



**Australian Government**

**Defence**

# **RAAF DARWIN MID TERM REFRESH**

**RAAF Base Darwin, Northern Territory**

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

October 2023

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# **RAAF Darwin Mid Term Refresh Project**

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 RAAF Darwin Mid Term Refresh Project (the Project).

## **Executive Summary**

2. The Project will be delivered at RAAF Base Darwin (the Base) and will provide a new high-capacity main entrance, an upgraded entrance for heavy vehicle access, and capacity, condition and compliance upgrades to the potable water, firefighting water and sewer networks.

3. The estimated total capital out-turned cost is \$159.9 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. 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 Darwin 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. Detailed environmental and heritage investigations have been completed and the Project will not have a significant impact on existing environmental and heritage values. The Project has been designed to minimise ecological impacts during both construction activities and operations. Several mitigation and management measures will be incorporated accordingly, including the expected disposal of asbestos contaminated material and continued monitoring for per-and polyfluoroalkyl substances (PFAS).

## **Purpose of the Works**

### Aim of the Project

7. The aim of the Project is to address safety and capacity concerns associated with the current Base entrances, as well as prioritised capacity, condition and compliance upgrades of engineering services at RAAF Base Darwin. These works will deliver enhanced resilience and redundancy to the Base, which supports Defence's strategic objectives.

### Location of the Project

8. The Project will be delivered at RAAF Base Darwin, which is located approximately 6 kilometres north-east of Darwin, NT.

9. Attachment 1 illustrates the site location.

### Need for the Project

10. RAAF Base Darwin is one of the Air Force's main forward mounting bases, with administrative, accommodation, recreational and operational support facilities as well as technical workshops, aircraft hardstands and aircraft pavements. The Base supports major exercises and operations and also shares its runway with Darwin International Airport. RAAF Base Darwin also hosts an extended deployment of United States Marine Corps personnel and their aircraft under the United States Force Posture Initiative.

11. The Project will improve the Base's ability to rapidly surge to full capacity on short notice to support the significant number of defence personnel, aircraft and support elements that operate from the Base during major activities. Prioritised sustainment of the Base's facilities and infrastructure mitigates the risk associated with ageing infrastructure, focusing on critical items ahead of the next Base Redevelopment that is indicatively scheduled between 2031 and 2038.

12. Furthermore, the 2020 Defence Strategic Update and 2020 Force Structure Plan highlight enhancing northern defence capability as an integral part of Australia's defence strategy. The 2023 Defence Strategic Review also urges for the upgrade and development of Australia's northern bases; improving the ability of the Australian Defence Force to operate from Northern Australia. The Project directly supports Defence's strategic objectives by reinvesting in engineering services and associated facilities and infrastructure to improve the Base's ability to cater for surge activity.

## Proposed Facilities Solution

13. The Department of 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 to address the Project need.

14. The essential requirements of the Project include:

- a. a replacement high-capacity main entrance for the Base
- b. an upgraded entrance for heavy vehicle access to the Base for Explosive Ordnance and fuel deliveries
- c. capacity, condition and compliance upgrades to the potable water network
- d. capacity, condition and compliance upgrades to the firefighting water network
- e. capacity, condition and compliance upgrades to the sewer network.

### Options Considered

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

- a. **Option 1 – Do nothing.** This option considers the impact of not investing in facilities and infrastructure. Existing engineering services and infrastructure have numerous capacity and compliance risks, in addition to the safety concerns associated with the current main entrance and heavy vehicle access. This option does not address any of these concerns, would not sustain the site to support current and future capability requirements and is considered not viable.
- b. **Option 2 – Prioritised Scope.** This option provides the prioritised scope identified to meet the capability need. This option fully addresses the Project needs and is within budget, so it is therefore the recommended option.
- c. **Option 3 – Prioritised Scope plus Living-in Accommodation.** This option addresses all work elements of Option 2 with the addition of new live-in accommodation. This option exceeds the available budget and is therefore not recommended.

16. **Preferred option.** Option 2 is the preferred option as it meets the requirements of project, is in-budget and will provide value for money investment in sustaining the facilities and infrastructure of the Base.

### Scope of Project Works for the Preferred Option

17. The recommended Option 2 includes the following five Project elements:
- a. **Project Element 1 – Main Access Precinct**
    - (1) New high-capacity vehicle and pedestrian Base entrance
    - (2) New pass office
    - (3) Upgrade of Stuart Highway intersection with Billeroy Road
    - (4) Decommissioning of current vehicle and pedestrian Base entrance (existing heritage pass office will be retained)
    - (5) Base entrance spine road (Billeroy Road) widening
  - b. **Project Element 2 – Heavy Vehicle Access Precinct**
    - (1) Upgraded heavy vehicle entrance
    - (2) Signalisation and upgrade of Stuart Highway intersection with Bombing Road
  - c. **Project Element 3 – Potable Water Network**
    - (1) Prioritised network replacement of primary domestic and working accommodation precincts
  - d. **Project Element 4 – Fire Water Network**
    - (1) Prioritised network upgrade of primary domestic and working accommodation precincts
    - (2) New dedicated fire hydrants at prioritised buildings
  - e. **Project Element 5 – Sewerage System**
    - (1) New sewer main to accommodate expected growth of the primary domestic and working accommodation precincts

### Planning and Design Concepts

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 where possible, conventional construction techniques and materials commonly used by the construction industry and consistent with those already used.
  - c. applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life.

- d. providing flexible services and infrastructure to accommodate an appropriate level of growth.

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 (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. Austroads Guide to Road Design
  - p. NT Government road development guidelines
  - q. Defence Estate Resources Information Kiosk
  - r. Defence Estate Principles of Development
  - s. Defence Smart Infrastructure Manual
  - t. Defence Manual for Infrastructure Engineering Electrical
  - u. Defence Manual of Fire Protection Engineering
  - v. Defence Security Manual
  - w. Defence Security Principles Framework
  - x. Defence Heritage Strategy
  - y. Defence Engineering Services Network Standard
  - z. Defence Facilities Communications Cabling Standards.
- 20. An accredited building certifier has been engaged to certify 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

21. Indigenous group, the Larrakia Aboriginal people are the Traditional Owners of the Darwin region. As such, they have a connection with the Base and the management of risks to their heritage is managed through the current RAAF Darwin Heritage Management Plan.

22. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments under development and the Defence Estate Principles of Development.

23. 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 project requires Local or Territory Government approval for the proposed design for the road intersections with the Stuart Highway. Consultation with the NT Government Department of Infrastructure, Planning and Logistics has occurred throughout the entire design phase of the project to support the preferred approach for traffic to/from the Base.

#### Structure

24. New buildings have been designed according to the local geotechnical profile, the tropical climate and the cyclonic conditions of Darwin. The proposed new buildings will be structural steel framed structures.

#### Mechanical Services

25. 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

26. Existing sewerage and storm water services are proposed to be extended to each new facility to suit design requirements. Potable water will be connected to the existing supply via sub-metering to each new building.

### Electrical Services

27. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements. Electrical infrastructure and switchboards will have spare capacity to allow for future growth. Sub-metering will be included to each new building. The meters will be monitored through a new Building Management System, which will support an active energy management program on the site. Noting the importance of the Base entrance's pass office, the building will be provided a mobile generator link box for the use of emergency power as required.

### Fire Protection

28. 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.

29. The Project includes upgrades to the fire water mains across the primary domestic and working accommodation precincts, including provision of new hydrants for important facilities.

### Security Measures

30. The security arrangements are a suite of measures based on the Defence-in-Depth principles. Security measures are compliant with statutory requirements and address all requirements identified by the Project's Protective Security Working Group. The security design of the new base entrances considers contemporary base security measures, and also considers consistency in approach to other Defence sites.

### Acoustics

31. 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

32. 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.

33. 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 the commencement of any construction activities.

#### Materials and Furnishings

34. External walls for new buildings will be metal cladding with metal louvre sun screening systems to be installed to improve environmental performance of the buildings.

#### Landscaping

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

#### Childcare Provisions

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

#### Provisions for People with Disabilities

37. 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)*.

#### Environmental Sustainability

38. 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. **Use of renewable energy.** The Project will make use of the Defence Renewable Energy and Energy Security Program's recently implemented solar power generation on site.
- c. **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.
- d. **Re-use of existing structures.** The existing pass office associated with the current Base entrance will be retained noting its heritage value and enduring use for other Base functions.
- e. **Demolition and disposal of existing structures.** Replaced utility infrastructure will be diverted into the well-established recycling industries in the region.

## Potential Impacts

39. Defence has conducted rigorous assessments to identify potential environmental and local community impacts and propose suitable mitigation measures. These include:
- a. **Visual Impacts.** The new main entry precinct is adjacent to both the local community and Defence housing; however, all works are located within the existing Base extents. All works have been designed to minimise the aesthetic impact to the natural environment and maintain a consistent visual approach with that of other Defence entry precincts.
  - b. **Noise Impacts.** There is expected to be no material noise impacts to local communities outside of the Base. The new main entry precinct is adjacent to the current entrance and has also incorporated a noise barrier on the boundary with the local community and Defence housing. On the Base, the mechanical plant selection and location of plant rooms within facilities has been designed to minimise the noise impacts on nearby Defence facilities.
  - c. **Heritage Impacts.** The site selection process has considered the existing heritage precincts of RAAF Darwin. The existing natural, historic, and Indigenous values of the site will not be impacted by the proposed works. 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 NT Government Department of Infrastructure, Planning and Logistics has been engaged throughout the design

process to coordinate the upgrade of entrance intersections with the Stuart Highway. Particularly, the signalisation of the Stuart Highway intersection with Bombing Road to facilitate the upgraded heavy vehicle entrance is a new traffic control measure for the Highway. The project will support the associated community consultation for the implementation of the signalisation, as well as the upgrade of the Stuart Highway intersection with Billeroy Road and associated coordination of construction work staging and disruption minimisation.

40. 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**

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

42. Defence has engaged 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 Solomon – Mr Luke Gosling, Order of Australia, Member of Parliament
- b. Senator for the Northern Territory – Senator The Honourable Malarndirri McCarthy
- c. Senator for the Northern Territory – Senator Jacinta Nampijinpa Price
- d. Territory Member for Sanderson – The Honourable Kate Worden, Member of the Legislative Assembly
- e. Territory Member for Fong Lim – The Honourable Mark Monaghan, Member of the Legislative Assembly
- f. The Right Worshipful the Lord Mayor of Darwin – The Honourable Konstantine Vatskalis
- g. NT Government Department of Infrastructure, Planning and Logistics
- h. NT Government Power and Water Corporation

- i. Local community, business groups and businesses including:
  - (1) Industry Capability Network – Northern Territory
  - (2) Australia Post – Winnellie Business Centre
  - (3) Winnellie Supermarket and Shopping Centre
  - (4) The Narrows residents
  - (5) Defence Housing Australia.

### Related Projects

- 43. The following project relates to the Project:
  - a. **RAAF Darwin Secure Multi-User Facility.** The project is being programmatically delivered by the same Managing Contractor as the Mid-Term Refresh, and intends to provide a secure container compound, car park and supporting infrastructure to enable greater use of deployable mission planning containers at the Base. The project will be submitted to the Parliamentary Standing Committee on Public Works for approval via medium works notification in October 2023.
  - b. **Joint Health Command Garrison Health Facilities Upgrade.** A new health facility is being built at RAAF Darwin to support the provision of fit-for-purpose and contemporary healthcare facilities for Australian Defence Force personnel. Regular coordination and deconfliction with the Project has been undertaken, particularly to coordinate engineering services between the health facility and the proposed Main Access Precinct.  
  
**United States Force Posture Initiative works.** A number of projects are being delivered in support of additional United States of America military forces deploying to RAAF Base Darwin. Regular coordination and deconfliction with the Initiative's Program Office has been undertaken, particularly to incorporate engineering services impacts across both projects.

## **Cost Effectiveness and Public Value**

### Project Costs

- 44. The estimated total capital out-turned cost of the Project is \$159.9 million (excluding Goods and Services Tax). This includes management and design fees,

construction, information and communications technology, furniture, fittings, equipment, contingencies and a provision for escalation.

45. There will be ongoing operating and sustainment costs resulting from the proposed works. This is due to the upgrade of engineering services and the new infrastructure associated with improved Base entrances.

#### Project Delivery System

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

47. A Managing Contractor Contract is planned to deliver the work and will be appointed to procure trade sub-contractors and manage the construction 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. This form of contract is the most suitable for large, complex projects with multiple stakeholders and inter-dependencies.

#### Construction Program

48. Subject to Parliamentary approval, design activities are expected to be completed by early 2024, with construction expected to commence in mid-2024 for completion by mid-2027.

#### Public Value

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

- a. **Economic impacts.** the Project expenditure will support the Australian economy, in particular the construction and professional services sectors in the local and surrounding regions of Darwin
- 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. Defence anticipates that, over the life of the Project, up to 220 full-time equivalent direct and indirect jobs are likely to be created for the NT, with many accruing locally.

- c. **Local industry and Indigenous business involvement opportunities:** Defence and the Managing Contractor will actively promote opportunities for small and medium local enterprises through construction trade packages. The Managing Contractor will also develop a Local Industry Capability Plan and an Indigenous Participation Plan to detail how it will engage with and maximize opportunities for local industry and Indigenous businesses, while providing value for money to the Commonwealth.
- d. **Health and Safety:** The Project will substantially improve the safety at the intersections of the Stuart Highway with the Base, particularly due to the upgrade of the intersection between the Stuart Highway and Bombing Road. The new signalisation and upgrade to facilitate the heavy vehicle entrance will mitigate the risk associated with semi-trailer and ‘road train’ explosive ordnance and fuel deliveries queuing over the highway with no formal traffic control. The upgraded intersection of the Stuart Highway with Billeroy Road to facilitate the new main entrance will also incorporate improvements to the traffic flow, noting that various community users that will also make use of the intersection.
- e. **Existing infrastructure services.** The Project will improve and upgrade existing infrastructure services by addressing 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. All interfaces between engineering services and road infrastructure have undergone consultation with the NT Government Power and Water Corporation and the Department of Infrastructure, Planning and Logistics.

#### Below the Line Items

- 50. There are no additional works proposed to be delivered should savings arise from tendering for the above works.

#### Revenue

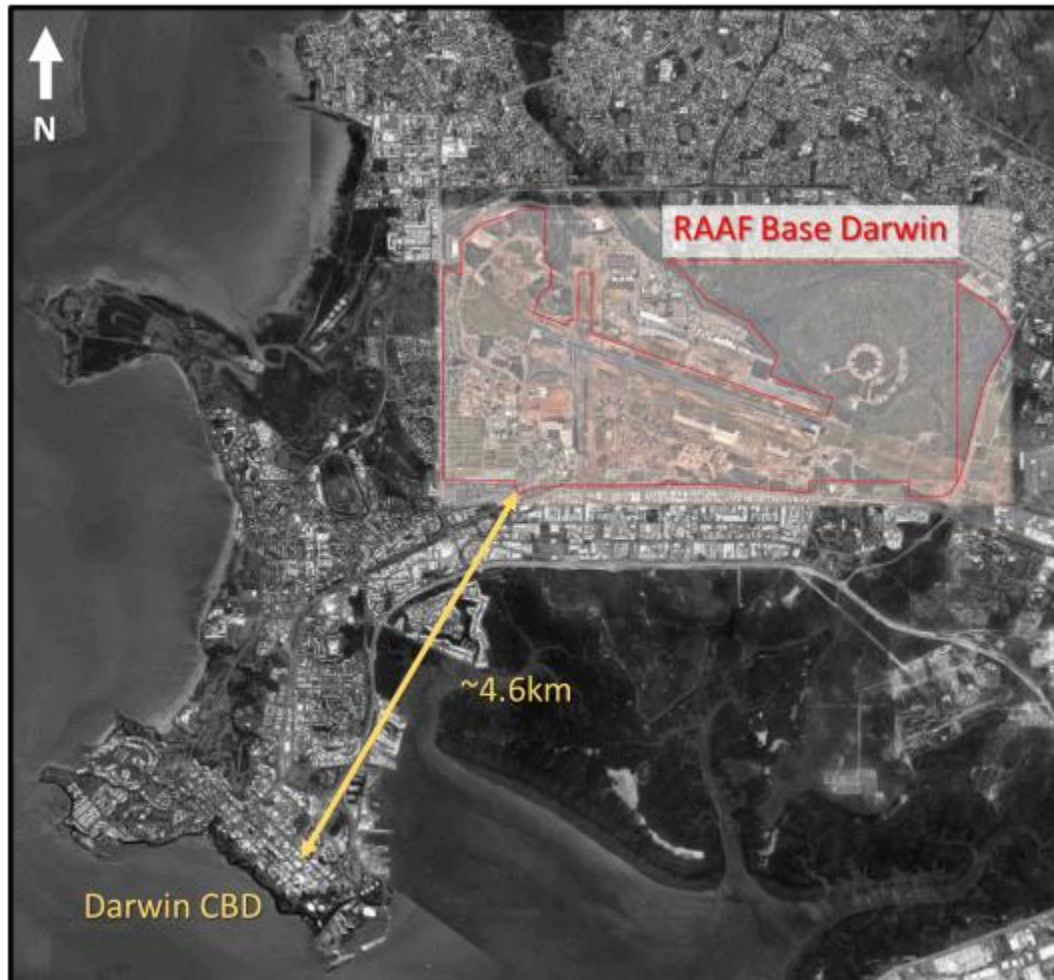
- 51. No revenue is expected to be derived from the Project.

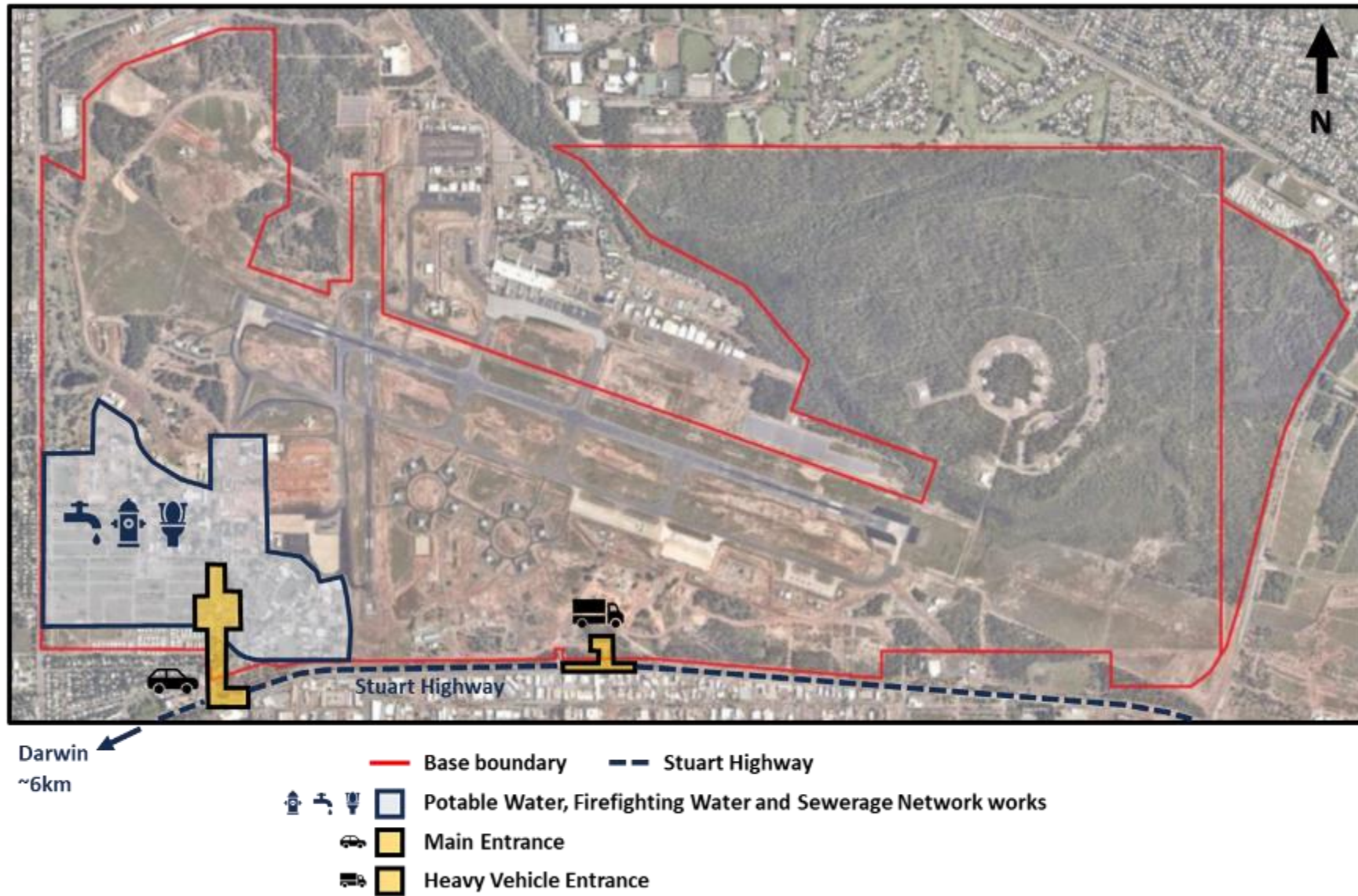


## **Attachments**

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

## Attachment 1: Location of Project Works







## Attachment 2: Selection of Proposed Works



**Figure 1: Main Entry Precinct**



**Figure 2: Heavy Vehicle Entry Precinct**