Australian Government

Defence

FACILITIES TO SUPPORT JP9101 PHASE 1 ENHANCED DEFENCE HIGH FREQUENCY COMMUNICATIONS SYSTEM – 'PROJECT PHOENIX'

Lyndoch and Morundah (NSW)

Bohle River and Speed Creek (QLD)

Humpty Doo, Shoal Bay, Mount Bundey Training Area (NT)

Exmouth and Rough Range (WA)

Russell and HMAS *Harman* (ACT)

STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

May 2023

[This page intentionally blank]

Table of Contents

Facilities to Support JP9101 Phase 1 Enhanced Defence High Frequency Communications System – 'Project Phoenix'

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 Facilities to Support JP9101 Phase 1 Enhanced Defence High Frequency Communications System – 'Project Phoenix' (the Project).

Executive Summary

2. The aim of the Project is to provide fit for purpose facilities to support the Enhanced Defence High Frequency Communications System.

3. The Project will be delivered at Rough Range and Exmouth (WA); Mount Bundey Training Area, Humpty Doo and Shoal Bay (NT); Speed Creek and Bohle River (QLD); Morundah and Lyndoch (NSW), and Russell and HMAS *Harman* (ACT).

4. Proposed works include refurbishments of control buildings, engineering services and infrastructure at existing sites, and the construction of a new site at Mount Bundey Training Area. The Project also includes construction of inter-site links (in-ground fibre optic cable) between receive and transmit sites (regional paired sites).

5. The estimated total capital out-turned cost of the Project is $280.2 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. No revenue is expected to be generated by these works.

6. Defence, together with the Head Contractors, will actively promote opportunities for small and medium local enterprises through construction trade packages, providing employment opportunities in the five regions. There will also be opportunities for Indigenous business involvement in accordance with the Government's Indigenous Procurement Policy.

7. 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. A work health and safety plan will be required to be developed for the construction phase prior to the commencement of any construction activities.

8. Environmental and heritage investigations have been completed and the Project will not have significant impact on existing environmental and heritage values. The Project has been designed to minimise ecological impacts for both construction activities and operations and several mitigation and management measures will be incorporated accordingly.

Purpose of the Works

Aim of the Project

9. The primary role of the Enhanced Defence High Frequency Communications System is to provide reliable, automated and survivable long range high frequency radio communications capable of supporting command and control, tactical data exchange and Internet Protocol communications; a primary bearer for users without access to satellite communications; and an alternate bearer for satellite communications users.

10. The enhanced system requires facilities and infrastructure upgrades to support the installation and sustainment of the new capability. The Project will also develop resilience in the system by providing redundancy in the cable links between transmit and receive sites.

Location of the Project

11. The Project will deliver two network management facilities in Canberra at Russell and HMAS *Harman*, ACT, as well as paired transmit and receive sites at locations across Australia:

a. **Western Australia.** Rough Range (approximately 50 kilometres south of Exmouth) and Exmouth (3 kilometres north of Exmouth township)

b. **Northern Territory.** Mount Bundey Training Area (approximately 130 kilometres southeast from Darwin), Humpty Doo (approximately 55 kilometres southeast of Darwin), and Shoal Bay (approximately 27 kilometres northeast of

Darwin). Mount Bundey is a new site and the existing High Frequency infrastructure at Shoal Bay will be decommissioned

c. **Queensland.** Speed Creek (approximately 68 kilometres southwest of Townsville), and Bohle River (approximately 12 kilometres west of Townsville)

d. **New South Wales.** Morundah (approximately 100 kilometres west of Wagga Wagga) and Lyndoch (approximately 37 kilometres west of Wagga Wagga).

12. Attachments 1 and 2 illustrate the national and regional site locations.

Need for the Project

13. The Project is required to provide facilities and infrastructure to boost the strategic high-frequency communications capability to support regional and global operations.

14. The 2016 Defence Integrated Investment Program explicitly identified the Project as a key enabler for the Australian Defence Force. The Project was again identified in the 2020 Defence Strategic Update to enhance resilience to communications technology, including infrastructure underpinning conducting and sustaining operations to better respond to disasters.

15. The Project will complement Defence's investment in secure and resilient satellite communications to support Australia's soldiers, sailors and aviators on operations at home and abroad. Australia and its international partners will use these latest advances in command and control methods over the coming decades.

Proposed Facilities Solution

16. The Department of Defence undertook comprehensive master planning, site investigations, stakeholder consultation, whole-of-life cost analysis and design development to establish the facilities and infrastructure works required to address the Project need.

17. The essential requirements of the Project include:

a. refurbish existing buildings

b. upgrade engineering services to meet the enhanced capability requirement at all sites

c. new receive site at Mount Bundey Training Area

d. decommission high frequency infrastructure elements at Shoal Bay

e. inter-site links – new in-ground fibre-optic cable communication connections between each existing receive and transmit site (regionally paired sites) and new primary and redundant fibre-optic communication connections in the Northern Territory.

Options Considered

18. The following three options have been developed for the Project:

a. **Option 1 – Do nothing.** This option does not deliver any new or upgraded facilities and the enhanced capability would not be provided. The 'Do Nothing' option has been assessed by Defence as not feasible

b. **Option 2 – Full Scope plus Maximised Energy Security and Ancillaries.** This option provides the full scope identified to meet the capability need with additional enhancements, such as increased energy security at multiple sites. This option provides the full scope, however it is over budget and is not recommended

c. **Option 3 – Full Function and Increased Energy Security.** This option provides facilities to achieve the full functional capability requirement through scope reductions and services consolidation to achieve affordability. It also provides additional energy security at selected sites. This option fully addresses the Project need and is within budget, and is therefore recommended.

19. Option 3 is the preferred option as it meets the full functional requirements of the enhanced capability and represents the best value for money to the Commonwealth from both an initial and whole of life perspective.

Scope of Project Works for the Preferred Option

20. The recommended Option 3 includes the following Project elements:

a. **Project Element 1 - Lyndoch Transmit Site (Riverina, NSW)**

i. Building Works: repurpose, refurbish and extension to existing control building through architectural, security, and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building

Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing, and physical and electronic security upgrades.

iv. External Services: above-ground fuel storage tanks and water storage tanks.

b. **Project Element 2 – Morundah Receive Site (Riverina, NSW)**

i. Building Works: repurpose and refurbish existing control building through architectural, security, and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing, and physical and electronic security upgrades.

iv. External Services: above-ground fuel storage tanks and water storage tanks.

c. **Project Element 3 - Inter-site Link Cable (Riverina, NSW)**

i. Provision of an additional below ground communications link between the existing receive and transmit sites.

d. **Project Element 4 - Bohle River Transmit Site (Townsville, QLD)**

i. Building Works: repurpose and refurbish existing control building through architectural, security and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing, and physical and electronic security upgrades.

iv. External Services: above-ground fuel storage tanks and water storage tanks.

e. **Project Element 5 - Speed Creek Receive Site (Townsville, QLD)**

i. Building Works: repurpose and refurbish existing control building through architectural, security and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing, and physical and electronic security upgrades.

iv. External Services: above-ground fuel storage tanks and water storage tanks.

f. **Project Element 6 - Inter-site Link Cable (Townsville, QLD)**

i. Provision of an additional below-ground communications link between the existing receive and transmit sites.

g. **Project Element 7 - Humpty Doo Transmit Site (Darwin, NT)**

i. Building Works: repurpose and refurbish existing control building through architectural, security and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing, and physical and electronic security upgrades.

iv. External Services: above ground fuel storage tanks and water storage tanks.

h. **Project Element 8 - Mount Bundey Receive Site (Darwin, NT)**

i. Building Works: new receive control building and associated building infrastructure, including backup power supply through the installation of a new local emergency generator.

ii. Building Services: new communications services and cabling throughout the control building.

iii. External Works: new infrastructure to facilitate access to the new control building and antennae, including a new access road.

iv. External Services: new high voltage grid mains connection from the training area boundary to the site.

i. **Project Element 9 - Shoal Bay Antenna Decommissioning (Darwin, NT)**

i. External Works: decommission antennae and associated infrastructure, including concrete pads, and minor building equipment.

j. **Project Element 10 - Inter-site Link Cable (Darwin, NT)**

i. Provision of Defence Terrestrial Communications Network primary link.

ii. Provision of two below-ground communications links between the existing receive and transmit sites.

k. **Project Element 11 - Exmouth Transmit Site (North West Cape, WA)**

i. Building Works: repurpose and refurbish existing control building through architectural and minor structural upgrades to meet capability requirements and Building Code requirements.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building Code requirements. The scope also includes installation of a new local emergency generator.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing and physical and electronic security upgrades.

iv. External Services: above ground fuel storage tanks and water storage tanks. New local generator for on-site 24/7 power supply, with investigation into connection to existing mains power supply (Exmouth township) ongoing.

l. **Project Element 12 - Rough Range Receive Site (North West Cape, WA)**

i. Building Works: repurpose and refurbish existing control building through architectural and minor structural upgrades to meet capability requirements and Building Code requirements. Extension of existing control building to house new ICT services.

ii. Building Services: replace and upgrade electrical, mechanical, hydraulic, fire protection, security and ICT to meet capability requirements and Building

Code requirements. New local diesel power generator and solar photovoltaic generation with battery energy storage system to allow 24/7 operation.

iii. External Works: upgrade sections of perimeter fence tracks impacted by water flow, external fencing and physical and electronic security upgrades.

iv. External Services: above ground fuel storage tanks and water storage tanks, and a new solar farm power supply on site with associated electrical infrastructure (batteries, cabling, invertors etc).

m. **Project Element 13 - Inter-site Link Cable (North West Cape, WA)**

i. Provision of an additional below-ground communications link between the existing receive and transmit sites.

n. **Project Element 14 - Russell 8 Network Management Facility (Canberra, ACT)**

i. Fit-out Works: refurbish the existing network management facility at Russell to support increased communications racks and power requirements. Works also include new workstations and interior refurbishment.

ii. Building Services: upgrade electrical, mechanical, ICT and security services to meet capability requirements and Building Code requirements.

o. **Project Element 15 - HMAS *Harman* Network Management Facility (Canberra, ACT)**

i. Fit-out Works: refurbish existing network management facility at HMAS *Harman* to support increased communications racks and power requirements. Works also include new workstations and interior refurbishment.

ii. Building Services: upgrade electrical, mechanical, ICT and security services to meet capability requirements and Building Code requirements.

Planning and Design Concepts

21. The general philosophy for the design of the proposed works is based on:

a. reuse and repurpose existing buildings and infrastructure to maximise value for money, minimise new construction, and mitigate where feasible operational downtime during construction;

b. work within existing site constraints and security requirements;

c. providing cost-effective, functional, low maintenance, energy efficient design options compatible with proposed functions and existing aesthetics;

d. adopting, where possible, conventional construction techniques and materials commonly used by the construction industry and consistent with those already used;

e. applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life;

f. providing flexible services and infrastructure to accommodate an appropriate level of growth in accordance with relevant Defence standards; and

g. applying alternative energy supply to enhance energy security where feasible and minimise where possible 24/7 diesel generator power supply.

Relevant Legislation, Codes and Standards

22. 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. *Disability Discrimination Act 1992 (Cth)*

h. National Construction Code - Building Code of Australia

i. Defence Manual for Infrastructure Engineering Electrical

j. Defence Facilities Communications Cabling Standard

k. Defence Smart Infrastructure Manual

l. Defence Estate Quality Management System

m. Defence Manual of Fire Protection Engineering

n. Defence Security Principles Framework

o. Defence Estate Principles of Development

p. Defence Pollution Prevention Management Manual

q. Defence Building Energy Performance Manual

r. Defence Office Accommodation Guidelines

s. Energy Efficiency in Government Operation Policy (2007)

t. National Waste Policy Action Plan (2019).

23. Accredited Building Certifiers 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 which will implement processes including independent inspections, audits and testing.

Land and Zoning

24. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments where applicable, such as the Mount Bundey Training Area Capability Board Report for the establishment of the new Receive Site, and the Defence Estate Principles of Development.

25. The proposed facilities at all sites have completed or are currently subject to the Defence site selection processes to ensure compliance with relevant Defence policies and regulations.

Structure

26. Existing facilities structures will remain in place with minor amendments only to allow for better space utilisation where appropriate, or minor new supporting elements.

27. The new facilities structure at the Mount Bundey Training Area and the extension at Lyndoch have been designed according to the local geotechnical profiles. The proposed new facilities will be steel-framed roof supported on steel columns with pre-cast concrete perimeter panels tied into the steel-framed roof. The structure will be supported by a perimeter strip footing with internal pad and strip footings beneath the precast panels and columns. Internal walls are non-load bearing frames, lined with plasterboard to provide maximum flexibility in future layout.

Mechanical Services

28. The mechanical services for the supporting facilities 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.

Civil Infrastructure

29. New civil infrastructure will be provided for the new site at the Mount Bundey Training Area.

30. Additional civil works will be undertaken to support facility extension at the Lyndoch site, broadly comprising an extension to the existing elevated compound.

31. Access roads and perimeter fencing at existing sites will be upgraded or repaired only as required.

32. All civil infrastructure will be designed according to the function of the site and mandatory requirements of the National Construction Code.

Hydraulic Services

33. Hydraulic services typically include remediating hot and cold water reticulation, non-drinking reticulation, sanitary drainage, on site wastewater systems, trade waste systems as required, rainwater harvesting, water treatment systems and sanitary ware and tapware. This includes provision of new rain water storage tanks, water treatment and pump systems. Selected sites have access to town water and waste services.

34. The new site at the Mount Bundey Training Area will comprise a similar arrangement to the existing sites which are not connected to town water and waste services.

Electrical Services

35. Electrical services provided typically include high and low voltage power distribution, local emergency and base-load diesel generator systems and bulk fuel storage, uninterruptible power supply system, control and monitoring, general and equipment power, interior and exterior lighting, earthing and bonding, and lightning protection. Solar renewable energy supply electrical work at Rough Range is included in these works. All electrical services will be provided in accordance with Australian Standards and Defence engineering requirements. Electrical infrastructure and switchboards will have spare capacity in accordance with Defence standards to allow for future growth. Metering will be installed to allow connection to the new building management system to allow for efficient operation and support energy management on sites.

Fire Protection

36. 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. General upgrades to the fire systems within existing facilities have been included. In accordance with Defence and Government policy, fire protection systems will be free of per- and polyfluoroalkyl substances (PFAS).

37. Bushfire protection measures have been designed into sites where relevant and required in accordance with the Building Code of Australia. This typically includes elements such as bushfire water storage, clearance zones and fire breaks. Operational elements of bushfire protection are being developed between the Project and Prime Contractor.

Security Measures

38. Security arrangements for all sites include a suite of measures that are compliant with statutory requirements and address all requirements of the Enhanced Defence High Frequency Communications System. The security design of the sites will ensure that all existing and new facilities also conform to the Defence Security Principles Framework.

Acoustics

39. 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.

Work Health and Safety

40. 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.

41. 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, reviewed and approved for the construction phase prior to the commencement of any construction activities.

Materials and Furnishings

42. Materials and furnishings will be sought from readily available local sources and selected against functionality, durability, low maintenance and ecologically sustainable design properties. The design process has also considered the impact of constructability in a remote location when considering the materials to be used.

43. External façades for the new building at the Mount Bundey Training Area and the extension at the Morundah receive site will comprise a combination of precast concrete wall panels, and pre-finished profiled steel walling and roofing similar to existing sites and appropriate for building operation and security requirements.

44. Internal fittings and furnishings will be selected based on key considerations of being modern, functional, durable and low maintenance. Internal partitions are to be lightweight stud walls with plasterboard finishes, providing the ability for simple future reconfiguration as required.

Landscaping

45. **New Site – Mount Bundey Training Area.** The proposed new landscape works will complement and enhance the character of the site. The landscape design will focus on a functional, low maintenance, water sensitive approach with the use of native 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.

46. **Existing Sites.** Minimal landscaping is required at the existing sites, however for the small elements required they will follow the approach for the new Mount Bundey Training Area site as noted above.

Childcare Provisions

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

Provisions for People with Disabilities

48. **Network Management Facilities.** Access for people with disabilities will be provided in accordance with the National Construction Code, Australia Standard 1428 and the *Disability and Discrimination Act 1992 (Cth)* for the network management facilities.

49. **Receive and Transmit Sites.** Access for people with disability to the receive and transmit buildings is not planned to be provided under the provision of Building Code of Australia Clause D4 and D5. An exemption is currently being sought for access for people with disabilities for these sites based on the required tasks to be undertaken by personnel operating the capability, including:

a. climbing ladders to access roof spaces

b. accessing the antennae field of variable terrain via foot in a variety of weather conditions

c. accessing local and/or remote in-ground infrastructure, such as communications pits

d. operate and maintain the electronic communications systems, such as antennae and wireless communications towers including being able to climb structures

e. operate and maintain plant and equipment in loading docks and other similar legacy building spaces

f. lift and install communications and electrical equipment into racks up to a height of 1.8 metres

g. decant palletised items and move and lift them on to storage racks up to a height of 1.8 metres.

Environmental Sustainability

50. 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. **Energy targets:** Energy performance targets will comply with the Defence Smart Infrastructure Manual where applicable.

b. **Measures to reduce energy and water use:** Measures proposed to reduce energy use include adopting passive building design principles for existing and new facilities; using energy efficient heating ventilation and air conditioning systems, lighting and intelligent control systems; maximising natural ventilation and installing energy management systems. Measures proposed to reduce water use include specifying water efficient fixtures and fittings and incorporating water consumption targets into the design. Where landscaping works are proposed, water-sensitive design principles will be adopted and native, local environment appropriate, low-water usage plant species will be selected.

c. **Power supply - Mount Bundey Training Area Site (NT).** A new high voltage mains connection has been included instead of a 24/7 diesel generator power supply. This will reduce emissions and protect the local environment through minimising diesel generator emissions, and emissions and noise impacts from regular fuel truck re-supply movements.

d. **Power supply - Rough Range Receive Site (WA).** A new solar farm and battery energy storage system on site is included in the design to supplement power supply and reduce the reliance on 24/7 diesel generator power. Further solar farm power supplies will be introduced at other sites should funding be realised through the approach to market or should risk provision become available based on the retirement of risks.

e. **Re-use of existing structures:** The design has included maximum re-use of existing facilities at all sites including staging works to utilise available existing space, reduce new construction, and minimise interruptions to the operation of the capability.

f. **Installing metering.** Electrical services will be metered in accordance with the requirements of the Defence National Sub-meter Program. They will be suitable to connect to the Defence National Resource Data Management System. Hydraulic services will be metered. All metered services will be connected directly to the respective building's building management system.

g. **Minimising waste in construction and demolition and disposals.** Minimum reuse or recycled waste targets will be included in the head contractors' brief taking into consideration the location of each site. This applies to both

construction and demolition elements. The Defence Smart Infrastructure Handbook approach to minimising waste to landfill will be adopted.

Potential Impacts

51. 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 potential visual impacts to the local community noting all sites are existing, remote, and the facilities will not materially increase each buildings' appearance. The new site at the Mount Bundey Training Area is in a remote area of the Northern Territory and 3 kilometres from the nearest public road with natural screening foliage between the road and the new site.

b. **Noise Impacts.** Both existing facilities and the new site are typically remote from communities and generate limited noise due to the nature of the operation. Sites than run on 24/7 diesel power generators are acoustically attenuated such that the noise cannot be heard outside of the building. Currently landscaping machinery, such as lawn mowers, are operated periodically to maintain the grounds and supply trucks will periodically visit site for deliveries. There will be no increase to noise impacts with the new capability. Construction will have limited noise impact noting the sites are remote from communities, however this will be reviewed and approved through each head contractors' construction environmental management plan.

c. **Heritage Impacts:** Assessment of potential impacts to Indigenous heritage concluded that each of the site locations proposed have a low risk of impact on known areas of cultural significance. The project is not anticipated to impact indigenous heritage values, however local indigenous representatives will be consulted in accordance with heritage management plans.

d. **Traffic, Transportation and Road Impacts:** There will be minor traffic increases to each site during construction to enable the works to be completed. Noting the remote location of the sites the traffic impacts are likely to be minimal. Traffic will be managed through the review and approval of each contractor's construction management plan. After construction there will be no increase in traffic at existing sites. There will be minor movements to the new Mount Bundey

Training Area receive site, however this is an unmanned site and only visited on a weekly to fortnightly basis.

e. **Relevant Local Facilities:** There are no potential impacts on existing local facilities at all Project locations. This is due to the remote location of the facilities away from local residential and commercial areas, and their singular purpose.

f. **Ecological Impacts Existing Sites.** There are no ecological impacts from new construction or operation of the new capability at existing sites.

g. **Ecological Impacts at the New Mount Bundey Training Area Site.** Investigations and new field surveys suggest that *habitat* for four threatened fauna species listed under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)*, the Gouldian finch (Erythrura gouldiae), Partridge Pigeon (Geophaps smithii smithii), Yellow-snouted Ground Gecko (Lucasium occultum) and Red Goshawk (Erythrotriorchis radiatus) is present within the Project Area. Several design modifications, management and mitigation measures have been identified for both the construction period and the ongoing operation of this new site to minimise any potential environmental and heritage impacts, particularly with respect to the yellow-snouted ground gecko. Given the implementation of these mitigations, Defence's environmental authority, the Directorate of Environmental Planning, Assessment and Compliance, has assessed that the Project will not have a significant impact on the yellow-snouted ground gecko or any other identified matters of national environmental significance.

52. Defence has determined through the Environmental Assessment Report process 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

53. 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.

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

a. Federal Member for Durack, Hon Melissa Price (Exmouth and Rough Range, WA)

b. Federal Member for Herbert, Mr Phillip Thompson (Bohle River, QLD)

c. Federal Member for Kennedy, Hon Bob Katter (Speed Creek, QLD)

d. Federal Member for Riverina, Hon Michael McCormack (Lyndoch, NSW)

e. Federal Member for Farrer, Hon Sussan Ley (Morundah, NSW)

f. Federal Member for Lingiari, Ms Marion Scrymgour (Humpty Doo, Mount Bundey, Shoal Bay, NT)

g. Federal Member for Soloman, Mr Luke Gosling (adjacent electorate to all Darwin sites, NT)

h. Federal Member for Canberra, Ms Alicia Payne (Russell, ACT)

i. Federal Member for Bean, Mr David Smith (HMAS *Harman*, ACT)

j. West Australian Member for North West Central, Merome Beard MLA (Exmouth and Rough Range, WA)

k. Northern Territory Member for Arafura, Manuel Brown MLA (Mount Bundey, NT)

l. Northern Territory Member for Goyder, Kezia Dorcas Tibisay Purick MLA (Humpty Doo and Mount Bundey, NT)

m. Northern Territory Member for Nelson, Gerard Maley MLA (Shoal Bay, NT)

n. New South Wales Member for Wagga Wagga, Joe McGirr MP (Lyndoch, NSW)

o. New South Wales Member for Albury, Justin Clancy MP (Morundah, NSW)

p. Queensland Member for Townsville, Hon Scott Stewart (Bohle River, QLD)

q. Queensland Member for Traeger, Robert (Robbie) Katter (Speed Creek, QLD)

r. ACT Members for Kurrajong, Andrew Barr MLA, Elizabeth Lee MLA, Shane Rattenbury MLA, Rachel Stephen-Smith MLA, Rebecca Vassarotti MLA (Russell and HMAS *Harman*, ACT)

s. Greg Ireland, Chief Executive Officer, Northern Territory Chamber of Commerce

t. Chris Rodwell, Chief Executive Officer, Chamber of Commerce and Industry WA

u. Heidi Cooper, Chief Executive Officer, Business Chamber Queensland

v. Daniel Hunter, Chief Executive Officer, Business NSW

w. Chief Executive Officer (to be announced), Canberra Business Chamber

x. Traditional Owners

  i. Wiradjuri Traditional Owners (NSW)

  ii. Limilngan Traditional Owners (NT)

  iii. Wulna Traditional Owners (NT)

  iv. Larrakia Traditional Owners (NT)

  v. Gugu-Badhun Traditional Owners (QLD)

  vi. Nyawaygi Traditional Owners (QLD)

  vii. Thalanyji Traditional Owners (WA)

  viii. Yamatji Marlpa Aboriginal Corporation (WA)

y. Authorities:

  i. Essential Energy (NSW)

  ii. UGL Rail (NSW)

  iii. Wagga Wagga City Council (NSW)

  iv. Lockhart Shire Council (NSW)

  v. Federation Council (NSW)

  vi. Transport NSW (NSW)

  vii. Power and Water Corporation (NT)

  viii. NT Roads / NT Government (NT)

ix. Aboriginal Areas Protection Authority (NT)

x. Northern Lands Council (NT)

xi. PowerLink (QLD)

xii. Townsville Council (QLD)

xiii. Ergon Energy (QLD)

xiv. Agripower (QLD)

xv. Horizon Power (WA)

xvi. WA Water (WA)

xvii. Shire of Exmouth (WA)

z. Private Land Owners (WA)

Related Projects

55. **Shoal Bay Receiver Site Capability Replacement Project.** As part of Defence's approved future investment strategy, the Shoal Bay Receiving Site is scheduled for works to renew and enhance its capabilities. These works will be undertaken in coordination with the program of works for the Project.

56. **United States Force Posture Initiatives.** The Project's 30% Concept Design included the provision to provide a direct buried high voltage supply from the range's existing infrastructure supply to the new Mount Bundey Training Area Receive Site. Initial engagement with the United States Force Posture Initiatives is being undertaken to coordinate or merge any potential duplication of power systems if suitable.

Cost Effectiveness and Public Value

Project Costs

57. The estimated total capital out-turned cost of the Project is $280.2 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.

58. There will be ongoing operating and sustainment costs resulting from the proposed works. These are predominantly due to utilities costs, and minor selected communications

and maintenance activities. The increase in costs for enhanced capability is largely due to the requirement for higher power usage.

Project Delivery System

59. A Project Manager / Contract Administrator will be appointed to manage the delivery phase of the works at all sites.

60. 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.

61. A Head Contract form of contract is planned to deliver the works at all sites based on a 100% complete design developed by the Design Services Consultant. The Project plans to seek separate head contractors for each region, and one specialist head contractor for the inter-site links. The head contractors will procure trade contractors and manage the construction of the works.

62. The Head Contract form of delivery for each region is considered optimal in order to provide the local industry in each region the maximum opportunity to participate in the construction, including small to medium enterprises.

Construction Program

63. Subject to Parliamentary approval, design activities are expected to be completed by late 2023 and construction is expected to commence in early 2024 for completion of all sites by late 2026.

Public Value

64. 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 the head contractors and their procurement of subcontract packages.

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:** Defence anticipates providing local businesses with opportunities to supply construction materials and labour. Defence and the head contractors will actively promote opportunities for small and medium local enterprises through construction trade packages. The head contractors 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. **Health and Safety.** The Project will reduce health and safety risks at all sites through refurbishments that bring existing transmit and receive buildings up to current compliance standards.

e. **Existing infrastructure services:** There are no expected impacts on any infrastructure services in any region. Power, water and sewerage services are generally managed on site and where power supplies are provided and increased from grid utilities there will be no impact to infrastructure off-site. The Project plans to extend the high voltage supply from the Mount Bundey Training Area feed to the new site within the training area and this is being coordinated with the utility provider, Power and Water Corporation (NT). The Project is also currently investigating connection to existing mains power supplies (Exmouth township).

Below the Line Items

65. In the event that savings are achieved through tendering or retiring risk provision, Defence proposes to utilise the savings to deliver enhancements that are consistent with the approved Project scope. Below the line scope items include:

a. renewable power supply at Speed Creek (QLD)

b. renewable power supply at Exmouth (WA)

c. renewable power supply at Bohle River (QLD)

d. renewable power supply at Humpty Doo (NT)

e. renewable power supply at Lyndoch (NSW)

f. HMAS *Harman* Modular Secure Facility (ACT)

g. perimeter and antenna field access roads all existing sites

h. removal of legacy microwave towers all sites.

66. The priority of below the line items is to replace 24/7 diesel generator operated sites, followed by high power usage sites.

Revenue

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

Attachments

1. Location of All Project Sites
2. Regional Location Maps of Sites and Proposed Pathways of Inter-site Links

Attachment 1

Location of All Project Sites

Attachment 2

Legend:
RX = Receive Site
TX = Transmit Site

Regional Location Maps of Sites

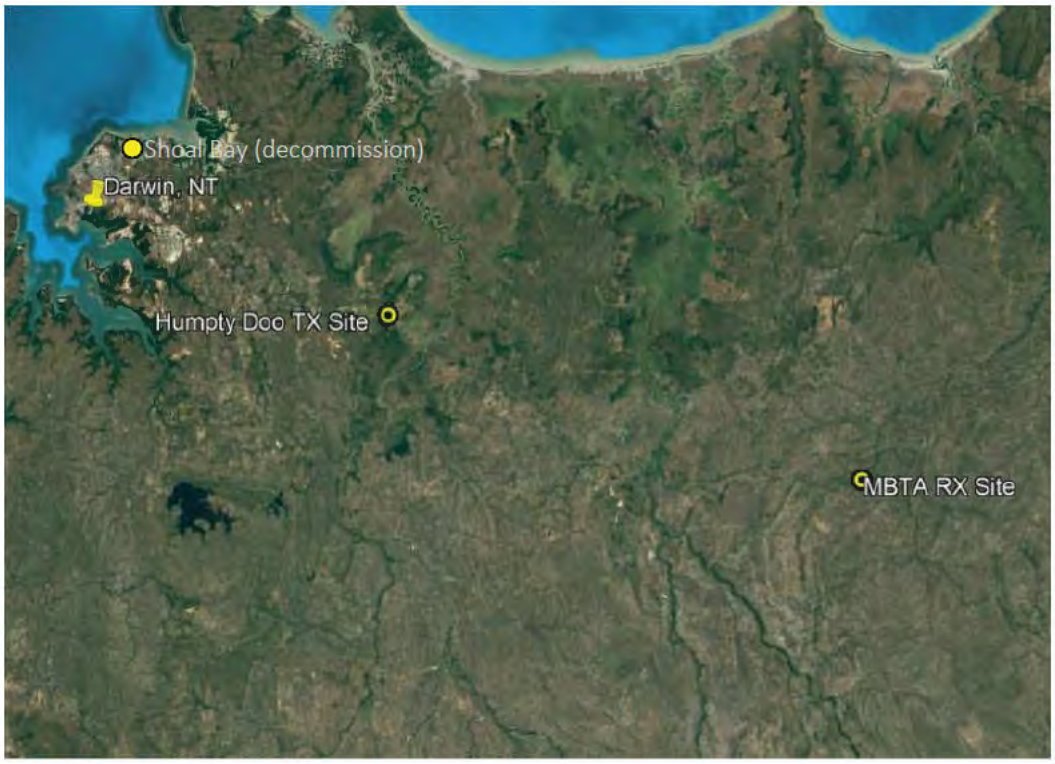

Figure 1: NT Sites – Humpty Doo, Shoal Bay, Mount Bundey Training Area

Figure 2: NT Sites – Proposed Pathway of Inter-site Link

Figure 3: WA Sites – Rough Range and Exmouth

Figure 4: WA Sites - Proposed Pathway of Inter-site Link

Figure 5: NSW Sites – Morundah and Lyndoch

Figure 6: NSW Sites - Proposed Pathway of Inter-site Link

Figure 7: QLD Sites - Bohle River and Speed Creek

Figure 8: QLD Sites - Proposed Pathway of Inter-site Link

Figure 9: ACT Sites - Russell and HMAS *Harman*