



Australian Government

Defence

COCOS (KEELING) ISLANDS AIRFIELD UPGRADE PROJECT

Indian Ocean Territories, Western Australia

STATEMENT OF EVIDENCE TO THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

November 2022

[This page intentionally blank]

Table of Contents

Cocos (Keeling) Islands Airfield Upgrade Project	1
Executive Summary	1
Purpose of the Works	2
Aim and Location of the Project	2
Need for the Project	2
Proposed Facilities Solution	3
Options Considered	3
Scope of Works Proposed for the Preferred Option	4
Planning and Design Concepts	9
Relevant Legislation, Codes and Standards	10
Land and Zoning	10
Maintenance Responsibility	11
Structure	11
Mechanical Services	11
Hydraulic Services	11
Electrical Services	12
Fire Protection	12
Security Measures	12
Acoustics	13
Work Health and Safety	13
Materials and Furnishings	13
Landscaping	13
Childcare Provisions	13
Provisions for People with Disabilities	14
Environmental Sustainability	14
Potential Impacts	15
Consultation with Key Stakeholders	16
Related Projects	17
Cost Effectiveness and Public Value	16
Project Costs	17
Project Delivery System	18
Construction Program	18
Public Value	18
Below the Line Items	19
Revenue	19
Attachments	19

Cocos (Keeling) Islands Airfield Upgrade Project

1. The purpose of this Statement of Evidence is to provide information for the Australian public to comment on, and the Parliamentary Standing Committee on Public Works to enquire into, proposed works under the Cocos (Keeling) Islands Airfield Upgrade Project (the Project).

Executive Summary

2. The aim of the Project is to upgrade the Cocos (Keeling) Islands airfield for use by heavier aircraft, and to improve the airfield safety for both civilian and military aircraft.

3. The Project will strengthen and widen the existing runway and taxiways, strengthen the apron, extend the runway and upgrade airfield lighting and drainage infrastructure. The Project will also deliver supporting elements to enable construction to occur, including a new, permanent material offloading facility (construction wharf), bulk material storage areas, temporary workers accommodation, and road hardening. The Project also aims to remove some existing Defence legacy waste (aircraft debris) from the islands.

4. The estimated capital out-turned cost of the Project is \$567.6 million (excluding Goods and Services Tax). The cost estimate includes project management and design fees, construction costs, workers accommodation and provision for construction risk and an allowance for escalation. There will be increased operating costs as a result of the Project, which the Department of Infrastructure, Transport, Regional Development, Communications and the Arts has agreed to cover as the airfield and associated infrastructure will remain under their management. No revenue is expected to be generated by these works.

5. Environmental investigations have been undertaken and the Project has been designed to minimise ecological impacts. All works will be designed and constructed in accordance with the relevant legislation, standards, codes, guidelines and Defence policy. Accredited building certifiers will certify compliance of the design and completed works.

6. The Project will promote opportunities for small and medium local enterprises through construction trade packages, providing potential employment opportunities in the Indian Ocean Territories and greater Western Australia. The Project will also comply with the Government's Indigenous Procurement Policy.

Purpose of the Works

Aim and Location of the Project

7. The aim of the Project is to upgrade the Cocos (Keeling) Islands airfield for use by heavier aircraft, and to improve the airfield safety for both civilian and military aircraft.
8. The Cocos (Keeling) Islands is an Australian territory located in the Indian Ocean approximately 3,000 kilometres north-west of Perth, Western Australia. The islands comprise two coral atolls made up of 27 smaller islands. Together, the two largest islands, West Island and Home Island, support a population of approximately 600 people.
9. The Project would be delivered at:
 - a. the Cocos (Keeling) Islands airfield, located adjacent to the West Island town centre (refer Attachment 1)
 - b. Rumah Baru Port Facility, located on the north-east of West Island.

Need for the Project

10. Upgrading the Cocos (Keeling) Islands airfield is key to sustaining Australian Defence Force operations in the north-eastern Indian Ocean.
11. The 2020 Defence Strategic Update identified increases in geopolitical uncertainty due to strategic competition as a key driver towards Australia's strategic environment. This competition is expected to heavily influence the Indo-Pacific region, specifically the north-eastern Indian Ocean through maritime and mainland South-East Asia to Papua New Guinea and the South-West Pacific.
12. The Cocos (Keeling) Islands airfield is a strategically important airfield for the Defence's conduct of operations in the Indo-Pacific region. Defence has a requirement to operate heavier aircraft out of the Cocos (Keeling) Islands airfield, but due to insufficient runway length and strength it cannot currently do so.
13. In particular, the Cocos (Keeling) Islands airfield is a key enabling element of Defence's P-8A Poseidon maritime patrol and response capability, however due to the insufficient length and strength of the existing runway, apron and taxiways, these aircraft are currently unable to operate from the airfield. Further, the existing supporting infrastructure, such as airfield lighting and drainage, is aging, inadequate and/or non-compliant, and future sea level rise has the potential to impact operations.

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 scope of works proposed under the Project.
15. Due to the remote location of the Cocos (Keeling) Islands, Defence would initially deliver supporting elements to enable works to take place:
- a. **Supporting Element 1 (Temporary Construction Facilities)** – establishing the enabling infrastructure on the Cocos (Keeling) Islands to support the works, including construction compounds with laydown areas, temporary offices, temporary workers accommodation and a material offload facility (including a permanent construction wharf) for the unloading of construction materials
 - b. **Supporting Element 2 (General Support)** – messing, accommodation, transport and staging for the fly-in fly-out workforce, and provision of fuel and other stores to support the accommodation camp and construction activities
 - c. **Supporting Element 3 (Logistics)** – enabling logistics to ship construction materials and equipment from Australia to the Cocos (Keeling) Islands.

Options Considered

16. In addition to identifying the requirement for additional supporting elements, three options were investigated to meet Defence's capability requirements under the Project:

Option 1 – Do Nothing

- a. **Option 1 – Do nothing.** Under this option the airfield deficiencies described earlier would remain unaddressed and would worsen over time due to further degradation of the airfield infrastructure and future sea level rise. This option is not preferred as it would not support the requirement for Defence to operate heavier aircraft out of the Cocos (Keeling) Islands airfield.
- b. **Option 2 – Essential Scope (no extension to the runway).** This option would address the maintenance and availability issues associated with the airfield, however it would continue to limit required Defence capability within the north-eastern Indian Ocean region.
- c. **Option 3 – Enhanced Scope (including 150m extension to the runway).** This option includes all scope elements included in Option 2, plus a runway extension.

17. Option 3 is assessed as the preferred option, representing the best value for money solution to the Commonwealth to address the need from a whole-of-life perspective and ensuring the Cocos (Keeling) Islands airfield can support the required Defence capability.

Scope of Works Proposed for the Preferred Option

18. A detailed description of the works proposed under Option 3 is as follows:

a. **Work Element 1 – Existing Runway:**

- i. **Runway Strengthening** - overlay existing runway with asphalt to accommodate larger, heavier aircraft and mitigate inundation from sea level rising and/or localised flooding
- ii. **Runway Shoulders** – construct shoulder pavements along the full length of the runway
- iii. **Turning Nodes** – construct new turning nodes at each end of the runway to allow aircraft to backtrack on the runway
- iv. **Runway End Safety Area** – strengthening the existing safety area to comply with requirements for larger aircraft.

b. **Work Element 2 – Four Existing Taxiways:**

- i. **Taxiway Strengthening** – overlay all four existing taxiways with asphalt to achieve the required strength
- ii. **Taxiway Shoulders** – widening all four taxiways.

c. **Work Element 3 – Existing Apron.** The existing apron comprises five parking bays of different sizes for various civilian and military aircraft, located adjacent to the taxiway:

- i. **Apron Strengthening** – overlay existing apron with asphalt to achieve the required strength to accommodate larger, heavier aircraft
- ii. **Apron Configuration** – the existing apron layout has been re-planned to create two dedicated parking positions that can accommodate P-8A aircraft.

d. **Work Element 4 – Lighting.** The Cocos (Keeling) Islands airfield requires an upgrade to the existing airfield lighting and additional apron floodlighting:

- i. **Low Intensity Runway Lighting** – a new single intensity lighting system comprising runway edge lights, runway threshold/end lights and runway turning node lights

- ii. **Precision Approach Path Indicator** – augment the existing indicator installation to accommodate changes in runway threshold pavement levels and maintain the minimum wheel clearance over each runway threshold
 - iii. **Taxiway Edge Lighting** – new lighting for all four taxiways
 - iv. **Illuminated Wind Direction Indicator** – a single central indicator, to be located approximately midway along the runway and adjacent to the existing passenger terminal
 - v. **Apron Floodlighting** – replace existing apron floodlighting, including poles and cabling, mounted on hinged poles to minimise maintenance requirements
 - vi. **Movement Area Guidance Signs** – illuminated distance to run markers on the runway
 - vii. **Cabling, Pit and Duct System** – a new pit and duct system to house primary, secondary and parallel circuit cables. A new panel to house the mains isolating transformers and associated distribution and control equipment. This will provide direct control of the airfield lighting facilities whilst utilising low voltage control signaling.
- e. **Work Element 5 – Drainage and Flooding.** The existing drainage system at the Cocos (Keeling) Islands airfield is inadequate for the site topography, ocean tidal levels and groundwater, which results in regular inundation and ponding of water. Upgrading the drainage system would minimise inundation during storm events, mitigate against sea level rise and reduce water ponding. A coastal hazard risk assessment also identified areas of low topography that could channel storm surges, leading to inundation of the southern portions of the runway:
- i. **Relocate existing drainage** – reroute the drainage path by constructing graded drains to existing outlets for both minor and major design storm events
 - ii. **Taxiway Drainage** – install reinforced concrete box culverts underneath existing taxiways
 - iii. **Apron Drainage** – install a trench drain and manual control valve to capture any spills during refuelling. The trench system would be located between

each taxiway, based upon the proposed parking and refuelling positions on the site

- iv. **Coastal Engineering** – construct a seawall of exposed geotextile sand containers which would eliminate the need to import rock to implement a steeper slope. This method aligns with coastal protection infrastructure strategies employed elsewhere on the island.

- f. **Work Element 6 – Runway Extension.** The southern end of the runway will be extended to accommodate the P-8A Poseidon aircraft. Works outlined in Elements 1 to 5 above will be incorporated into Work Element 6 to ensure consistency across the full runway post-extension:

- i. extend the existing runway by 150 metres
- ii. include runway shoulder works along the length of the runway extension (refer Work Element 1)
- iii. paved and sealed clearways at each end of the runway (refer Work Element 1)
- iv. a 240 m x 90 m Runway End Safety Area at the southern end of the runway (refer Work Element 1)
- v. line marking
- vi. clear vegetation from within the runway extension footprint.

- g. **Work Element 7 – Defence Legacy Waste Removal.** The workforce and equipment to be deployed to the Cocos (Keeling) Islands, and associated logistics, presents an opportunity to remove Defence legacy waste material from the islands. This includes aircraft debris located on the inner shore of the islands and Marston Matting used in the original construction of the airfield, which was originally deposited in the lagoon on West Island.

The method for disposing of the legacy waste is still being refined by Defence, its designers and environmental sub-consultants. Surveys are currently being undertaken to confirm the appropriateness of removing the waste from the Cocos (Keeling) Islands in light of any environmental impacts that could arise from this activity. Pending the outcome of further design and environmental surveys, the current requirements for Work Element 7 are:

- i. **Waste removal** – land-based waste removed by an excavator with swamp tracks, while waste located in the lagoon will be removed using a low-draft, workboat. Highly frangible waste will not be removed from the Cocos (Keeling) Islands as it will naturally deteriorate. Waste that has become functional marine habitat, such as some aircraft debris, will not be removed.
 - ii. **Waste packaging, transport and disposal** – the waste will be screened, separated and containerised before being transported to Australia and disposed of appropriately.
- h. **Supporting Element 1 – Temporary Construction Facilities.** Due to the remote location of the Cocos (Keeling) Islands, the Project will require several temporary facilities to support the construction and minimise impacts to the local population. These facilities comprise:
 - i. **Permanent Material Offloading Facility** – the Project will require offloading materials, and the existing port for West Island is inadequate for the handling of bulk aggregates. This facility is proposed to comprise of a piled steel structure with precast decking located adjacent to the existing port facility. Costs associated with the construction and subsequent demolition and removal of a temporary material offloading facility are comparable with building a permanent structure, and after consulting with the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, as the administrators and the Cocos (Keeling) Islands Port Authority, it was agreed Defence would construct a material offloading facility and manage its operation throughout the Project’s construction stage. On completion, Defence would hand this facility over to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts to provide ongoing benefit to the Cocos (Keeling) Islands community.
 - ii. **Utilise Stilling Basin Compound** – the Stilling Basin is an open stockpile area located next to the existing wharf at Rumah Baru. The Project will use the compound to:
 - (1) facilitate vessel loading and unloading
 - (2) stage cargo including plant, equipment and materials
 - (3) undertake biosecurity inspections
 - (4) wash-down outward-bound cargo

- (5) stockpile bulk aggregates
 - (6) refuel plant and equipment.
- iii. **Quarantine Station Compound** – Defence requires a compound area for material storage, processing and manufacturing activities during the Project’s delivery phase. This location has been selected for its proximity to transport routes and distance from the local community, and has been agreed upon by Defence, the Shire of Cocos (Keeling) Islands and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts.
- iv. **Temporary Accommodation Camp** – a temporary camp is required to support the Project. It will be located to the north of the main township on West Island, which has been agreed by Defence, the Shire of Cocos (Keeling) Islands and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts:
 - (1) The camp will be a modular structure capable of accommodating the forecast workforce and would include messing facilities to also function as a cyclone shelter for the Project workforce
 - (2) The accommodation camp will be dismantled following the Project and the site returned to its former condition.
- v. **Road Works** – portions of Sydney Highway and Rumah Baru Road will be strengthened, widened and bypass bays constructed to support Project-related traffic and reduce safety risk to the local community. Works would include a new access road to the airfield from Sydney Highway that would bypass the township to reduce disruption to the local community and minimise traffic incidents.
- i. **Supporting Element 2 – General Support.** The scope and remote location of the Project requires support to facilitate the works and sustain the workforce, such as:
 - i. importing food, preparing meals and removing waste generated by the construction workforce
 - ii. transport and mainland Australia accommodation costs for the fly in fly out workforce

- iii. provision of fuels and other general stores to service the worker's accommodation camp and construction activities
 - iv. the optimum roster for the main airfield construction crew is an 'all in, all out' approach of 20 days on-island and eight days rest period off-island.
- j. **Supporting Element 3 – Logistics.** Where possible, the Project would provide a standalone Project-specific supply chain to transport personnel, equipment and material to the Cocos (Keeling) Islands and minimise disruption to the local community. To this end, the Project has engaged a logistics subcontractor. Logistics will comprise:
- i. **Freight by sea:** Sea freight is the primary logistics method to support bulk cargo and sustainment requirements. Cargo volume will greatly exceed the existing Cocos (Keeling) Islands maritime supply chain capacity, therefore the Project will establish a dedicated shipping supply chain to supplement the existing Cocos (Keeling) Islands supply chain.
 - ii. **Freight by air:** Commercial air freight will be utilised to facilitate the uplift of perishables, high-value low-volume cargo, and urgent items.
 - iii. **Additional charter flight services:** While existing flights will be utilised throughout construction, additional charter services from mainland Australia will be required to accommodate the peak workforce during the construction stage of the Project to minimise service impacts to locals and tourists.

Planning and Design Concepts

19. The general philosophy for the design of proposed permanent and temporary 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. promoting, where possible, a sustainable solution responding to local climate, considering the full life cycle of the facilities and infrastructure

- e. applying appropriate constructability measures to ensure the design can be delivered in a practical way given the remote location of the Project.
- f. meeting the functional requirements for facilities and infrastructure being provided.

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. National Construction Code - Building Code of Australia
 - g. Safe Work Australia Codes of Practice
 - h. Defence Estate Quality Management System
 - i. Defence Smart Infrastructure Manual
 - j. Defence Manual for Infrastructure Engineering – Electrical
 - k. Defence Manual of Fire Protection Engineering
 - l. Defence Security Principles Framework
 - m. Defence Estate Principles of Development
 - n. Civil Aviation Safety Authority (CASA) Manual of Standards Part 139 – Airfields
 - o. Defence Explosive Regulations.
- 21. Compliance of the design will be certified by appropriately accredited consultants in the various required disciplines. 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

- 22. The proposed works are consistent with the Shire of Cocos (Keeling) Islands Planning Scheme. All airfield works fall within the existing Special Use zoning area

nominated for the airfield, and the MOF is co-located with the existing public purposes marina zoning area.

Maintenance Responsibility

23. The Department of Infrastructure, Transport, Regional Development, Communications and the Arts has overall responsibility for the Cocos (Keeling) Islands, including the provision of airport services. The proposed airfield works have been developed following the land use provisions outlined in existing Memorandum of Understanding between Defence and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, which, as per existing agreements, is responsible for airfield maintenance, operations, and ongoing maintenance, after Defence has delivered the works.

Structure

24. The material offloading facility is the only permanent structure outside the airfield proposed to be provided by the Project. It has been designed in accordance with the Project's material offloading needs, ongoing civilian usage as per consultation with the Cocos (Keeling) Islands Port Authority and the local geotechnical profile.

25. The design of the temporary structures has been developed according to the Project workforce, material and safety requirements.

Mechanical Services

26. Mechanical services for the supporting elements facilities, such as the accommodation camp and quarantine station compound, 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

27. West Island's potable water is currently sourced from an aquifer that is vulnerable to contamination from a fuel spill. It was agreed, through consultation with the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, and the relevant water authorities, that the Project would not undertake any works at the airfield without first securing a potable water supply. As such, a sea water reverse osmosis desalination plant will be delivered by the Department of Infrastructure, Transport,

Regional Development, Communications and the Arts with a financial contribution from Defence. The sea water reverse osmosis plant will provide water security for both the construction workforce and the local community. Defence is currently working with the Department of Infrastructure, Transport, Regional Development, Communications and the Arts to identify other potential management options in the event the completion of the sea water reverse osmosis plant is delayed.

28. The existing West Island waste water treatment plant and associated reticulation are currently at full capacity. As such a new treatment plant will be delivered by Department of Infrastructure, Transport, Regional Development, Communications and the Arts with a financial contribution made by Defence that should also meet any increased demand by West Island in the future.

Electrical Services

29. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements. The airfield lighting system and apron floodlighting are to be supplied from a free-standing Airfield Lighting and Equipment Panel located adjacent to the apron. Power to support the construction workforce and plant will, depending on availability, either be provided through diesel generators (most likely) or through the use of redundant capacity on West Island's network.

Fire Protection

30. Fire protection has been addressed through compliance with the Manual of Fire Protection Engineering, and the National Construction 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. Fire protection for the accommodation camp (temporary), quarantine station compound (temporary) and the permanent material offloading facility will comply with the Defence Manual of Fire Protection Engineering, and the National Construction Code.

Security Measures

31. To ensure works comply with the necessary security measures and the airfield continues to conform with the security protocols already established on site, an Airfield Method of Works Plan has been developed in consultation with the airfield operator at the Cocos (Keeling) Islands, and the security of the site will be developed in accordance with

the Defence Security Principles Framework to ensure that the works comply with the necessary security requirements.

Acoustics

32. The temporary accommodation camp and quarantine station compound demountable buildings will comply with the National Construction Code and Australian Standards for noise and acoustics.

Work Health and Safety

33. 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 Act 2005 (Cth)*, contractors will be required to hold full work health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme.

34. Safety aspects of the Project are being addressed during the design development process and 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

35. Materials have been selected based on suitability for purpose, durability, ongoing maintenance requirements and compliance with relevant codes and standards. The design process has also considered the impact of constructability in a remote location when considering the materials to be used.

Landscaping

36. Landscaping will be minimal and complement the character of the site, and design will comply with airfield grading requirements, be low maintenance and water sensitive.

Childcare Provisions

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

Provisions for People with Disabilities

38. 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

39. 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. **Measures to reduce energy and water use.** Measures to promote energy efficiency were closely considered for strength, weakness, opportunity and threat analysis during the master planning stage of the Project.

The Project proposes to reduce energy consumption by adopting light emitting diode technology (also known as LED lighting) for the airfield lighting system rather than halogen units. Although the Project does not include specific water use reduction, measures have been taken to secure the potable water source for West Island. Defence's contributions to constructing the sea water reverse osmosis desalination plant will positively impact the status of water security on West Island and will continue to support the water security during any further works over the water lens on West Island.

- c. **Re-use of existing structures.** Given the proposed scope under the Project (refurbishment and extension of the airfield infrastructure and a new, permanent material offload facility) the Project presents limited opportunities for the re-use of existing structures. However, Defence has considered the type of materials required for the airfield works, and the design has been developed to re-use as much of the existing material as possible which will, in turn, also reduce bulk cargo shipping requirements. This includes potential re-use of the material from the Stilling Basin compound within the airfield if the condition of the material meets the design requirements.
- d. **Demolition and disposal of existing structures.** Together with construction waste, demolition and disposal of existing structures will be managed by

implementing a site-specific construction environmental management plan. Defence has evaluated the mobilisation and de-mobilisation requirements of enabling infrastructure, which led to the decision to maintain the material offloading facility as a permanent facility. Reallocation of the de-mobilisation costs into an increased service life for the offloading facility has led to reduced waste at the end of the Project and ongoing community benefit.

Potential Impacts

40. Defence has conducted rigorous assessments and developed an Environmental Report and an Environmental Assessment Report to identify potential environmental and local community impacts, and propose the following suitable mitigation measures:
 - a. **Visual Impacts.** The works on the airfield are consistent with the current appearance of the airfield. The elements which have the biggest visual impact to the Cocos (Keeling) Islands West Island community are the extension of the runway, the sea wall at the southern end of the runway, and the new, permanent material offloading facility.
 - b. **Noise Impacts.** The Project will enable larger aircraft to operate out of the Cocos (Keeling) Islands airfield, which may increase noise in the proximity of the airfield. The apron has been designed to orient aircraft in a northerly direction to minimise noise impacts to the West Island community. Defence will conduct further assessment via a Noise and Vibration Assessment, which will model the forecast traffic spectrum noise impacts on sensitive receptors. Noise levels, expected to temporarily increase during airfield works, would be localised. Construction noise will also be mitigated by undertaking the Noise and Vibration Assessment with recommendations to minimise noise impacts being implemented through the construction environmental management plan.
 - c. **Heritage Impacts.** There are no recorded world, national or Indigenous heritage places within the Project's footprint.
 - d. **Traffic, Transportation and Road Impacts.** Traffic will increase along Sydney Highway and Rumah Baru Road during construction. Enabling works on the existing road network will be required to facilitate trucks which will result in some traffic disruptions during construction. This will be managed through the development of a Construction Traffic Management Plan. Portions of Sydney Highway and Rumah Baru Road will be strengthened, widened and provided with

bypass bays to support the flow of Project-related traffic and reduce the safety risks. The Project will also provide a new access road to the airfield from Sydney Highway, which will reduce disruption to the local community and minimise traffic safety incidents by bypassing the township.

- e. **Ecological Impacts.** Of the potentially 13 *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)* listed threatened species in the Cocos (Keeling) Islands, two species, the Green Turtle and the Hawksbill Turtle, have the potential to be impacted by the material offload facility footprint. The Project is assessed to have minimal impact on these turtles as this facility is located within areas (Rumah Baru Port Facility) that have already been disturbed. Appropriate methods to mitigate any potential impact will be identified in the Construction Environmental Management Plan.
- f. **Airfield Operational Impacts.** Aircraft will be unable to use the runway during each work shift when works are being completed on the airfield. To address this impact, Defence will ensure the runway is clear and safe to operate at the end of each work shift. Works are designed to enable a construction methodology that can support a four-hour reinstatement time in the case of any emergency unscheduled aircraft. This will minimise the impact on operations out of the Cocos (Keeling) Islands airfield.

41. Defence has determined through the Environmental Assessment Report process 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 Environment and Water under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)*.

Consultation with Key Stakeholders

42. 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.

43. 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:

- a. Ms Nola Marino MP, Assistant Minister for Regional Development and Territories
- b. Ms Natasha Griggs, Administrator of Australian Indian Ocean Territories
- c. The Department of Infrastructure, Transport, Regional Development, Communications and the Arts
- d. The Shire of Cocos (Keeling) Islands
- e. Toll Remote Logistics Pty Ltd – Airport Operator
- f. Community Consultation Sessions – on both West and Home Island at the Cocos (Keeling) Islands.

Related Projects

44. **Sea Water Reverse Osmosis and Waste Water Treatment Plant Upgrades.**

This project is being delivered by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts to upgrade the potable and wastewater infrastructure on West Island and is being supported by a financial contribution from the Project. Currently, the Project is reliant on the delivery of the Sea Water Reverse Osmosis for the supply of potable and construction water, and disposal of waste water. The Project is currently exploring potential, temporary management options for this risk in the event the Sea Water Reverse Osmosis Project is delayed.

45. **AIR555-1 Airborne Intelligence, Surveillance, Reconnaissance, Electronic Warfare Facilities, approved by Parliament in August 2020.** This project is expanding existing Defence facilities adjacent to the apron and is currently in design development. This project commenced construction in 2020 and will be completed by mid-2024.

Cost Effectiveness and Public Value

Project Costs

46. The estimated total capital out-turned cost of the Project is \$567.6 million (excluding Goods and Services Tax). This includes project management and design fees, construction costs, information and communications technology, furniture, fittings, equipment, contingencies and an allowance for escalation.

47. An increase in operating and sustainment costs is expected as a result of the proposed works. This is due to the Project providing a wider and longer airfield strip than currently exists at the Cocos (Keeling) Islands, as well as the provision of the new material

offloading facility. These future sustainment costs will be the responsibility of Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

Project Delivery System

48. A Project Manager / Contract Administrator will be appointed to manage the delivery phase of the works. An Integrated Managing Contractor will be appointed to complete the design, procure trade contractors and manage the construction of the works.

49. The Integrated 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. As the Cocos (Keeling) Islands presents unique challenges in respect to constructability and logistics, early involvement of an Integrated Managing Contractor has enabled the complexities of planning and enabling works to be addressed and solutions agreed.

Construction Program

50. Subject to Parliamentary approval, design is expected to be completed by early 2023, with construction expected to commence in mid-2023 for completion by mid-2026.

Public Value

51. 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 sub-contractor packages.
- b. **Employment opportunities.** It is expected that the Project will generate employment opportunities to the local and regional work force, and more broadly for the supply of materials, products and equipment during delivery of the works. The construction workforce is forecast to average 110 people per day once airfield works commence, which will be complemented by significant shipping and logistics efforts off-island.
- c. **Local industry and Indigenous business involvement opportunities:** The Project will actively promote opportunities for small to medium local enterprises through the construction trade packages. Works to be undertaken will comply with Government policy for local industry participation, which requires successful tenderers to provide detailed commitments on how they will utilise and develop

Australian industry. These commitments will become contract deliverables and successful tenders will be required to report on their performance against them. The current forecast for local industry participation over the delivery of the Project is approximately 90% of the value of reimbursable packages (this includes businesses based in the Indian Ocean Territories and also broader Western Australia). The Project's Indigenous Participation Plan will detail the approach for the engagement of Indigenous businesses on the Project, which are likely to be based in Western Australia.

- d. **Existing infrastructure services:** The Project will improve existing infrastructure services through addressing existing issues at the Cocos (Keeling) Islands airfield, such as poor drainage and pavement deterioration. Upgrading the airfield will improve the condition of the airfield, which will benefit both Defence and civilian aviation activities. The Project will also contribute to the provision of new sea water reverse osmosis desalination and wastewater treatment plants, which will in turn increase the water resource capacity on West Island. The Project also proposes to construct a permanent material offloading facility, in lieu of a temporary facility, which will support ongoing logistic and shipping operations for the Cocos (Keeling) Islands following Project delivery.

Below the Line Items

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

Revenue

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

Attachment

1. Cocos (Keeling) Islands Airfield Upgrade – Location Plan

Attachment 1 – Cocos (Keeling) Islands Airfield Upgrade Location Plan



