



Australian Government

Defence

FACILITIES TO SUPPORT ADVANCED GROWLER PHASE 6

RAAF Base Amberley, Queensland

Delamere Air Weapons Range, Northern Territory

STATEMENT OF EVIDENCE TO THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

February 2024

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Table of Contents

Executive Summary	1
Purpose of the Works	2
Aim of the Project	2
Location of the Project	2
Need for the Project.....	2
Proposed Facilities Solution	3
Options Considered	3
Scope of Project Works for the Preferred Option	4
Amberley.....	4
Delamere	4
Planning and Design Concepts	5
Relevant Legislation, Codes and Standards	6
Land and Zoning.....	7
Structure	7
Mechanical Services	7
Hydraulic Services.....	7
Electrical Services	7
Fire Protection	8
Security Measures	8
Acoustics	8
Work Health and Safety	8
Materials and Furnishings	9
Landscaping.....	9
Childcare Provisions.....	9
Provisions for People with Disabilities	9
Environmental Sustainability	9
Potential Impacts	11
Contamination	11
Consultation with Key Stakeholders	12
Related Projects	12
Cost Effectiveness and Public Value	13
Project Costs.....	13
Project Delivery System	13
Construction Program.....	14

Public Value	14
Revenue	14
Attachments	15
Attachment 1: Locality Plan	
Attachment 2: Scope Overview	

Facilities to Support Advanced Growler Phase 6

1. The purpose of this Statement of Evidence is to provide information to the Australian public to comment on, and the Parliamentary Standing Committee on Public Works to inquire into, proposed works to be provided by the Facilities to Support Advanced Growler Phase 6 (the Project).

Executive Summary

2. The aim of the Project is to provide new and upgraded facilities and infrastructure to enable integration and interoperability of EA-18G Advanced Growler capability at RAAF Base Amberley (Amberley), Queensland, and Delamere Air Weapons Range (Delamere), Northern Territory.

3. The Project works include:

- a. Next Generation Jammer storage and maintenance facilities at Amberley;
- b. New Mission Control Centre at Amberley;
- c. New Mobile Threat Training Emitter Systems maintenance facility at Delamere;
and
- d. Facility upgrades to support enhanced Electronic Warfare training range capability at Delamere.

4. The estimated total capital out-turned cost of the Project is \$228.2 million (excluding Goods and Services Tax). The cost estimate includes management and design fees, construction, information and communications technology, furniture, fittings, equipment, contingencies, and a provision for escalation. There will be ongoing operating costs as a result of the Project works. No revenue is expected to be generated by the works.

5. The Project will promote opportunities for small and medium local enterprises through construction trade packages, providing employment opportunities in the Queensland and Northern Territory regions. There will also be opportunities for Indigenous business involvement in accordance with Government's Indigenous Procurement Policy.

6. All works will be designed and constructed in accordance with relevant legislation, standards, codes, guidelines and Defence policy. Accredited building certifiers will certify the compliance of the design and completed works.

7. Environmental and heritage investigations have been completed and the Project will not have a significant impact on existing environmental and heritage values.

Purpose of the Works

Aim of the Project

8. The aim of the Project is to provide new and upgraded facilities to enable integration and interoperability of EA-18G Advanced Growler capability at RAAF Base Amberley, Queensland, and Delamere Air Weapons Range, Northern Territory.

Location of the Project

9. The Project will be delivered at:

- a. RAAF Base Amberley, located approximately 40 kilometres south-west of Brisbane, Queensland; and
- b. Delamere Air Weapons Range, located approximately 520 kilometres south of Darwin, Northern Territory.

Need for the Project

10. Consistent with the 2020 Force Structure Plan and the 2023 Defence Strategic Review, EA-18G Growler upgrades are required throughout their operational life to ensure interoperability with key strategic Australian Defence Force capability.

11. The Advanced Growler Phase 6 Project will deliver upgrades to Australia's Airborne Electronic Attack capability, including ongoing advances in the EA-18G Growler aircraft to ensure they remain interoperable with those operated by the United States Navy.

12. The Project will provide the necessary facilities works at Amberley and Delamere to support integration of the EA-18G Advanced Growler upgrades into Air Force's existing infrastructure. The works include:

- a. maintenance, logistics and storage upgrades at both Bases to enable effective servicing of the new capability
- b. training facilities to support enhanced operation of EA-18G Advanced Growler capability, including the ability to conduct joint training exercises and integrated training with other capabilities

Proposed Facilities Solution

13. Defence undertook comprehensive master planning, site investigations, stakeholder consultation, whole-of-life cost analysis and design development to establish the capital facilities and infrastructure works required to address the Project need. The essential requirements of the Project include:

- a. upgrades to the Next Generation Jammer maintenance and storage facilities at Amberley, enabling storage and staging of Next Generation Jammer pods at the Base;
- b. new specialised training facilities at Amberley, which will enhance Air Force's ability to appropriately prepare personnel for operation of the EA-18G Advanced Growler upgraded capability; and
- c. new and upgraded maintenance, logistics and storage facilities at Delamere, enabling maintenance of Advanced Mobile Threat Training Emitter Systems equipment, supporting associated training activities and ensuring optimum functionality of the Air Weapons range during training exercises.

Options Considered

14. Defence has developed the following three options:

- a. **Option 1 – Do nothing.** This option will not provide any investment in facilities or infrastructure the support the introduction of the new Next Generation Jammer and Mobile Threat Training Emitter Systems capability.
- b. **Option 2 – In Budget Scope.** This option includes the delivery of the highest priority functional requirements within the Government approved budget. It includes upgrades to the Next Generation Jammer maintenance and storage facilities, as well as specialised training facilities at Amberley. It also includes new and upgraded maintenance, logistics and storage facilities at Delamere.
- c. **Option 3 – Full Scope.** This option provides fit-for-purpose facilities and upgraded infrastructure to address all the functional requirements identified by Air Force and would enable full capability for Advanced Growler Phase 6.

15. **Preferred option.** Option 2 is the preferred option as it addresses the Project needs and Defence's minimum viable capability requirements. Option 2 represents the best value

for money solution for the Commonwealth from both a capital and a whole-of-life perspective.

Scope of Project Works for the Preferred Option

16. The preferred option includes the following work elements:

RAAF Base Amberley

- a. **Work Element 1 – Upgrades to Existing Next Generation Jammer Maintenance Facility.** This element includes adaptive re-use of Building 1411, including provision of additional work bays, lifting equipment, ICT and power, as well as installation of air conditioning throughout.
- b. **Work Element 2 – New Next Generation Jammer Secure Ready Storage Facility.** This element includes construction of a new facility to provide floor-level storage for Next Generation Jammer stock, including a staging area and a gantry crane.
- c. **Work Element 3 – New Next Generation Jammer Container and Ground Support Equipment Storage.** This element includes covered, semi-enclosed storage for Next Generation Jammer shipping containers, as well as additional Ground Support Equipment storage for increased holdings, within the new Next Generation Jammer Secure Ready Storage Facility.
- d. **Work Element 4 – New Mission Control Centre.** This element includes a new facility to replicate the Mission Control Centre at Delamere, including secure conference and briefing rooms, training rooms and supporting communications and information communications and technology (ICT) services.

Delamere Air Weapons Range

- e. **Work Element 5 – New Mobile Threat Training Emitter Systems Maintenance Facility.** This element includes a new facility to support Advanced Mobile Threat Training Emitter Systems maintenance, including additional work bays, office space, secure briefing room and storage, as well as supporting services.
- f. **Work Element 6 – Modifications to Existing Air Defence Radar System Storage Shelter.** This element includes adaptive reuse of an existing building to accommodate new Advanced Mobile Threat Training Emitter Systems capability, including access controls, fire suppression and ICT connection.

- g. **Work Element 7 – New Vehicle Wash Point.** This element includes a new two-bay vehicle wash point to support an increase in Mobile Threat Training Emitter Systems vehicle throughput during training exercises.
- h. **Work Element 8 – Upgrades to Existing Maintenance Facility Road Network.** This element includes road upgrades to allow vehicle access to storage and maintenance facilities.
- i. **Work Element 9 – New Overflow Storage.** This element includes provision of an additional hardstand to support overflow storage during training and maintenance periods.
- j. **Work Element 10 – Upgrades to Existing Range Operations Centre Communications Building.** This element includes construction of a new secure communications building to support existing infrastructure on site, including racking, Uninterrupted Power Supply and connection into the existing Range Operations Compound communications tower.
- k. **Work Element 11 – Upgrades to Existing Infrastructure.** This element includes upgrades to existing services infrastructure, including sewer and diesel storage.

Planning and Design Concepts

- 17. The general philosophy for the design of the proposed works is based on:
 - a. providing cost-effective, functional, low maintenance, energy efficient design options compatible with proposed functions and existing aesthetics;
 - b. adopting, where possible, conventional construction techniques and materials commonly used by the construction industry and consistent with those already used;
 - c. applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life;
 - d. providing flexible services and infrastructure to accommodate an appropriate level of growth;
 - e. working within site constraints, security requirements and approved estate base plans for each location; and
 - f. considering functional relationships of the proposed facilities to existing facilities.

Relevant Legislation, Codes and Standards

18. The following legislation, standards, codes and guidelines are applicable:
 - a. *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)*;
 - b. *Fair Work Act 2009 (Cth)*;
 - c. *Fair Work (Building Industry) Act 2012 (Cth)*;
 - d. *Work Health and Safety Act 2011 (Cth)*;
 - e. *Disability Discrimination Act 1992 (Cth)*;
 - f. *Building and Construction Industry Improvement Amendment (Transition to Fair Work Act) Act 2012 (Cth)*;
 - g. National Construction Code;
 - h. Safe Work Australia Codes of Practice;
 - i. Defence Manual for Infrastructure Engineering – Electrical;
 - j. Defence Smart Infrastructure Manual;
 - k. Defence Manual of Fire Protection Engineering;
 - l. Defence Contamination Management Manual;
 - m. Defence Pollution Prevention Management Manual;
 - n. Defence Safety Manual;
 - o. Defence Security Principals Framework;
 - p. Defence Communications Cabling Standard;
 - q. Defence Communications Room Standard;
 - r. Defence Building Energy Performance Guide; and
 - s. Australian Signals Directorate Information Security Manual.
19. An accredited building certifier will certify the compliance of the design and the completed works. Construction compliance with the design shall be assured using approved quality management systems, which will implement processes, including independent inspections, audits and testing.

Land and Zoning

20. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments, including the RAAF Base Amberley Estate Base Plan Volumes One and Two, July 2017, RAAF Base Tindal and Delamere Air Weapons Range Zone Plan, November 2014, and the Defence Planning Guidance.

21. Site Selection Boards were completed for all proposed new buildings and infrastructure to ensure they are consistent with the Estate Base Plans for each of the establishments and the Defence Planning Guidance. Site Selection Board assessments considered the suitability of sites for proposed functions, the locations of related functions, as well as access to services and infrastructure.

Structures

22. The structures have been designed according to the local geotechnical and climatic profile. The proposed new facilities will generally be of reinforced precast concrete walls, suspended concrete floor slabs and steel-frame with pre-finished steel roofing.

23. Internal walls are non-load bearing frames, lined with plasterboard to provide maximum flexibility to respond to changing functional needs.

Mechanical Services

24. The mechanical services have been designed according to the function and needs of each building. The proposed mechanical services will meet specific user needs, relevant ventilation, thermal comfort and air quality requirements and the mandatory requirements of the National Construction Code.

Hydraulic Services

25. Existing sewerage and storm water services are proposed to be extended to each facility to suit design requirements. Potable water will be connected to the existing supply via sub-metering to each new building. Roof water will be redirected to existing stormwater infrastructure on each Base.

Electrical Services

26. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements. Electrical infrastructure and switchboards will have spare capacity to allow for future growth. Sub-metering will be included to each re-used and new building. The meters will be monitored through a new

Building Management System, which will support an active energy management program on the site.

Fire Protection

27. Fire Protection has been addressed through compliance with the National Construction Code, and the Defence Manual of Fire Protection Engineering. The Project has assessed the asset classification and criticality, in order to determine the fire protection systems to be implemented in all facilities. General upgrades to the fire systems within existing facilities have been included.

Security Measures

28. The security arrangements are a suite of measures based on the Defence-in-Depth principles. Security measures are compliant with statutory requirements, Defence's Security Principles Framework and address all requirements identified by the Protective Security Working Group. The security design of the site will ensure that any new facilities conform to the existing security system employed by the base and range.

Acoustics

29. The new facilities will comply with the National Construction Code and Australian Standards for noise and acoustics. Acoustic separation has been considered in construction elements, while surface finishes are being designed to meet user requirements.

30. Aircraft noise impacts have been considered in the design of working accommodation. Acoustic separation has been considered between rooms and walls are designed to meet user requirements.

Work Health and Safety

31. The Project will comply with the *Work Health and Safety (WHS) Act 2011 (Cth)*, Work Health and Safety (Commonwealth Employment – National Standards) Regulations, and relevant Defence policies. In accordance with Section 35 (4) of the *Building and Construction Industry (Improving Productivity) Act 2016 (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.

32. Safety aspects of the Project have been addressed during the design development process and have been documented in a safety in design report. A work health and safety

plan will be developed for the construction phase prior to the commencement of any construction activities.

Materials and Furnishings

33. External walls for new buildings will be a mixture of concrete panels and metal cladding with curtain wall glazing. A metal louvre sun screening system will be installed to improve environmental performance of the buildings. Where required, pre-finished steel roofing and rainwater fittings have also been selected for their resilience to the harsh local environmental conditions.

Landscaping

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

Childcare Provisions

35. There is no requirement for childcare facilities under the Project.

Provisions for People with Disabilities

36. Access for people with disabilities will be provided in accordance with the *Disability and Discrimination Act 1992 (Cth)*, and the National Construction Code, AS1428.1-2009 Design for Access and Mobility.

Environmental Sustainability

37. Defence is committed to ecologically sustainable development and reducing greenhouse gas emissions. The Project has adopted cost effective measures as a key objective in the design and development of the proposed works. These include:

- a. **Meeting applicable energy targets.** The requirements of Defence's Smart Infrastructure Handbook - Design and Construction Version 1.0 (June 2019) and Building Energy Performance Manual Version 4.0 (December 2012) have been adopted for the Project. All buildings shall comply with the Australian Government's Energy Efficiency in Government Operations Policy. The Project energy targets include:

- 1) tenant light and power to be less than 7,500 megajoules per person per annum;

- 2) central services to be less than 400 megajoules per person per annum; and
 - 3) operational equipment loads general power intensity average (computers and other equipment) no more than nine watts per square metre.
- b. **Reducing energy and water use.** Measures proposed to reduce energy and water use include:
- 1) adopting passive building design principles for new facilities;
 - 2) selecting energy efficient heating ventilation and air conditioning systems, lighting, and intelligent building management control systems;
 - 3) minimising waste storage, disposal, and optimising the potential for recycling;
 - 4) selecting sustainable materials considering procurement, production and environmental performance;
 - 5) specifying water efficient fixtures and fittings;
 - 6) optimising rainwater harvesting for beneficial re-use;
 - 7) adopting water sensitive urban design principles; and
 - 8) selecting native, low-water usage plant species requiring irrigation only for establishment.
- c. **Demolition and disposal of existing structures.** The proposed scope of works includes removing some existing trees, redundant engineering services, footings and pavements.
- d. **Waste Minimisation.** An emphasis will be placed on ‘designing out’ waste. Measures proposed to minimise waste will follow the requirements under the Defence Smart Infrastructure Handbook, which requires that all designs consider the minimisation of waste in the planning, design, construction, and operation of the Project.
- e. **Material Selection.** Materials that minimise waste, are flexible in use and avoid volatile organic compounds and ozone depleting materials will be selected for use in the Project where practical. Local materials will also be preferred where practical to minimise transportation.

- f. **Climate Change Adaptation.** To determine the forecast effects of climate change on the proposed scope of works, a risk assessment has been undertaken in accordance with AS5334-2013.

Potential Impacts

38. Defence has conducted rigorous assessments to identify potential environmental and local community impacts and propose suitable mitigation measures. These include:

- a. **Visual Impacts.** There will be no material visual impact to local communities as the proposed facilities at both establishments are a significant distance from the closest residential and commercial developments.
- b. **Noise Impacts.** There will be no material noise impacts to local communities or existing nearby Defence facilities from the operation of the proposed facilities.
- c. **Heritage Impacts.** The proposed developments at both establishments are not anticipated to have material impacts on known areas of Indigenous cultural significance. Local Indigenous groups will continue to be consulted throughout the development of the Project.
- d. **Traffic, Transportation and Road Impacts.** Defence does not anticipate material impacts at either establishment on local traffic from the construction or operation of the proposed facilities. Temporary facilities required during construction, particularly at Delamere, will be managed in consultation with the establishment and, where applicable, Traditional Owners.
- e. **Relevant Local Facilities.** No material impacts on the demand for, or use of local facilities are anticipated to arise from the Project.

39. Based on the findings of the assessments undertaken by the Project, Defence has determined that existing environmental and heritage values will not be significantly impacted by the Project. Therefore, the Project is not required to be referred to the Minister for the Environment and Water under the [*Environmental Protection and Biodiversity Conservation Act 1999 \(Cth\)*](#).

Contamination

40. Concentrations of contaminants on the proposed sites for the new facilities have been assessed and are not considered to pose an unacceptable risk to human health during construction or the proposed use of the site. Appropriate control measures to manage

contamination or hazardous materials will be implemented during construction in accordance with Defence's Pollution Prevention Management Manual, Defence Contamination Management Manual and State Legislation.

Consultation with Key Stakeholders

41. Defence has developed a community consultation and communications strategy that recognises the importance of providing local residents and other interested stakeholders an opportunity to provide input into, or raise concerns relating to, the proposed works.

42. Defence has engaged, and continues to engage, with a variety of internal and external stakeholders during Project development to date. Further consultations will be conducted to support the Parliamentary Standing Committee on Public Works' inquiry into the proposed works. These include:

- a. The Federal Member for Blair, The Hon Shayne Neumann MP;
- b. The Federal Member for Lingiari, Ms Marion Scrymgour MP;
- c. The Queensland Member for West Ipswich, Mr James (Jim) Madden;
- d. The Northern Territory Member for Daly, Mr Dheran Young;
- e. The Mayor of the City of Ipswich, Mayor Teresa Harding;
- f. The Mayor of Katherine, Mayor Elisabeth Clark;
- g. The Chief Executive Officer Victoria Daly Regional Council, Mr Brian Hylands;
- h. Traditional Owners of the land;
- i. Local industry and business associations, including:
 - 1) Business Ipswich; and
 - 2) The Northern Territory Business Council;
- j. Local community groups.

Related Projects

43. The following projects relate to the Project:

- a. **Guided Weapons Explosive Ordnance Storage Project.** The Guided Weapons Explosive Ordnance Storage Project is delivering two new Earth-Covered Buildings

and associated facilities, including one Earth-Covered Building dedicated to Facilities to Support Advanced Growler Phase 6, at Amberley.

- b. **Proposed new Contractors Camp at Delamere.** The new Camp at Delamere will generally be independent for most Range services supply. Coordination and deconfliction is required with the Camp throughout the Project.
- c. **Intermediate Level Maintenance – Boeing Defence Australia.** The Intermediate Level Maintenance at Amberley was originally included in the Project, however it was extracted as a separate project shortly after commencement of the design phase. Further impacts to the Project from Intermediate Level Maintenance are yet to be assessed, but may include spatial, power and heat loading impacts to the design. As such, coordination with Intermediate Level Maintenance may be required during subsequent design phases.

Cost Effectiveness and Public Value

Project Costs

44. The estimated total capital out-turned cost of the Project is \$228.2 million (excluding Goods and Services Tax). This includes management and design fees, construction, information and communications technology, furniture, fittings, equipment, contingencies and a provision for escalation.

45. There will be ongoing operating and sustainment costs resulting from the proposed works. This is due to the increase in facilities capacity being provide by the Project, including a new Mission Control Centre building at Amberley and maintenance facilities at Delamere, which will create additional maintenance, cleaning and utilities costs required to operate and maintain the new facilities.

Project Delivery System

46. A Project Manager / Contract Administrator will be appointed to manage the delivery phase of the works.

47. A Design Services Consultant has been engaged to provide design services. It is envisaged that this engagement will be extended for any further design development of the proposed scope.

48. A Head Contract form of contract is planned to deliver the works, with the Head Contractor being appointed to procure trade contractors and manage the construction of the

works. The Head Contract form of delivery provides the Commonwealth with direct control over the design and quality of the Project. The Head Contract delivery methodology will also assist to promote opportunities for small to medium enterprises and leverage indigenous participation by sub-contracting construction trade packages.

Construction Program

49. Subject to Parliamentary approval, design activities are expected to be completed by mid-2024, and construction is expected to commence in early to mid-2025 for completion in late 2026.

Public Value

50. Defence has comprehensively assessed public value, opportunities and benefit to the community as a result of the proposed works:

- a. **Economic impacts.** Project expenditure will support the Australian economy, in particular in the construction and professional services sectors in south-east Queensland and the Northern Territory.
- b. **Employment opportunities.** The Project will employ a diverse range of consultants, contractors and construction workers, and is expected to generate opportunities for up-skilling and job training to improve individual skills and employability on future projects.
- c. **Local industry and Indigenous business involvement opportunities.** The Head Contractor will actively promote opportunities for small and medium local enterprises through construction trade packages. The Head Contractor will also develop a Local Industry Capability Plan and an Indigenous Participation Plan to detail how it will engage with and maximise opportunities for local industry and Indigenous businesses, while providing value for money to the Commonwealth.
- d. **Meeting capability needs.** The Advanced Growler Phase 6 Project aims to address requirements outlined in the Defence Strategic Update 2020, which identified ongoing upgrades to the EA-18G Growler as a necessary component of the Australian Defence Force's electronic warfare and strike/air combat capabilities. The Project will provide the facilities necessary to support the capability upgrades.

Revenue

51. No revenue is expected to be derived from the Project.

Attachments

1. Locality Plan
2. Scope Overview

Attachment 1

Locality Plan



Attachment 2

Scope Overview



Figure 1 – Work Element 1 – Upgrades to Existing Next Generation Jammer Maintenance Facility, Work Element 2 – New Next Generation Jammer Secure Ready Storage Facility and Work Element 3 – New Next Generation Jammer Container and GSE Storage, RAAF Base Amberley, Queensland.

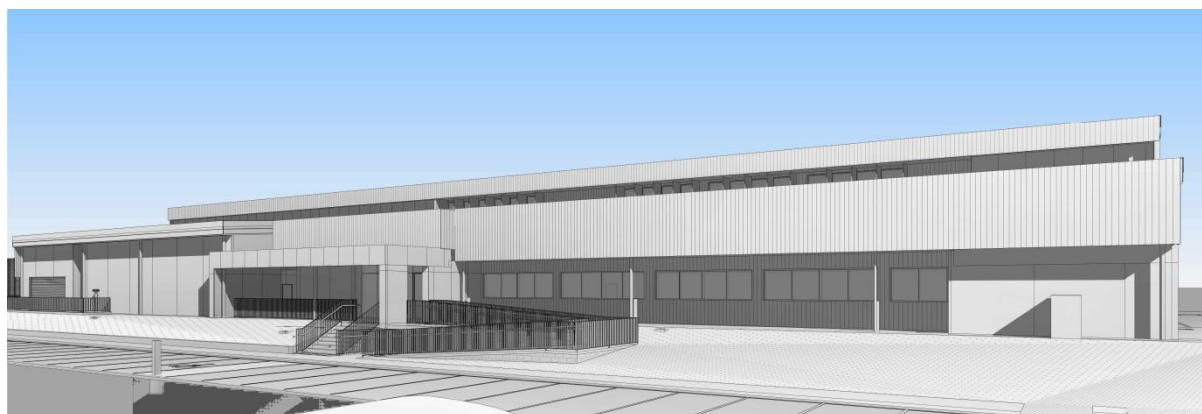


Figure 2 – Work Element 4 – Mission Control Centre, RAAF Base Amberley, Queensland.



Figure 3 – Work Element 5 – New Mobile Threat Training Emitter Systems Maintenance Facility and Work Element 6 – Modifications to Existing Air Defence Radar System Storage Shelter, Delamere Air Weapons Range, Northern Territory.

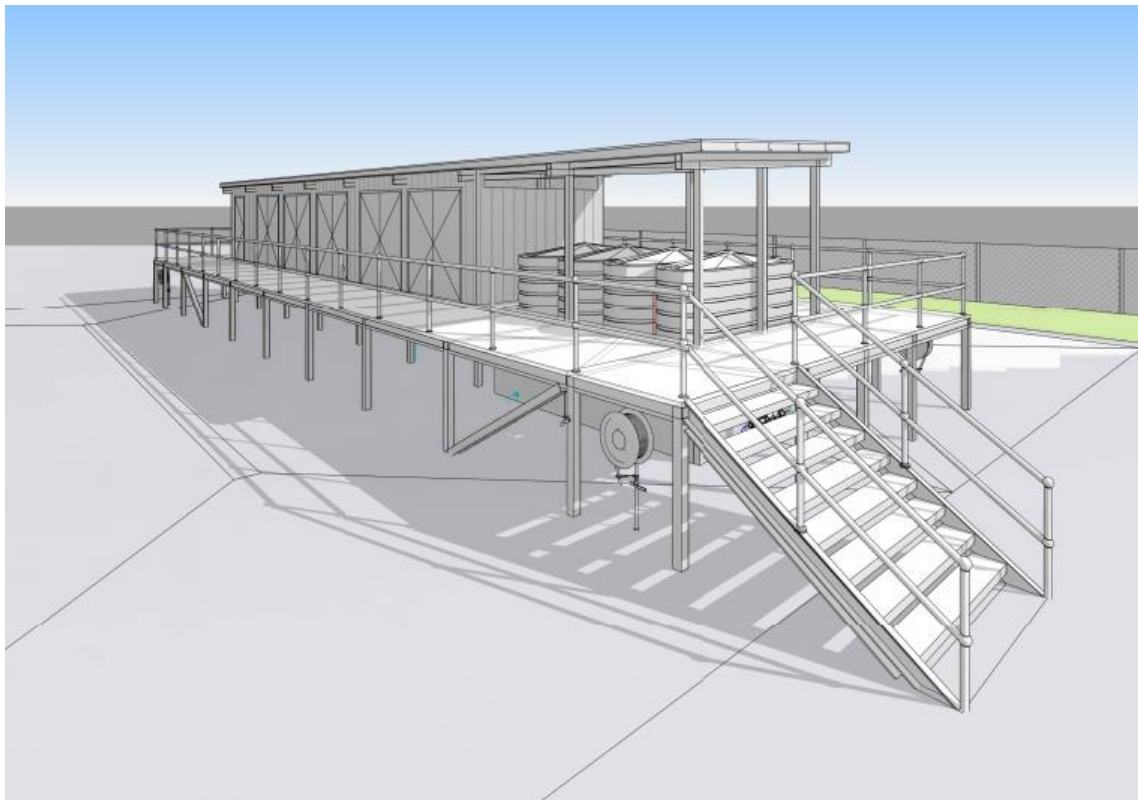


Figure 4 – Work Element 7 – New Vehicle Wash Point, Delamere Air Weapons Range, Northern Territory.

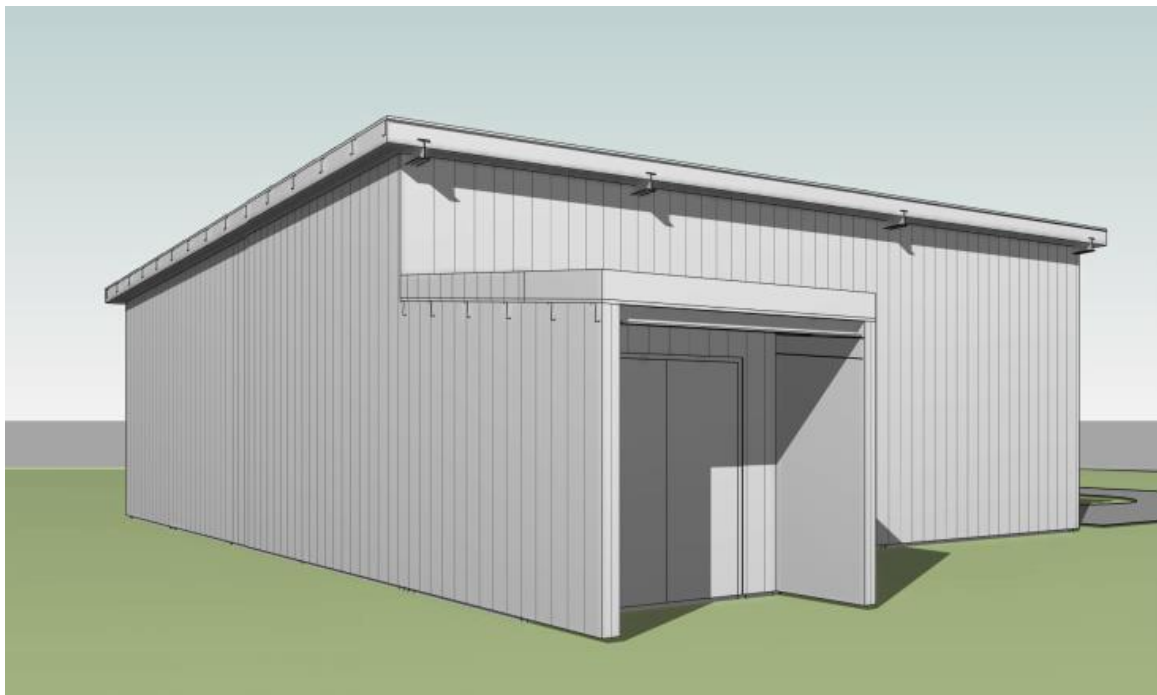


Figure 5 – Work Element 10 – Upgrades to Existing Range Operations Centre Communications Building, Delamere Air Weapons Range, Northern Territory.