Draft Terms of Reference for an Environmental Impact Statement

Muckaty Solar Precinct

AAPowerLink Australia Assets Pty Ltd

Barkly Regional Local Government Area

21 May 2026

ntepa Northern Territory Environment Protection Authority

Proposal	Muckaty Solar Precinct
Proponent	AAPowerLink Australia Assets Pty Ltd
NT EPA reference	EP2025/044
Local government area	Barkly Regional Local Government Area
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Further information and guidance on the environmental impact assessment process is available on the NT EPA website at: www.ntepa.nt.gov.au

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1. Introduction

1.1. Overview

The Muckaty Solar Precinct (proposal) proposed by AAPowerLink Australia Assets Pty Ltd (proponent) is being assessed by the Northern Territory Environment Protection Authority (NT EPA) under the *Environment Protection Act 2019* (EP Act) by environmental impact statement (EIS).

These terms of reference (TOR) set out matters relating to the environment that are to be addressed in the EIS for this proposal, in accordance with regulation 98(1)(a) of the Environment Protection Regulations 2020 (EP Regulations) and Schedule 4 to the Environment Protection and Biodiversity Conservation (EPBC) Regulations 2025. The EIS must also address all requirements in the NT EPA's Preparing an environmental impact statement – Environmental impact assessment guidance for proponents.

1.2. Background

The proposal is for the construction, operation and decommissioning of a large-scale solar generation and battery energy storage system precinct on Aboriginal freehold land owned by the Muckaty Aboriginal Land Trust. The proposed action will be located within NT Portion 5173, in the Barkly Local Government Area, approximately 27 km west of the Stuart Highway, 121 km north of Tennant Creek and 81 km south of Elliot (Kulumindini) in the Northern Territory (NT).

Energy generated at the precinct will be dispatched through the Australia-Asia Powerlink Project's transmission system from Powell Creek Station or supplied to local customers.

The proposed project area is 135,857 ha, of which approximately 54,437 ha has been identified as potentially suitable for development.

The proposed action includes:

- solar generation sites (including solar panels, local collector network, inverters, batteries, substations)
- transmission infrastructure within the precinct and connecting to the Australia-Asia Powerlink Project or local customers (including switching station, and overhead transmission line)
- temporary and permanent non-process infrastructure (including access roads, airfield, rail siding, accommodation, borrow pits, laydown areas, and borefield).

Solar generation sites will be constructed in stages where the number and size of sites will be determined in response to consumer demand. Each generation site is expected to take approximately five years to construct and would operate for approximately 70 years following commissioning.

Temporary non-process infrastructure is expected to be progressively decommissioned when no longer required for use. Solar generation sites and permanent non-process infrastructure will be decommissioned and rehabilitated progressively at the end of each site's operational life.

1.3. Assessment period

The draft EIS is to be submitted to the NT EPA within two years from the date of issue of these TOR (in line with regulation 99 of the EP Regulations and in consideration of the matters listed under EP Regulation 99(3)).

1.4. Assessment under bilateral agreement

The Australian Government Minister for the Environment and Water determined that the proposal is a controlled action for matters protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC Referral 2025/10357). The proposal requires assessment and approval under the EPBC Act, due to the potential for a significant impact on:

- Listed threatened species and communities (sections 18 and 18A), and
- Listed migratory species (sections 20 and 20A).

The proposal is being assessed by the NT EPA in accordance with the bilateral assessment agreement made under section 45 of the EPBC Act. These TOR have been prepared to meet the requirements of both government jurisdictions.

Information on the EPBC Act can be obtained from the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) website at www.environment.gov.au/epbc/.

2. Matters to be addressed in the draft EIS

2.1. Executive summary of the draft EIS

A stand-alone summary of the draft EIS is required. The summary is to be presented in a way that is accessible to interested parties who may not wish to read the full draft EIS, enabling stakeholders to understand the likely consequences of the proposal.

The summary must provide the following at a minimum:

- a clear and concise overview of the proposal including proponent, elements of the proposal, proposal and disturbance areas, development stages, activities, the lifespan, and appropriate map/s
- a summary of the site selection process and alternatives considered
- an overview of the existing environment including climate, location and significance of sensitive receptors that may be impacted by the proposal
- a summary of the environmental values in the proposal area
- a summary of the potential significant environmental impacts and benefits of the proposal and cumulative impacts in consideration of existing and proposed activities in the Barkly region
- a summary of measures to avoid, mitigate and/or offset potential significant impacts of the proposal, with clear and measurable outcomes for environment protection
- a summary of stakeholder engagement and future commitments
- a summary of decommissioning at the end of the proposal's life, rehabilitation/restoration and future land use.

2.2. Proposal description

2.2.1. Overview

Provide a clear description of the proposal and the full scope of works for which approval is sought. The proposal description must include:

- a summary table listing the main physical components of the proposal and their maximum spatial extent or quantity, using appropriate parameters including the matters outlined in **Table 1**

- supporting maps, figures, images, diagrams, and flow charts
- the decision-making criteria and framework used in considering various options that would deliver the required outcomes, with identification of the various options that were evaluated in deciding the proposal design, why the preferred option was selected above other options, and how the environmental decision-making hierarchy was applied
- a discussion of how the proposal addresses sections 42 and 43 of the EP Act, including the principles of ecologically sustainable development (sections 17-24 of EP Act)
- how the proposal relates to current and future actions proposed or being undertaken in the region, such as Australia-Asia Powerlink Project on Powell Creek Station
- any variations or modifications to the proposal since the referral information was submitted.

Provide detail about any information gaps or uncertainties in relation to the EIS, including any further studies or measures required to address these gaps. Where there is uncertainty in the concept design, footprint, capacity or life of the proposal or its components, the approach to resolving this uncertainty must be clearly explained and the maximum extent or range for each parameter provided.

The draft EIS is to:

- use committed language (e.g. 'will') instead of ambiguous terms (e.g. 'may', 'where possible', 'if required', etc.)
- demonstrate that all proposed avoidance, mitigation and management measures, as well as all monitoring activities, are based on relevant guidance or are in accordance with contemporary best practice.

2.2.2. Proposal area

Delineate area of the proposal, taking into account the proposal area and the surrounding land and waterways that may be impacted by the proposed action, with a suitable buffer to allow for uncertainty.

Provide maps showing:

- the extent of the proposal area alongside important local and regional features
- current land tenure, land use, and native title in the potentially affected area
- other interests in land such as minerals and petroleum
- sensitive environments, including towns, communities, homesteads and residences, any sites of conservation significance, and cultural values (if appropriate and with permission from relevant Aboriginal stakeholders) potentially affected by the proposal.

2.2.3. Proponent

Provide background to the proponent, including:

- the proponent's environmental history, including notification/disclosure of offences, or non-compliances with state/territory or Commonwealth environmental legislation
- experience, qualifications and certification of all suitably qualified consultants and subconsultants engaged by the proponent to complete the EIS.

Outline any partnerships with other organisations or industries as part of the proposal.

2.2.4. Objectives of the proposal

State the rationale and justification for the proposal that considers the social, economic and other

environmental benefits and costs to the NT and to local and regional communities over the life of the proposal.

List the objectives of the proposal and include a description of how the proposal meets these objectives. Include:

- key requirements of the proposal e.g. workforce, energy and water demand
- a description of how the proposal objectives are consistent with any environmental, social, economic or cultural objectives.

The EIS must also demonstrate how the key objectives of the proposal meet the objects in section 3 and requirements of sections 42 and 43 of the EP Act.

2.2.5. Construction, operation, and decommissioning

Provide details of staging, timing and the associated risks and impacts of all construction, operation, decommissioning and rehabilitation aspects of the proposal as outlined in Table 1.

Table 1 Minimum information requirements for the proposal description

Topic	Required information

Site layout maps	Detailed maps and graphic illustrations in the description of the proposal must include, but not be limited to:
	• the location and dimensions of existing disturbance, existing infrastructure (e.g. roads/tracks, railway, powerlines and pipelines), and natural and modified landforms (including a depiction of these overlaid on aerial photos or high-resolution satellite imagery) within the proposal area
	• the location and approximate dimensions of areas to be disturbed, structures to be built or repurposed including:
	  ○ all areas to be cleared or disturbed
	  ○ access roads, rail, and service infrastructure
	  ○ stormwater and drainage infrastructure
	  ○ water storages
	  ○ buildings and structures
	  ○ temporary stockpiles
	  ○ waste storage facilities.
	• the proposal layout in relation to environmental values and sensitive receptors within the proposal area
	• the boundaries of the proposal area in relation to any overlapping or adjacent leases or permits (mineral, petroleum or other); and any other interests in land including Native Title (claims or determined), Aboriginal freehold land, and pastoral land.

Design	Describe key elements in the design of the proposal including provision for the proposal's infrastructure (e.g. solar generation sites, solar panels, battery energy storage systems and inverters and substations. Describe design options considered, including different configurations of the

Topic	Required information
	proposal's infrastructure components, reasons for selection of preferred design options, and how the proposed design avoids and/or mitigates environmental constraints and potential significant impacts and risks to the surrounding environment. Describe how the proposal, and the key elements of the proposal will integrate with existing government and privately operated infrastructure networks e.g. road, rail and transmission lines. Describe how the proposal has been designed to minimise social, cultural, and environmental impacts, considering the needs of the community and stakeholders.
Site selection	Describe the site selection process for the proposal including: • alternative project area site locations • site selection processes within the selected project area site. • consideration of stakeholder comments • consideration of potential impacts to threatened species including the bilby and sites of conservation significance in particular. Include a list of the criteria used for site selection and discuss the outcomes in relation to the principles of environment protection and management (as set out in Part 2 of the EP Act), adaptation to a changing climate, and the NT EPA's environmental objectives.

Construction and repowering	Describe all elements and stages of construction and repowering including:
	• vegetation clearing and site preparation
	• construction methodology including equipment and machinery required
	• construction materials required – types, quantities, sources, storage requirements and potential hazards. Where large volumes of fill or rock material are proposed to be imported to the site, identify the potential sources of this fill / borrow material, the criteria that will be adopted to confirm suitability for the proposed use and any related environmental regulatory requirements
	• location, extent, and nature of temporary stockpiles of borrow material and topsoil
	• any existing infrastructure required to service the proposal, including road and rail, electricity supply, water supply, and sewerage
	• details of environmental management during construction, including:
	  ○ water management and use including stormwater drainage
	  ○ erosion and sediment control
	  ○ controls to avoid spills/discharges
	  ○ biosecurity measures to address weeds, feral animals and other pests
	  ○ waste management including an inventory of waste streams according to the staging and trajectories of the number and volume of solar

Topic	Required information
	panels, inverters and energy storage system battery waste ○ air quality management ○ maintenance of components and servicing of infrastructure ○ noise and vibration management ○ maintenance of existing onsite infrastructure during construction. • timeframes for completion. • applicable legislation, guidelines, and standards.
Transport and traffic	Describe traffic and transport activities during construction, operation and decommissioning including but not limited to: • proposed transport methods and routes including proposed haul roads, access tracks, public roads (including any proposed realignments, closures, and upgrades), and proximity to sensitive receptors and sensitive areas (e.g. townships or communities/outstations, residents, waterways, sensitive and/or significant vegetation, cultural heritage values, threatened and invasive species) • forecast vehicle movements including type, size, volume, and frequency of movements, volumes of traffic, vehicle types, access routes, hours of operation • existing transport baseline information including current traffic numbers, movement patterns (during wet and dry seasons) and relevant existing infrastructure on potentially affected roads/road network.
Energy	Provide relevant information with respect to energy during construction, operation and decommissioning, including but not limited to: • energy requirements, and renewable and non-renewable sources • consideration of renewable sources of energy and justification of selected options • measures to maximise energy efficiency and avoid and/or reduce greenhouse gas emissions consistent with the NT Government's target of achieving net zero greenhouse gas emissions by 2050.
Workforce	Provide an assessment of the workforce required for each phase of the proposal, including but not limited to an evaluation of the following: • sources (local, regional, interstate, overseas) • workforce training opportunities • employment opportunities for Aboriginal people • indirect local and regional workforce opportunities created through local and regional procurement opportunities • benefits to the local and regional community.
Decommissioning and rehabilitation	Discuss the strategy and provide a draft plan and timeline for decommissioning of the proposal.

Topic	Required information
	The strategy and draft plan is to include the following considerations: • dismantling, removal and waste management strategies of proposal infrastructure and components (e.g. solar panels, local collector network, inverters, batteries, substations) at the end of their life cycle, throughout the life of the proposal and at the end of the proposal's life • an inventory for waste management according to the staging and trajectories of the number and volume of solar panels, inverters and energy storage system battery waste • potential contamination from components • unplanned decommissioning, closure, planned closure of the proposal • rehabilitation and restoration objectives and criteria • the proposed land use after decommissioning and closure (including alternatives). Demonstrate the strategy and plan for decommissioning has considered section 26 (environmental decision-making hierarchy) and section 27 (waste management hierarchy) of the EP Act to enhance or restore environmental quality and meets the NT EPA's environmental factor objectives.

2.3. Alternatives

State the rationale and justification for the proposal, and an assessment of alternatives to the proposal that considers the strategic, social, economic, and environmental implications, technical feasibility and commercial drivers. The assessment must be supported by:

- an evaluation of the alternatives that could meet the objectives of the proposal (as set out in section 2.2.4). For each of these alternatives, include an assessment of:
    - the short, medium and long term advantages and disadvantages
    - the operational requirements (including workforce, associated infrastructure requirements, the energy requirements and potential sources of energy)
    - an estimate of initial capital and ongoing operating costs
    - a comparative desktop assessment of the potential impacts on species of conservation significance
    - consideration of potential impacts and benefits to local and regional communities over the life of the proposal.
- clear justification for why the proposal is preferred over the alternatives
- a comparative discussion on the social, economic, cultural and environmental values preserved or enhanced through the selection of the proposal over the other alternatives
- a discussion of the implications of not proceeding with the proposal.

Discuss how the principles of ecologically sustainable development (sections 17 – 24 of the EP Act) have been applied in the assessment of alternatives to the proposal.

2.4. Information requirements for environmental factors

The NT EPA identified six environmental factors that could be significantly impacted by the proposal (Table 2). Further information about environmental factors is available in the NT EPA's environmental factors and objectives guidance.

Table 2 Environmental factors that must be addressed in the draft EIS

THEME	FACTOR	ENVIRONMENTAL OBJECTIVE
LAND	Terrestrial environmental quality	Protect the quality and integrity of land and soils so that environmental values are supported and maintained.
	Terrestrial ecosystems	Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.
WATER	Hydrological processes	Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.
AIR	Atmospheric processes	Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.
PEOPLE	Community and economy	Enhance communities and the economy for the welfare, amenity, and benefit of current and future generations of Territorians.
	Culture and heritage	Protect culture and heritage.

For each of the environmental factors listed in Table 2, the draft EIS is to provide an assessment of how the NT EPA's environmental objective would be met, as outlined in the NT EPA Guide for preparing an EIS and detailed below.

The proposal area is to be delineated in the EIS to identify the components of the environment (under each environmental factor) and their specific values that have the potential to be impacted by the proposal.

If additional potential impacts are identified through the environmental impact assessment process, these must also be included in the draft EIS, even if this requires addressing additional environmental factors not specified in Table 2.

2.4.1. Terrestrial environmental quality

Table 3 Minimum information required for assessment of Terrestrial environmental quality

Aspect	Specific information required
NT EPA objective: Protect the quality and integrity of land and soils so that environmental values are supported and maintained.	
Environmental	Describe the characteristics and current condition of land and soils in the proposal area. This must include, at a minimum, descriptive and spatial information for the

Aspect	Specific information required
values	following: • slope characteristics and associated runoff and erosion risk, including details of existing erosion • soil drainage to the extent that it poses a constraint to the proposed land use • soil physical and chemical properties • potential or actual presence of contaminated soils as determined from a Preliminary Site Investigation and/or contaminated land investigations, if the need is indicated • presence of potential acid sulfate soils (PASS), acid sulfate soils (ASS) and acid forming material (AFM), and indicative volumes encountered. Provide results and interpretation of any geotechnical, geochemical and soil investigations and surveys of the proposal area. Include an assessment of the suitability of sites for relevant proposal elements. Identify environmental values that could be affected by impacts to terrestrial environmental quality (e.g. quality and integrity of land and soils) caused by the proposal. Include consideration of: • land uses, properties and public infrastructure surrounding the proposal • surface watercourses and groundwater aquifers • groundwater dependent ecosystems • aquatic ecosystems.
Potential significant impacts and risks	Identify, describe, and assess potential significant impacts and risks to the quality and integrity of land and soils from proposed construction and operation activities including cumulative impacts and risks. This must include at a minimum: • direct disturbance of land and soils during construction (e.g. land clearing, excavation, trenching, compaction, loss of soil structure) • indirect disturbance from construction and operation activities resulting in soil erosion, topsoil migration, sedimentation, and altered drainage patterns • disturbance or treatment of contaminated soils, PASS, ASS and AFM • contamination of soils from spills or leaks associated with transport, storage (e.g. stockpiling, leaving in-situ) and handling (including recycling and processing of materials for recycling) of hazardous materials and electronic wastes. Quantify the significance and extent of impacts, at the proposal level and cumulatively, with use of and reference to relevant guidance. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline measures for avoiding and mitigating impacts identified above, with consideration of section 26 (environmental decision-making hierarchy) and section 27 (waste management hierarchy) of the EP Act. Consider measures to enhance or restore environmental quality. These must include at a minimum: • infrastructure (including supporting facilities) design and layout

Aspect	Specific information required
	• proposal staging • site rehabilitation and restoration where relevant • erosion and sediment control planning and implementation in line with best practice guidance (IECA 2008, Best Practice Erosion and Sediment Control, International Erosion Control Association (Australasia), Picton, NSW) • water management and efficiency (including stormwater) • PASS/ASS/AFM management (if present) any proposed works must be undertaken in accordance with the National Acid Sulfate Soils Guidance • emergency, hazard and spill response management • end-of-life of assets management • compliance with any statutory or policy basis for the proposed measures. Identify the standards and controls to be effectively implemented in management plans as part of the proposal and their likely effectiveness to mitigate and manage impacts to terrestrial environmental quality. If ASS is detected, and exposure of these soils are unavoidable, an Acid Sulfate Soil Management Plan (ASSMP) is required.
Monitoring and reporting	Describe clear and measurable outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal remain acceptable and outline the proposed monitoring and reporting activities related to the identified outcomes. The proposed monitoring and reporting must specify timing in relation to the construction, operation and decommissioning of the proposal.
Residual impact	Assess the significance of any residual impact or risk of the proposal.

2.4.2. Terrestrial ecosystems

Table 4: Minimum information required for assessment of Terrestrial ecosystems

Aspect	Specific information required
NT EPA objective: Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	
Environmental values	Identify the existing environment and the terrestrial ecosystem values of the proposal area and area of influence. This must include, at a minimum: • descriptive information (i.e. maps, geospatial data) on the location and extent of field-verified vegetation communities within the proposal area using vegetation mapping based on the Northern Territory Guidelines and Field Methodology for Vegetation Survey and Mapping (Brocklehurst et al. 2007) • descriptive field verified spatial information (i.e. maps, geospatial data) of sensitive and significant vegetation including riparian areas, wildlife corridors,

Aspect	Specific information required
	wetlands, closed forests, and groundwater dependent ecosystems (in accordance with the NT Land Clearing Guidelines) • identification of all species of conservation significance, including restricted range and data deficient species in addition to threatened species listed under the *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act) and EPBC Act, which have the potential to occur. Assess the likelihood of occurrence for all species that are known or likely to occur • descriptive information (i.e. maps, geospatial data) and field verification for all species of conservation significance, including restricted range species, data deficient species and listed terrestrial threatened flora and fauna and migratory species known, or considered likely to occur. This must include, at a minimum: ○ the type, value, sensitivity, quality and geographic extent of suitable habitat (hectares), landscape context, listing status (TPWC Act, EPBC Act), threatening processes, estimates of population size, abundance and distribution ○ descriptive information that clearly outlines the survey and identification effort undertaken, including estimates of population parameters used to evaluate the local and regional context for potential impacts from the proposal. At a minimum, the fauna species considered must include: — Greater Bilby *Macrotis lagotis* — Grey Falcon *Falco hypoleucus* — Yellow-spotted Monitor *Varanus panoptes* — Gouldian Finch *Chloebia gouldiae* — Sharp-tailed Sandpiper *Calidris acuminata* — Common Greenshank *Tringa nebularia* — Australian Painted Snipe *Rostratula australis* — Southern Whiteface (*Aphelocephala leicopsis*) — Curlew Sandpiper (*Calidris ferruginea*) — Oriental Pratincole (*Glareola maldivarum*) — Oriental Plover (*Charadrius veredus*) — Pectoral Sandpiper (*Calidris melanotos*) — Common Sandpiper (*Actitis hypoleucos*) • Survey results must be presented, including but not limited to: ○ relevant spatial data, survey effort and species records ○ identification of any critical or important areas for flora and fauna taxa of conservation significance including consideration of the importance of both small and large areas of habitat, habitat connectivity (e.g. wildlife corridors) and their location likely to be important for maintaining terrestrial ecological integrity and functioning

Aspect	Specific information required
	○ a description of the presence of invasive weeds (declared under the *Weed Management Act 2001*), pests and biosecurity risks observed or considered likely to occur in the proposal area. Detail any information gaps or uncertainties in relation to surveys of terrestrial ecosystems, including any further studies or measures required to address these gaps. This must include at a minimum: • appropriate justification, should survey methods for future studies diverge from relevant Commonwealth and NT guidelines, including citation of species experts or scientific literature • the known and potential presence of species (identified as target species in preliminary terrestrial ecology studies for the proposal under the TPWC Act) must be described, including but not limited to plants, mammals, reptiles, amphibians, invertebrates • the likely occurrence of listed migratory species associated with Lake Woods and surrounding wetlands must be described • the existing condition of habitat and vegetation communities, including significant and sensitive habitats and potential habitats for threatened species listed under TPWC Act and EPBC Act must be described along with any existing threatening processes • identification of flora and fauna that hold social, cultural, and/or economic values and have the potential to occur, and describe the importance of these species • identification of flora and fauna known or likely to occur that are currently being assessed for eligibility for inclusion or change of conservation status under the EPBC Act. Include in appendices the detailed technical information, studies, or investigations necessary to support the draft EIS. Justify the suitability of the methods, surveys or processes used to identify/estimate species occurrence (presence/absence), relative abundance, habitat condition or quality, and the extent of values potentially impacted. Data must be provided in appropriate and readable formats (both numeric and spatial) with appropriate metadata to facilitate assessment, and in line with the NT EPA 'Biodiversity data policy' and 'Guidance for preparing biodiversity data packages (e.g. geopackage files for spatial data with the geospatial parameters clearly identified).
Potential significant impacts and risks	Identify, describe, and assess potential significant impacts (direct, indirect, and cumulative) of the proposal on terrestrial ecosystems and identified environmental values in accordance with requirements of the EP Act and EPBC Act. This must include, at a minimum: • direct loss of fauna/flora/ecological communities from vegetation and land clearing and ongoing maintenance (e.g. fire and vegetation management) including significant and sensitive habitats and potential habitats for threatened species listed under TPWC Act and EPBC Act. Provide an overview of the extent (hectares) of the loss in table and map format

Aspect	Specific information required
	• indirect disturbance or degradation to flora/ecological communities, including significant and sensitive habitats, possibly resulting in a long-term decline or loss over time e.g. from erosion, dust, weeds/pathogens, shading from solar panels, disturbance of acid sulfate soils, alterations to hydrological regimes etc. • direct, indirect and cumulative impacts to Lake Woods associated with the proposal, including those resulting from altered surface water flows, groundwater use and sediment transport • habitat fragmentation due to infrastructure development, altered environmental flows and altered floodplain inundation regime • habitat degradation for species of conservation significance, e.g. due to noise, light, vibration, dust, weeds, runoff, erosion, sedimentation impacts • introduction or increase of weed and pest species due to construction, operation or maintenance activities • direct impacts to fauna as a result of collision with vehicles or equipment, including solar panels • changes to fauna behaviours as a result of noise or light emissions from proposal areas. • potential glint and glare from solar panels or the 'lake effect' (where the solar panels are mistaken for a water body) • potential changes to fire regimes in the proposal area • how the assessment of potential significant impacts on terrestrial ecosystems has taken the impacts of a changing climate into account. Identify areas of habitat critical to the survival of listed threatened species, particularly those necessary for activities such as foraging, breeding, roosting, or dispersal. Include areas essential for the long-term maintenance of the species, with consideration of the preservation of species, important populations, key populations for genetic diversity, and efforts related to population reintroduction or recovery. Identify other industries and proposals near the proposal area that are likely to contribute to cumulative impacts on terrestrial ecosystems, including threatened species and habitats. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Quantify the significance and extent of impacts, at the proposal level and cumulatively, with use of and reference to relevant guideline thresholds.
Avoidance, mitigation, and management	Outline the proposed measures to avoid, mitigate and manage the potential significant impacts identified above, with consideration of sections 26 (environmental decision-making hierarchy) and 27 (waste management hierarchy) of the EP Act, and measures to enhance or restore environmental quality. Identify areas of land that will be excluded from proposal development due to the presence of extreme constraints that cannot be overcome, and other measures to avoid, mitigate and manage the potential significant direct and indirect impacts on areas of high biodiversity value and sensitive and significant vegetation

Aspect	Specific information required
	communities. The measures should address at a minimum: • facility design and layout • infrastructure corridor alignments • clearing of native vegetation • fauna relocation and management • pest/weed/pathogen control and management • specific adaptive management measures for potential "lake effect" impacts • compliance with any statutory or policy basis for the proposed measures. Where fauna relocation or translocation is proposed, evidence from previous successful programs involving the target species must be provided. In the absence of such studies, an assessment of the species' ecology, including population density, habitat requirements, known threats, and key biological traits must be used to demonstrate the likelihood of successful relocation and to identify associated risks. Avoidance and mitigation and management measures must be evidence based and in accordance with available guidance, including advice from relevant Commonwealth and NT Government advisory agencies. Demonstrate that proposed infrastructure has been designed and appropriately sited to avoid and mitigate impacts to terrestrial ecosystem values. If the siting of proposal elements is not able to avoid or mitigate impacts to terrestrial ecosystem values (i.e. threatened species habitat) provide a justification for why this was not feasible. The avoidance, mitigation and management measures proposed must include environmental objectives, performance criteria, monitoring and reporting methods, corrective actions, assigned responsibilities and timeframes for implementation and review in accordance with DCCEEW's Environmental Management Plan Guidelines and relevant NT Government and NT EPA guidance. Describe any proposed measures to enhance or restore environmental quality through restoration or rehabilitation of areas impacted by the proposal in line with section 42 of the EP Act. All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant NTG advisory agencies. All clearing of native vegetation should comply with the NT Land clearing Guidelines.
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts and risks to terrestrial ecosystems, and mitigation and management measures. For any potential significant impact, thresholds must be set and mitigation measures described, should thresholds be met or exceeded. Describe clear and measurable indicators, outcomes and commitments that will ensure the NT EPA's environmental objective for terrestrial ecosystems will be met and impacts of implementing the proposal remain acceptable. Specify the timeframes and timing for monitoring and reporting. The proposed monitoring and reporting must specify which proposal phase it relates to (i.e.

Aspect	Specific information required
	construction, operation and decommissioning). All monitoring activities must be substantiated and in accordance with available guidance, including advice from relevant Commonwealth and NT Government advisory agencies, potential native title holders, Traditional Owners/Custodians, and/or their representatives.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.
Offsets	Where significant residual impact to terrestrial ecosystem values, including listed species under the EPBC Act and/or TPWC Act, remains (after proposed avoidance and mitigation measures have been applied), identify any proposed offset and describe how it is consistent with the NT Offset Framework and the EPBC Act environmental offsets policy. This must include offset options and feasibility.

2.4.3. Hydrological processes

Table 5: Minimum information required for assessment of Hydrological processes

Aspect	Specific information required
NT EPA objective: Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	
Environmental values	Describe existing climate characteristics, evaporation and rainfall patterns in the proposal area (including magnitude and seasonal variability) relevant to the hydrological and hydrogeological assessment. Describe the characteristics, nature and condition of the catchment areas and the existing surface water systems of the proposal area and area of influence that includes an assessment of: • the waterways and water features (e.g. rivers, creeks, waterholes, wetlands, and sinkholes) that would potentially be impacted by the proposal, and the interaction between surface water and groundwater • surface water flow characteristics, (e.g. velocity, direction, height, inflow/outflow areas and their variability), seasonal flow patterns, flow volumes, duration, frequency and timing, connectivity, magnitude of flow • the quantity, quality and significance of surface water resources and related values, considering the potential impacts of the proposal on changes to stream flows, overland flow, flooding regimes and sediment transport processes • the history of flooding including frequency, duration, extent and levels, and the frequency and duration of floodplain/wetland inundation • the hydrological connectivity (if any) between the drainage systems and intermittent creeks affected by the proposal, and Lake Woods. Describe the existing groundwater systems, and the quantity, quality and significance of groundwater resources and related values of the proposal area and

Aspect	Specific information required
	area of influence that includes: • a hydrogeological conceptual model for the proposal area describing the characteristics and condition of existing groundwater and flow systems, recharge and discharge processes, the location and extent of springs and other groundwater dependent ecosystems, and the interconnectivity between the surface water and groundwater regimes • the capacity of target aquifers to provide the required volumes of water at the expected usage rate with consideration to proximity of existing groundwater users to the proposal, current groundwater uses, existing extraction rates and volumes, and groundwater proposed to be used by the proposal (including a description of the quality, quantity, usage rate and proposed location of those resources). Describe and assess the existing physical, chemical and water quality characteristics of water features (e.g. rivers, creeks, waterholes, wetlands, and sinkholes) present in the proposal area and area of influence. This must include, at a minimum: • consideration of rainfall, soils/geological characteristics, seasonal environmental flow patterns (including for waterholes, wetlands and sinkholes), and land use. Describe and assess the potential for the proposed action to alter water quality and impact aquatic ecosystems and areas of riparian habitat in the proposal area. Provide a description of the existing regulatory framework for surface water and groundwater resources relevant to the proposal, including any water allocation policies and plans. Identify groundwater and surface water resources needed for construction purposes.
Potential significant impacts and risks	Identify, describe, and assess the potential significant impacts of the proposal on surface and groundwater systems in the proposal area. This must include at a minimum: • impacts on the natural basin, catchment, and surface hydrology from vegetation and land clearing and construction activities, including potential changes to overland flows, drainage lines (e.g. diversions), stream flows, and impacts on existing water users including the environment • impacts on hydrogeological processes within and around the catchment from vegetation and land clearing and construction activities, including potential changes to local groundwater levels, flows, spring discharges, and impacts on existing water users • changes to connected groundwater dependent or other water systems (including springs and seeps) • potential for waterlogging (water table rise) and soil degradation to occur • an assessment of the nature, extent and risk of impacts associated with sediment transport and altered water regimes on Lake Woods. Identify, describe, and assess the possible sources of water contamination (e.g.

Aspect	Specific information required
	erosion and sedimentation acid forming, saline, sodic or dispersive soils if present, spills or discharges of hazardous materials) Provide a hydraulic and hydrological analysis (flood impact assessment) that: • demonstrates the design flood peak discharges for the proposal area including baseline and operational scenarios for all flood and stormwater events up to a 1% Annual Exceedance Probability (AEP), and Probable Maximum Flood • models the extent of flooding across the catchment area to the points at which no significant impact occurs. Flood studies are to include a range of annual exceedance probabilities. Use hydrographs to represent flood levels at different locations • uses best practice data analysis and hydrological and hydraulic modelling to simulate a full range of flood events (baseline hydrology) and provides site-specific baseline data and historical data to assess seasonal, long-term and extreme variations in flooding • assesses how the proposal may change flooding characteristics (upstream and downstream) taking into consideration climate change scenarios and climate change impacts on flooding • includes maps (flow, water level/depth and velocity) to clearly illustrate the baseline and operational scenario impacts for all relevant design events • considers all infrastructure associated with the proposal including roads and linear infrastructure and proposed measures to avoid or mitigate impact to people, property (including damage to other properties), and the environment during flood events • details how design and management of all stages of the proposal will mitigate potential impacts on level of flood risk (upstream and downstream). Demonstrate that models used for the assessment of impacts to hydrological processes have adequate resolution and extent for simulation of catchment-wide impacts as well as localised impacts. Report on assumptions and parameters used in the model, justification for their use and predictive uncertainty. Discuss the sensitivity of input parameters and critical assumptions, and how this may change predictions. Describe how the proposal area and area of disturbance has been defined in models, as it relates to the hydrology of groundwater and surface water systems. Describe how ground truthing of predicted impacts will be carried out over the life of the proposal. Describe and discuss how the proposal area and area of disturbance has been considered in the site selection process and evaluation of alternatives, as it relates to the hydrology of groundwater and surface water systems. Consult with relevant government agencies (e.g. NT Water Resources Division, NT Flora and Fauna Division, NT Fisheries Division and Commonwealth Department of Climate Change, Energy, the Environment and Water) and demonstrate how their feedback has been considered and/or adopted in relation to modelling methods and characterisation of scenarios for predictions.

Aspect	Specific information required
	Describe any uncertainties and further work required to increase understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline the measures for avoiding or mitigating impacts identified above, with consideration of section 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act and ensure that measures to enhance or restore environmental quality are included. Describe measures to avoid and mitigate potential significant impacts of vegetation and land clearing on hydrological processes e.g. waterlogging and its effect on floodplains/wetlands, riparian areas, groundwater dependent ecosystems and waterways. These should address at a minimum: • facility design and layout • water management and efficiency, including stormwater and wastewater management • waste management including a detailed description of management methods for all types of wastes, including e-waste (e.g. solar panels and batteries) • erosion and sediment control • compliance with any statutory or policy basis for the proposed measures. Outline the management plans and adaptive management strategies including trigger action response plans that would be implemented, and specify the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Discuss adaptation to a changing climate including design and resultant viability of the proposal. All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant NTG advisory agencies.
Monitoring and reporting	Provide details on proposed monitoring and reporting related to potential impacts and risks to hydrological processes. The proposed monitoring and reporting should specify which proposal phase it relates to, i.e. construction or operation. Describe the framework to monitor the effectiveness of proposed management measures, including timeframes and key performance indicators for implementing the proposed measures (e.g. trigger values and limits that will be used for monitoring), and how adaptive management actions will be initiated. All monitoring activities should be substantiated and in accordance with best practice advice from relevant NTG advisory agencies.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.

2.4.4. Atmospheric processes

Table 6: Minimum information required for assessment of Atmospheric processes

Aspect	Specific information required
NT EPA Objective: Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.	
Environmental values	Discuss the proportion of renewable and non-renewable energy sources currently used to meet the energy demand in the NT with reference to greenhouse gas (GHG) emissions. Assess the trends and future demand for renewable energy in the NT, and discuss how implementing the proposal will benefit local and regional communities and the environment in the NT. Describe and assess the GHG emissions that would be generated by implementing the proposal and discuss the potential effect of the proposal on the scale, magnitude, and trajectory of GHG emissions in the NT.
Potential significant impacts and risks	Provide estimates of the proposal's Scope 1 and Scope 2 GHG emissions in accordance with section 6 of the NT EPA Atmospheric Processes Environmental Factor Guidance, with a clear emission breakdown by activity, proposal phase, financial year, and for the total life of the proposal. This should clearly identify and quantify emissions from land clearing activities. Describe the proposal's: • contribution to the NT and national emissions, including a comparison between the proposal's emissions and current NT and Australian emission levels (as reported in Australia's National Greenhouse Accounts and against Australia's emission targets) • Influence on the NT's target of net zero greenhouse gas emissions by 2050 being achieved • impact on renewable energy supply in the NT, including how the proposal improves renewable energy availability and supports NT renewable energy targets.
Avoidance, mitigation, and management	Describe any proposed measures that will avoid, mitigate and offset scope 1 emissions and, if applicable, scope 2 emissions associated with the clearing event as well as subsequent land use. Describe any energy efficiency and mitigation and management measures that will be adopted during the construction and operation phases of the proposal to reduce or minimise GHG emissions to as low as reasonably practicable and demonstrate application of best practice.
Monitoring and reporting	Outline the proposed monitoring of emission reduction strategies to demonstrate that all reasonable and practicable measures have been, and will continue to be, applied to minimise the proposal's emissions over time. Monitoring approaches should include an evaluation of the effectiveness of measures taken to manage emissions as well as any opportunities to improve emissions reduction

Aspect	Specific information required
	management. Identify whether the Commonwealth *National Greenhouse and Energy Reporting Act 2007* Safeguard Mechanism obligations apply to the proposal.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.
Offsets	Where a significant residual impact may remain after applying the environmental decision-making hierarchy, identify any offsets and describe how any proposed offset is consistent with the NT Offset Framework and NT GHG emissions offsets policy.

2.4.5. Community and economy

Table 7: Minimum information required for assessment of Community and economy

Aspect	Specific information required
NT EPA objective: Enhance communities and the economy for the welfare, amenity, and benefit of current and future generations of Territorians.	
Environmental values	Identify and describe the existing social and economic profiles, and the social and economic values and sensitivities, which could be affected by the proposal, including reference to: • social values as identified by stakeholders • demographics, including skills audit of affected communities and workforce characteristics • relevant accommodation type and quantity • existing pressures on services and resource availability in the region • existing and required local businesses relevant to supply chain, construction and operation • primary economic characteristics within the proposal area • primary employment source/s of townships/cities/communities within or in proximity to the proposal area • proximity to existing infrastructure and associated operators (e.g. rail, gas pipeline, cables etc.) • social amenity and use of the proposal area and adjacent areas for other purposes, including, residential, commercial, industrial, recreational/leisure, tourism, and traditional land use.
Potential significant impacts and risks	Identify, describe, and assess the potential significant social and economic impacts, along with the social and economic benefits, associated with the proposal for the local, regional and NT community and economy, with reference to relevant principles of ecologically sustainable development (sections 17 – 24 of the EP Act).

Aspect	Specific information required
	Provide an economic and social impact assessment in accordance with the NT EPA Guidelines for Economic and Social Impact Assessment including assessment of potential impacts, benefits and risks to local communities and the economy utilising modelling, outcomes of investigations, and/or other relevant information. The assessment must describe the significance of potential impacts and risks to communities and the economy. The assessment of each aspect should consider cumulative impacts and the reversibility of potential impacts. Demonstrate that the assessment of the economic and social impacts and benefits of the proposal is informed by an inclusive and collaborative community and stakeholder engagement and consultation process including consultation with relevant and appropriate Traditional Owners/Custodians. Describe any uncertainties and further work required to improve understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Describe the significance and extent of impacts, at the proposal level and cumulatively, with use of and reference to relevant guideline thresholds. The significance and the extent of potential impacts must be described in a manner that enables the proponent to demonstrate that proposed avoidance, mitigation and management measures can: • maximise economic benefits • minimise economic costs • maximise social benefits, and • minimise social costs
Avoidance, mitigation, and management	Describe measures to avoid, mitigate and manage potential significant social and economic impacts, and to enhance benefits to the community and economy, over the life of the proposal (consider section 6.5 of the NT EPA Guidelines for Economic and Social Impact Assessment). Describe how the views of stakeholders have been considered in proposed avoidance, mitigation and management measures. All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant NTG advisory agencies.
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts and benefits and that will be used to demonstrate and measure how enhancement of the community and economy is achieved. The proposed monitoring and reporting should specify the project phase it relates to (i.e. construction or operation) and be substantiated and in accordance with best practice advice from relevant NTG advisory agencies.
Residual impact	Assess the significance of any residual impact or risk to identified values and the NT economy, and the acceptability of the residual impact to stakeholders.

2.4.6. Culture and heritage

Table 8: Minimum information required for assessment of Culture and heritage

Aspect	Specific information required
NT EPA objective: Protect culture and heritage.	
Environmental values	Describe the local Aboriginal communities and traditional owners within (or in proximity to) the proposal area and any native title claims. Undertake a study that includes surveys to identify, describe and characterise existing culture and heritage values that may be affected by the proposal, including but not limited to: • Aboriginal sacred sites • heritage places and objects • cultural values associated with any native title claim applications and determinations in potentially affected areas outside the immediate proposal area • cultural practice areas • environmental values and areas important under Aboriginal tradition. Discuss the suitability of studies, surveys and investigations used to identify culture heritage values. Provide results of studies (e.g. archaeological and anthropological investigations and surveys, statutory/ regulatory processes, consultations and other research) undertaken to inform the information provided in the EIS. Provide maps showing the location and extent of cultural heritage values in the potentially affected area (including sacred sites, heritage places and objects, traditional owner land and cultural practice areas). The maps of cultural heritage values must include the location and boundaries of each component of the proposal, including all infrastructure elements necessary for the proposal. Discuss the Commonwealth and NT legislation relevant to the identified culture and heritage values. Describe any gaps, uncertainties and further work required to improve understanding of cultural heritage values and reduce uncertainty.

Potential significant impacts and risks	Describe and assess the potential significant impacts on cultural heritage values from implementing the proposal. Include at a minimum an assessment of:
	• direct and indirect disturbance during construction, operation, and maintenance activities including vegetation clearance, topsoil stripping and subsoil excavation to:
	  ○ significant Aboriginal cultural heritage places and objects (e.g. artefact scatters, shell middens, earth mounds, quarries, stone arrangements, petroglyphs, rock shelters, rock art, etc.)
	  ○ traditional and/or contemporary Aboriginal values (including sacred sites) or uses of land (e.g. hunting and ceremonial use) due to construction,

Aspect	Specific information required
	operation or maintenance activities ○ non-Aboriginal cultural heritage sites and values during project construction, operation, and maintenance activities. • change or permanent land use restrictions in areas of project infrastructure • tangible and intangible impacts to cultural values and landscapes due to cultural connection to country and potential disturbance to flora and fauna, ecosystems, landscapes and landforms from construction, operation or maintenance activities • the duration, magnitude, and extent of potential significant impacts to cultural heritage values • the risk of discovery of unexpected finds of heritage places and objects, or ancestral remains • methods for locating, salvage or removal of any cultural heritage objects within the proposal area • the extent of any temporary or permanent land access or use restrictions for cultural practices • cumulative impacts from the proposal on cultural heritage values, including the incremental destruction of heritage places or objects that may occur in the proposal area • intergenerational impact on cultural connection, access to cultural areas, sacred sites and the perception of a place's cultural heritage value once it has been altered. Quantify the significance and extent of cumulative impacts to cultural heritage, with use of and reference to relevant guideline thresholds. Provide details of consultation with the Aboriginal Areas Protection Authority, DLPE Heritage Unit, Traditional Owners and their representatives regarding potential significant impacts to sacred sites, and heritage places and objects, including identification of participants, and results of consultation. Provide an Authority Certificate (if one has been obtained) or clarify if an application has been made under the *Northern Territory Aboriginal Sacred Sites Act 1989* (Sacred Sites Act) that covers the proposal area and proposed activities during all phases of the proposal (i.e. construction, operation and decommissioning). Present information in accord with the wishes of Aboriginal stakeholders regarding the confidentiality of cultural information and traditional knowledge, noting the proponent may request that identified information not be made public in accordance with section 281(2)(b) of the EP Act. Discuss the legislative framework or statutory decision-making processes that will consider the impacts identified above. Provide details about any potential significant impacts to cultural heritage values that would not be mitigated through other statutory decision-making processes, and the proposed measures to avoid and then mitigate those impacts. Assess the potential cumulative impacts to cultural heritage values from the

Aspect	Specific information required
	proposal and other activities in the region. Describe any uncertainties and further work required to improve understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline the measures for avoiding and mitigating the impacts identified above, with consideration of section 26 (environmental decision-making hierarchy) and section 27 (waste management hierarchy) of the EP Act. Outline the approach to ongoing consultation and engagement with traditional owners/representatives and provide a cultural heritage management plan (CHMP) with standards and controls that identifies and describes the measures that will be implemented to avoid, mitigate and manage impacts to identified cultural heritage values. Include a protocol for the unexpected discovery of cultural artefacts, human remains and other archaeological features during construction. All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant NTG advisory agencies and traditional owners. Provide evidence of obtaining an authority certificate in accordance with the Sacred Sites Act that covers all areas of the proposal, and a commitment to comply with the conditions of the Authority Certificate.
Monitoring and reporting	Outline the proposed methodology and timeframes for monitoring and reporting activities related to potential significant impacts and risks, and mitigation and management measures to cultural heritage values. Describe clear and measurable outcomes and commitments for the protection of cultural heritage values. The proposed monitoring and reporting must specify which proposal phase it relates to (i.e. construction, operation or decommissioning). Explain how the proposed monitoring and reporting responds to advice from relevant government advisory agencies, native title holders, Traditional Owners and/or their representatives, and how monitoring results and management outcomes will be communicated to stakeholders.
Residual impact	Determine whether there are likely to be any significant residual environmental impacts or risks to identified cultural heritage values.

3. Other requirements

3.1. Matters of national environmental significance (MNES)

The EPBC Act provides for the Commonwealth to accredit NT EPA assessments of proposals under the EP Act. The proposal was referred and was determined to be a controlled action, with the following relevant controlling provisions:

- Listed threatened species and communities (section 18 and 18A)
- Listed migratory species (sections 20 and 20A).

The proposal is being assessed as a bilateral assessment in accordance with the EPBC Act and agreement between the NT EPA and the Commonwealth and the EIS must address matters outlined in Schedule 4 of the EPBC Regulations. In addressing all relevant MNES, include the following details:

- a list of any matter protected by the controlling provisions that are known or likely to occur within the proposal site according to PMST (using a buffer of 5km)
- a list of the relevant policy and guidance for the MNES
- discussion of the protected matters listed above addressing whether or not the impacts are significant
- the discussion on protected matters should address uncertainty (where applicable) and in the absence of information about impacts, a precautionary approach should be applied and the maximum potential impact assumed
- a significant impact assessment for the relevant protected matters using the DCCEEW Significant Impact Guidelines 1.1 to determine the level of significance of the impact on the MNES
- a summary of the impacts (direct, indirect and cumulative) on the MNES and provide relevant tables and maps
- description of proposed avoidance and mitigation measures
- how the mitigation hierarchy has been applied
- assurance that avoidance, mitigation and management measures are aligned with the requirements of all EPBC Act relevant policy and guidance
- a summary of whether offsets are required in relation to the MNES and if so, provide details of the proposed offset and how the offset addressed the Australian Government Environmental Offset Policy.

The draft EIS must address all relevant MNES and explain how adequate consideration has been given to the conservation advice for each EPBC Act listed species that are known or likely to be impacted, and Australia's obligations under international conventions and agreements.

The draft EIS must explain how the proposal is consistent with any guidelines, threat abatement plans, bioregional plans or recovery plans including, but not limited to:

- The Biodiversity Convention
- The Bonn Convention
- EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species
- Wildlife Conservation Plan for Migratory Shorebirds
- Conservation advice for:
    - Greater bilby *Macrotis lagotis*
    - Grey falcon *Falco hypoleucus*
    - Gouldian finch *Chloebia gouldiae*
    - Sharp-tailed sandpiper *Calidris acuminata*
    - Common greenshank *Tringa nebularia*

  - Australian painted snipe *Rostratula australis*
  - Southern Whiteface *Aphelocephala leicopsis*
  - Curlew sandpiper *Calidris ferruginea*
- Recovery plans:
  - Greater Bilby *Macrotis lagotis*
- Threat abatement plans:
  - Reduce the impacts on northern Australia's biodiversity by the five listed grasses
  - Biological effects, including lethal toxic ingestion, caused by cane toads
  - Predation by feral cats
  - Predation by European red fox
  - Predation, habitat degradation, competition and disease transmission by feral pigs
  - Competition and land degradation by rabbits
- The following survey guidelines:
  - Survey guidelines for Australia's threatened bats
  - Survey guidelines for Australia's threatened birds
  - Survey guidelines for Australia's threatened mammals
  - Survey guidelines for Australia's threatened reptiles.

The draft EIS must include a discussion of how the proposal meets the principles of ecologically sustainable development, as defined under section 3A of the EPBC Act.

3.2. Offsets

Provide details of an overall biodiversity offset strategy for any significant residual impacts of the proposal on the terrestrial environment. Offsets may be required as a condition of any approval under the EPBC Act. Offsets must be consistent with the NT Offsets Framework, NT Biodiversity Offsets Policy, and the EPBC Act environmental offsets policy.

3.3. Whole of environment considerations

Provide a holistic assessment of the impacts of the proposal on the whole of the environment, in particular, a description of the connections and interactions between the environmental factors, and an assessment of cumulative impacts, and impacts at a local and regional scale. Succinctly discuss predicted outcomes in relation to the principles of environment protection and management (as set out in Part 2 of the EP Act), and the NT EPA environmental factors and objectives.

3.4. Consideration of the impacts of a changing climate

The draft EIS must:

- assess how adaptation to reasonable climate change scenarios has been considered in the design, construction, operation, and any effect on the viability of the proposal, with reference to reporting in: Climate Change in the Northern Territory: State of the science and climate change impacts (NESP ESCC Hub 2020).

- describe and assess the extent to which the outcomes and commitments proposed under the proposal will address any significant vulnerabilities of the proposal and the environmental values in the proposal area. The assessment must:
    - evaluate any adaptation measures including both structural (e.g. design modifications, alternative solutions) and non-structural (e.g. land-use planning, monitoring, emergency response programs) measures
    - take into consideration the most current and reasonable climate change projections for the region
    - include analysis against baseline conditions to understand historical climate change influences.

3.5. Stakeholder engagement and consultation

Proponents have a general duty under section 43 of the EP Act to provide communities and stakeholders that may be affected by a proposal with an opportunity for consultation to assist community understanding of the proposal and its potential significant impacts and benefits. If an impact or benefit is uncertain, this must be clearly stated.

The proponent must engage and consult with stakeholders[1] who are affected by and interested in the proposal. The proponent must document the following in the EIS:

- the proponent's approach to stakeholder engagement and consultation for the life of the proposal, through provision of a stakeholder engagement plan, including demonstration that this is consistent with the NT EPA's guidance for proponents: Stakeholder Engagement and Consultation and aligns with best practice guidance
- a summary of information presented in the referral on consultation undertaken up until mid-2024, including identified stakeholder groups, issues raised, and adjustments made to the proposal because of consultation
- details of further stakeholder engagement and consultation undertaken on the proposal during the EIS phase including:
    - the engagement approach
    - any additional identified stakeholders
    - methods used for communication with stakeholders and how proposal information was disseminated
    - how stakeholder input was invited
    - how any new information on the potential significant impacts/benefits of the proposal were communicated (if necessary)
    - issues raised in consultations
    - any adjustments to the proposal as a result of consultation.

3.5.1. Aboriginal stakeholders

The draft EIS, including a stakeholder engagement plan, a cultural heritage management plan and an economic and social impact assessment, is to be informed by consultation with stakeholders, including

[1] As defined in the NT EPA Guidance for Proponents - Stakeholder Engagement and Consultation

Aboriginal stakeholders. The draft EIS should set out the processes applied to identifying and determining Aboriginal stakeholders.

Aboriginal stakeholders must include:

- native title claimants (claims under consideration and decided) with native title rights and interests within the proposal area
- Traditional Owners of land within the proposal area.

The draft EIS is to describe the Aboriginal stakeholders and demonstrate how the proponent has:

- recognised the role of Aboriginal people as stewards of their country
- recognised the rights and interests of Aboriginal stakeholders in the Adelaide River catchment, and encouraged their participation in environmental decision-making in relation to the proposal
- enabled Aboriginal stakeholders (and in particular potentially affected Native Title Holders, Traditional Owners, and Custodians) to make decisions about the proposal
- engaged with Aboriginal stakeholders in a culturally appropriate manner, using specialist expertise where required
- provided Aboriginal stakeholders with information in appropriate detail, language, and format for understanding of the proposal and its potential significant impacts and benefits
- promoted the cooperative use of Aboriginal knowledge of biodiversity and Aboriginal culture in environmental decision-making
- treated the views of Aboriginal stakeholders as the primary source of information on Aboriginal cultural values
- discussed options with, and obtained the views of, Aboriginal stakeholders regarding environmental management and cultural heritage management (including environmental monitoring and reporting)
- adopted measures to protect the rights and interests of Aboriginal people in relation to the areas that may be impacted.

3.6. Public consultation requirements

The public consultation requirements for the EIS are outlined in Part 5 Division 6 of the EP Regulations. Additional specific details are provided below.

3.6.1. Submission period

The submission period under the EP Act during which feedback can be given on the draft EIS is between 30 and 60 business days. The duration of the period will be confirmed during the draft EIS pre-lodgment phase.

3.6.2. Form and manner for publication

The draft EIS must:

- be divided into two parts:
    - a main report (with executive summary available as separate document)
    - appendices to the main report.
- have a navigable table of contents
- present information in format that is easy to follow

- use hyperlinks to assist with navigation through the document
- generally conform with the web content accessibility guidelines (WCAG) 2.0 level AA and material relevant to creating accessible documents on the NT Government Website.

3.6.3. Public consultation locations

The draft EIS is to be made available in hard copy for public consultation during the submission period at:

- NT EPA, Level 1, Arnhemica House, 16 Parap Road, Parap, NT 0820
- Northern Territory Library, 54 Cavenagh Street, Darwin, NT 0800
- Environment Centre Northern Territory, Unit 3, 98 Woods St, Darwin, NT 0800
- Northern Land Council, 45 Mitchell Street, Darwin
- Barkly Regional Council Office, 41 Peko Road, Tennant Creek NT
- Elliott Post Office, Elliott, NT

4. Appendix A – List of relevant guidance material

The following guidance material, in addition to the guidance material referenced in 3.1 (Matters of national environmental significance) is considered relevant to the TOR. This list is not exhaustive, but captures guidance used in the preparation of these TOR and to inform the preparation of the EIS. The proponent must draw on further relevant industry and best practice guidance as part of developing the EIS.

Brocklehurst, P. S. et al., 2007. Northern Territory guidelines and field methodology for vegetation survey and mapping. Available at: https://territorystories.nt.gov.au/10070/635994/0

CSIRO 2020. Climate Change in the Northern Territory: State of the science and climate change impacts. https://depws.nt.gov.au/__data/assets/pdf_file/0011/944831/state-of-the-science-and-climate-change-impacts-final-report.pdf

Commonwealth of Australia, 2013. Significant Impact Guidelines 1.1: Matters of National Environmental Significance. Department of Climate Change, Energy, the Environment and Water: https://www.dcceew.gov.au/environment/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance

DCCEEW, 2023. Interim Engaging with First National People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999: https://www.dcceew.gov.au/sites/default/files/documents/interim-engaging-with-first-nations-people-and-communities-assessments-and-approvals-under-epbc-act.pdf

DENR, 2020. Northern Territory Water Allocation Planning Framework. Department of Environment and Natural Resources: https://depws.nt.gov.au/__data/assets/pdf_file/0011/476669/nt-water-allocation-planning-framework.pdf

DLPE, 2026. Land clearing guidelines. Department of Lands, Planning and Environment: Land Clearing Guidelines - Northern Territory Planning Scheme

DENR, 2020. Northern Territory Climate Change Response: Towards 2050. Department of Environment and Natural Resources: https://climatechange.nt.gov.au/nt-climate-change-response/northern-territory-climate-change-response-towards-2050

DEPWS, 2021. Northern Territory Offsets Framework. Department of Environment, Parks and Water Security: https://depws.nt.gov.au/environment-information/northern-territory-offsets-framework/northern-territory-offsets-framework

DEPWS, 2023. Biodiversity Offsets Policy. Department of Environment, Parks and Water Security https://depws.nt.gov.au/__data/assets/pdf_file/0003/1182450/biodiversity-offsets-policy.pdf

NESP Earth Systems and Climate Change Hub, 2020. Climate change in the Northern Territory: state of the science and climate change impacts. National Environment Science Programme, Earth Systems and Climate Change Hub: http://nespclimate.com.au/building-understanding-of-climate-change-in-the-northern-territory/

Northern Territory Government, 2017. Preventing weed spread guide, Weed Management Branch: https://nt.gov.au/environment/weeds/how-to-manage-weeds/prevent-weed-spread-industry-and-recreation

NT EPA, 2013b. Guidelines for the Preparation of an Economic and Social Impact Assessment. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management

NT EPA, 2013c. Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the NT. Northern Territory Environment Protection Authority. https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/284685/siting_design_landfills.pdf

NT EPA, 2015. Waste Management Strategy for the Northern Territory 2015-2022. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-

management

NT EPA, 2017. Guideline: Recommended Land Use Separation Distances. https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/453192/guideline_recommended_land_separation_distances_oct.pdf

NT EPA, 2018. Guidance on Adaptive Management. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/__data/assets/pdf_file/0003/622092/guideline_adaptive_management.pdf

NT EPA, 2020a. Environmental impact assessment guidance: NT EPA Environmental Factors and Objectives. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management

NT EPA, 2021. Environmental impact assessment guidance for proponents: Stakeholder Engagement and Consultation. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/884696/guidance-proponents-stakeholder-engagement-and-consultation.pdf

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