Australian Government

Defence

EDINBURGH DEFENCE PRECINCT

MID TERM REFRESH

Adelaide, South Australia

STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

July 2023

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Edinburgh Defence Precinct Mid Term Refresh

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 Edinburgh Defence Precinct Mid Term Refresh (the Project).

Executive Summary

2. The aim of the Project is to deliver new and upgraded engineering services and associated facilities and infrastructure across the Edinburgh Defence Precinct, thereby delivering enhanced resilience and redundancy to support Defence strategic objectives.

3. The estimated total capital out-turned cost of the Project is $311.9 million (excluding Goods and Services Tax). The cost estimate includes management and design fees, construction, information and communications technology, a provision for escalation and contingencies. As a result of these works, there will be ongoing operating and sustainment costs. No revenue is expected to be generated by these works.

4. Defence, together with the Managing Contractor, will promote opportunities for small and medium local enterprises through construction trade packages, providing employment opportunities in the Adelaide region. There will also be opportunities for Indigenous business involvement in accordance with the Government's Indigenous Procurement Policy.

5. 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.

6. 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

7. The aim of the Project is to replace or upgrade engineering services and associated facilities and infrastructure that are aged and approaching the end of useful life, have capacity and compliance issues, and pose risks to current and future functions, thereby

delivering enhanced resilience and redundancy across the Edinburgh Defence Precinct to support important Defence activities conducted on the precinct.

Location of the Project

8. The Project will be delivered across the Edinburgh Defence Precinct, including:

a. RAAF Base Edinburgh

b. Defence Science and Technology - Edinburgh.

Need for the Project

9. The 2023 Defence Strategic Review[1] notes the importance of foundational estate and infrastructure for Defence. The Edinburgh Defence Precinct is a key national defence research and intelligence surveillance and reconnaissance hub[2]. To support the generation and sustainment of current and future capability, the Government will continue to invest into this strategically important site for Defence.

10. The Australian Defence Force requires Defence bases in Australia that can support multiple Defence Service groups operating concurrently to accommodate current and emerging capability requirements. RAAF Base Edinburgh and Defence Science and Technology - Edinburgh are enduring Defence sites.

11. RAAF Base Edinburgh supports intelligence, surveillance, reconnaissance and research operations, land combat functions and administrative and personnel functions to support Australian Defence Force personnel in the South Australian region.[3] The base also supports Air Force cadet units.

12. Defence Science and Technology - Edinburgh supports national Defence research working closely within the Australian science, technology and innovation fields to deliver scientific advice and solutions that provide capability enhancement for the Australian Defence Force and the national security community.[4]

13. The Project directly supports Defence's strategic objectives by reinvesting in engineering services and associated facilities and infrastructure to sustain the two sites now and into the future. In addition, the Project will enhance estate resilience and redundancy to ensure that the Australian Defence Force maintains operational efficiency.

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[1] https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review
[2] https://www.defence.gov.au/about/locations-property/base-induction/edinburgh-defence-precinct
[3] Welcome to Edinburgh Defence Precinct Annual Handbook 2021
[4] https://www.dst.defence.gov.au/discover-dst/our-role

Proposed Facilities Solution

14. Defence has undertaken comprehensive master planning, site investigations, stakeholder consultation, whole-of-life cost analysis and design development to establish the engineering services and infrastructure works required to address the Project need.

15. The Project proposes to deliver new and upgraded engineering services, including the high voltage power network, fire water, sewer and stormwater, and associated facilities infrastructure to support base operational requirements.

Options Considered

16. Defence has developed four options:

a. **Option 1 – Do nothing.** This option considers the impact of not investing in facilities. Existing engineering services and infrastructure, in particular the high voltage power network, have numerous capacity and compliance issues and risks and this option does not address any of these. It would not sustain the two sites to support current and future capability requirements and is considered not viable.

b. **Option 2 – Minimum scope.** This option provides a minor increase in available high voltage power supply and provides limited scope for other engineering services and infrastructure. This option does not fully support current and future estate capability requirements and is not recommended.

c. **Option 3 – Minimum scope plus limited additions.** This option will double the available high voltage power supply and provide limited scope for other engineering services and infrastructure. This option does not fully support current and future capability requirements and is not recommended.

d. **Option 4 – Full Scope.** This option provides fit-for-purpose engineering services and infrastructure that will address all capacity and compliance issues and risks and sustain the two sites to support current and future capability requirements. This option is the preferred option.

17. **Preferred option.** Option 4 is assessed as the preferred option as it represents the best value for money solution to the Commonwealth to address the need from a whole of life perspective and ensuring ongoing support to important Defence activities conducted on the precinct.

Scope of Works Proposed for the Preferred Option

18. The recommended Option 4 includes the following Project elements:

a. **Project Element 1 – Electrical Infrastructure Upgrade Stage A:**

(1) High Voltage Cabling

(2) New Central Emergency Power Station (RAAF Base Edinburgh only)

(3) Substation replacements

(4) Control System Upgrade

(5) Switching Station buildings.

b. **Project Element 2 - Electrical Infrastructure Upgrade Stage B:**

(1) High Voltage cabling

(2) new Central Emergency Power Station (Defence Science and Technology - Edinburgh only)

(3) Substation replacements

(4) Control System upgrade

(5) Switching Station buildings.

c. **Project Element 3 – Electrical Infrastructure Upgrade Stage C:**

(1) Switching Station buildings

(2) reconfigure switching station buildings

(3) High Voltage cabling

(4) additional capacity in New Central Emergency Power Stations.

d. **Project Element 4 – Civil Infrastructure at RAAF Base Edinburgh:**

(1) new fire water and potable water pipework

(2) fire water infrastructure upgrade and extension to separate the potable water and fire water network

(3) replace or remediate existing sewer infrastructure

(4) upgrades to existing stormwater network.

e. **Project Element 5** – **Civil Infrastructure at Defence Science and Technology - Edinburgh:**

(1) new fire water and potable water pipework

(2) new fire water infrastructure to separate the potable water and fire water network

(3) replace or remediate existing sewer infrastructure

(4) upgrades to existing stormwater network.

Planning and Design Concepts

19. 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
b. adopting 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.

Relevant Legislation, Codes and Standards

20. 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 (Improving Productivity) Act 2016 (Cth)*
h. *Building and Construction Industry Security of Payment Act 2009 (SA)*
i. *Planning, Development and Infrastructure Act 2016 (SA)*
j. Safe Work Australia Codes of Practice
k. Australian/New Zealand Design Standards
l. National Construction Code - Building Code of Australia
m. National Electricity Rules
n. Plumbing Code of Australia
o. Defence Estate Resources Information Kiosk
p. Defence Estate Principles of Development
q. Defence Smart Infrastructure Manual
r. Defence Manual for Infrastructure Engineering Electrical
s. Defence Manual of Fire Protection Engineering
t. Defence Security Manual
u. Defence Security Principles Framework
v. Defence Heritage Strategy
w. Defence Engineering Services Network Standard
x. Defence Facilities Communications Cabling Standards.

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

Land and Zoning

22. Indigenous group, the Kaurna Aboriginal people are the Traditional Owners of the Adelaide Plains in South Australia. As such, they have a connection with the Edinburgh Defence Precinct and the management of risks to their heritage is managed through the current Edinburgh Defence Precinct Heritage Management Plan.

23. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments, including the Edinburgh Defence Precinct Estate Base Plan and the Defence Estate Principles of Development.

24. The Project does not involve the acquisition, disposal or leasing of any land or property by Defence. There are no required or proposed changes to zoning because of the Project. The location only requires Local or State Government approval for high voltage cables to pass beneath the public road that separates the two sites. A new easement will be required between the City of Salisbury and the Commonwealth for any high voltage cables that are not routed through the easements that already exist for high voltage cables.

Structure

25. The Project only delivers buildings to house infrastructure equipment. As such, the structures have been designed according to the local geotechnical profile and the specialist high voltage electrical equipment operating within each building. The proposed new buildings will be structural steel and reinforced concrete framed structures with roofing appropriate to the purpose of the structures being high voltage equipment buildings.

Mechanical Services

26. The mechanical services are focused on building ventilation (including generator exhaust) and thermal control for the high voltage equipment within the buildings. 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 Building Code of Australia.

Hydraulic Services

27. The Project will remediate or replace parts of the existing sewer network that are in poor condition.

28. The electrical infrastructure buildings will require connection to existing hydraulic services. Existing sewerage and storm water services are proposed to be extended to each building to suit design requirements. Potable water will be connected to the existing supply via sub-metering to each new building. Roof water will be diverted into surrounding stormwater drains as none of the buildings has significant landscaping that can benefit from local retention of rainwater.

Electrical Services

29. New electrical infrastructure will be provided in accordance with Australian Standards and Defence engineering requirements.

30. Lighting, power and lightning protection for the buildings that house new infrastructure 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

31. Fire protection has been addressed through compliance with the Manual of Fire Protection Engineering and the Building Code of Australia. The Project has assessed the asset classification and criticality in order to determine the fire protection systems to be implemented in all facilities.

32. The Project includes upgrades and extensions to existing fire water mains across the two sites to improve the availability of water for fire protection across the precinct. This does not include upgrades within existing buildings across the sites.

Security Measures

33. The security design of the Project will ensure that any new buildings or infrastructure conform to the existing security system employed across both sites, and are consistent with security arrangements applied to existing buildings or infrastructure being replaced or upgraded.

Acoustics

34. The new buildings are equipment rooms related to utility infrastructure without permanent staffing. The new facilities will comply with the National Construction Code and Australian Standards for noise and acoustics. Acoustic separation has been considered between rooms and walls are being designed to meet user requirements.

Work Health and Safety

35. 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 (Improvement Productivity) Act 2016 (Cth)*, project 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. 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 safety plan will be developed for the construction phase prior to commencing any construction activities.

Materials and Furnishings

36. External walls for the new infrastructure equipment buildings will be a mixture of concrete panels and metal cladding. Windows are not required as the buildings are equipment rooms for utility infrastructure. Where required, pre-finished steel roofing and rainwater fittings have also been selected for their resilience to a marine environment.

Landscaping

37. The proposed new landscape works will be minor as the buildings are equipment rooms for utility infrastructure, however the landscaping selected will complement the character of each site. The design will focus on a functional, low maintenance, water sensitive approach with the use of Indigenous plants. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices in accordance with local environmental conditions and the Construction Environmental Management Plan.

Childcare Provisions

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

Provisions for People with Disabilities

39. Access for people with disabilities will be provided in accordance with the Building Code of Australia, Australia Standard 1428 and the *Disability and Discrimination Act 1992 (Cth).*

Environmental Sustainability

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

a. **Energy targets.** Energy performance targets will comply with the Defence Smart Infrastructure Manual where applicable.
b. **Use of renewable energy.** The Project will enable the Defence Renewable Energy and Energy Security Program to implement future solar power generation on site through coordination of design and configuration of the new buildings with that program.
c. **Measures to reduce energy and water use.** The buildings are equipment rooms for utility infrastructure, and mechanical services will be selected to enable the equipment to operate safely and efficiently within a temperature range suitable for the equipment to minimise the energy demand.
d. **Re-use of existing structures.** Existing intake switching station buildings will be re-purposed into primary switching stations following construction of the new intake switching stations.
e. **Demolition and disposal of existing structures.** Where existing utility infrastructure becomes surplus to requirement it will be diverted into the well-established recycling industries in the region.

Potential Impacts

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

a. **Visual Impacts.** There are no potential visual impacts to the local community. Works across the two sites are not visible to the public nor are they accessible to public use. All works have been designed to minimise the aesthetic impact to the natural environment.

b. **Noise Impacts.** There are no potential noise impacts to the local community as the generators are contained inside purpose-built buildings that are not adjacent to potential community receptors.

c. **Heritage Impacts.** The site selection process has considered the Edinburgh Defence Precinct Heritage Management Plan with a particular focus on utility route selection minimising Indigenous heritage risks. If a heritage artefact is discovered during construction, the Managing Contractor will comply with Defence's heritage finds process, which will be outlined in the contractor's environmental management and heritage plan.

d. **Traffic, Transportation and Road Impacts.** The Project has no tie-ins to the public road network and will construction traffic will utilise existing base access points.

e. **Maintaining Existing High Voltage Network during Switchover.** The Project will establish robust commissioning, handover and takeover processes that will be designed to avoid unplanned loss of power supply to the resident capabilities and functions on the precinct.

42. Defence has determined that the Project will not have a significant impact on existing environmental and heritage values and is not required to be referred to the Minister for the Environment and Water under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth).*

Consultation with Key Stakeholders

43. 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.

44. Defence has engaged with a variety of internal and external stakeholders during project development to date, and further consultation will be conducted to support the Parliamentary Standing Committee on Public Works' inquiry into the proposed works. These stakeholders include, but not limited to, the following:

a. Mr Matt Burnell MP, Federal Member for Spence

b. Mr Nick Champion MP, State Member for Taylor

c. Mrs Zoe Bettison MP, State Member for Ramsay

d. local council Mayors from the City of Salisbury and the City of Playford

e. Business SA – South Australia's Chamber of Commerce and Industry

f. representatives from the Traditional Owners – the Kaurna Aboriginal People.

Related Projects

45. The following proposed project has synergies or dependencies with the Project, and is subject to Government Approval:

a. **Defence Renewable Energy and Energy Security Program.** Solar photovoltaic and battery storage systems are being scoped for RAAF Base Edinburgh.[5] The Project will enable the future connection and integration of the future solar and battery system into the precinct network. The 2023 Defence Strategic Review considers climate change as it relates to Australia's national security, and this future initiative supports Defence's commitment to renewable energy and transition to clean energy.

46. This proposal has been considered against Defence's master planning and services infrastructure solutions and has been integrated in the Project's design to enable integration for efficient operations.

47. The most recently approved major capital works projects across Edinburgh Defence Precinct include:

a. AIR7000 Phase 1B Remotely Piloted Aircraft System Facilities Project, approved by Parliament in 2022[6] at a cost of $427.1 million, and currently being delivered at both RAAF Base Edinburgh and RAAF Base Tindal, Northern Territory.

b. AIR555 Phase 1 Airborne Intelligence Surveillance Reconnaissance Electronic Warfare Capability Facilities Works Project, approved by Parliament in 2020[7] at a cost of $293.65 million, and currently being delivered at several Defence bases, including RAAF Base Edinburgh.

c. Defence High Performance Computing Centre, approved by Parliament in 2018[8] at a cost of $68.8 million. This project was completed in 2021 at Defence Science and Technology - Edinburgh.

Cost Effectiveness and Public Value

[5] Defence Annual Report 2021-22
[6] Department of Defence — AIR7000 Phase 1B Remotely Piloted Aircraft System Facilities Project – Parliament of Australia (aph.gov.au)
[7] AIR 555 Phase 1 Airborne Intelligence Surveillance Reconnaissance Electronic Warfare Capability Facilities Works – Parliament of Australia (aph.gov.au)
[8] Defence High Performance Computing Centre – Parliament of Australia (aph.gov.au)

Project Costs

48. The estimated total capital out-turned cost of the Project is $311.9 million (excluding Goods and Services Tax). The cost estimate includes management and design fees, construction costs, information and communications technology, equipment, and a provision for escalation and contingencies.

49. An increase in operating costs across the two sites is expected as a result of the proposed works. This is due to the expansion and capacity upgrade to the high voltage power network, including two new central emergency power station buildings. The increase is also impacted to a lesser extent by the expansion of the firefighting system.

Project Delivery System

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

51. A Managing Contractor will be appointed to complete the design, procure trade sub-contractors and manage the construction of the works. The Managing Contractor form of delivery provides the Commonwealth with buildability input into the design while promoting opportunities for small to medium enterprises by sub-contracting design and construction trade packages.

Construction Program

52. Subject to Parliamentary approval, design activities are expected to be complete by early 2024, with construction expected to commence from early 2024 for completion in mid 2027.

Public Value

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

a. **Economic impacts.** The Project will actively promote opportunities for small to medium enterprises through construction trade packages.
b. **Employment opportunities.** The Project is expected to generate employment opportunities for a diverse range of consultants, contractors and construction workers, and for up-skilling and job training to improve individual skills and employability on future projects. Defence anticipates that, over the life of the Project, up to 100 personnel will be provided with employment opportunities.

c. **Local Industry and Indigenous Business involvement opportunities.** The Project must comply with the Government Policy for Local Industry Participation, which requires the Managing Contractor to provide detailed commitments on how they will utilise and develop Australian industry. These commitments will become contract deliverables and the Managing Contractor will be required to report on their performance against them. While the policy does not mandate the use of local suppliers, the Project will provide local businesses with opportunities to supply construction materials and labour, and will actively promote opportunities for small to medium local enterprises through construction trade packages. In accordance with the Government's Indigenous Procurement Policy, the Managing Contractor will develop an Indigenous Participation Plan, which will provide opportunities for Indigenous businesses to be involved in the Project.

d. **Existing infrastructure services.** The Project will improve and upgrade existing infrastructure services by addressing existing critical compliance and capacity issues. All works conducted by Defence will be located within land owned by the Commonwealth for use by Defence, or under an easement. SA Power Networks will own the new power supply infrastructure that they will deliver to upgrade the existing power capacity across the two sites. The new SA Power Networks feeder may provide benefits to users along the route that SA Power Networks uses to bring the new supply to the precinct.

Below the Line Items

54. In the event that savings are achieved through tendering or retiring risk provision, Defence proposes to utilise the savings to enhancements that are consistent with the approved Project scope, including:

a. additional high voltage cabling
b. a Substation Automation System
c. increase the extent of sewer relining or implement minor sewer extensions and modifications
d. increase the extent of potable and/or fire water main expansion or replacement
e. increase the extent of stormwater system upgrades.

Revenue

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

Attachment

1. Locality Plan

Attachment 1: Locality Plan