Terms of Reference for an Environmental Impact Statement (EIS)

Rover 1 Project

Castile Resources Pty Ltd

Tennant Creek Station – Barkly Local Government Area

February 2024

ntepa Northern Territory Environment Protection Authority

Proposal :	Rover 1 Project
Proponent:	Castile Resources Pty Ltd (Castile Resources)
NT EPA Reference:	EP2023/030
Location:	NT Portion 3556, Warumungu, Northern Territory
Local Government Area:	Barkly Regional Council
Public consultation period:	5 October to 15 November 2023 (30 business days)

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 Rover 1 Project (the proposal) proposed by Castile Resources Pty Ltd (the proponent) is being assessed by the Northern Territory Environment Protection Authority (NT EPA) under the *Environment Protection Act 2019* (EP Act) at the level of an Environmental Impact Statement (EIS).

These Terms of Reference (TOR) set out the matters relating to the environment that are to be addressed in the EIS for this proposal, in accordance with regulations 98(1)(a) and 98(2) of the Environment Protection Regulations 2020 (EP Regulations). The EIS must also address all requirements in the NT EPA guidance: Preparing an environmental impact statement.

A proponent initiated EIS referral was received on 30 August 2023 for consideration under the EP Act. The proposal is to develop the Rover 1 project, an underground iron oxide-gold-copper-cobalt mine operation on Aboriginal freehold on NT Portion 3556, located approximately 70 km southwest of Tennant Creek in the Barkly Local Government Area. The Rover 1 project consists of:

- land disturbance of approximately 177 ha
- a decline box cut and underground workings
- above ground facilities and infrastructure, including a waste rock dump (WRD), processing plant, paste plant, tailings storage facility (TSF), run-of-mine pad (ROM pad), raw water dam (RWD) and supporting infrastructure including an onsite accommodation village
- estimated groundwater extraction of up to 4.4 megalitres per day from the underground workings and a groundwater borefield
- ore processing of up to 500,000 tonnes per annum, with the products hauled to Tennant Creek for further transport via train, airline and marine vessels
- upgrades to the existing Kunayungka Road and minor roads
- sewage (treated) irrigation to land
- potential development of a gas-fired power station and a 40 km long gas pipeline connecting to the Amadeus gas pipeline (location and total footprint to be confirmed yet)
- rehabilitation progressively where practical, and to be complete 5 years after operations cease.

The estimated operational life of the mine is approximately 10 years.

Further details of the proposal, and the notice of decision and statement of reasons for the NT EPA's decision are on the NT EPA's website.

1.2. Assessment under the bilateral agreement

On 22 December 2023, the Commonwealth Minister's delegate determined that the proposal is a controlled action for matters protected under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Referral EPBC 2023/09691) and, as such, ruiequires assessment and an approval decision due to the potential for significant impact on:

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

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

Information on the EPBC Act and protected matters can be obtained from the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) website.

1.3. Assessment period

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

2. Matters to be addressed in the EIS

2.1. Executive Summary of the draft EIS

A summary of the draft EIS is required as part of the EIS documentation. The summary must be written as a stand-alone document, able to be provided on request to interested parties who may not wish to read the full draft EIS.

The summary should be presented in plain English and must provide the following at a minimum:

- a clear and concise overview of the proposal including proponent, proposal lifespan, key components, development stages, activities, the potentially affected area, and appropriate map/s a summary of the key environmental values in the potentially affected area
- a summary of the potential significant environmental impacts and benefits of the proposal .
- a summary of measures to avoid, mitigate and offset (if applicable) potential significant impacts and enhance benefits of the proposal,
- a summary of closure outcomes and the intended future use of the site
- a summary of stakeholder participation, issues raised and future commitments
- a summary of approval requirements including a description of any licences, permits or consents.

2.2. Proposal description

2.2.1. Overview

Provide a clear description of the proposal for which approval is sought including:

- a summary table listing the key physical components, proposal development stages and associated activities
- a description of how the proposal interacts with existing activities (e.g. exploration, pastoral and cultural activities) in the region
- a description of the proposal footprint and potentially affected area
- maps, figures, images, diagrams and flow charts
- any variations or modifications to the proposal since the referral information was submitted

- where there is uncertainty in the detailed design, footprint, capacity or life of the proposal, a clear explanation of the approach to resolving this uncertainty and the maximum extent for each parameter provided.

2.2.2. Proponent

Provide background information about the proponent including but not limited to:

- information on the environmental history of the proponent including experience in the mining industry
- partnerships with other organisations or industries as part of the proposal
- notification/ disclosure of offences, or any non-compliances with state/ territory or Commonwealth environmental related regulation.

2.2.3. Objectives of the proposal

State the rationale and justification for the proposal, considering social, economic and other environmental benefits and costs to the NT, in particular to local and regional communities, during the life of the proposal and post development.

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

Demonstrate how the objects in section 3 of the EP Act can be met, and address the specific requirements of sections 42 (purpose of environmental assessment) and 43 (general duty of proponents) of the EP Act.

Demonstrate the application of the principles of ecologically sustainable development to decision-making processes as set out in Part 2 Division 1 of the EP Act.

2.2.4. Statutory framework

The EIS must provide information on the statutory framework for the proposal, including a description of any permits, consents, or other approvals that have been granted/obtained and any that will be required from NT and Australian government authorities e.g. titles under the *Mineral Titles Act 2010*; authorisation under the *Mining Management Act 2001*; permits or licenses under the *Water Act 1992*, *Waste Management and Pollution Control Act 1998*, and *Aboriginal Land Rights (Northern Territory) Act 1976*.

2.2.5. Site selection and design

Describe mine site planning and layout design options considered, reasons for selection of the preferred site layout and design, and how this avoids and/or mitigates potential impacts and risks to the surrounding environment and its users. Provide details of the suitability of the site layout and design (particularly TSF, WRD) with regard to:

- potential impacts on environmental values and nearby sensitive receptors
- current site climatic conditions (e.g. rainfall, evaporation)
- a changing climate, e.g. hotter climate, increased storm intensity
- the benefits it delivers to nearby communities
- the accessibility and useability of the mineral resource for future development (other than this proposal)

- how the design has been informed by best practice closure objectives and activities
- any other reasons for selecting the preferred option.

Provide details of the design of key proposal components (e.g. decline box cut, underground workings, TSF, WRD, ROM pad, RWD, paste plant, power station, gas transmission line, haul roads), as prepared by suitably qualified engineers and referencing accepted engineering and design standards and leading practice guidelines that have been used to inform design, including:

- design criteria, and impact and risk assessments undertaken, to inform the design requirements for key components (and any other mine components that pose a significant risk to the environment in the event of inadequate performance or failure), e.g. Australian National Committee On Large Dams (ANCOLD) guidelines.
- the extent, detail and outcomes of investigations undertaken to determine the suitability of alternative options including, but not limited to:
    - geochemical characterisation investigations undertaken to determine the physical and chemical characteristics of the materials to be mined and processed (e.g. ore, waste rock, tailings), ensuring investigations are consistent with the International Network for Acid Prevention's Global Acid Rock Drainage (GARD) guidelines and the Commonwealth guidelines Preventing Acid and Metalliferous Drainage – Leading Practice Sustainable Development Program for the Mining Industry
    - feasibility studies and risk assessments undertaken to investigate and assess best practice options related to cyanide, PAF waste rock and tailings management, including options for backfilling waste rock and tailings to underground workings, and cover systems for mine waste landforms.
    - resource investigations undertaken to determine the availability of suitable construction and rehabilitation materials
    - feasibility studies undertaken to investigate the options for supplying power to the mine site

Provide high-quality plans /drawings of the proposed design, including dimensions and capacity, and covering the progression of WRD, underground operations and other mining components.

2.2.6. Construction and operation

Provide a detailed description of all construction and operation aspects of the proposal as outlined in Table 1.

Table 1 Minimum information requirements for the proposal description

Topic	Required information

Site layout maps and graphs	The description of the proposal must include site layout maps, graphs and illustrations that depict the proposed location and dimensions of the proposal components clearly identifying the areas of:
	• existing disturbance (including areas currently and previously impacted by the exploration activities), infrastructure, roads/tracks, natural and modified landforms
	• new disturbance and infrastructure, including (where applicable):
	  ○ all areas to be cleared and disturbed
	  ○ decline box cut and underground workings, including cross-sections to

Topic	Required information
	depict dimensions (maximum footprint and depth), slopes, orientation and bench heights ○ storage and processing areas (including but not limited to topsoil, overburden, mined and processed ore, rejects) ○ laydown areas, vehicle park up areas, servicing and refueling areas, borrow areas, and access and haul roads ○ service corridors and firebreaks ○ buildings and structures to be built ○ infrastructure related to water extraction, storage and treatment (including potable water, wastewater, process water and irrigation water), communications, and electricity generation and transmission (including any new gas pipeline/s) ○ stormwater and drainage infrastructure ○ erosion and sediment controls ○ chemical, waste (including but not limited to non-hazardous solid wastes) and explosives storage facilities ○ administration and accommodation areas ○ load in and load out facilities • current land tenure, owner(s) and lease(s) of the land of which the proposal area covers and any other interests including agriculture, mining, petroleum, native title (claims or determined), and Aboriginal freehold land • boundaries of mining tenures, granted or proposed, to which the proposal area is, or would be subject • sensitive receptors and sensitive environment (including sensitive and/or significant vegetation types identified in the Northern Territory Land Clearing Guidelines; Greater Bilby, Painted Honeyeater and Grey Falcon habitat; permanent and seasonal residential communities; existing and potential future water users; sites of cultural significance; and no-go work areas/exclusion zones) overlying the proposal area and surrounds i.e. within the area potentially affected by the proposal. Provide a high-quality contemporary aerial/satellite view of the proposal area and potentially affected area to describe current site conditions including existing disturbance.
Construction	Describe all elements and stages of the construction phase including: • construction methodology • construction workforce and accommodation services • equipment and machinery required • construction materials required – major types, quantities, qualities, sources, storage requirements and potential hazards • vegetation clearing and site preparation • available and potential sources of fill / borrow material • location, extent and nature of temporary stockpiles of borrow material and topsoil • erosion, sediment and drainage control, including crossings to be built over watercourses and sensitive areas • any new ancillary infrastructure and upgrades required to service the

Topic	Required information
	proposal, including road access, and supply of electricity, water and sewerage • maintenance of existing onsite infrastructure • waste management including classification of waste streams • controls to avoid spills/discharges to the environment • controls to avoid impacts on significant vegetation (e.g. groundwater-dependent ecosystems) and listed threatened species • controls to reduce greenhouse gas emissions • dust management and control • noise/vibration management and control • biosecurity management and control in relation to weeds and feral animals • fire management and control • exclusion/no-go work areas (including but not limited to ecologically and culturally important areas) • timeframes for completion Where multiple alternatives exist, the choice of the preferred option(s) must be clearly explained and a comparison provided against other options in terms of potential environmental impacts.
Operation	Describe all elements and stages of the operation phase including: • mining and ore processing methodology, including process flow diagrams for metals/mineral extraction, and methods for the progressive development of underground operations • equipment and machinery required • infrastructure – location, size and type • timeframes for the commencement and completion of operations/ development stages • the location, tonnage and quality of the overburden and mineral reserves (including rejects) to be mined and processed annually • location, shape, size and nature of stockpiles • materials and chemicals required - major types, quantities, qualities, sources, potential hazards, transport and storage requirements • information on contaminated or problematic materials (e.g. cyanide; acid, saline, sodic or dispersive material) that will pose a risk to the environment - sources, types, location, quantities, qualities, potential hazards, management requirements and methods • any limitations to the effective operation and management of the proposal, e.g. ore grade, climatic conditions • ongoing maintenance and upgrades required to service any infrastructure including roads and erosion and sediment controls • applicable legislation, guidelines, standards and permits • erosion and sediment control • weeds and feral animals management • dust management and control • noise/vibration management and control • fire management and control • controls to avoid impacts on significant vegetation (e.g. groundwater-

Topic	Required information
	dependent ecosystems) and listed threatened species • controls to avoid and reduce greenhouse gas emissions • controls to avoid spills/discharges to the environment • adequacy and likely effectiveness of mitigation measures and controls for all operational environmental management aspects • details on incident reporting and emergency response measures to be undertaken in the event of a hazardous material spill or infrastructure failure that may lead to environmental damage Where multiple alternatives exist, the choice of the preferred option(s) must be clearly explained and a comparison provided against other options in terms of potential environmental impacts.
Non-mining waste (e.g. hazardous waste, putrescible and non-putrescible solid waste, wastewater)	Provide a waste inventory including waste streams/types generated by implementing the proposal[1], annual and total estimates of the volumes of each waste stream, and the waste treatment method and/or location for each stream. Describe the overarching approach to waste management, confirming the key waste infrastructure that will be used[2]. Include capacity, location, site-selection considerations, and measures to contain any leachate, gases or hazardous materials. Demonstrate that the waste management hierarchy and section 24 of the EP Act has been applied during the design of the proposal and will be applied to waste management throughout.
Mining waste (e.g. tailings, rejects, overburden)	Use the outcomes of geochemical characterisation to identify the occurrence (including volumes) and risks of acid and metalliferous drainage (AMD) including neutral metalliferous drainage (NMD) and saline drainage (SD), from the proposed infrastructure / landforms (including ore and concentrate stockpiles) and mining methodology. Assess the potential volumes and quality of mining waste, and associated runoff and seepage risks during the mining operations and post development. Ensure that the assessment considers acid base accounting, and contaminants including (but not limited to) metals, major ions, turbidity, nutrients salinity and hydrocarbons. Provide assessment methodology (including material segregation criteria), knowledge gaps or uncertainties, and how these will be addressed. Describe how each mining waste will be managed relevant to each proposal phase (i.e. construction, operations, closure and post-development). If applicable, provide treatment methodology (including any necessary reagents, cover systems and storage requirements), disposal locations and capacity, monitoring/ maintenance details, contingency and adaptation methods. Ensure that the proposed management methods are in accordance with relevant guidelines and standards.
Water source/s and demand	Describe all water requirements relevant to each proposal phase and associated activities. Provide detailed information on volumes required, sources and available volumes, chemical characteristics, storage (e.g. number of dams/ponds), treatment and management of water aspects. Provide a water balance relevant to each proposal phase, ensuring that it is

[1] With reference to the NT EPA's Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the NT. https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/284685/siting_design_landfills.pdf
[2] Noting that the referral indicated consideration of an onsite landfill and land application of primary treated sewage

Topic	Required information
	consistent with the Minerals Council of Australia Water Accounting Framework and Bureau of Meteorology Australian Water Accounting Standards. Provide options for alternative water supply and/or water-reuse, with consideration of the environmental decision-making hierarchy and the waste management hierarchy.
Water extraction (from underground workings and borefield)	Provide detailed information on the borefield, predicted water inflows in the box cut and underground workings, water quality, timeframes for anticipated peak dewatering/water extraction requirements, and ancillary infrastructure associated with water extraction. Assess dewatering volumes and rates relevant to each proposal phase including the staged expansion of underground operations. Ensure that the assessment considers Northern Territory Water Allocation Planning Framework and existing groundwater users in the region that may be affected by dewatering. Outline the occurrence and risks of drawdown impacts on the nearby existing groundwater users, sensitive or significant vegetation and surrounding water systems (e.g. paleovalley aquifers, water resources supplying water to Tennant Creek residents). Describe how the drawdown impacts will be monitored and managed relevant to each proposal phase. If applicable, provide an adaptive management plan, in accordance with NT EPA's guidance on Adaptive Management, including a trigger-action-response-plan.
Energy	Provide relevant information with respect to energy during construction and operation, including but not limited to: • energy requirements and sources • a preferred option for sourcing energy from renewable and non-renewable sources and justification for the selected option • power station, transmission network, and gas pipeline (if applicable) • location and extent of land clearing and watercourse crossings for power infrastructure (if applicable) • compliance with relevant legislation, codes and standards
Transport and traffic	Describe traffic and transport activities during construction and operation, including but not limited to: • details of the proposed transport routes including proposed haul roads, access tracks, public roads, and railway sidings (including any proposed realignments and upgrades) • existing transport baseline information including current traffic numbers, movement patterns and relevant existing infrastructure (including but not limited to Tennant Creek rail siding, Port Darwin and Tennant Creek airport) • vehicle, train and aircraft movements for the proposal including type, size, number and frequency of movements to and from site and Tennant Creek • hours of operation • details on access and transport routes including proximity to sensitive receptors and sensitive areas (e.g. townships or communities / outstations, waterways, sensitive and/or significant vegetation, culturally sensitive sites, threatened and invasive species) • details on traffic management aspects, incident reporting and emergency response measures to be undertaken in the event of a hazardous material and

Topic	Required information
	mined materials spill • details on changes or restrictions to local traffic due to upgrading of roads/rail and construction vehicles resulting in delays or inconvenience to local communities and other road users.
Workforce	For each phase of the proposal, provide a summary of the: • estimated number of people to be employed • skills base required • likely sources (local, regional, overseas) • on-site facilities provided, e.g. accommodation village

2.2.7. Rehabilitation and closure

Given the anticipated short lifespan of the proposal to be approximately 10 years, provide detailed information on the proposed decommissioning, closure and rehabilitation of the proposal, with consideration of section 42 of the EP Act.

Describe best practices for progressive rehabilitation and closure (ensuring consistency with relevant guidelines including ICMM Integrated Mine Closure: Good Practice Guide, CRC-TiME Integrated Mine Transitions Framework (IMTF) for mine closure planning, Mine Closure - Leading Practice Sustainable Development Program) that apply to restoring the proposal area to a safe and stable condition that does not cause environmental harm and can sustain a post-development land use.

The detail on the proposed decommissioning, closure and rehabilitation is to include:

- the proposed lifespan of the proposal and planned closure timeframes
- existing condition and amenity, previous and current land use, and agreed post-development land use (after closure) including alternatives defined by the outcomes of consultations undertaken with key stakeholders
- a plan for best practice unplanned or early closure
- a plan for best practice care and maintenance
- any legacy benefits of the proposal to nearby communities, such as power or water supply
- final site design and conditions identifying the locations of post-development land use, the areas subject to contaminated land assessments and the areas where rehabilitation is not proposed (if applicable).

  Where the area cannot be rehabilitated to an original (to the maximum extent practicable) and/or a stable condition, state the reasons and the proposed methodology to achieve the best environmental outcomes. For example, where the modified landforms extend above and below the natural ground level, demonstrate that the site design and landforms are designed by appropriately qualified professionals in accordance with accepted guidelines and standards.
- rehabilitation and closure objectives and actions (in consideration of biological, cultural, economic and social environmental aspects and the agreed post-development land use) including information on:

- time-based milestones consistent with SMART[3] principles
- material sources, characterisation and indicative volumes available for site rehabilitation
- options that preference progressive rehabilitation (e.g. backfilling of underground voids with potentially acid forming waste and paste tailings, revegetation of temporary work areas)
- revegetation strategies including species to be used and their source
- decommissioning, removal and/or disposal of infrastructure
- treatment, removal and/or disposal of problematic materials (e.g. PAF rock and tailings) and contaminated soils
- performance indicators, monitoring and reporting schedule
- knowledge gaps, uncertainties and environmental constraints (including social and economic), to achieving rehabilitation objectives and milestones.

Where rehabilitation and closure objectives and activities do not meet best practice (e.g. backfilling of underground voids with potentially acid forming waste and paste tailings, revegetation of temporary work areas), state the reasons and demonstrate how the proposed methodology achieves the best environmental outcomes.

Demonstrate that the proposed site rehabilitation actions have been informed or supported by any land rehabilitation practices that may have been successful across the Central Australia region, and predictive post-development assessment of water levels and quality in underground workings that account for exchange with the surrounding groundwater resources, and interactions with sensitive receptors/areas.

2.2.8. Changes or amendments to proposal

Describe any changes, amendments or refinements to the proposal since submission of the referral, noting that the NT EPA must be formally notified of any significant variations under section 51 of the EP Act.

2.3. Stakeholder engagement and consultation

Proponents have a general duty under section 43 of the EP Act to provide stakeholders that may be affected by a proposal with an opportunity for consultation to assist understanding of the proposed action and its potential impacts and benefits.

The EIS is to document the following:

- the proponent's approach to stakeholder engagement and consultation for the life of the proposal, including demonstration that this is consistent with the NT EPA's guidance for proponents: Stakeholder Engagement and Consultation and DCCEEW's Interim Engaging with First Nations People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999, and aligns with best practice guidance[4]

[3] SMART milestones are:
Specific – it is clear what must be done
Measurable – it must be possible to know when it has been achieved
Achievable – it is capable of being achieved
Reasonable/relevant – there is a reasonable and clear connection between the milestone and the desired outcomes
Time-specific – it is clear when the milestone will be completed.

[4] For example: Social Impact Assessment Guideline (nsw.gov.au)

- a summary of information on stakeholder engagement and consultation[5] undertaken on the proposal, including the
    - identified stakeholder groups (e.g. Central Land Council, Barkly Regional Council, DCCEEW, Northern Territory Government authorities, Port Darwin, and Aboriginal Stakeholders as outlined in section 2.3.1 below)
    - the manner in which information has been disseminated and communicated to stakeholders, and how stakeholder input was invited and incorporated
    - key issues raised in consultations
    - adjustments made to the proposal as a result of consultation.
- future plans and commitments for ongoing consultation.

2.3.1. Aboriginal stakeholders

The EIS is to be informed by consultation with Aboriginal stakeholders. The EIS should set out the processes applied to identifying and determining Aboriginal stakeholders.

Aboriginal stakeholders must include (but may not be limited to):

- traditional Aboriginal owners[6] and native title holders[7] whose lands are within and adjacent to the potentially affected area, through their representative bodies
- other people or organisations who have been identified as Aboriginal stakeholders.

The EIS is to demonstrate that the proponent has:

- recognised the role that Aboriginal people have as stewards of their country[8], and the importance of participation of Aboriginal people in environmental decision-making processes in relation to 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 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 in regards to environmental management
- adopted measures to protect the rights and interests of Aboriginal people in relation to the areas that may be impacted.

[5] As defined in the NT EPA Guidance for Proponents - Stakeholder engagement and consultation
[6] including but not limited to Aboriginal owners of the Karlantijpa Aboriginal Land Trust
[7] including but not limited to native title holders for Tennant Creek Pastoral Lease and Phillip Creek Pastoral Lease
[8] In accordance with section 3(e) of the EP Act, and in recognition of the rights and interests of Aboriginal people in the potentially affected area

2.4. Environment protection and management requirements

Provide information that demonstrates, in accordance with section 42(b) of the EP Act, that the proposal is assessed, planned and will be carried out taking into account the following:

2.4.1. Principles of ecologically sustainable development

Substantiate predicted outcomes in relation to the principles of ecologically sustainable development as set out in Part 2, Division 1, of the EP Act.

2.4.2. Management hierarchies

Summarise how the environmental decision-making hierarchy (section 26 of the EP Act) and the waste management hierarchy (section 27 of the EP Act) have been applied in the design of the proposal and will continue to be applied in the development and operation of the proposed action. Draw on details reported in response to Table 1 and in the assessment of environmental factors in section 2.5 of these TOR.

2.4.3. Ecosystem-based management

Describe how ecosystem-based management[9] has been taken into account in the design of all components of the proposal and the proposed mitigation and management measures. Include consideration of residual impacts (section 2.5) and justification for whether they are acceptable.

2.4.4. The impacts of a changing climate

Provide a summary of the projected climate changes in the region, referring to relevant publications.

Describe how adaptation to a changing climate has been considered in the design and closure of the proposal, with reference to the Northern Territory Climate Change Response: Towards 2050 and NESP Earth Systems and Climate Change Hub's Climate Change in the Northern Territory: State of the science and climate change impacts.

In assessing the environmental factors (section 2.5 of these TOR, and applying relevant references – see Appendix A), describe the extent to which the outcomes and commitments proposed address any significant vulnerabilities of the proposal and the environmental values in and adjacent to the proposal area under the most current, down-scaled climate projections for the region. Discuss the cumulative effect of projected climate changes on identified environmental values, and on mitigation measures.

2.5. Information requirements for environmental factors

The NT EPA identified eight environmental factors in its referral decision that have the potential to be significantly impacted by implementing the proposal (Table 2), identified from the NT EPA's Environmental factors and objectives - Environmental impact assessment guidance.

[9] As defined in section 4 of the EP Act

Table 2 Preliminary 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.
	Inland water environmental quality	Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.
Air	Air quality	Protect air quality and minimise emissions and their impact so that environmental values are maintained.
	Atmospheric processes	Minimise greenhouse gas emissions so as to contribute to the NT Government's target 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 factors listed in Table 2, the draft EIS must consider the significance of the identified potential impacts with reference to section 11 of the EP Act and Significant Impact Guidelines for protected matters under the EPBC Act, where applicable. The EIS must identify and consider the proposal footprint and the potentially affected area, and cumulative impacts in consideration of other known or proposed activities in the region (including the existing exploration works), and potential natural fires, drought or floods, to identify the environmental aspects (under each environmental factor) and their specific values that could be impacted by the proposal. Where relevant, the assessment of potential environmental impacts must consider unusual operations, unplanned and emergency shutdowns of part or all of the operations.

The draft EIS is to provide an assessment of how the NT EPA's environmental objective for each factor would be met, as outlined in the NT EPA's Preparing an environmental impact statement – environmental impact assessment guidance for proponents.

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

The following sections and tables outline the information to be addressed for each environmental factor. The below information requirements must be addressed in an appropriate format within the draft EIS, with

technical assessment reports appended to the EIS as applicable. Detailed maps and figures must be included to support the descriptions and findings for each of the relevant environmental factors.

2.5.1. Terrestrial environmental quality

Table 3 Information required for the 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.	
Relevant activities	Identify the activities that may cause environmental harm relating to land and soils, including but not limited to: • Vegetation clearing and land disturbance • construction and mining activities • handling and storage of hazardous materials (e.g. fuel, cyanide) • overburden (including PAF rock) and tailings management • land application of primary treated sewage • water extraction from underground workings and borefield • excavation and stockpiling of borrow materials (if applicable).
Environmental values	Describe and map the soils and land within the proposal area and potentially affected area in accordance with relevant guidelines and including: • soil and landform types • physical and chemical properties of the soil • physical attributes of landform including elevation and depression • the presence and location of existing erosion and other disturbances • the environmental values supported by land and soils Characterise the soil qualities based on a desktop study of relevant soil reports, analysis of remote sensing data and field based investigations. Describe and map soils in accordance with relevant guidelines.
Potential significant impacts and risks	Identify potential significant impacts and risks to the terrestrial environment and: • describe the pathways by which terrestrial environmental quality could potentially be significantly impacted by the proposal, and undertake a risk assessment addressing the area of disturbance proposed, soil erosion/ compaction, surface subsidence, dispersive soils, potential acid sulfate soils, surface hydrology, sediment transport and sources of contamination which could significantly impact soil quality • using appropriate studies, investigations and relevant information, quantify the potential direct, indirect and cumulative impacts of the proposal on terrestrial environmental quality, and assess and justify the significance of those impacts. Provide results and interpretation of geotechnical, geochemical and soil investigations and surveys of the proposal area, and an assessment of the suitability of proposed locations for mine components with regards to the chemical and physical properties of the soil. Further geochemical characterization work undertaken must identify the potential for acid, metalliferous and any other non-benign drainage from mined materials (including waste rock, ore and other materials) and tailings, including a comprehensive classification in accordance with the NT EPA's Environmental Assessment Guidelines

Aspect	Specific information required
	for Acid and Metalliferous Drainage. The EIS must identify, quantify and map potential significant impacts on terrestrial environmental quality based on relevant guidelines and standards.
Avoidance, mitigation and management	Outline the measures for avoiding or mitigating potential significant impacts identified above, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Consider measures to enhance or restore environmental quality. Outline the key management plans that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. The EIS must demonstrate, at a minimum, that: • mitigation measures are in accordance with best practice, including advice from relevant Government authorities • infrastructure has been appropriately sited and has taken into consideration the minimum requirements outlined in the NT Land Clearing Guidelines • topsoil and overburden management and/ or amelioration measures are appropriate to ensure suitability for mine rehabilitation • mining wastes (particularly tailings and rocks) have been adequately classified and are appropriately managed in accordance with the GARD guidelines, Preventing Acid and Metalliferous Drainage – Leading Practice Sustainable Development Program for the Mining Industry and ANCOLD guidelines. Demonstrate that the waste rock classification and material segregation criteria have been reviewed to inform the effective management of mining wastes. • erosion and sediment controls are sited where necessary to appropriately manage erosion impacts and soil mobilisation • cyanide is managed or destroyed in accordance with the requirements of International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential significant impacts and risks to land and soils, and mitigation and management measures. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal will be acceptable. Specify timeframes for monitoring and reporting. The proposed monitoring and reporting must specify which proposal phase it relates to i.e., construction, operations, closure and post-development. Demonstrate that monitoring activities are in accordance with best practice and advice from relevant NT Government authorities.
Residual impact	Identify any potential significant residual impact or risk of the proposal to identified values and the level of certainty underpinning the predicted residual impacts.

2.5.2. Terrestrial ecosystems

Table 4 Information required for the 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.	
Relevant activities	Identify the activities that may cause environmental harm relating to terrestrial ecosystems, including but not limited to: • disturbance of 177 ha • construction and use of mine infrastructure and haul roads • operation of plant and equipment • water extraction and discharge • minerals processing including mine waste handling and management • landfill operations.
Environmental values	Review the terrestrial ecological information provided in the referral, and provide an updated description of all terrestrial ecological values present or likely to be present within the proposal footprint and potentially affected area including: • a description and map of sensitive and/or significant vegetation including riparian vegetation, groundwater dependent ecosystems (GDE including, but not limited to *Corymbia opaca*, *Corymbia aparrerinja*), and their significance in local and regional settings • desktop reassessment of the likelihood of occurrence for Grey Falcon, *Falco hypoleucos* • a description of the extent and importance of relevant threatened flora and fauna species (including but not limited to the Greater Bilby (*Macrotis leucura*), Painted Honeyeater (*Grantiella picta*) and Grey Falcon (*Falco hypoleucos*)) in local and regional settings (informed by targeted surveys (additional to those that informed the Referral) • a description and map of general habitats and significant habitat requirements for relevant threatened species (including but not limited to burrows sites and tracks for the Greater Bilby, known or possible nesting sites for Grey Falcon and important habitat (mistletoe) for the Painted Honeyeater) • a description and map of the extent of vegetation communities using the vegetation mapping units developed by the Department of Environment, Parks and Water Security (DEPWS) Where surveys are required for listed species, consult with relevant government authorities regarding the survey design and methodology. For any additional surveys undertaken, the results must be presented in the draft EIS including survey effort and species records.
Potential significant impacts and risks	Identify, describe and assess potential direct and indirect significant impacts and risks of implementing the proposal, and cumulative impacts, on terrestrial ecosystems and identified environmental values including: • direct loss of flora/ vegetation communities from vegetation clearing, including loss of sensitive and/or significant vegetation[10], and potential habitats for threatened species

[10] Refer to NT Land Clearing Guidelines

Aspect	Specific information required
	• assessment of the proposal's contribution to local and regional loss of vegetation communities and potential habitat for threatened species, ensuring that all historically disturbed areas are considered, and how the proposal contributes to cumulative impacts on biodiversity values • direct impacts on threatened fauna due to collision with vehicles, interaction with mine waste storage structures (e.g. TSF) and increased pest activity • indirect disturbance or modification of flora/ecological communities from groundwater drawdown, altered water quality, treated sewage disposal, erosion, dust, weeds/pathogens, pests, disturbance or acidification of soils, changes in bushfire risk (fire frequency and intensity) • impacts to terrestrial ecosystems, including GDEs from spills of hazardous materials (e.g. fuel, cyanide) and the overflow of tailings from storage structures Determine the areas that could feasibly experience those impacts including uncertainty associated with the impact predictions. Assess the potential impacts of a changing climate to terrestrial ecosystems in the context of cumulative impacts from the proposal and other activities in the region. Using appropriate studies, investigations and relevant information, quantify the extent of potential impacts and their significance at the proposal level and in regional settings.
Avoidance, mitigation and management	Outline the measures for avoiding, or mitigating potential significant impacts identified above, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Consider measures to enhance or restore environmental quality. Outline the key management plans (e.g., Greater Bilby Management Plan) that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. The EIS must demonstrate, at a minimum, that: • mitigation measures are in accordance with best practice, including advice from relevant Government authorities • infrastructure has been appropriately sited to minimise general biodiversity impacts and has taken into consideration the minimum requirements outlined in the NT Land Clearing Guidelines • the borefield design, and combined water extraction from underground workings and borefield have taken into consideration sensitive and/or significant vegetation and other water users in the region • a Greater Bilby Management Plan has been developed in accordance with the advice from relevant government authorities, including DEPWS Flora and Fauna division.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential significant impacts and risks to terrestrial ecological values, and mitigation and management measures. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal will be acceptable. Specify timeframes for monitoring and reporting. The proposed monitoring and reporting must specify which proposal phase it relates to i.e., construction, operations, closure and post-development. Demonstrate that monitoring activities are in accordance with best practice and advice from relevant government authorities.

Aspect	Specific information required
Residual impact	Identify any potential significant residual impact or risk of the proposal to identified values and the level of certainty underpinning the predicted residual impacts.
Offsets	Where a significant residual impact may remain after applying the environmental decision-making hierarchy, identify offsets and describe how any proposed offset is consistent with the NT Offsets Framework, EPBC Act environmental offsets policy, and/or NT policy on the translocation of native wildlife for conservation in the Northern Territory (if applicable).

2.5.3. Hydrological processes

Table 5 Information required for the 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.	
Relevant activities	Identify the activities that may cause environmental harm relating to hydrological processes, including but not limited to: • disturbance of 177 ha • construction and operation of mine and ancillary infrastructure including water structures • water extraction from underground workings and borefield • land application of primary treated sewage • sealing of walls and backs in the underground access decline • construction of a gas pipeline traversing watercourses (if applicable).

Environmental values	Provide updated and detailed information for the proposal footprint and the potentially affected area including:
	• climate and meteorological conditions in the proposal area, the frequency and severity of extreme weather conditions
	• hydrogeology including information on:
	  ○ groundwater systems
	  ○ hydraulic properties such as specific yield, storativity and transmissivity
	  ○ water depths and movement (including information on the structural features, i.e. faults, fractures, cavities and solution joints)
	  ○ hydraulic connectivity and disconnectivity between aquifers (including shallow/paleovalley and deep aquifers)
	  ○ recharge rates
	  ○ quantitative water balance
	  ○ local/regional importance
	• surface water hydrology including drainage characteristics and flood events
	• baseline groundwater-surface water interactions including recharge/ discharge zones, pathways (e.g. wetlands, swamps, soaks, springs, GDEs), and rates
	• declared beneficial uses, existing users, water quality objectives and environmental values including

Aspect	Specific information required
	○ sites of cultural significance[11] ○ areas of stygofauna occurrence, based on a desktop assessment of the suitability of habitat present, and field sampling (if relevant)[12] ○ extent and value of GDEs, including but not limited to culturally significant sites characterised by groundwater dependent vegetation (e.g. *Corymbia opaca*, *Corymbia aparrerinja*) or surface water features (e.g. soaks, swamps and springs) • current and proposed known (future) water use potentially affected by the proposed water abstraction Provide detailed maps and hydrogeological cross-sections to support the above descriptions, and indicate short-term and long-term variability. Outline studies used in the assessment, including their results, limitations and uncertainties.
Potential significant impacts and risks	Identify, describe and assess potential direct and indirect significant impacts and risks of the proposal, and cumulative impacts, on hydrological processes including: • the natural catchment and surface and groundwater hydrology • drawdown of water table and localised groundwater mounding (e.g., near water/mine waste storage structures and sewage discharge area), with potential effects to any GDEs (e.g. springs, wetlands, soaks, swamps, groundwater dependent vegetation and stygofauna), and connected surface water and groundwater systems • surface water flows (if applicable) including: ○ an alteration to the volume, speed or direction of flow, or likely flow of a waterway ○ an alteration to the stability of bed or banks of a waterway, including the removal of vegetation ○ impacts on other and current likely future users and the environment. • impacts from the proposal on declared beneficial uses, water quality objectives and environmental values, associated with interception of or abstraction from the groundwater system and connected water systems • impacts to current and future (potential) groundwater users within the Tennant Creek Water Control District in terms of supply and quality, including but not limited to the Tennant Creek West borefield supplying water to Tennant Creek community. The assessment of potential significant impacts must use the outcomes of relevant studies and information. As a minimum, the assessment must include: • description of GDEs and understanding of their interconnectivity and water dependence • outcomes from flood risk assessments and associated design criteria adopted for mining components, in particular for the gas pipeline and haul road

[11] For example, Little Lake Surprise and Algoolgoora Swamp

[12] To determine if field sampling of stygofauna is required, consult with relevant government authorities including the Flora and Fauna and Water Resources Divisions of DEPWS.

Aspect	Specific information required

	• predictions based on an updated transient groundwater model[13] for relevant characteristics such as:
	  ○ alterations to recharge
	  ○ groundwater inflows in the decline box cut and underground workings
	  ○ groundwater drawdown and recovery levels (at 1 m intervals) for affected aquifer(s), including information on areal extent, rates and variability
	  ○ alterations to aquifer(s) storage and groundwater flow (i.e., direction and rates)
	  ○ impacts to declared beneficial uses and sensitive receptors/ areas.
	• predictions for initial conditions and all stages of the proposal (i.e., construction, operations, closure and post-development) under both expected and worst-case scenarios
	• overall water balance of the intercepted or targeted groundwater system(s), including inputs and outputs, and feasibility assessment to illustrate the availability of a sustainable water supply for the abstraction of desired volumes (while minimising adverse impacts to the environment, and current and future groundwater users)
	• quantification of sustainable groundwater extraction limits, and any approval required under the *Water Act 1992*
	Expand the model domain to a wider area, covering all key sensitive receptors and areas in the surrounding area, including but not limited to GDEs, Tennant Creek West borefield and paleochannels. Modelling should consider the maximum expected dewatering (e.g. from box cut, underground workings and borefield) and seepage volumes (e.g., from mine landforms, and treated wastewater discharge), as well as changes in land surface characteristics and the variability in the natural system. Consult with Water Resources Division of DEPWS regarding the model design and characterisation of scenarios for predictions.
	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 the predictions.
	Provide an independent peer review of the groundwater model including sensitivity, predictive uncertainty analysis and predictions derived from it, and detail any changes made to the proposal as a result of the peer review.
	Describe any uncertainties and further work required to increase understanding of potential significant impacts and reduce uncertainty. Quantify the significance and extent of impacts, at the project level and cumulatively, using relevant guideline thresholds.

Avoidance, mitigation and management	Outline the measures for avoiding or mitigating significant impacts identified above, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Consider measures to

[13] Barnett et al, 2012, Australian Groundwater Modelling Guidelines, Waterlines report, National Water Commission, Canberra

Middlemis, H. and Peeters, L.J.M., 2018, Information Guidelines Explanatory note - Uncertainty analysis for groundwater modelling. A report prepared for the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development through the Department of the Environment and Energy, Canberra.

Aspect	Specific information required
	enhance or restore environmental quality. Avoidance and mitigation measures must be developed with consideration given to the following: • proposal design and layout • construction methodology • alternative water supply from targeted bore/s and/or aquifer/s • water conservation and reuse • water storage structures • compliance with any legislation, standards and policies relevant to the proposed measures including a water extraction license (a Tier 3 application) under the *Water Act 1992* • environmental management requirements associated with seasonal weather, extreme weather conditions such as floods, storms and cyclones for the 10%, 5%, 2%, 1% and 0.1% annual exceedance probability (AEP) design events. Outline the key management plans and adaptive management strategies (including a trigger-action-response-plan) that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Demonstrate that mitigation measures are in accordance with best practice and advice from relevant NT Government authorities.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential significant impacts and risks, mitigation and management measures. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal will be acceptable. Specify timeframes for monitoring and reporting. Demonstrate that proposed monitoring locations (including bores) are appropriately sited to monitor relevant impacts. The proposed monitoring and reporting must specify which proposal phase it relates to i.e., construction, operations, closure and post-development. Demonstrate that monitoring activities are in accordance with best practice and advice from relevant NT Government authorities.
Residual impact	Identify any potential significant residual impact or risk of the proposal to identified values.

2.5.4. Inland water environmental quality

Table 6 Information required for the assessment of Inland water environmental quality

Aspect	Specific information required
NT EPA objective: Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	
Relevant activities	Identify the activities that may cause environmental harm relating to inland water

Aspect	Specific information required
	environmental quality, including but not limited to: • disturbance of 177 ha • operation of mine and ancillary infrastructure • overburden (including PAF rock) and tailings management • handling and storage of hazardous materials (e.g. fuel, cyanide) • land application of primary treated sewage • water extraction from underground workings and borefield.
Environmental values	Describe the water quality (chemical, physical and biological) of groundwater and surface water including current and potential (future) water users in the proposal footprint and the potentially affected area. Provide detailed maps to support the above descriptions. Outline studies used in the assessment, including their results, limitations and uncertainties.
Potential significant impacts and risks	Identify, describe and assess potential direct and indirect significant impacts and risks of the proposal, including cumulative impacts, on water quality including: • contamination of surface water or/and groundwater from the spills or discharges of hazardous materials, and waste streams from mining components (TSF, WRD and stockpiles) • changes to surface water quality from construction, stockpiling and the transport of overburden, ore and topsoil • changes to groundwater quality and levels in surrounding areas (including the Tennant Creek West borefield) and connected aquifers due to density driven flow of fluids and solutes driven by dewatering and mine activities • impacts on declared beneficial uses, water quality objectives and environmental values including sensitive areas and current users As a minimum, the assessment must include: • spatial and temporal trends in climate including predicted climate change • baseline conditions and identified environmental values • potential sources of contaminants, mechanism of their release and transport pathways to receptors • the physical and chemical characteristics, and volume of potential contaminants / pollutants • cumulative impacts with the existing exploration operation, other industries or proposals • the physical and chemical characteristics, volume, timing and location of any discharges • the reversibility of potential impacts (including timeframe) The assessment must identify potential impacts and risks to inland water environmental quality and quantify their significance: • against site specific water quality data and any relevant guideline thresholds including Australian and New Zealand Guidelines for Fresh and Marine Water Quality and NHMRC's Australian Drinking Water Guidelines • on the beneficial uses, water quality objectives and identified environmental values. Quantify the extent of potential significant impacts on inland water environmental quality relating to a changing climate, and how these have been considered cumulatively to proposal impacts. The assessment must take into account initial conditions and all stages of the proposal

Aspect	Specific information required
	(i.e., construction, operations, closure and post-development). The assessment of impacts must use the outcomes of relevant studies and information. At a minimum, provide the outcomes of 3-D solute transport model including limitations and uncertainty associated with the impact predictions. Include maps and/or diagrams, with a focus on areas where sensitive receptors and sensitive environment are present. Provide an independent review of the solute transport assessment, and detail any changes made to the proposal as a result of the peer review.
Avoidance, mitigation and management	Outline the measures for avoiding or mitigating potential significant impacts identified above, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Consider measures to enhance or restore environmental quality. Avoidance and mitigation measures must be developed with consideration given to the following: • proposal design and layout • construction methodology • water management and efficiency, including stormwater, wastewater and mine-affected water • waste management including a detailed description of management methods for all types of wastes including PAF material • erosion, sediment and drainage controls • chemical and fuel spill management • post-development landform stability • compliance with any legislation, standards and policies relevant to the proposed measures. Outline the key management plan/s that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Specific to the post-development conditions, provide in the draft EIS, : • predicted post-development water balance, including density driven exchange between mine affected and non-affected water • predicted post-development water quality in box cut and the underground workings • surface and/or groundwater quality in accordance with site-specific guideline values to meet post-development land use criteria. • details on the monitoring, avoidance and mitigation measures. Demonstrate that mitigation measures are in accordance with best practice and advice from relevant NT Government authorities.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential significant impacts and risks, mitigation and management measures. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal will be acceptable. Specify timeframes for monitoring and reporting. The proposed monitoring and reporting must specify which proposal phase it relates to i.e., construction, operations, closure and post-development. Demonstrate that monitoring activities are in accordance with best practice and advice

Aspect	Specific information required
	from relevant NT Government authorities.
Residual impact	Identify any potential significant residual impact or risk of the proposal to identified values.

2.5.5. Air quality

Table 8: Information required for assessment of Air quality.

Aspect	Specific information required
NT EPA objective: Protect air quality and minimise emissions and their impact so that environmental values are maintained.	
Relevant activities	Identify the activities that may cause significant environmental impacts relating to air quality, including but not limited to: • onsite power generation (yet to be confirmed) • dust generation activities.
Environmental values	If relevant activities are identified, describe the ambient air environment, and the sensitive receptors and sensitive environment, including areas of current and predicted public use (including cultural use), within the proposal footprint and the potentially affected area. Provide maps and figures to support descriptions as appropriate.
Potential significant impacts and risks	Describe and assess the potential significant impacts on air quality, including cumulative impacts, using outcomes of investigations and/or other relevant information, and identify: • the likely types, sources, scale and extent of emissions that could impact air quality • the potential impacts on local air quality and sensitive receptors/environment during all phases of the proposal • the duration, magnitude and extent of potential impacts, including those impacts resulting from the accumulation of emissions over the operational life of the power station • the proposal footprint and potentially affected area that could feasibly experience those impacts. If a power station is to be constructed and operated in the vicinity of sensitive receptors (i.e. within 5 km), the assessment must identify and quantify potential significant impacts on air quality in accordance with the NSW EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales. Ensure that emitted pollutants do not prejudice compliance with the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM) as amended and account for anticipated amendments to the AAQ NEPM in 2025.
Avoidance, mitigation and management	Outline the measures for avoiding or mitigating potential significant impacts identified above, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Also consider measures to enhance or restore environmental quality. Avoidance, mitigation and management measures must be developed with consideration

Aspect	Specific information required
	given to the following: • design and layout of the proposal • construction methods and timeframes • separation distance from sensitive receptors/environment • emission (e.g. oxides of nitrogen (NOx), sulphur dioxide (SO_2), carbon monoxide (CO)) avoidance, mitigation or management measures where relevant air quality thresholds are exceeded • compliance with any statutory or policy basis (including AAQ NEPM) for the proposed measures. Demonstrate that mitigation measures align with best practice and advice from relevant government advisory agencies.
Monitoring and reporting	Outline any proposed monitoring and reporting activities related to potential significant impacts (including cumulative impacts) and risks, and mitigation and management measures. The proposed monitoring and reporting must specify which project phase it relates to, i.e. construction or operations. Demonstrate that monitoring activities are in accordance with best practice and advice from relevant government advisory agencies.
Residual impact	Identify any potential significant residual impact of the proposal on environmental values.

2.5.6. Atmospheric processes

Table 9 Information required for the 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.	
Relevant activities	Identify the activities that may contribute to greenhouse gas emissions, including but not limited to: • land clearing • fuel combustion for the operation of machinery, vehicles and diesel generator sets during construction and operations • rocks blasting using explosives • sewage treatment • FIFO (Fly-in and fly-out) workforce • onsite power generation (yet to be confirmed).
Environmental values	Describe the current emissions profile for the NT by industry/sector. Describe greenhouse gas emissions trajectories for the NT by industry/sector.
Potential significant impacts and risks	Review the Greenhouse Gas Report (Appendix K of referral), and provide updated information on all sources and classes of GHG emissions (in particular, emissions from onsite power generation, if applicable) including: • direct GHG emissions (Scope 1 emissions, e.g. land clearing, diesel combustion during construction and operation, proposed power generation)

Aspect	Specific information required
	• indirect GHG emissions (Scope 2 emissions, e.g., consumption of the electricity produced and transmitted from the Tennant Creek power station, if applicable) • indirect GHG emissions from upstream and downstream activities associated with the proposal (Scope 3 emissions, e.g. extraction and/or production of purchased machinery and materials, final product transportation via train, airline or marine vessels) • fugitive GHG emissions from the gas pipeline connecting to the Amadeus gas pipeline (if applicable) • cumulative emissions in conjunction with the current exploration works • comparison with NT and national emissions. Provide a breakdown of Scope 1, 2 and 3 emissions according to the emission sources and source locations (i.e. within the NT, elsewhere in Australia or outside of Australia). Quantify GHG emissions from each source for each financial year (annual), including total GHG emissions for the life of the project. Provide an inventory of projected annual emissions for each relevant greenhouse gas, with total emissions expressed in tonnes 'CO_2 equivalent' terms. Provide justification for the suitability of methodologies or surveys used to calculate greenhouse gas emissions.
Avoidance, mitigation and management	Outline the measures for avoiding or mitigating projected Scope 1 and Scope 2 emissions, with consideration of sections 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act. Include a description of: • the supply of renewable energy and meeting NT renewable energy targets • any energy efficiency and mitigation and management measures to reduce or minimise greenhouse gas emissions over the life of the proposal including a commitment to continuous improvement measures • how proposed measures to maximise energy efficiency and avoid and/or reduce/abate greenhouse gas emissions will meaningfully contribute to the NT Government's target of achieving interim 2030 energy target (i.e. 50% renewable energy) and net zero greenhouse gas emissions target by 2050 • if applicable, how the proposal's requirements under the Australian Government's Safeguard Mechanism will affect greenhouse gas emissions reductions over the life of the proposal. Demonstrate that proposed mitigation measures are in accordance with best practice and capable of achieving stated emissions reductions, including identification of any local conditions or circumstances that might influence the choice of technologies or measures to mitigate emissions. Outline the key management plan/s that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Identify uncertainties that may impact the proposal's ability to reduce emissions in line with the NT and Australian Government targets and how uncertainties would be addressed.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential significant impacts and risks to atmospheric processes, and mitigation and management measures. Describe clear and measurable outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal will be

Aspect	Specific information required
	acceptable. The proposed monitoring and reporting must specify which proposal phase it relates to i.e., construction or operations. Demonstrate that monitoring activities are in accordance with best practice and advice from relevant NT Government authorities.
Residual impact	Identify any potential significant residual impact or risk of the proposal to the current emissions profile and the greenhouse gas emissions trajectory for the NT. Describe the net contribution to the NT's greenhouse gas emissions over the life of the proposal.
Offsets	Where a significant residual impact may remain after applying the environmental decision-making hierarchy, identify offsets and describe how any proposed offset is consistent with the NT Offsets Framework.

2.5.7. Community and economy

Table 10: 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.	
Relevant activities	Identify the activities that may affect community and economy, including but not limited to: • construction and mining operations, rehabilitation and closure, handling and processing ore (cumulative impacts) • generating employment and social and economic opportunity for local communities.
Environmental values	Describe the socio-economic area of influence, with consideration to: • key landowners, custodians/stakeholders/communities, and other persons with overlapping or intersecting interests • demographic characteristics and trends, governance and institutions • the labour market including participation, skills gaps, Aboriginal employment • business capacity, and economic sectors and livelihoods • level of disadvantage against relevant indicators • current land uses including, residential, commercial, industrial, recreational/leisure, tourism, and the use of outstations (e.g. Kunayungku, Ngappamilarnu outstations) • infrastructure and services such as roads, utilities, fuel, water telecommunications, policing, transport, accommodation • worker and tourist mobility and demand for services • relevant contextual factors including history of other projects, community values and aspirations, government policies and legislation, with reference to the Barkly Economic Growth Strategy 2030.
Potential significant	Identify, describe and assess the significance of potential benefits to, and potential

Aspect	Specific information required
impacts and risks	impacts (including cumulative impact) on, the community and the economy including: • impacts on community wellbeing, values, aspirations, health and cohesion • risks and opportunities for existing businesses, economic sectors and employment/livelihoods • potential risks (e.g., labour shortage and financial) to proposal implementation • potential risks and opportunities for the quality, affordability and availability of social infrastructure and services including housing, education, health, childcare, policing, transport (including by air and rail), waste management services, utilities and telecommunications, including for communities and out-stations • social integration of non-local workforce • potential impacts on short-term accommodation, including tourism • impacts on the water supply (including the Tennant Creek West borefield) in terms of availability and water quality. • economic assessment of the proposal's impact on the NT economy including the total contribution to Gross Territory Product and Gross Domestic Product over the economic life of the proposal • estimated capital and annual operational expenditure Demonstrate that the assessment of the impacts and benefits of the proposal on people in the socio-economic area of influence is informed by an inclusive and collaborative community and stakeholder engagement and consultation process.
Avoidance, mitigation and management	Outline the measures for systematically avoiding and mitigating potential significant social impacts, and maximising benefits. Identify and discuss frameworks and management strategies that would be implemented to address: • protection of community values • ongoing community and stakeholder engagement • training and employment • local business and industry procurement • distribution of community benefits • avoidance of any financial or environmental liability • community wellbeing. Outline the key management plan/s that would be implemented, and the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Demonstrate that mitigation measures align with best practice and advice from relevant government advisory agencies.
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts, risks and benefits and mitigation and management measures to community and economy. The proposed monitoring and reporting must specify which project phases it relates to. Demonstrate that monitoring activities align with community expectations

Aspect	Specific information required
	and are in accordance with best practice and advice from relevant NT Government authorities.
Residual impact	Identify the significance of any residual impact or risk of the proposal to identified values.

2.5.8. Culture and heritage

Table 10: Information required for assessment of Culture and heritage.

Aspect	Specific information required
NT EPA objective: Protect culture and heritage.	
Relevant activities	Identify the activities that may affect culture and heritage, including but not limited to: • mining activities (including cumulative impacts) • water extraction from underground workings and borefield • activities with the potential for direct and indirect disturbance of sacred sites, heritage sites and sites of cultural significance including cultural landscapes.
Environmental values	Identify the Aboriginal communities and traditional owners within (or in proximity to) the proposal area, including the potentially affected area. Describe the characteristics and current condition of culture and heritage values within the proposal area, including the potentially affected area, which could be impacted. This must include (at a minimum) descriptive and spatial information for the following: • Aboriginal and non-Aboriginal sites, places or objects of natural, historic or cultural heritage significance, including places used for maintaining cultural traditions (e.g. hunting or/and gathering on Partnparinji campsite; Kanturrpa, Miyikampi, and Pawurrinji ceremonial sites) • heritage places or objects protected under the *Heritage Act 2011* (which includes both the automatic protection of Aboriginal and Macassan archaeological sites and the protection of other declared places) • registered or recorded sacred sites under the *Northern Territory Aboriginal Sacred Sites Act 1989* (Sacred Sites Act) taking into account confidentiality requirements • terrestrial ecosystems including GDEs (e.g. soaks, swamps, trees) and biodiversity that are important for maintaining Aboriginal cultural values including fishing and valued species (e.g. Desert walnut - *Owenia reticulata*, Ghost gum - *Corymbia aparrerinja*, Rough-leaved bloodwood - *Corymbia setosa*, Bush potato - *Ipomoea costata*, Fork-leaved corkwood - *Hakea divaricata*, Australian bustard - *Ardeotis australis*, Sand goanna - *Varanus gouldii*) • amenity (e.g. noise, odour, dust, vibration and aesthetics) to the extent of its importance to maintaining cultural values Information sources must include published archaeological and anthropological information, site surveys, respective registers, consultations and other research. Advice must be sought from the Aboriginal Areas Protection Authority and Central Land Council about sacred sites (including those not recorded or registered under the

Aspect	Specific information required
	Sacred Sites Act) and cultural values requiring protection across the proposal's potentially affected area. Presentation of information must accord with the wishes of Aboriginal stakeholders regarding the confidentiality of cultural information, noting that the proponent may request that identified information not be made public in accordance with section 281(2)(b) of the EP Act. Justify the suitability of the methodologies, surveys or processes used to provide information about sacred sites, culture and heritage. Detail any information gaps or uncertainties in relation to sacred sites, culture and heritage, including any further studies or measures required to address these gaps.
Potential significant impacts and risks	Describe potential significant impacts on cultural and heritage values, including: • disturbance to identified culture and heritage values during construction, operation, and maintenance activities • temporary or permanent land access or use restrictions • cumulative impacts from the proposal and the existing exploration activities in the region. Determine the proposal footprint and area that could feasibly experience those potential significant impacts. The assessment must: • quantify the significance of potential impacts and risks to identified culture and heritage values • identify any effect on intergenerational transmission of cultural traditions • consider cumulative impacts and the reversibility of potential impacts. Assess the potential significant impacts of a changing climate on cultural and heritage values in the context of cumulative impacts from the proposal and other activities in the region. Identify the uncertainties and provide a detailed description of how uncertainties would be addressed, such as through an adaptive management approach incorporating baseline studies, monitoring and staging, and including consideration of the precautionary principle where relevant.
Avoidance, mitigation and management	Describe the measures for avoiding and mitigating impacts on cultural heritage values and the practice and transmission of cultural traditions Avoidance and mitigation measures must be developed with consideration given to the following: • substantial initial and ongoing consultation and engagement with Aboriginal stakeholders • an Authority Certificate that covers all areas of the proposal and potential impact, in accordance with the Sacred Sites Act • appropriate Aboriginal culture and heritage awareness training for the workforce. Demonstrate the application of the mitigation hierarchy to avoid and minimise impacts on culture and heritage values, including any considerations for rehabilitation

Aspect	Specific information required
	and closure. Identify and address the potential impacts on potentially affected Aboriginal people and communities, landholders, tourism and operators as stakeholders. Demonstrate that mitigation measures align with best practice and advice from relevant government advisory agencies. Demonstrate how the views of stakeholders, including Aboriginal stakeholders, have been considered in adopted measures.
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts and risks and mitigation and management measures to culture and heritage and the practice and transmission of cultural traditions. The proposed monitoring and reporting must specify which project phases it relates to. Demonstrate that monitoring and reporting aligns with best practice, and advice from relevant government advisory agencies. Demonstrate how the views of stakeholders, including Aboriginal stakeholders, have been considered in the proposed monitoring and reporting.
Residual impact	Identify any potential significant residual impact or risk of the proposal to identified Aboriginal values and the acceptability of the residual impact, to Aboriginal stakeholders.

3. Other requirements

3.1. Other environmental factors or matters

3.1.1. Matters of national environmental significance (MNES)

The proposal is a controlled action under the EPBC Act where the relevant controlling provisions are:

- Listed threatened species and communities (section 18 and 18A)

The proposal is being assessed in accordance with the bilateral agreement between the NT and the Commonwealth. The EIS must address matters outlined in Schedule 4 of the EPBC Regulations and explain how the Conservation Advice for each EPBC Act listed species (that is known or likely to be impacted) has been adequately considered. Moreover, 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:

- DCCEEW's Significant Impact Guidelines 1.1
- Conservation Advice for:
  - Greater Bilby (*Macrotis lagotis*)
  - Grey Falcon (*Falco hypoleucos*)
  - Painted Honeyeater (*Grantiella picta*)

- Recovery Plan for:
    - Greater Bilby (*Macrotis lagotis*)
    - Painted Honeyeater (*Grantiella picta*)
- Threat Abatement Plans for:
    - Predation by feral cats
    - Degradation by rabbits
    - Predation by European red fox
- The following survey guideline:
    - Survey guidelines for Australia's threatened mammals (DCCEEW, 2011)
    - Survey guidelines for Australia's threatened birds (DCCEEW, 2010)
- The following information sheet:
    - Greater Bilby scorecard (DCCEEW, 2018)

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 offset strategy for the 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, and the EPBC Act environmental offsets policy.

3.3. Whole of the environment considerations

Provide a holistic assessment of the impacts of the proposal on the whole of the environment, including a consistent description of the proposal, connections and interactions between the environmental factors, and cumulative impacts. 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's environmental objectives.

4. Public consultation requirements

The public consultation requirements for the draft EIS are outlined in Part 5 Division 6 of the EP Regulations. Additional specific details are provided below. Terms of the proponent's stakeholder engagement requirements for the draft EIS are outlined in section 2.3 above.

4.1. 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-lodgement phase.

4.2. Manner in which to publish

The draft EIS must be provided as:

- accessible PDF files that do not exceed 20MB
- seven (7) printed copies for display at the locations in section 4.4 below.

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.

4.3. Advertising

An advertisement must be placed in the NT News and a nationally distributed newspaper indicating that the draft EIS is available for comment, the locations where it can be inspected and obtained, the period in which comments/submissions can be made and where they can be made, and contact details for obtaining further information.

4.4. Public consultation locations

The draft EIS must be made available for public viewing at:

1. NT EPA, Level 1, Arnhemica House, 16 Parap Road, Parap, Darwin
2. Department of Industry, Tourism and Trade, Level 3, Paspalis Centrepoint Building, 48-50 Smith Street, Darwin
3. Central Land Council, Regional office, 63 Paterson St, Tennant Creek, NT
4. Barkly Regional Council, 41 Peko Rd, Tennant Creek, NT
5. Tennant Creek Public Library, 41 Peko Rd, Tennant Creek, NT
6. Environment Centre Northern Territory, Unit 3, 98 Woods Street, Darwin
7. Northern Territory Library, Parliament House, Darwin, NT

Appendix A – List of relevant guidance material

The following guidance material, in addition to the guidance material referenced in section *3.1.1. Matters of national environmental significance (MNES)*, is considered relevant to the TOR. This list is not exhaustive, but captures key 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.

- Australian National Committee on Large Dams (ANCOLD) guidelines. https://ancold.org.au
- Barnett et al, 2012, Australian groundwater modelling guidelines, Waterlines report, National Water Commission, Canberra. https://www.groundwater.com.au/media/W1siZiIsIjIwMTIvMTAvMTcvMjFfNDFfMzZfOTYwX0F1c3RyYWxpYW5fZ3JvdW5kd2F0ZXJfbW9kZWxsaW5nX2d1aWRlbGluZXMucGRmIl1d/Australian-groundwater-modelling-guidelines.pdf
- Commonwealth of Australia 2008. Threat Abatement Plan for predation by feral cats. Department of Agriculture, Water and the Environment. https://www.dcceew.gov.au/sites/default/files/documents/tap-cat-report.pdf
- Commonwealth of Australia, 2013. Significant Impact Guidelines 1.1: Matters of National Environmental Significance. Department of Agriculture, Water and the Environment: https://www.environment.gov.au/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance
- Commonwealth of Australia 2016. Preventing Acid and Metalliferous Drainage – Leading Practice Sustainable Development Program for the Mining Industry. Department of Industry, Science and Resources. https://www.industry.gov.au/publications/leading-practice-handbooks-sustainable-mining/preventing-acid-and-metalliferous-drainage
- Commonwealth of Australia, 2023. The Interim Engaging with First Nations People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999 (interim guidance). Department of Climate Change, Energy, the Environment and Water. https://www.dcceew.gov.au/environment/epbc/publications/engage-early
- Department of Sustainability, Environment, Water, Population and Communities 2012. Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy.: https://www.dcceew.gov.au/environment/epbc/publications/epbc-act-environmental-offsets-policy
- DENR 2000. Northern Territory Water Allocation Planning Framework. Northern Territory Government. https://depws.nt.gov.au/__data/assets/pdf_file/0011/476669/nt-water-allocation-planning-framework.pdf
- DENR, 2020. Land clearing guidelines. Department of Environment and Natural Resources: https://nt.gov.au/property/land-clearing
- DENR, 2020. Northern Territory Climate Change Response: Towards 2050. Department of Environment and Natural Resources: https://depws.nt.gov.au/__data/assets/pdf_file/0005/904775/northern-territory-climate-change-response-towards-2050.pdf
- DEPWS 2021. Northern Territory Offsets Framework. Northern Territory Government: https://depws.nt.gov.au/environment-information/northern-territory-offsets-framework/northern-territory-offsets-framework

- DoH, 2005. Guidelines for preventing mosquito breeding sites associated with mining sites. Medical Entomology, Department of Health: https://digitallibrary.health.nt.gov.au/prodjspui/handle/10137/1029
- International Network for Acid Prevention (2009) Global Acid Rock Drainage (GARD) guide. http://www.gardguide.com
- Middlemis, H. and Peeters, L.J.M., 2018. Explanatory note, uncertainty analysis in groundwater modelling. A report prepared for the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development through the Department of the Environment and Energy, Canberra. https://www.iesc.gov.au/sites/default/files/2022-07/information-guidelines-explanatory-note-uncertainty-analysis.pdf
- National Environmental Protection (Ambient Air Quality) Measure (NEPM) 2021: https://www.nepc.gov.au/nepms/ambient-air-quality
- 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 Environment Protection Authority. Environmental Management - Environmental impact technical guidance; Guidance for environmental management, monitoring and reporting: https://ntepa.nt.gov.au/publications-and-advice/environmental-management
- 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
- NSW DPIE, 2022. Cumulative Impact Assessment Guideline for State Significant Projects. NSW Department of Planning, Industry and Environment: https://www.planning.nsw.gov.au/sites/default/files/2023-03/cumulative-impact-assessment-guidelines-for-ssp.pdf
- NSW DPIE, 2023. Social Impact Assessment Guideline. NSW Department of Planning, Industry and Environment: https://www.planningportal.nsw.gov.au/sites/default/files/documents/2023/GD1944%20SIA%20Guideline_NEW%20VI_14_02_23.pdf
- NSW EPA (2022) Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales: https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/air/22p3963-approved-methods-for-modelling-and-assessment-of-air-pollutants.pdf?la=en&hash=79991C3AD2F7A1FAEC34EBAA857E7D0CCDDD1B24
- NSW Waste classification guidelines at https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines
- NT EPA, 2013. Guidelines for Assessment of Impacts on Terrestrial Biodiversity. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management
- NT EPA, 2021. 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, 2020. 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, 2020. Environmental impact assessment guidance for proponents: Stakeholder Engagement and Consultation. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management
- NT EPA, 2021. Environmental impact assessment guidance for proponents: Preparing an environmental impact statement. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/__data/assets/pdf_file/0009/818217/preparing-an-environmental-impact-statements.pdf