



Australian Government

Defence

**GUIDED WEAPONS AND EXPLOSIVE
ORDNANCE STORAGE PROGRAM
TRANCHE 2**

Defence Establishment Orchard Hills, New South Wales

**STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS**

June 2024

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Guided Weapons and Explosive Ordnance Storage Program Tranche 2

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 enquire into, proposed works under the Guided Weapons and Explosive Ordnance Storage Program Tranche 2 (the Project).

Executive Summary

2. The aim of the Project is to meet the increased Guided Weapons and Explosive Ordnance (GWEO) storage requirements through the provision of earth covered buildings and associated infrastructure to enable planned GWEO acquisitions and strategic stockpiling requirements.

3. The Project's estimated total capital out-turned cost is \$244.9 million (excluding Goods and Services Tax). The cost estimate includes project management and design fees, construction, information and communications technology, furniture, fittings, equipment, contingencies, and a provision for escalation. As a result, there will be ongoing operating and sustainment costs. No revenue is expected to be generated by these works.

4. The Project will promote opportunities for small and medium local enterprises through construction trade packages, and provide employment opportunities in the Western Sydney region. There will also be opportunities for Indigenous businesses to be involved in the Project, in accordance with the Government's Indigenous Procurement Policy.

5. The Project works will be designed and constructed in accordance with relevant legislation, standards, codes, guidelines and Defence policies. Accredited building certifiers will certify the compliance of the design and completed works.

6. Detailed environmental and heritage investigations have been completed. The Project will have a moderate impact on existing environmental and heritage values due to the impact on landscape, soils, and the demolition of buildings. The Project has been designed to minimise ecological impacts during both construction activities and operations.

Purpose of the Works

Aim of the Project

7. The aim of the Project is to support increased GWEO Storage requirements by providing earth covered buildings and associated infrastructure, including a non-explosive ordnance storage building, non-explosive dangerous goods stores, and engineering services at the Defence Establishment Orchard Hills, New South Wales.

Location of the Project

8. The Project will be delivered at the Defence Establishment Orchard Hills, which is located approximately nine kilometres south of Penrith, New South Wales. **Attachment 1** depicts the location of the proposed works.

Need for the Project

9. The 2020 Force Structure Plan directed Defence to develop options to increase supplies of munitions through an increase in weapon inventory across the Australian Defence Force to ensure weapons stock holdings are adequate to sustain combat operations.

10. The 2023 Defence Strategic Review refocused planning priorities based on a deteriorating strategic environment, resulting in a reduced strategic warning time for preparedness. As part of the strategic refocus, GWEO infrastructure and logistics were identified as key elements required to be located strategically for effective power projection and sustainment. For accelerated preparedness, the Defence Strategic Review set specific GWEO objectives, establishing required GWEO stocks and rapid acquisition of stock from existing suppliers, exploring alternative supply options, and boosting domestic production capacity.

11. To achieve these strategic aims, the current GWEO storage network requires expansion to support Defence's commitment to provide a self-reliant and resilient GWEO supply chain. The Project supports this increase in weapon inventory by delivering additional modern explosive ordnance storage facilities, supporting functionality and capability outcomes delivered by the procurement of next generation guided weapons.

Proposed Facilities Solution

12. Defence has undertaken comprehensive master planning, site investigations, stakeholder consultation, whole-of-life cost analysis and design development to establish the capital facilities and infrastructure works required under the Project.

13. The proposed works are as follows:

a. increase GWEO storage facilities by providing earth covered buildings;

- b. provide increased non-explosive ordnance storage, including a non-explosive ordnance store, material handling and equipment building, and non-explosive dangerous goods store;
- c. upgrade and undergrounding of electrical supply infrastructure to address insufficient high voltage supply; and
- d. provide associated infrastructure and engineering services upgrades required for the new facilities.

Options Considered

- 14. Defence has developed the following four options:
 - a. **Option 1 – Do Nothing.** This option does not deliver any works and does not provide the required GWEO storage capacity to meet Defence’s requirement.
 - b. **Option 2 – Reduced Capability** This option will deliver 12 earth covered buildings, supporting facilities and associated infrastructure. This option does not meet the GWEO storage capacity requirements for currently planned explosive ordnance stocks.
 - c. **Option 3 – Minimum Viable Capability.** This option will deliver 14 earth covered buildings, supporting facilities and associated infrastructure. This option meets the minimum viable capability to support GWEO storage capacity requirements to Financial Year 2028-29.
 - d. **Option 4 – Full Scope.** This option will deliver 17 earth covered buildings, supporting facilities and associated infrastructure. This option exceeds the minimum viable capability to support ongoing GWEO storage capacity requirements.
- 15. **Preferred option:** Option 3 (Minimum Viable Capability) is the preferred option as it meets the minimum viable capability, is within the Project’s approved budget and represents the best value for money solution for the Commonwealth.

Scope of Project Works for the Preferred Option

- 16. The preferred option includes the following work elements:
 - a. Work Element 1 - Earth Covered Buildings. These buildings are the safest means for storage of GWEO.

- b. Work Element 2 - Non-Explosives Dangerous Goods Building. This building is required for the storage of dangerous goods and components of GWEO.
- c. Work Element 3 - Non-Explosive Ordnance Storage Building. This building is required for the palletised receipt, dispatch, and storage of non-explosive ordnance goods.
- d. Work Element 4 - Material Handling Storage. This building is required for the receipt, dispatch, and storage of materials handling and packaging equipment.
- e. Work Element 5 - Civil Infrastructure. Vehicle and pedestrian pavements are required to access the new facilities.
- f. Work Element 6- Electrical Infrastructure. Upgrades to the base electrical infrastructure are required to remediate insufficient electrical supply to the new facilities.

Planning and Design Concepts

- 17. The design of the proposed facilities provides for the functionality associated with the prescriptive nature of explosive ordnance licensing, including handling and maintenance.
- 18. 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 the Defence standard earth covered building design;
 - c. applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life; and
 - d. providing flexible services and infrastructure to accommodate an appropriate level of growth.

Relevant Legislation, Codes and Standards

- 19. The following legislation, standards, codes, and guidelines are applicable:
 - a. *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)*;
 - b. *Fair Work (Building Industry) Act 2012 (Cth)*;
 - c. *Work Health and Safety Act 2011 (Cth)*;
 - d. *Disability Discrimination Act 1992 (Cth)*;
 - e. *Fair Work Act 2009 (Cth)*;
 - f. *Public Works Committee Act 1969 (Cth)*;

- g. *Building and Construction Industry Improvement Amendment (Transition to Fair Work) Act 2012 (Cth);*
- h. Safe Work Australia Codes of Practice;
- i. Australian/ New Zealand Design Standards;
- j. National Construction Code (NCC) 2022;
- k. *Defence Act 1903 (Cth);*
- l. *Native Title Act 1992 (Cth);*
- m. Department of Defence Explosives Publications (DEOP), specifically eDEOP 101
Department of Defence Explosives Regulations;
- n. Defence Manual of Fire Protection Engineering (MFPE);
- o. Defence Manual for Infrastructure Engineering Electrical (MIEE);
- p. Defence Smart Infrastructure Manual;
- q. Defence Infrastructure Management policies and processes;
- r. Defence Estate Quality Management System;
- s. Other Commonwealth Legislation:
 - (1) *Ozone Protection Act 1989;*
 - (2) *Ozone Protection and Synthetic Greenhouse Gas Legislation Amendment Act 2003;*
 - (3) *Aboriginal and Torres Strait Islander Heritage Protection Act 1984;*
 - (4) *Australian Heritage Commission Act 1975;*
- t. State Legislation:
 - (1) *NSW National Parks and Wildlife Act 1974;*
 - (2) *NSW Biodiversity Conservation Act 2016.*

20. An accredited building certifier will certify the compliance of the design and the completed works. Construction compliance with the design will be assured using approved quality management systems, which will implement processes including independent inspections, audits, and testing.

Land and Zoning

21. The Deerubbin Aboriginal Land Council has been engaged throughout the development of the Project, with risks to heritage managed through the Defence Establishment Orchard Hills Heritage Management Plan.

22. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments for Defence Establishment Orchard Hills, align with the Defence Estate Strategy Implementation Plan 2016-2036 and meet all Explosive Ordnance Regulations.

23. Site Selection Boards were completed for all proposed new buildings to ensure developments are consistent with both approved estate plans and the Defence Estate 'Principles of Development'. Site Selection Board assessments considered the suitability of sites for proposed functions, the locations of related functions, access to services and infrastructure, and radio frequency and line of sight considerations.

Structure

24. The proposed structures have been designed in accordance with the local geotechnical profile at the Defence Establishment Orchard Hills. The Earth Covered Buildings are a solid concrete structure covered in earth with a steel blast proof entrance door. The Project will utilise the Defence standard design that has been successfully implemented on other projects, standardising design, and achieving delivery efficiencies.

25. The other proposed structures will be single storey steel portal frame structures with large roller shutter doors, metal sheet roofing and metal sheet cladding.

26. The floors to all structures will be reinforced concrete slabs, finished to a high degree of flatness to enable the safe operation of materials handling equipment.

Mechanical Services

27. 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

28. There are no hydraulic service requirements within the earth covered buildings. The other buildings will have hydraulic services provided for the amenity and working spaces including sewerage and storm water services to suit design requirements. Potable water will connect to the existing supply via sub-metering to each new building. An onsite wastewater treatment system will service the material handling and equipment store.

Electrical Services

29. Lighting, power, and lightning protection will be provided in accordance with Australian Standards, Defence engineering, and Explosive Ordnance requirements. Electrical infrastructure and switchboards will have spare capacity to allow for future growth or demand. Sub-metering will be built-in for each new building, and the equipment

will have the ability to connect to the site-wide Building Management System, which will support an active energy management program at the Base.

Fire Protection

30. The Manual of Fire Protection Engineering details Defence fire protection policies for asset protection and building function protection. The Manual of Fire Protection Engineering notes that direct attack on a fire within or adjacent to Explosive Ordnance storage buildings presents an unacceptable risk to staff and firefighters. Dispensations to the Building Code of Australia will be sought, to either reduce or omit the provision of fire hydrants and reels to Explosive Ordnance storage buildings.

31. The Project has assessed the asset classification and criticality to determine the fire protection systems to be implemented in the facilities. General upgrades to the fire systems within existing facilities have been included.

Bushfire Protection

32. A bushfire assessment has been completed for the site. This assessment will ensure the design achieves the required bush-fire protection, satisfies legislative requirements for the assessment of development in bush-fire prone land, and addresses the assessment and reporting requirements in the Manual of Fire Protection Engineering.

33. Existing bushfire hydrants along the perimeter of the existing fence will be demolished to allow for the new earth covered buildings. New bushfire hydrants will be constructed along the new fence line and will be installed early in delivery to ensure active bushfire protection is present on site during the remaining phases of the Project.

Security Measures

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

Acoustics

35. The new facilities will comply with National Construction Code and Australian Standards for noise and acoustics. Acoustic separation has been considered in construction elements.

36. Vibration isolation of all equipment will comply with recommended vibration levels as set out in the applicable Australian Standards and Defence Regulations.

Work Health and Safety

37. 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 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.

38. Safety aspects of the Project have been addressed during design development and have been documented in a safety in design report completed by each contractor. A work health safety plan will be developed for the construction phase prior to the commencement of any construction activities.

39. As the proposed facilities are to be constructed within an operating Explosive Ordnance environment, the Head Contractor will be required to agree to an Explosive Ordnance Cooperation, Consultation and Coordination Plan. This plan, based on the principle of risk associated with Explosive Ordnance activated being ‘so far as reasonably practical’, identifies risks, risk mitigation, site access and operating protocols during construction.

Materials and Furnishings

40. Materials and furnishings will be sought from readily available local suppliers where possible selected against functionality, durability, low maintenance and ecologically sustainable design properties.

Landscaping

41. The Project site is located on previously cleared land and the proposed new landscaping works will complement existing site conditions. Design will focus on a functional, low maintenance, water sensitive approach and consist of indigenous plants.

42. 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

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

Provisions for People with Disabilities

44. Access for people with disabilities will be provided in accordance with the BCA, Australian Standard AS1428, Defence's Disabled Access and Other Facilities for Disabled Persons policy and the *Disability and Discrimination Act 1992 (Cth)*.

Environmental Sustainability

45. 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, inclusive of the following:

- a. **Energy targets.** The Project will meet the requirements of the Defence Building Performance Manual, which sets out Defence Policies and requirements for energy and resource efficiency to reduce greenhouse gas emissions for Defence Buildings. The scope of the Project works will not deliver buildings that are classified as office or residential use structures under the National Construction Code and will not be required to meet the Commonwealth Energy Efficiency in Government Operations policy. The Project will adopt measures during design to minimise waste in all design elements.
- b. **Measures to reduce energy and water use.** The buildings' utility infrastructure and mechanical services will be selected to enable the equipment to operate safely and efficiently within a temperature range suitable to minimise energy demand and consumption.
- c. **Demolition and disposal of existing structures.** Hazardous materials will be disposed of in accordance with the requirements of the Hazardous Materials Assessment.

Potential Impacts

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

- a. **Visual Impacts.** The site is remotely located within the Defence Establishment Orchard Hills. Works across the site are not visible to the public and are not accessible for public use. The works have been designed to minimise the aesthetic impact to the existing and natural environment.

- b. **Noise and Duet Impacts.** During construction there will be some temporary and localised impact from noise, dust, and traffic. Control strategies will be in place to ensure the Workplace Noise Regulations are adhered to, such as limiting hours of operation, covering, or wetting down stockpiled materials or exposed soil. Any noise complaints that arise during operations will be managed through the standard procedure for response to public concerns.
- c. **Heritage Impacts.** Heritage surveys have been completed during the investigation of the design. There is no expected impact to Aboriginal Heritage, Historic Heritage, or Natural Heritage. If a heritage artefact is discovered during construction, the Head Contractor will be required to comply with Defence's Heritage Finds Process as outlined in their Environmental Management and Heritage Plan.
- d. **Traffic, Transportation and Road Impacts.** The Project expects an increase in the number of large vehicles entering the base during the delivery phase. Management controls will be implemented to mitigate the effects of this increased traffic on local road networks. The Project expects minimal impact to traffic, transportation and road use due to the recent Northern Road upgrade completed by local government to accommodate the expected increase in vehicle traffic due to the new Western Sydney Airport and population growth in the area. The Northern Road upgrade included signalised entry to the base increasing road safety for vehicles entering and exiting the Defence Establishment Orchard Hills.
- e. **Relevant Local Facilities.** The Project will not impact any existing local facilities due to the remote nature of the site.
- f. **Community Impact.** The impact on local community is assessed as positive for the supply of local services, resources, and material during construction. The Project is likely to generate employment opportunities in the local area during the construction phase requiring a diverse range on consultants, contractors, and construction workers.

47. 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

48. Detailed site investigations for contamination have been completed as part of the Environmental Review, the investigations note the below;

- a. The Unexploded Ordnance survey identified potential unexploded ordnance and burial pit for further investigation and clearing as part of the project works.
- b. Unexploded ordnance testing has been undertaken for the first 500mm on existing stockpiles for removal. Further progressive testing is required for every 500mm during earthworks removal works.
- c. Geotechnical and Contamination investigations identified potential sources of contamination such as fill materials, asbestos containing buildings and Polyfluoroalkyl Substances. The Construction Environmental Management Plan will include environmental control measures to ensure contaminated material is managed in accordance with relevant legislation, codes, and standards.

Consultation with Key Stakeholders

49. 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. Defence has engaged with a variety of internal and external stakeholders during Project development to date, including:

- a. Federal Member for Lindsay, Mrs Melissa McIntosh MP;
- b. State Member for Badgerys Creek, Mrs Tanya Davies MP;
- c. Mayor of Penrith, Mr Todd Carney;
- d. Penrith Valley Chamber of Commerce, Mr Richard Fox;
- e. Darug Ngurra Aboriginal Corporation, Mrs Corina Wayali Norman; and
- f. Deerubbin Local Aboriginal Land Council, Mr Athol Smith.

Related Projects

50. The following Projects relate to the Project:

- a. Guided Weapons and Explosive Ordnance Storage Tranche 1 Program involves the delivery of three earth covered buildings across two sites at RAAF Base Amberley and HMAS *Stirling*. Tranche 1 works precede this Project to deliver critical Explosive Ordnance storage capacity by March 2025.
- b. Explosive Ordnance Facilities Northern NSW Redevelopment Project will deliver critical facilities and infrastructure upgrades at the Defence Establishment Orchard

Hills. The Project will upgrade base facilities and infrastructure to support administration, base security, new Explosive Ordnance Training School, living-in accommodation and supporting wellbeing facilities for residential training courses.

Cost Effectiveness and Public Value

Project Costs

51. The Project's estimated total capital out-turned cost is \$244.9 million (excluding Goods and Services Tax). This cost includes project management and design fees, construction, information and communications technology, furniture, fittings, equipment, contingencies, and a provision for escalation.

52. There will be ongoing operating and sustainment costs resulting from the proposed works. This is due to the new buildings and facilities being constructed under the Project.

Project Delivery System

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

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

55. An Early Contractor Involvement Head Contractor has been engaged to provide constructability input throughout the design phase. It is envisaged that the Head Contractor will be retained for the Project's delivery phase. This form of delivery provides the Commonwealth with direct control over the design and quality of the Project through early input into the design phase. This delivery methodology will also assist to promote opportunities for small to medium enterprises by sub-contracting construction trade packages.

Construction Program

56. Subject to Parliamentary approval, construction is expected to commence in late-2024 and be completed by late-2026.

Public Value

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

- a. **Meeting capability needs.** The proposed facilities will contribute to the on-going effectiveness of Australia's Defence capability, by directly supporting operations and training activities.
- b. **Economic impacts.** The Project expenditure will support the Australian economy, primarily in the construction and professional services sectors in Western Sydney and surrounding regions.
- c. **Employment opportunities.** The Project will employ a diverse range of skilled 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.
- d. **Local industry and Indigenous business involvement opportunities.** Defence and the Head Contractor will actively promote opportunities for small and medium local enterprises through construction trade packages. The Head Contractor will develop a Local Industry Capability Plan and an Indigenous Participation Plan to detail local industry engagement and maximise opportunities for local industry and Indigenous businesses, while providing value for money to the Commonwealth.

Below the Line Items

58. The Project has identified and prioritised below-the-line scope items that are currently unable to be funded within the Project's approved budget. In the event the Project experiences trade savings through tendering or the retirement of risk provision during delivery, the following additional scope items may be delivered:

- a. additional earth covered buildings to support increased inventories of GWEO; and
- b. additional upgrades to electrical infrastructure to ensure facility resilience and continuous source of power.

Revenue

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

Attachments

1. Location of the Project
2. Selection of Proposed Works

Attachment 1

Location of the Project



**Defence Establishment
Orchard Hills**

Selection of Proposed Works

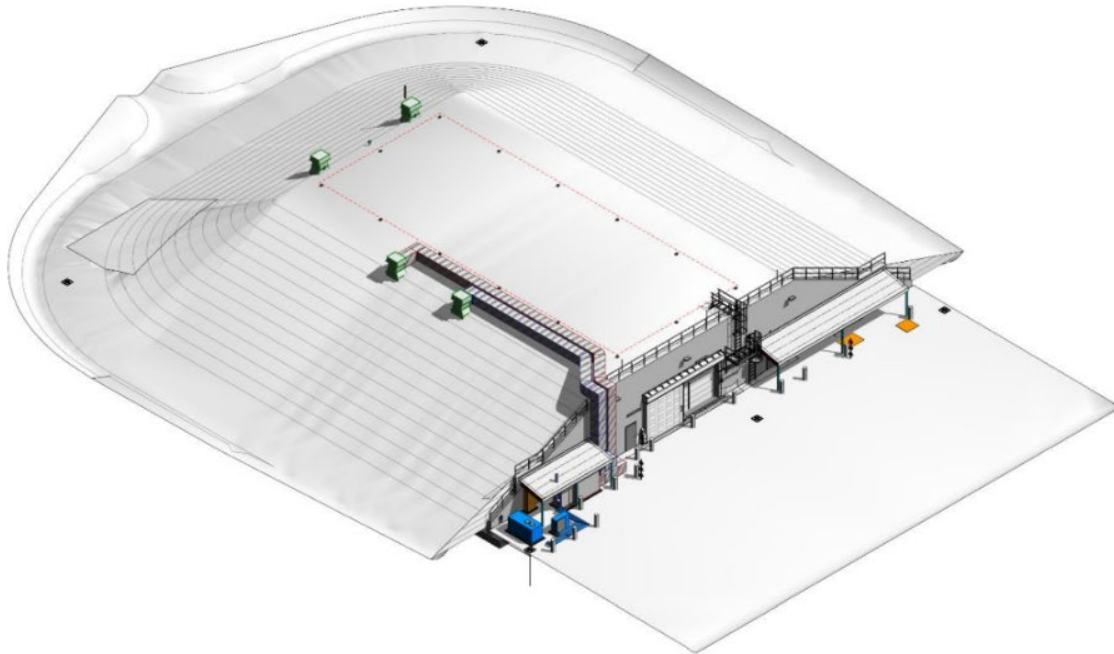


Figure 1 – Earth Covered Building

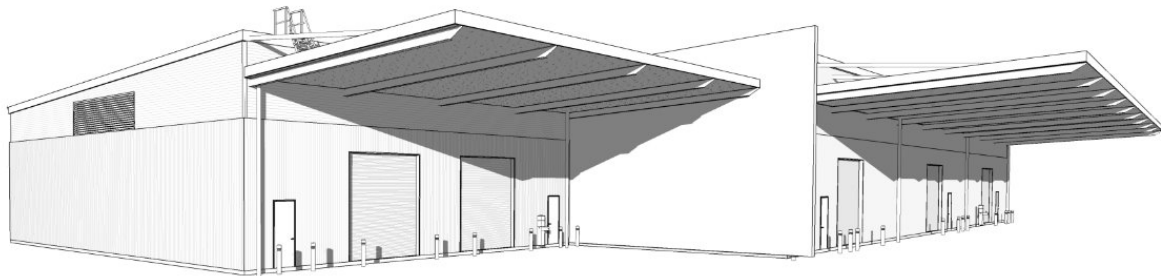


Figure 2– Non Explosive Ordnance Store Perspective