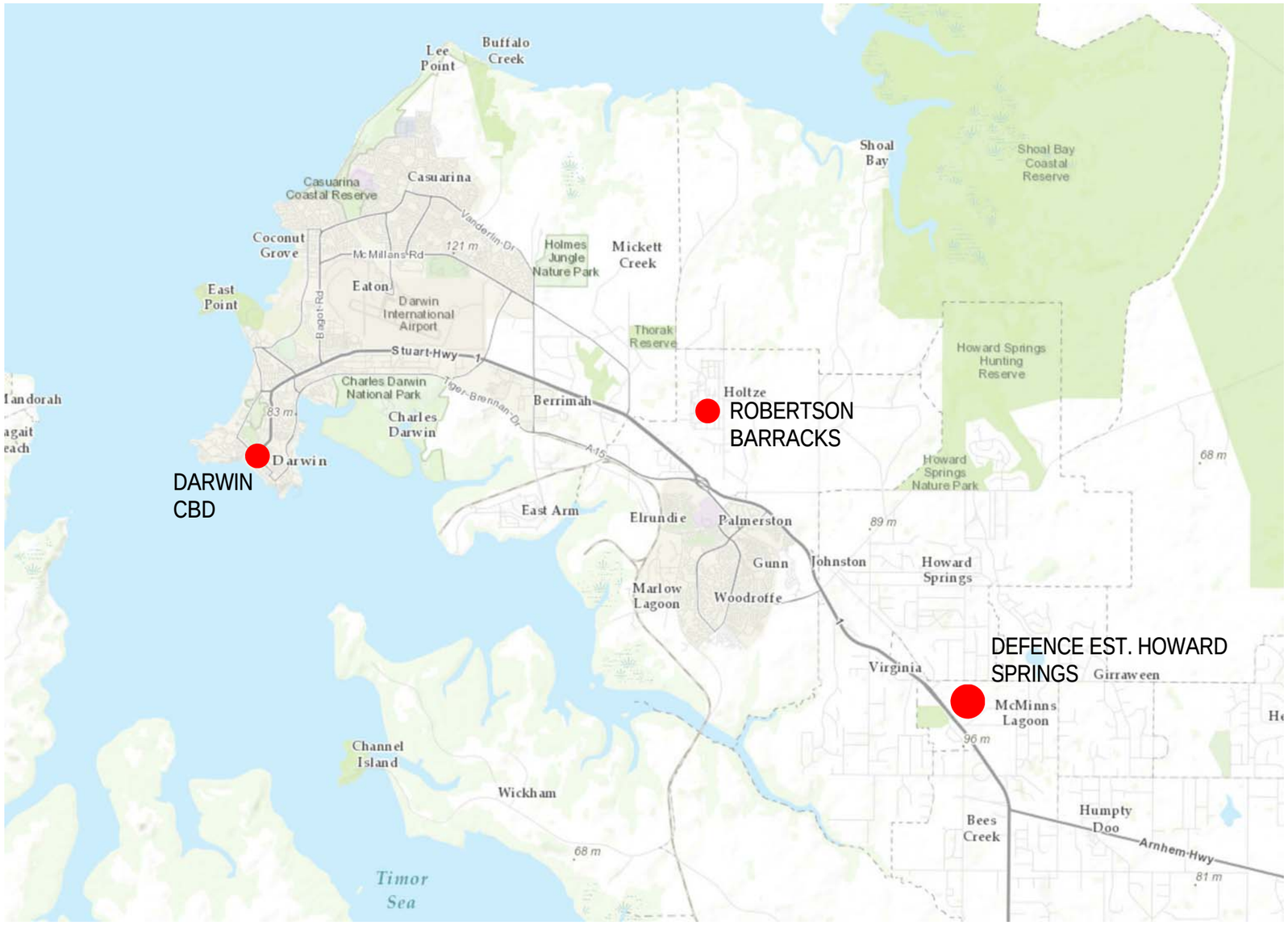
HOLSWORTHY BARRACKS

0 1km

N

ATTACHMENT 02-02 | HOLSWORTHY BARRACKS - SITE LOCALITY

ATTACHMENT 02-03 | LAVARACK BARRACKS - SITE LOCALITY



ATTACHMENT 02-04 | HOWARD SPRINGS - SITE LOCALITY

Attachment 3

Site Plans

3-1. Campbell Barracks

3-2. Holsworthy Barracks

3-3. Lavarack Barracks

3-4. Defence Establishment Howard Springs

COLOUR LEGEND

NEW BUILDINGS - REDFIN

NEW BUILDING - CAMPBELL BARRACKS REDEVELOPMENT

EXISTING BUILDINGS

SITE PLAN LEGEND

1. NEW REDFIN BUILDING

2.NEW PETROL OILS AND LUBRICANTS STORE BUILDING

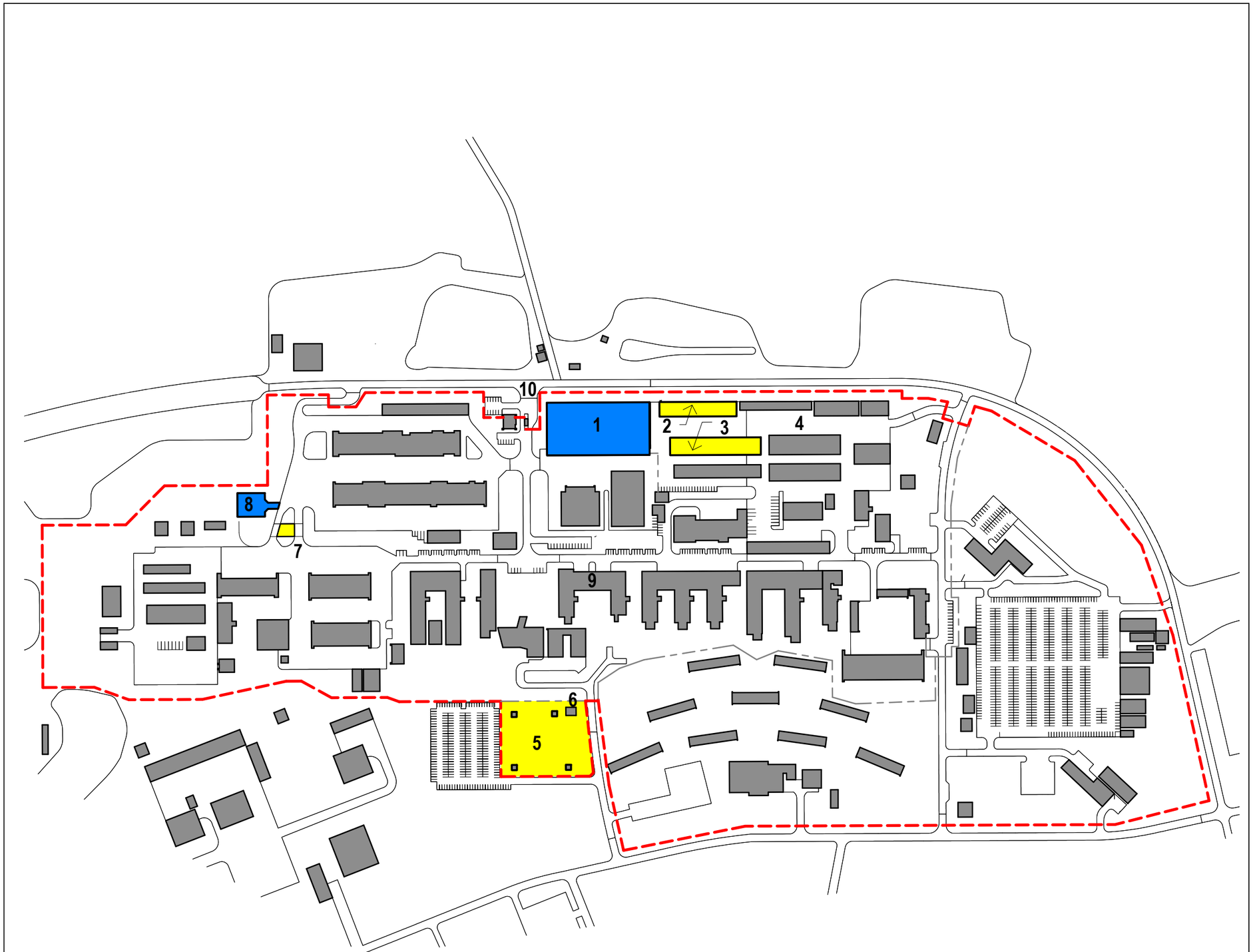
3. NEW ANTENNA FARM SHELTER

4. NEW BUILDING - CAMPBELL BARRACKS REDEVELOPMENT

N

0 75

ATTACHMENT 03-01 | CAMPBELL BARRACKS - SUPPORT PRECINCT SITE PLAN



COLOUR LEGEND

- NEW BUILDING
- ADAPTIVE RE-USE BUILDINGS
- EXISTING BUILDINGS
- TOBRUK LINES BOUNDARY

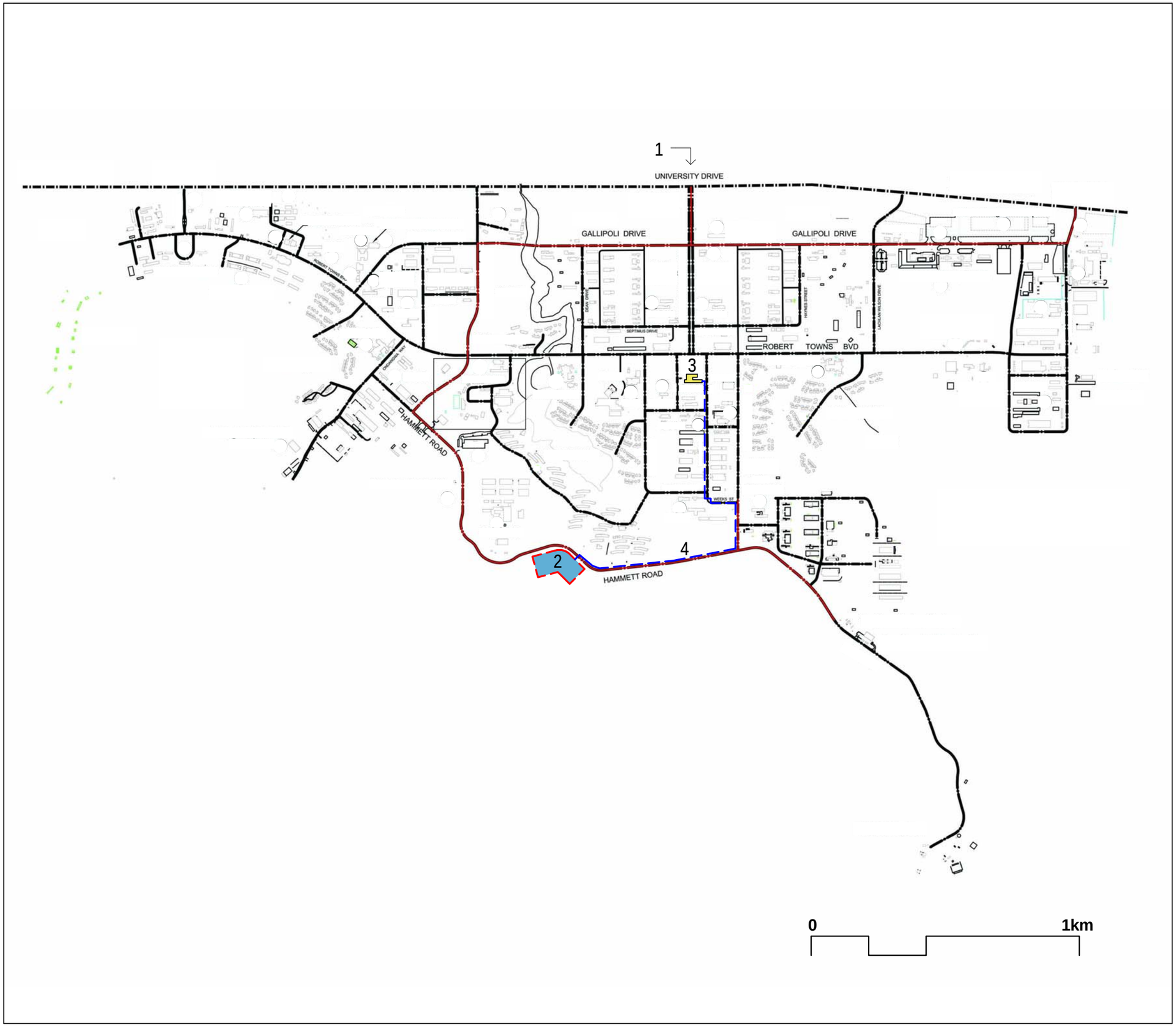
SITE PLAN LEGEND

1. NEW SOV HANGAR
2. ADAPTIVE RE-USE BUILDING 01
3. ADAPTIVE RE-USE BUILDING 02
4. TRANSPORT YARD
5. ADAPTIVE RE-USE
   - ANTENNA FARM
6. ANTENNA SHELTER
7. LOADING RAMP
8. CONTAINER STORAGE
9. EXISTING BUILDING T073
   RADIO ROOM
10. ENTRY TO TOBRUK LINES

N

0 200

ATTACHMENT 03-02 | HOLSWORTHY BARRACKS - SITE PLAN

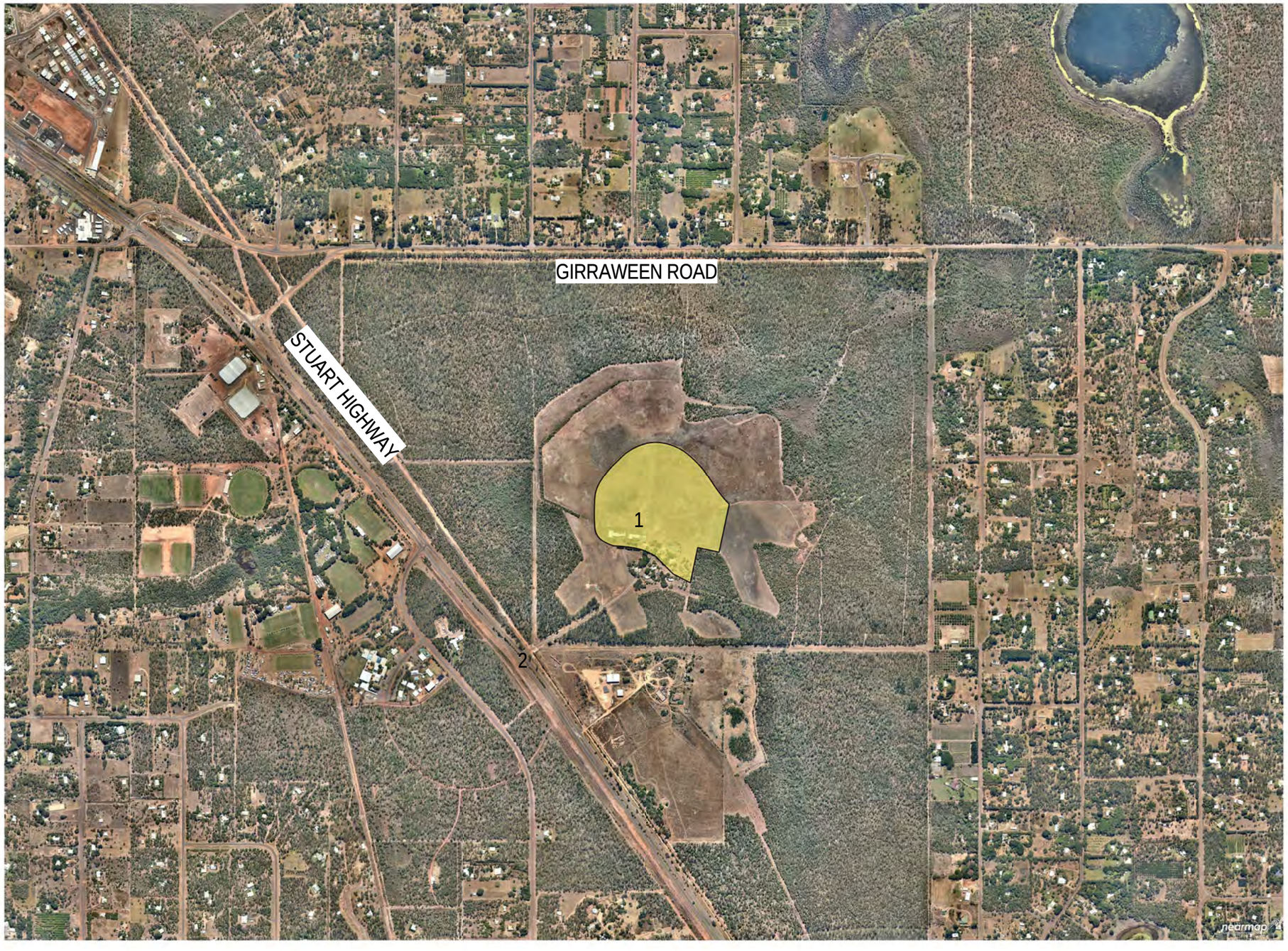


LEGEND

1. MAIN ENTRY
2. ANTENNA FARM
3. LOCATION OF RADIO ROOM
4. COMMUNICATIONS CONDUIT

N

ATTACHMENT 03-03 | LAVARACK BARRACKS - SITE PLAN



LEGEND

1. LOCATION OF PROPOSED WORKS

2. MAIN ENTRY

N

ATTACHMENT 03-04 | HOWARD SPRINGS - SITE PLAN

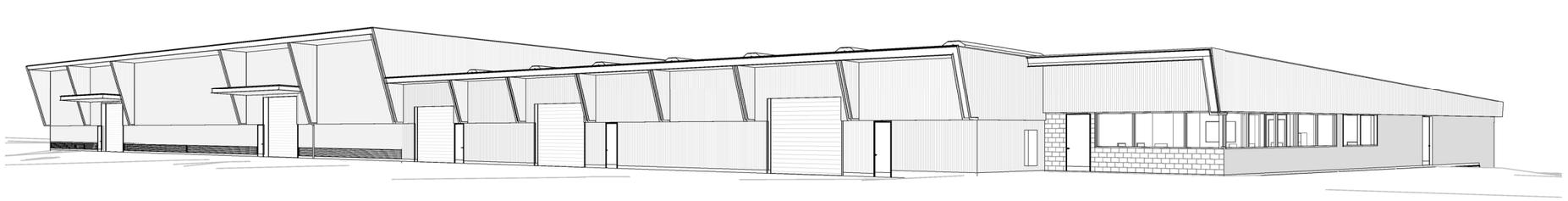
Attachment 4

Campbell Barracks Floor Plans

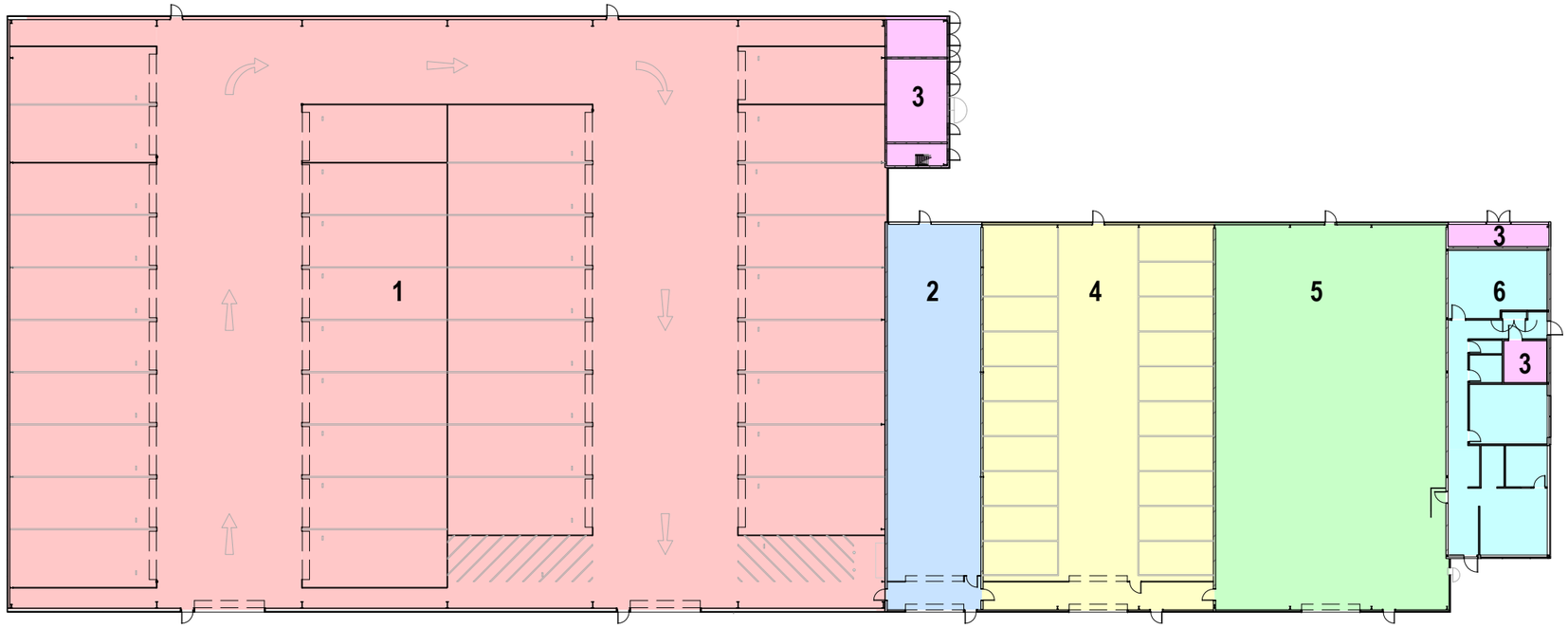
4-1. 3D Perspective of Main Hangar

4-2. Main Hangar Floor Plan

4-3. Petrol, Oils and Lubricants Store Floor Plan

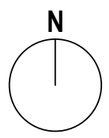


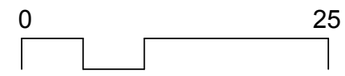
3D PERSPECTIVES - VIEW FROM SOUTH-EAST



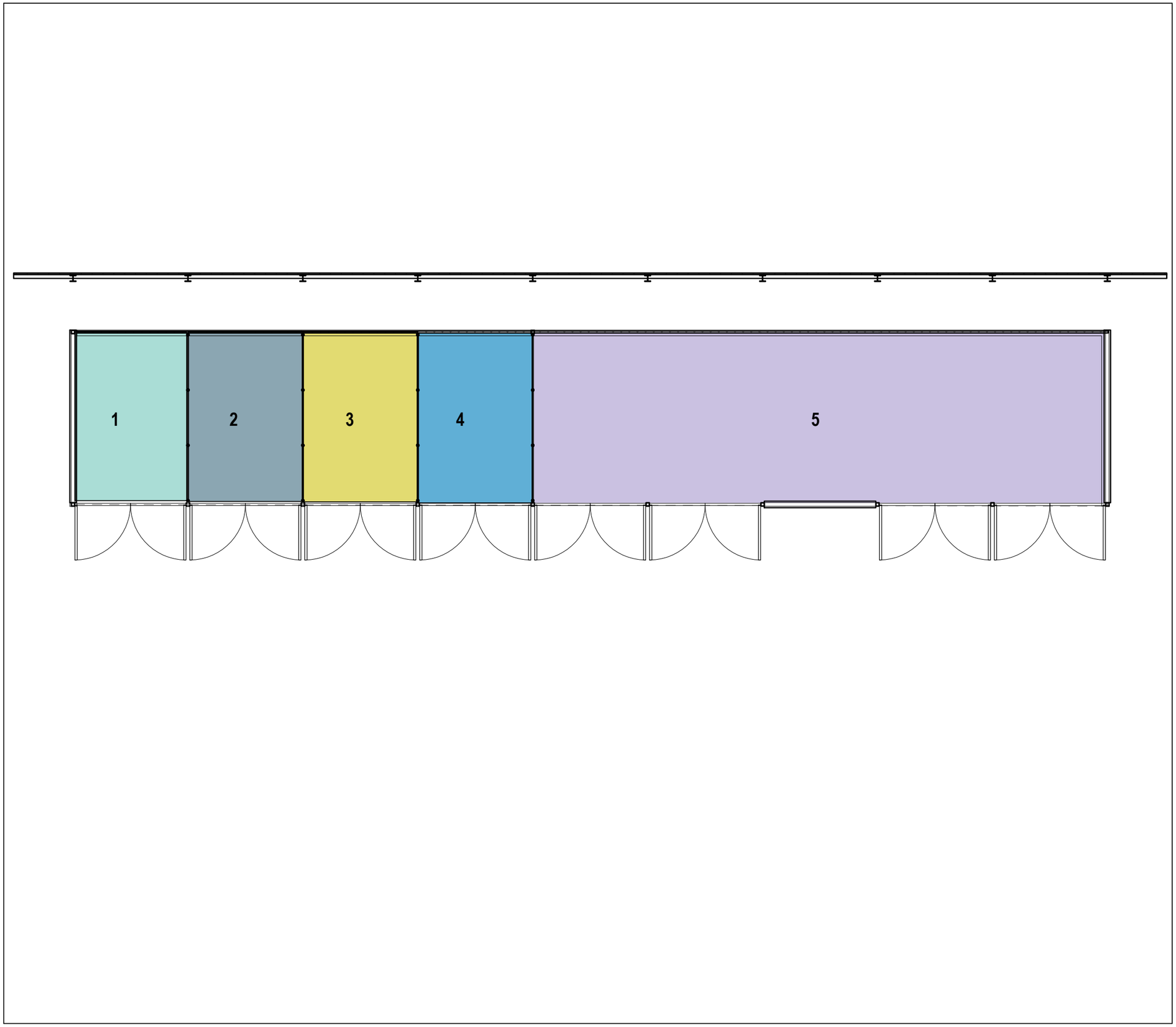
LEGEND

- 1. MAIN SOV HANGAR
- 2. Q-STORE
- 3. PLANT ROOMS
- 4. LIGHT VEHICLE PARKING
- 5. LIGHT SUPPORT VEHICLE STORAGE
- 6. WORKING ACCOMMODATION



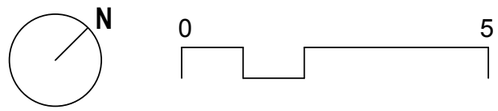


ATTACHMENT 04-02 | FLOOR PLANS - CAMPBELL BARRACKS SOV HANGAR



LEGEND

- 1. SQUADRON PETROL OILS AND LUBRICANT STORE
- 2. SQUADRON PETROL OILS AND LUBRICANT STORE
- 3. SQUADRON PETROL OILS AND LUBRICANT STORE
- 4. SQUADRON PETROL OILS AND LUBRICANT STORE
- 5. REDFIN PETROL OILS AND LUBRICANTS STORE



ATTACHMENT 04-03 | FLOOR PLANS - CAMPBELL BARRACKS PETROL OILS AND LUBRICANTS STORE

Attachment 5

Campbell Barracks Fixed Control Station Layout Plan

ANTENNA FARM LEGEND

1. ROTATING HEAD LOG PERIODIC ANTENNA

2. NEAR VERTICAL INCIDENT SKYWAVE ANTENNA

3. ANTENNA FARM SHELTER

N

0 50

ATTACHMENT 05 | CAMPBELL BARRACKS ANTENNA FARM SITE PLAN

Attachment 6

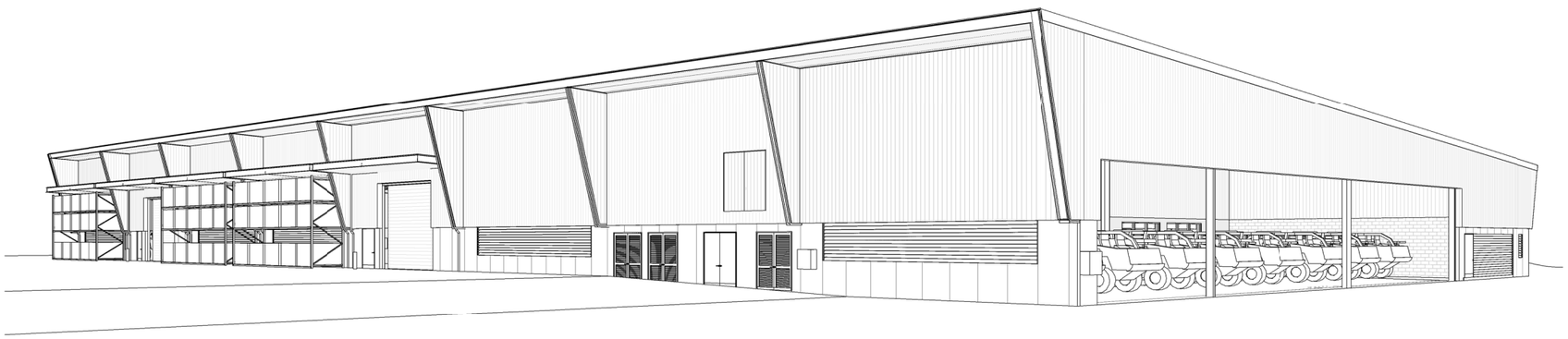
Holsworthy Floor Plans

6-1. 3D Perspective of Main Hangar

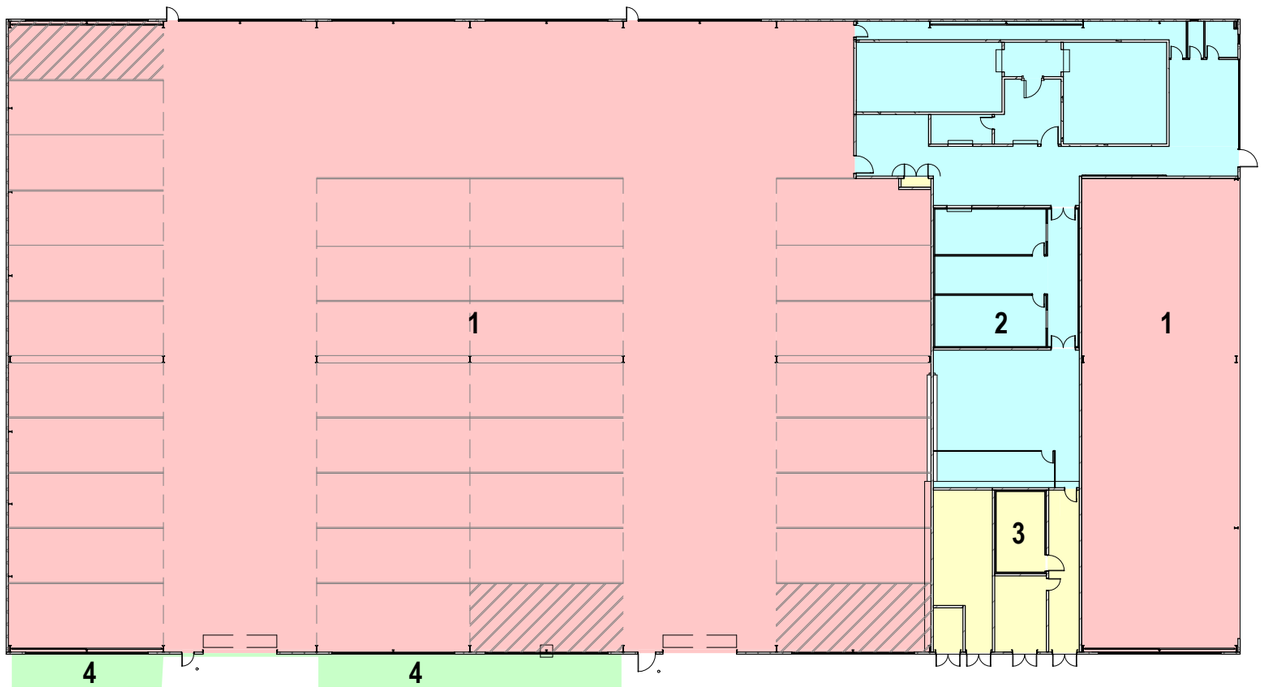
6-2. Main Hangar Floor Plan

6-3. Adaptive Reuse Building 01 Floor Plan

6-4. Adaptive Reuse Building 02 Floor Plan



3D PERSPECTIVE - VIEW FROM NORTH-EAST



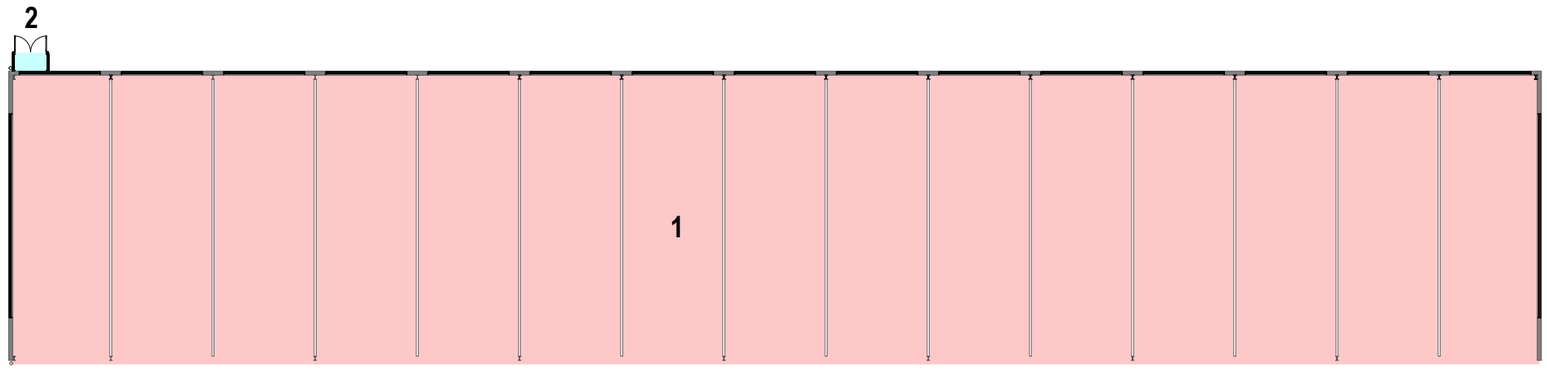
LEGEND

- 1. SOV HANGAR
- 2. WORKING ACCOMODATION
- 3. PLANT ROOMS
- 4. STORAGE

N

0 25m

ATTACHMENT 06-02 | FLOOR PLANS - HOLSWORTHY BARRACKS SOV HANGAR

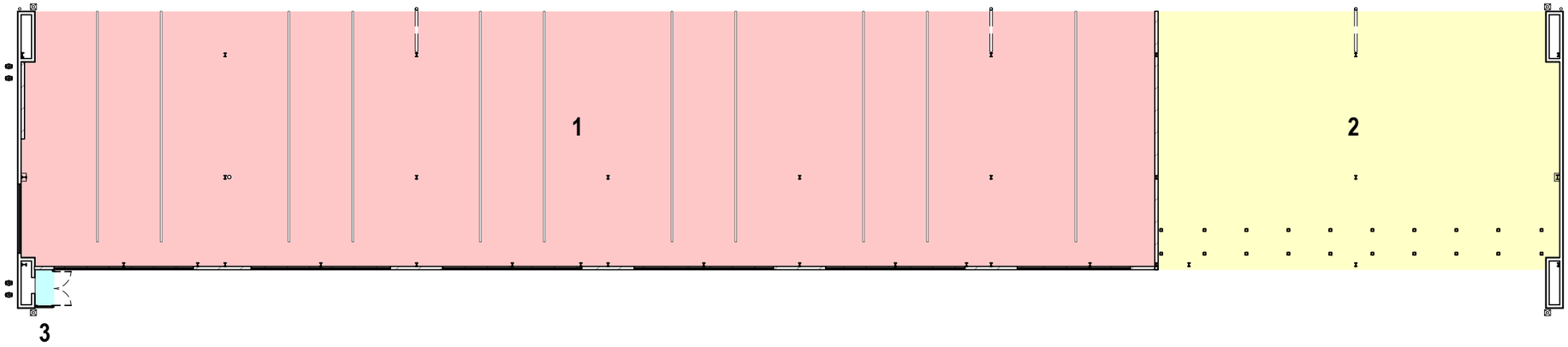


LEGEND

1. SOV STORAGE
2. AIR COMPRESSOR ROOM

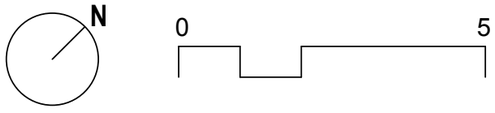
N

0 15



LEGEND

- 1. SOV STORAGE
- 2. HAMPER STORAGE AREA
- 3. AIR COMPRESSOR ROOM



Attachment 7

Holsworthy Barracks Fixed Control Station Layout Plan

ANTENNA FARM LEGEND

1. ROTATING HEAD LOG PERIODIC ANTENNA

2. NEAR VERTICAL INCIDENT SKYWAVE ANTENNA

3. ADAPTIVE RE-USE OF ANTENNA FARM SHELTER

N

0 50

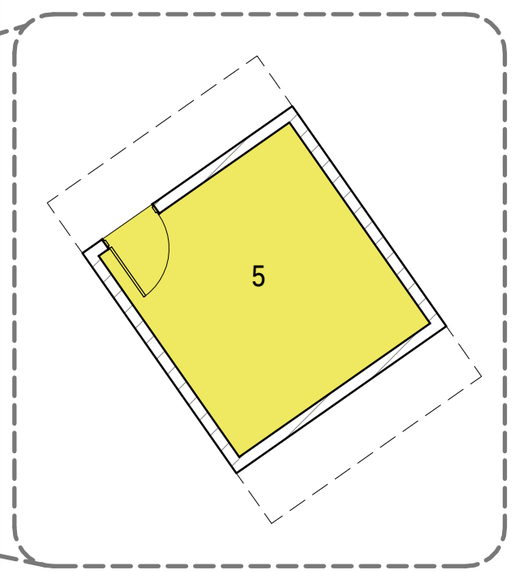
ATTACHMENT 07 | HOLSWORTHY BARRACKS - ANTENNA FARM SITE PLAN

Attachment 8

Lavarack Barracks Fixed Control Station Layout Plan

8-1. Antenna Farm Infrastructure Layout

8-2. Radio Room Floor Plan



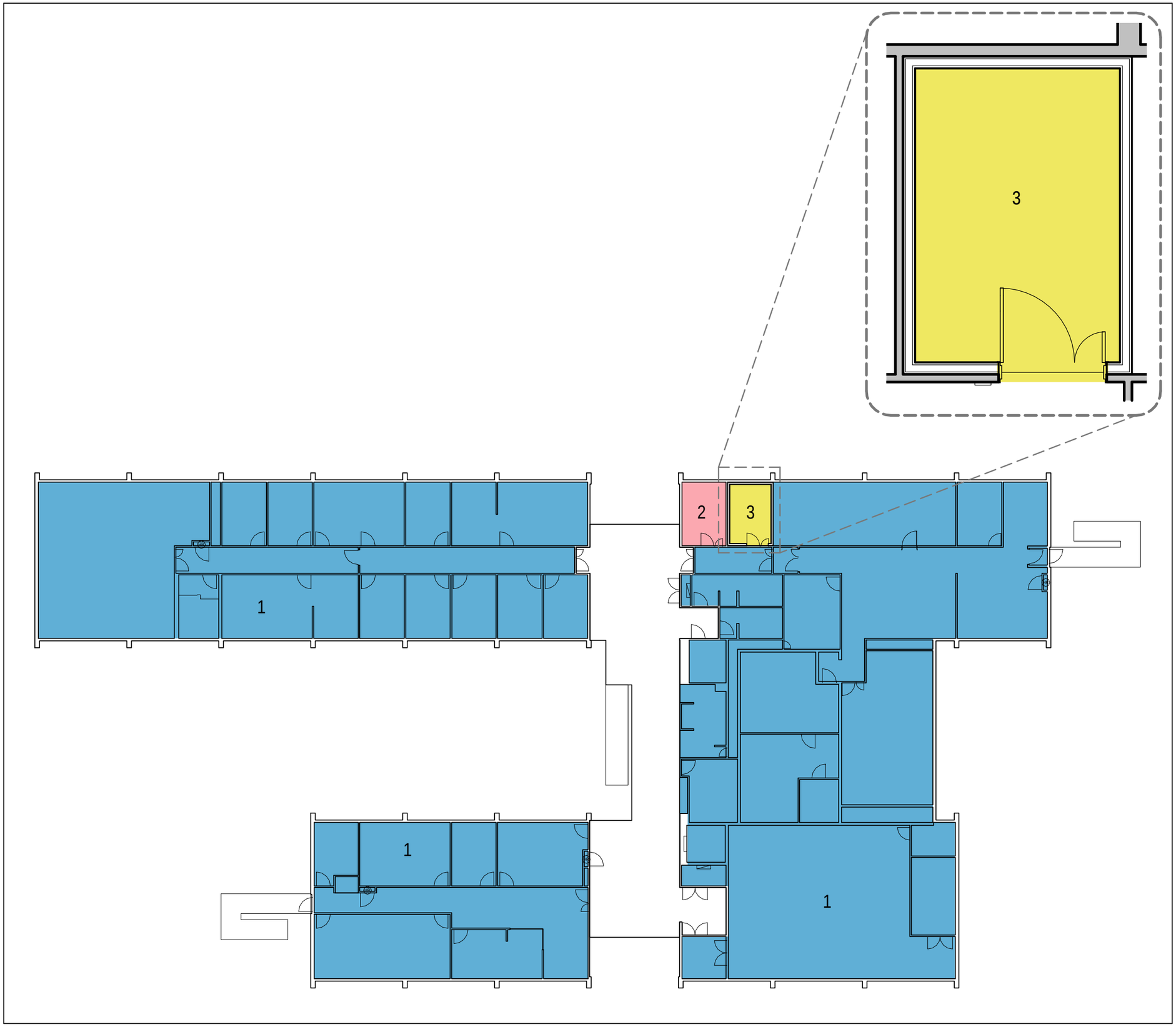
FLOOR PLAN - ANTENNA FARM SHELTER

LEGEND

1. COMMUNICATIONS CONDUIT
2. PROPOSED NEW ROAD
3. ROTATING HEAD LOG PERIODIC ANTENNA
4. NEAR VERTICAL INCIDENT SKYWAVE ANTENNA
5. ANTENNA FARM SHELTER
6. LOCATION OF RADIO ROOM

N

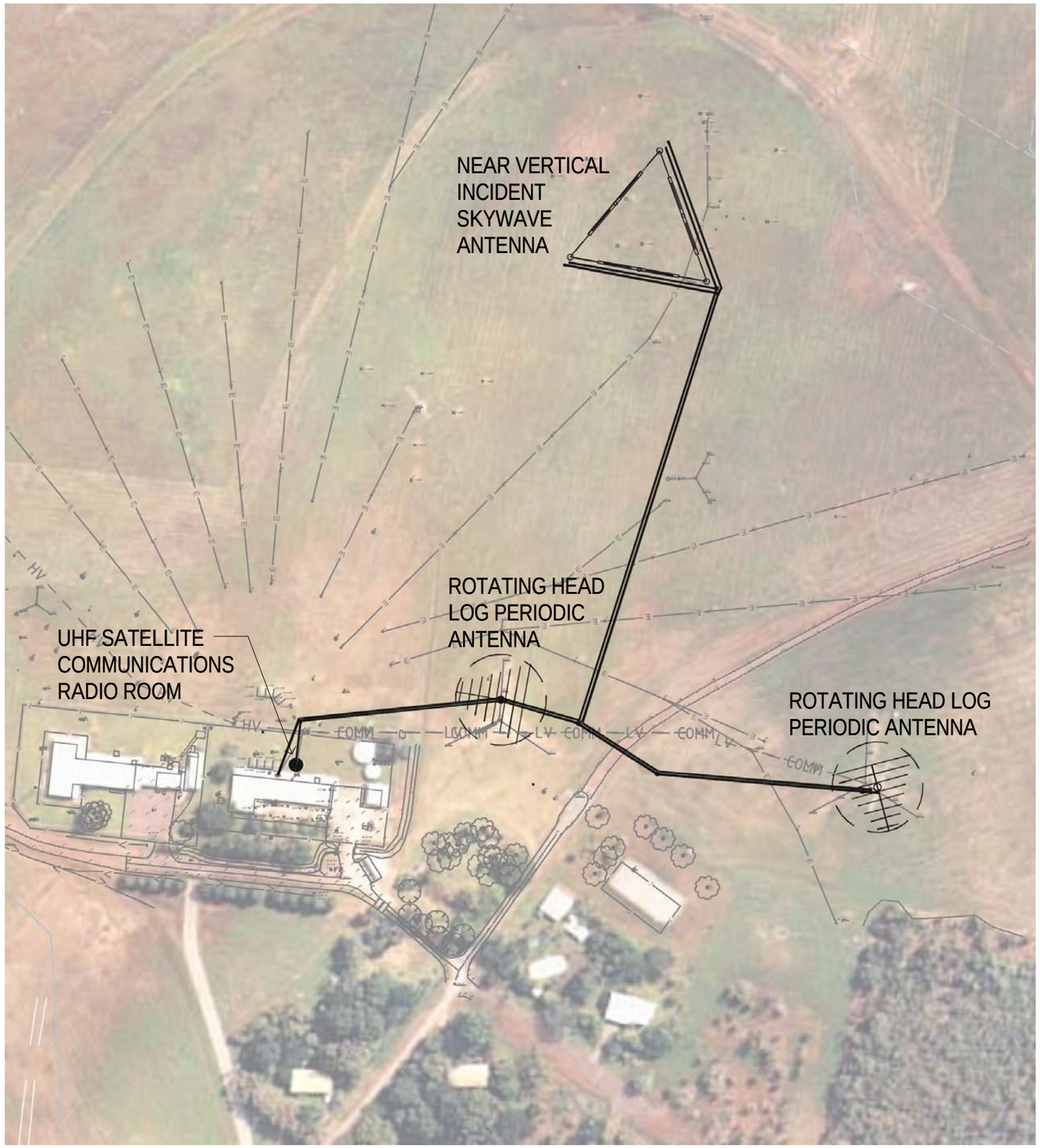
ATTACHMENT 08-01 | LAVARACK BARRACKS - SITE PLAN



ATTACHMENT 08-02 | LAVARACK BARRACKS - RADIO ROOM LOCATION

Attachment 9

Defence Establishment Howard Springs Fixed Control Station Layout Plan



ATTACHMENT 09 | HOWARD SPRINGS - SITE PLAN