Terms of Reference for an Environmental Impact Statement

Sweetwater Agricultural Development – Stage 1

Southern Cross Agri Pty Ltd

Local Government Area: Victoria Daly

Issued 11 May 2026

ntepa Northern Territory Environment Protection Authority

Proposal	Sweetwater Agricultural Development – Stage 1
Proponent	Southern Cross Agri Pty Ltd
NT EPA reference	EP2025/042
Local government area	Victoria Daly
Public consultation period	The proponent's draft terms of reference were made available for public consultation from 13 August 2025 to 24 September 2025

Further information and guidance on the environmental impact assessment process is available on the NT EPA website at: www.ntepa.nt.gov.au

Document title	Terms of Reference for an Environmental Impact Statement
Document type	Terms of Reference
Version	1.0
Date approved	22 October 2025
TRM number	33-D25-11829

Contents

1. Introduction

1.1. Overview

The Sweetwater Agricultural Development – Stage 1 (proposal) proposed by Southern Cross Agri Pty Ltd (proponent) is being assessed by the Northern Territory Environment Protection Authority (NT EPA) under the *Environment Protection Act 2019* (EP Act) by the environmental impact statement (EIS) method.

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 regulation 98(1)(a) of the Environment Protection Regulations 2020 (EP Regulations). The EIS must also address all requirements in the NT EPA's Preparing an environmental impact statement – Environmental impact assessment guidance for proponents.

1.2. Background

The proposal is for the development of an irrigated agricultural farm on Spirit Hills Station (parts of NT portions 1584 and 3221) in the Keep River area of the NT, adjacent to the Western Australian border.

Key components of the proposal include:

- clearing a minimum of 3,269 hectares of native vegetation within a development envelope of 4,525 hectares
- construction of water storage facilities (200 hectares footprint, 10 gigalitres capacity) to retain harvested stormwater (including irrigation tailwater) for on-farm irrigation
- rotational farming of annual crops
- supporting infrastructure, including:
  - water distribution and drainage networks
  - levee banks
  - access tracks
  - river crossings
  - storage facilities for chemicals, commodities, and machinery
  - worker accommodation.

The proposal is intended to operate over 100 years, with no foreseeable decommissioning plan.

1.3. Assessment period

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

2. Matters to be addressed in the draft EIS

2.1. Executive summary of the draft EIS

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

The summary must provide the following at a minimum:

- a clear and concise overview of the proposal including proponent, elements of the proposal, activities, lifespan, the potentially affected area, and appropriate map/s
- a summary of the site selection process and alternatives considered
- a summary of the environmental values in the potentially affected area
- a summary of the potential significant environmental impacts of the proposal on the identified values
- a summary of measures to avoid, mitigate and/or offset potential significant impacts of the proposal, with clear and measurable outcomes for environment protection
- a summary of stakeholder engagement and future commitments.

2.2. Proposal description

2.2.1. Overview

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

- a summary table listing the main physical components of the proposal and their maximum spatial extent or quantity, using appropriate parameters including the matters outlined in Table 1
- supporting maps, figures, images, diagrams, and flow charts
- how the proposal aligns with broader agricultural development plans in the Keep River region
- a discussion of how the proposal addresses sections 42 and 43 of the EP Act, including the principles of ecologically sustainable development (sections 17-24 of EP Act).

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

The draft EIS is to:

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

2.2.2. Potentially affected area

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

Provide maps showing:

- the extent of the potentially affected area alongside important local and regional features
- current land tenure, land use, and native title in the potentially affected area
- other interests in land such as agriculture, tourism, mineral and petroleum

- sensitive environments, including towns, communities, homesteads and residences, any sites of conservation significance, and cultural values (if appropriate and with permission from relevant Aboriginal stakeholders) within the potentially affected area.

2.2.3. Proponent

Provide background to the proponent, including:

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

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

2.2.4. Construction and operation

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

Table 1 Minimum information requirements for the proposal description

Topic	Required information

Site layout maps	The description of the proposal must include, but not be limited to, detailed maps and graphic illustrations of:
	• the location and dimensions of existing disturbance, existing infrastructure (e.g. roads/tracks, river crossings and powerlines), and natural and modified landforms (including a depiction of these overlaid on aerial photos or high-resolution satellite imagery) within the potentially affected area.
	• the location and approximate dimensions of areas to be disturbed, structures to be built or repurposed including:
	  ○ all areas to be cleared[1] or disturbed (maximum limit)
	  ○ farm plots
	  ○ access roads and service infrastructure
	  ○ water distribution and drainage infrastructure
	  ○ buildings and structures
	  ○ temporary stockpiles
	  ○ waste storage facilities.
	• the proposal layout in relation to environmental values and sensitive receptors within the potentially affected area
	• the boundaries of the proposal area in relation to any overlapping or adjacent leases or permits (agriculture, mineral or other); and any other interests in land including Native Title (claims or determined), Aboriginal freehold land, and pastoral land.

Design	Describe design options considered, reasons for selection of preferred design options, and how the proposed design avoids and/or mitigates environmental constraints and potential significant impacts and risks to the surrounding environment. Describe how the proposal has been designed to minimise social, cultural, and environmental impacts, considering the needs of the community and stakeholders. Describe how the proposal has been designed to consider, or allow for, adaptation to a changing climate (e.g. capacity and efficiency of water storage facilities to allow for potential increase in evaporation and/or large rainfall events).
Construction	Describe all elements and stages of the construction phase including:

[1] In accordance with the NT Land Clearing Guidelines and/or requirements under the NT Planning Scheme, and NT Pastoral land clearing guidelines and/or requirements under the *Pastoral Land Act 1992*.

Topic	Required information

	• vegetation clearing and site preparation.
	• construction methodology including equipment and machinery required.
	• construction materials required – types, quantities, sources, storage requirements and potential hazards:
	  ○ where large volumes of fill or rock material are proposed to be imported to the site, identify the potential sources of this fill / borrow material, the criteria that will be adopted to confirm suitability for the proposed use and any related environmental regulatory requirements
	  ○ consider the potential significant impacts and risks within the potentially affected area.
	• location, extent, and nature of temporary stockpiles of borrow material and topsoil.
	• any new supporting/ancillary infrastructure and upgrades required to service the proposal, including road access, and supply of power and water
	• maintenance of existing onsite infrastructure during construction.
	• timeframes for completion.
	• applicable legislation, guidelines, and standards.
	Where multiple options exist for any element of the construction, the choice of the preferred option 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: • details of farm lots – location, size, crop types, land suitability and land management requirements. • details of proposal infrastructure – location, size and type. • details of vegetation buffers/avoidance areas – location, size, monitoring and maintenance requirements. • equipment and machinery required for farm operation, monitoring and maintenance. • materials and chemicals required - major types, quantities, qualities, sources, potential hazards, transport and storage requirements, and storage location. • stormwater (including irrigation tailwater) harvesting methodology including details on regime and rules, predicted tailwater volume, infrastructure requirements, and any limitations to the effective operation, in line with environmental constraints and potential impacts to environmental values. • details on water storage facilities: ○ water storage design including information on construction materials, maximum, minimum, average depths, dead storage level, the area of

Topic	Required information
	inundation at full supply level, designed event frequency (at least 1% annual exceedance probability) ○ spillway design including information on location, footprint, capacity, height, and the predicted duration, timing, volume and frequency of controlled water releases ○ outlet infrastructure design including information on material, location, footprint, capacity, screening (if relevant) and flow regulation capabilities ○ operations including information on strategies for flood control and drought mitigation. • details on irrigation strategy – sources, quantities, qualities, crops requirements, infrastructure requirements, timing and method of application, and potential hazards. • details on fertiliser/herbicide application – types, quantities, qualities, method of application, and potential hazards. • details on maintenance and contingency management, including ongoing maintenance and upgrades required to service any infrastructure. • applicable legislation, guidelines, standards and permits. Where multiple options exist for any element of the operation, the choice of the preferred option must be clearly explained, and a comparison provided against other options in terms of potential environmental impacts.
Water	Describe the water requirements for each proposal component during construction and operation, including but not limited to: • consideration of potential water sources, water quality and treatment (if relevant), water storage and distribution, water efficiency and reuse strategies, and wastewater management. • an overall site water balance for construction and operation. • description of how the available water sources for irrigation match with the maximum area proposed to be cleared for cropping and the water requirements of the selected crops. • applicable legislation, guidelines, standards and permits.
Transport and traffic	Describe traffic and transport activities during construction and operation, including but not limited to: • proposed transport methods and routes including proposed haul roads, access tracks, public roads (including any proposed realignments, closures, and upgrades), proximity to sensitive receptors and sensitive areas (e.g. townships or communities/outstations, residents, waterways, sensitive and/or significant vegetation, cultural heritage values, threatened and invasive species). • forecast vehicle movements including type, size, number, and frequency

Topic	Required information
	of movements, vehicle types and hours of operation. • existing transport baseline information including current traffic numbers, movement patterns (during wet and dry seasons) and relevant existing infrastructure on potentially affected roads/road network. • applicable legislation, guidelines, standards and permits.
Energy	Provide relevant information with respect to energy during construction and operation, including but not limited to: • energy requirements and sources. • consideration of renewable sources of energy and justification of selected options.
Waste	Provide relevant information with respect to waste during construction and operation, including but not limited to: • source locations and a waste inventory (annual and total) for each waste type. • waste management practices including information on storage and containment, treatment and disposal, and waste minimisation strategies. • applicable legislation, guidelines, standards and permits.
Workforce	Provide an assessment of the workforce required (permanent and seasonal) for each phase of the proposal, including but not limited an evaluation of the following: • skills base required. • likely sources (local, regional, interstate, overseas). • workforce training opportunities to maximise employment of local workers. • employment opportunities for Aboriginal people. • indirect local and regional workforce opportunities created through local and regional procurement opportunities.

2.3. Whole of environment considerations

Provide a holistic assessment of the impacts (direct, indirect and cumulative) of the proposal on the whole of the environment i.e. consider the impacts (assessed separately under each environmental factor) together in a whole of environmental assessment including a description of the connections and interactions of the impacts between the environmental factors at a local and regional scale. Succinctly discuss predicted outcomes in relation to the principles of environment protection and management (as set out in Part 2 of the EP Act).

2.4. Consideration of the impacts of a changing climate

The draft EIS must consider the impacts of a changing climate on the proposal. The draft EIS must:

- assess how adaptation to reasonable climate change scenarios has been considered in the design, construction, operation, and any effect on the viability of the proposal, with reference to reporting in: Climate Change in the Northern Territory: State of the science and climate change impacts (NESP ESCC Hub 2020).
- describe and assess the effect of reasonable climate change scenarios on identified environmental values and on mitigation measures for the environmental factors outlined in section 2.5 of this TOR.
- take into consideration the most current and reasonable climate change projections for the region e.g. Australia's national climate change projections, Climate Change in Australia, and
- include analysis against appropriate baseline conditions to understand historical climate change influences in the NT.

2.5. Information requirements for environmental factors

The NT EPA identified 9 environmental factors that could be significantly impacted by the proposal (Table 2). Further information about environmental factors is available in the NT EPA's environmental factors and objectives guidance.

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

THEME	FACTOR	ENVIRONMENTAL OBJECTIVE
LAND	Landforms	Conserve the variety and integrity of distinctive physical landforms.
	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.
	Aquatic ecosystems	Protect aquatic habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.
AIR	Atmospheric processes	Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.
PEOPLE	Community and economy	Enhance communities and the economy for the welfare, amenity, and benefit of current and future generations of Territorians.

THEME	FACTOR	ENVIRONMENTAL OBJECTIVE
	Culture and heritage	Protect culture and heritage.

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

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

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

2.5.1. Terrestrial environmental quality

Table 3 Minimum information required for assessment of Terrestrial environmental quality

Aspect	Specific information required
NT EPA objective: Protect the quality and integrity of land and soils so that environmental values are supported and maintained.	
Environmental values	Describe the characteristics and current condition of land and soils in the proposal area. This must include, at a minimum, descriptive and spatial information for the following: • slope characteristics and associated runoff and erosion risk, including details of existing erosion • soil types, structure and characteristics, including their physical and chemical properties, drainage characteristics and fertility. Provide results and interpretation of any geotechnical, geochemical and soil investigations and surveys of the proposal area. Include an assessment of soil salinity and evaluate potential risks to land productivity and irrigation suitability. Provide an assessment of the suitability of sites for relevant proposal elements (e.g. farm lots, water storage areas, irrigation loads etc.), based on investigations and surveys conducted within the proposal area.
Potential significant impacts and risks	Identify, describe, and assess potential significant impacts and risks to the quality and integrity of land and soils from the proposed clearing, construction and operation activities including cumulative impacts and risks. This must include at a minimum: • direct disturbance of land and soils during land clearing • indirect disturbance from construction and operation activities resulting in soil degradation, soil erosion, topsoil migration, sedimentation, and increased soil salinity and sodicity

Aspect	Specific information required
	• contamination of soils from spills or leaks associated with transport, storage and handling of hazardous materials. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Quantify the significance and extent of impacts, at the proposal level and cumulatively. Discuss the likelihood and extent of salinity impacts (supported by modelling) with a focus on environmental values, land productivity and economic viability that may be impacted.
Avoidance, mitigation, and management	Outline measures for avoiding and mitigating impacts identified above, with consideration of section 26 (environmental decision-making hierarchy) and section 27 (waste management hierarchy) of the EP Act. Consider measures to enhance or restore environmental quality. These must include at a minimum: • farm design and layout • site rehabilitation and restoration where relevant • erosion and sediment control planning and implementation in line with best practice guidance (IECA 2008, Best Practice Erosion and Sediment Control and Department of Lands, Planning and Environment Erosion and Sediment Control Plan Procedures factsheet) • optimised farming practices (e.g. minimum tillage, suitable crops) • irrigation management • emergency, hazard and spill response management • end-of-life of assets management • compliance with any statutory or policy basis for the proposed measures. Identify areas of land that will be excluded from proposal development due to the presence of constraints that cannot be overcome. Identify standards and controls (including management plans) to be implemented as part of the proposal and their effectiveness to mitigate and manage impacts to terrestrial environmental quality.
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts and risks, 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 remain acceptable. The proposed monitoring and reporting must specify which proposal phase it relates to i.e. clearing, construction or operation.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.

2.5.2. Terrestrial ecosystems

Table 4: Minimum information required for assessment of Terrestrial ecosystems

Aspect	Specific information required
NT EPA objective: Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	
Environmental values	Identify terrestrial ecosystem values in the potentially affected area. This must include, at a minimum: • descriptive and spatial information (i.e. maps, geospatial data) on the location and extent of field-verified vegetation communities within the proposal area using vegetation mapping based on the Northern Territory Guidelines and Field Methodology for Vegetation Survey and Mapping (Brocklehurst et al. 2007) • descriptive and any new spatial information (i.e. maps, geospatial data) of sensitive and significant vegetation including riparian areas, wildlife corridors, wetlands, closed forests, and groundwater dependent ecosystems (in accordance with the NT Land Clearing Guidelines) • identification of all species of conservation significance, including restricted range and data deficient species in addition to threatened species listed under the *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), which have the potential to occur; and an assessment of the likelihood of occurrence for all species that are known or likely to occur • descriptive and spatial information (i.e. maps, geospatial data) for all species of conservation significance, including restricted range and data deficient species, and listed terrestrial threatened flora and fauna and migratory species, known or considered likely to occur. This must include, at a minimum: ○ the type, value, sensitivity, quality and geographic extent of suitable habitat (hectares), landscape context, listing status (TPWC Act, EPBC Act), threatening processes, estimates of population size, abundance and distribution ○ critical or important habitat areas necessary for foraging, breeding, roosting, or dispersal, and essential for the long-term maintenance of the species ○ descriptive information that clearly outlines the survey and identification effort undertaken, including estimates of population parameters used to evaluate the local and regional context for potential impacts from the proposal. At a minimum, species considered must include: - Masked Owl (northern mainland), *Tyto novaehollandiae kimberli* - Bare-rumped Sheath-tailed Bat, *Saccolaimus saccolaimus* - Ghost Bat, *Macroderma gigas*

Aspect	Specific information required
	- Northern Brushtail Possum, *Trichosurus vulpecula arnhemensis* - Crack-dwelling Ctenotus (Keep-Ord Rivers), *Ctenotus rimacola camptris* - Typhonium, *Typhonium sp*. Kununurra - Largetooth Sawfish, *Pristis pristis* o identification of flora and fauna that hold social, cultural, and/or economic values and have the potential to occur, and describe the importance of these species o identification of flora and fauna known or likely to occur that are currently being assessed for eligibility for inclusion or change of conservation status under the EPBC Act (e.g. *Typhonium* sp. Kununurra) o maps of areas in proximity to the potentially affected area that are already protected and known biodiversity offset areas under Commonwealth, NT and Western Australia (WA) legislation. Include in appendices the detailed technical information, studies, or investigations necessary to support the draft EIS. Justify the suitability of the methods, surveys or processes used to identify/estimate species occurrence (presence/absence), relative abundance, habitat condition or quality, and the extent of values potentially impacted. Detail any information gaps or uncertainties in relation to terrestrial ecosystems, including any further studies or measures required to address these gaps. This must include at a minimum: • any taxonomic uncertainties for species of conservation significance, including the measures and methods employed to clarify uncertainty regarding the identity, distribution and relative abundance of Typhonium species • appropriate justification, should survey methods diverge from relevant Commonwealth and NT guidelines, including citation of species experts or scientific literature.
Potential significant impacts and risks	Identify, describe, and assess potential significant impacts (direct, indirect, and cumulative) of the proposal on terrestrial ecosystems and identified environmental values in accordance with requirements of the EP Act and EPBC Act. This must include, at a minimum: • habitat loss from vegetation clearing and land use change, including loss of sensitive and significant vegetation, and loss of habitat for species of conservation significance (assessment must include quantitative data) • habitat fragmentation due to infrastructure development, altered flows and seasonal inundation • habitat degradation for vegetation communities and species of conservation significance, e.g. due to noise, light, vibration, dust, weeds, runoff, erosion, sedimentation, soil/water salinity, chemicals/herbicides,

Aspect	Specific information required
	altered fire regimes, and altered hydrological processes • altered vegetation composition due to saturated conditions, altered flows and altered inundation regime • introduction or spread of invasive species due to workforce, vehicle and equipment movement, and construction of new access tracks • fauna mortality or injury caused by e.g. collision with vehicles and equipment, entrapment in excavations and water storage areas • potential changes to populations of species of conservation significance • potential significant impacts to terrestrial GDEs, and • potential significant impacts to biodiversity with social, cultural or economic values. Describe the presence of invasive weeds (declared under the *Weed Management Act 2001*), pests and biosecurity risks observed or considered likely to occur in the proposal area. Discuss how the assessment of potential significant impacts to terrestrial ecosystems has considered the impacts of a changing climate into account. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Quantify the significance and extent of impacts, at the proposal level and cumulatively.
Avoidance, mitigation, and management	Outline the proposed measures to avoid, mitigate and manage the potential significant impacts identified above, with consideration of sections 26 (environmental decision-making hierarchy) and 27 (waste management hierarchy) of the EP Act, and measures to enhance or restore environmental quality. The avoidance, mitigation and management measures proposed must include environmental objectives, performance criteria, monitoring and reporting methods, corrective actions, assigned responsibilities and timeframes for implementation and review, in accordance with DCCEEW's Environmental Management Plan Guidelines and relevant NT Government and NT EPA guidance. Identify standards and controls (including management plans) to be implemented and their likely effectiveness to avoid and mitigate impacts to terrestrial ecosystem values. This should include consideration of an adaptive approach to irrigation practices, chemical/herbicide loads, and their application methods. Demonstrate that proposal infrastructure has been designed and appropriately sited to avoid and mitigate impacts to terrestrial ecosystem values. If the siting of proposal elements is not able to avoid or mitigate impacts to terrestrial ecosystem values (i.e. threatened species habitat) provide a justification for why this was not feasible.

Aspect	Specific information required
Monitoring and reporting	Outline proposed monitoring and reporting activities related to potential significant impacts and risks to terrestrial ecosystems, and mitigation and management measures. For any potential significant impact, thresholds must be set and mitigation measures described. Describe clear and measurable indicators, outcomes and commitments that will ensure the NT EPA's environmental objective for terrestrial ecosystems will be met and impacts of implementing the proposal remain acceptable. Specify timeframes for monitoring and reporting. The proposed monitoring and reporting must specify which proposal phase it relates to (i.e. clearing, construction and/or operations). All monitoring activities must be substantiated and in accordance with available guidance, including advice from relevant NT Government advisory agencies, native title holders, other Aboriginal stakeholders, and their representatives.
Residual impact	Assess the significance of any residual impact or risk of the proposal (after avoidance and mitigation measures have been applied) to identified values.
Offsets	If the residual impact to biodiversity and terrestrial ecosystem values, including listed species under the TPWC Act and/or EPBC Act is significant, identify any proposed offset and describe how it is consistent with the NT Offset Framework (as published) and the EPBC Act environmental offsets policy. This must include offset options and feasibility.

2.5.3. Hydrological processes

Table 5: Minimum information required for assessment of Hydrological processes

Aspect	Specific information required
NT EPA objective: Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	
Environmental values	Describe the existing groundwater environment within the area of the Keep River catchment potentially affected by the proposal, including information on: • geology and hydrogeology of aquifers near the proposal, including aquifer depth, stratigraphy, water levels, flow direction, seasonal variations and aquifer connectivity • recharge and discharge processes, and surface water-groundwater interactions • current groundwater uses, existing extraction rates and volumes, and proximity of existing groundwater users to the proposal • the significance of groundwater resources and associated values (e.g. GDEs).

Aspect	Specific information required
	Describe the existing surface water environment within the potentially affected area of the Keep River catchment, including information on: • the characteristics and condition of surface water resources, including catchment systems, waterways and water features that would potentially be impacted by the proposal • the hydrological regime of the Keep River and its tributaries, including details on inflow and outflow areas, flow velocity, direction, height, volume, timing, frequency, duration, seasonal variability, and connectivity with upstream and downstream reaches, floodplains, refugial habitats and groundwater • flood history including frequency, duration, extent and levels of past flood events, and the inundation patterns near the proposal area • the significance of surface water resources and their role in supporting ecological and hydrological functions. Describe existing climate characteristics and rainfall patterns relevant to the assessment, including magnitude and seasonal variability. Provide a critical review of available spatial and temporal climate data, including information on the intensity, frequency, and duration of extreme weather conditions. Estimate the volume, frequency and reliability of rainfall-runoff/stormwater available for harvesting, storage and irrigation. Demonstrate that stormwater harvesting is a sufficient and reliable water source to meet the water requirements for irrigating selected crops, supported by historical rainfall data and predictive modelling. Provide a water balance for water storage facilities that accounts for water inputs from rainfall and runoff, and outputs from evaporation, seepage and water use. Determine whether these storage facilities can reliably meet the water requirements for the intended purpose/s. Provide the results and interpretation of hydrological, hydrogeological, and any relevant geotechnical investigations. Include details about the quality and reliability of data and information provided, information sources, and any assumptions, exclusions, uncertainties and limitations. Identify the land uses and environmental values (social, cultural, ecological) of water in the potentially affected area that could be directly or indirectly impacted by changes to hydrological processes caused by implementing the proposal. Provide a description of the existing regulatory framework for surface water and groundwater resources relevant to the proposal.
Potential significant impacts and risks	Describe how the potentially affected area in relation to groundwater and surface water hydrology has been defined. Identify, describe, and assess the potential significant impacts of the proposal (direct, indirect and cumulative) on water resources and hydrological processes within the potentially affected area. The assessment must include at a minimum:

Aspect	Specific information required
	• impacts on hydrogeological processes from land clearing, land use change, water harvesting and reuse, including potential changes to local groundwater levels (e.g. groundwater rise), flow patterns, hydraulic connectivity, and impacts on existing water users and surrounding vegetation buffers • impacts on surface hydrology from clearing, infrastructure development (e.g. levees, water storage facilities) and operational activities, including potential changes to overland flows, stream flows and flood regimes, and impacts on nearby land uses and the aquatic ecosystems of the Keep River and floodplain, including refugial habitats • impacts on sediment processes (transport, erosion and deposition) caused by the proposal implementation, and downstream impacts on sediment delivery to the coast • consideration of evaporation losses from water storage facilities, and potential impacts on local water users • if applicable, the rates, volume and timing of any operational water releases from water storage facilities to downstream receiving environments, and impacts on river flows, riparian vegetation and in-stream habitats • unplanned events including the risk of water storage facility failure, and impacts on downstream land use. Provide a flood impact assessment, supported by modelling, that assesses how the proposal may change flooding characteristics (water level, extent and velocity) both upstream and downstream. This must include, at a minimum: • consideration of potential sea level rise scenarios and a range of annual exceedance probabilities (up to 1% AEP and probable maximum flood) • the extent of flooding across the Keep River catchment until no significant impacts are observed • how the proposal's design and management will mitigate potential flood risks and impacts on nearby land uses and the surrounding environment. Demonstrate that models used for the assessment of impacts to hydrological processes have adequate resolution and extent for simulation of catchment-wide and localised impacts. The model should allow for inclusion of baseline data, and adequate conceptualisation of the site, catchment, and sub catchments. Consult with relevant government agencies (e.g. NT Water Resources Division, NT Flora and Fauna Division and Commonwealth DCCEEW) and demonstrate how their feedback has been considered and/or adopted in relation to modelling methods. Report on assumptions and parameters used in the model, justification for their use and predictive uncertainty. Discuss the sensitivity of input parameters and critical assumptions, and how this may change predictions. Describe any uncertainties and further work required to increase understanding of potential significant impacts and reduce uncertainty. Where uncertainty

Aspect	Specific information required
	remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline the measures for avoiding or mitigating impacts identified above, with consideration of section 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act and ensure that measures to enhance or restore environmental quality are included. Outline the management plans and adaptive management strategies (e.g. dewatering, crop rotation) including trigger action response plans that would be implemented, and specify the associated performance indicators, timeframes for implementation, and the roles and responsibilities of the personnel involved. Demonstrate that farm and proposed infrastructure have been designed and appropriately sited to avoid and mitigate impacts to hydrological processes. If the siting of proposal elements is not able to avoid or mitigate impacts on hydrological processes values (i.e. threatened species habitat) provide a justification for why this was not feasible. Describe how farm operations in relation to water management would be optimised to maintain natural flows and downstream sediment discharge and manage potential significant impacts to waterways (e.g. to avoid overtopping of the dam and any uncontrolled discharges).
Monitoring and reporting	Provide details on proposed monitoring and reporting related to potential impacts and risks to hydrological processes. Describe the framework to monitor the predicted impacts and effectiveness of proposed management measures, including timeframes and key performance indicators for implementation. Describe clear and measurable outcomes and commitments, indicators, trigger values and limits that will be used for monitoring, and how adaptive management actions will be initiated. Describe which proposal phase the proposed monitoring and reporting relates to (i.e. clearing, construction, operations). Specify the timeframes for monitoring and reporting. Demonstrate that proposed monitoring locations in the potentially affected area (e.g. bores, designated monitoring areas) are appropriately sited to monitor relevant events.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.

2.5.4. Inland water environmental quality

Table 6: Minimum information required for assessment of Inland water environmental quality

Aspect	Specific information required
NT EPA objective: Protect the quality of groundwater and surface water so that environmental	

Aspect	Specific information required
values including ecological health, land uses and the welfare and amenity of people are maintained.	
Environmental values	Describe and assess the existing groundwater and surface water quality (physical, chemical and biological) of the potentially affected area, including upstream and downstream of the proposal. Describe and assess sediment quality (nutrient analytes and targeting metals) in the potentially affected area, including Keep River, its tributaries and floodplains. Provide a critical review and analysis of available physio-chemical data, including collected baseline water quality and sediment data. Include details about the quality and reliability of data and information provided. Discuss the proposal area suitability for intended use (agriculture) considering available water quality data, seasonal flow patterns and saltwater/freshwater dynamics. Identify the existing land uses, and environmental values of water (e.g. ecological, recreational, cultural) in the potentially affected area. Detail any information gaps and identify further studies or measures required to address them.
Potential significant impacts and risks	Describe how the potentially affected area in relation to the quality of groundwater and surface water systems has been defined. Identify, describe, and assess the impacts of the proposal on upstream and downstream water/sediment quality and environmental values applicable to the Keep River catchment. Information is to be supported with references to relevant legislation, policies, and guidelines. Include consideration of: • possible sources of water contamination (e.g. erosion and sedimentation, acid forming, saline, sodic or dispersive soils if present, spills or discharges of hazardous materials, nutrients or agricultural chemicals, and airborne dust) • possible changes to hydrological regimes (e.g. from farm infrastructure such as flood levees and water dams, water harvesting and reuse) • anticipated changes in physio-chemical parameters of water, soils and sediments, primarily changes in salinity and nutrient dynamics (e.g. from seepage, uncontrolled release etc.). Identify and assess the processes (e.g. seepage, hydrological changes, uncontrolled release) that have the potential to significantly impact existing water quality and productivity of the Keep River, its tributaries and floodplains. Discuss potential changes to water quality within proposed water storage facilities over time due to processes such as decomposition, eutrophication, stratification or 'turn-over,' sedimentation, precipitation and evaporation which could cause a reduction in water quality. Identify and describe potential sources and impacts of any contamination that may occur during construction and operation (e.g. potential for groundwater

Aspect	Specific information required
	contamination and algal blooms). Using detailed flow and water quality modelling (e.g. catchment model, in-stream model, ecological response model), evaluate the potential for significant adverse impacts on water quality with regards to salinity and nutrients, while also considering climate change and extreme weather conditions. Consult with relevant government agencies (e.g. NT Water Resources Division, NT Flora and Fauna Division and Commonwealth DCCEEW) regarding the model design and characterisation of scenarios for predictions and demonstrate how their feedback has been considered and/or adopted. Report on assumptions and parameters used in the model, justification for their use and predictive uncertainty. Discuss the sensitivity of input parameters and critical assumptions, and how this may change predictions. Quantify the significance of water quality impacts from the proposal taking into account: • site specific water quality data • outcomes of relevant studies and investigations • any relevant guideline thresholds, e.g. Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG (2018)) • existing land uses and identified environmental values. Identify other industries and developments near the proposal area (e.g. Knox Plain, Goomig Farm, Legune Station) that are likely to contribute to cumulative impacts on water quality and environmental values of the Keep River, its tributaries and floodplains. Provide an assessment of changes in water quality for key contaminants such as nutrients, pesticides, and herbicides as a result of the proposal implementation and other agricultural activities within the catchment. Describe any uncertainties and further work required to increase understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline the measures for avoiding or mitigating impacts identified above, with consideration of section 26 (Environmental decision-making hierarchy) and section 27 (Waste management hierarchy) of the EP Act and ensure that measures to enhance or restore environmental quality are included. Take into account: • farm design and layout • erosion, sediment and drainage controls • stormwater, wastewater and groundwater management • acid sulfate, saline, sodic and dispersive soils management (if present) • treatment options for water storage facilities and controlled/emergency

Aspect	Specific information required
	discharge • optimised farming practices (e.g. minimum tillage) • chemical and fuel storage and spill management • existing land uses within the catchment (e.g. agricultural). Outline the management and adaptive management strategies including trigger action response plans that would be implemented, and specify the associated performance indicators, timeframes for implementation. Describe how corrective management actions will be initiated and completed. Demonstrate that the timing, rates, and volumes of water harvesting and reuse will avoid significant impacts to water quality in the Keep River. Include consideration of natural seasonal variations (such as temperature, salinity, dissolved oxygen, turbidity, nutrient loads and chemical concentrations, and sediment/nutrient load transfer to downstream tidal environments).
Monitoring and reporting	Demonstrate that appropriate water quality monitoring (e.g. integrated catchment-wide monitoring with existing developments in the region) and reporting has been developed for each proposal phase, i.e. clearing, construction and operations. Demonstrate that proposed water quality monitoring sites are appropriately located to monitor relevant impacts. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met, the impacts of implementing the proposal remain acceptable, and specify timeframes for monitoring and reporting.
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified values.

2.5.5. Aquatic ecosystems

Table 7: Minimum information required for assessment of Aquatic ecosystems

Aspect	Specific information required
NT EPA objective: Protect aquatic habitats to maintain environmental values including biodiversity, ecological integrity, and ecological functioning.	
Environmental values	Identify, describe, and characterise the riverine and estuarine ecosystems within the Keep River catchment that could be affected by the proposal, both upstream and downstream. This must include, at a minimum: • a critical review of available literature and data to identify habitats and species that have the potential to occur • identification of all threatened aquatic and migratory species listed under the TPWC Act and the EPBC Act, including species under assessment for

Aspect	Specific information required
	inclusion or conservation status changes under the EPBC Act; and an assessment of the likelihood of occurrence for all species that are known or likely to occur • the location and extent of representative habitats within the Keep River, its tributaries and associated floodplains, including riparian vegetation, refugial habitats critical for species existence during the dry season (such as potential nursery areas for sawfish) and other important habitats for aquatic and water-dependent species • flora and fauna species of social, economic or cultural significance (i.e. barramundi, turtle) and invasive species. Undertake a field assessment to identify and estimate the presence/absence and potential extent of all flora and fauna (riverine and estuarine) within the potentially affected area. The survey efforts are to be standardised and quantified. If survey methods diverge from relevant Commonwealth and NT guidelines, justify them with their respective input from species experts or/and scientific literature. Consult with relevant government agencies (i.e. DLPE Flora and Fauna Division, Department of Agriculture and Fisheries) regarding suitable survey methods and further advice on other ecosystem values to be identified and demonstrate how their feedback has been considered and/or adopted.
Potential significant impacts and risks	Describe how the potentially affected area in relation to aquatic ecosystems (riverine and estuarine) has been defined. Identify, describe, and assess potential significant impacts on the quality and integrity of aquatic ecosystems within the potentially affected area as a result of: • indirect disturbance from clearing, construction, infrastructure development and operation (such as erosion, chemicals leaching and runoff, offsite migration of sediments and degraded water quality, introduction and spread of invasive species, altered water flows and seasonal inundation etc.) resulting in habitat fragmentation, habitat and productivity loss, and disturbance to sensitive species • unplanned or uncontrolled discharge from the farm and water storage areas. Provide an assessment of changes in the river flows, seasonal inundation and water quality (supported by detailed 3-dimensional modelling), and potential impacts to species habitats. This must include, at a minimum, consideration of potential significant impacts on all listed threatened and migratory species and their habitats, riparian vegetation and in-stream ecosystems (including fish migration), while also taking into account climate change and extreme weather conditions. Identify other industries, water uses and proposed development proposals within the potentially affected area that may contribute to cumulative impacts to threatened and/or migratory species and other ecosystem values. Assess the quantitative or qualitative significance of these cumulative impacts.

Aspect	Specific information required
	Describe any uncertainties and further work required to increase understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance, mitigation, and management	Outline the measures for avoiding, mitigating, or offsetting impacts identified above, with consideration of Section 26 (Environmental decision-making hierarchy) and Section 27 (Waste management hierarchy) of the EP Act. Also consider measures to enhance or restore environmental quality through restoration or rehabilitation in line with section 42 of the EP Act. At a minimum, avoidance and mitigation measures must take into account: • farm design and layout • stormwater/groundwater management • invasive species management • vegetation buffer management • existing land uses (e.g. agricultural) within the catchment. The avoidance, mitigation and management measures proposed must include environmental objectives, performance criteria, monitoring and reporting methods, corrective actions, assigned responsibilities and timeframes for implementation and review in accordance with the DCCEEW Environmental Management Plan Guidelines. Identify potentially affected areas that will require major management solutions (i.e. areas of existing eutrophication, areas of runoff and sedimentation, areas of pollution) prior to implementation of the proposal, proposed mitigation measures, and areas that will be avoided if the constraints cannot be overcome.
Monitoring and reporting	Outline proposed monitoring (e.g. integrated catchment-wide monitoring) and reporting activities related to potential significant impacts and risks, and mitigation and management measures for aquatic ecosystems. The proposed monitoring and reporting must specify which proposal phase it relates to and include, but not limited to: • a requirement for setting water quality and environmental flow thresholds and describe mitigating actions should thresholds be met or exceeded. • species, species groups or assemblages (e.g. Largetooth sawfish, *Pristis pristis*) which may be suitable as indicators for ongoing monitoring to provide assurance that ecological structure and function has not been impaired. Describe clear and measurable indicators, outcomes and commitments that will ensure the environmental objective is met and impacts of implementing the proposal remain acceptable. Specify timeframes and methodologies for monitoring and reporting, ensuring they align with the nature of the impact and occur at appropriate phases of the proposal.

Aspect	Specific information required
Residual impact	Assess the significance of any residual impact or risk of the proposal to identified aquatic ecosystem values. Describe the level of certainty underpinning the predicted residual impacts.
Offsets	Where a significant residual impact to biodiversity and listed species under the TPWC Act and EPBC Act may remain after applying the mitigation hierarchy, identify offsets and describe how any proposed offset is consistent with the NT Offset Framework (as published) and the EPBC Act environmental offsets policy.

2.5.6. Atmospheric processes

Table 8: Minimum information required for assessment of Atmospheric processes

Aspect	Specific information required
NT EPA Objective: Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions (GHG) by 2050.	
Potential significant impacts and risks	Using Australian Government recognised emissions accounting methodologies (e.g. Full Carbon Accounting Model), provide estimates of the proposal's scope 1and scope 2 GHG emissions for each proposal activity (including land clearing and subsequent land use e.g. fertiliser application, crops decay or burning, electricity use and transport etc.). Present the estimates as an inventory of projected total and net emissions (i.e. a GHG balance) for each relevant GHG, for each fiscal year and separately the cumulative total for the life of the proposal, with emissions expressed in tonnes carbon dioxide equivalent (CO_2-e). Describe any uncertainties and further work undertaken or required to improve understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Quantify the significance and extent of impacts, at the proposal level and cumulatively, with use of and reference to the current Environmental Factor Guidance: Atmospheric Processes.
Avoidance, mitigation, and management	Demonstrate emissions from the proposal are reduced as far as reasonably practicable. Describe strategies (existing and proposed) that demonstrate that all reasonable and practicable measures have been, and will continue to be, applied to minimise a proposal's emissions over time.
Monitoring and reporting	Describe the approach to monitor and review the proposal emissions, effect of measures and associated indicative timeframes. Provide an approach and frequency to report on any measures taken to manage emissions and where practicable, an evaluation of the effectiveness of the measures to reduce GHG emissions from the proposal.

Aspect	Specific information required
Residual impact	Describe the net contribution to the NT's GHG over the 100-year life of the proposal.
Offsets	After applying the environmental decision-making hierarchy, if a significant residual impact remains, identify any proposed GHG emission offsets and describe how any proposed offset is consistent with the NT Offset Framework (as published) and NT GHG emissions offsets policy.

2.5.7. Community and economy

Table 9: Minimum information required for assessment of Community and economy

Aspect	Specific information required
NT EPA objective: Enhance communities and the economy for the welfare, amenity, and benefit of current and future generations of Territorians.	
Environmental values	Identify and describe the existing social and economic profiles, and the social and economic values, which could be affected by the proposal. Include focused discussion about existing community values, such as popular areas for hunting, fishing and tourism. Discuss the suitability of studies, surveys and investigations used to identify social and economic values and inform the information provided in the EIS.
Potential significant impacts and risks	Identify, describe, and assess the potential significant social and economic impacts, along with the social and economic benefits, associated with the proposal for the local, regional and NT community and economy, with reference to relevant principles of ecologically sustainable development (sections 17 – 24 of the EP Act). Provide an economic and social impact assessment in accordance with the NT EPA guidelines for Economic and Social Impact Assessment. The assessment must include, but not be limited to: • impacts on the local (Kneebone and Marralum), regional and NT community and economy from biophysical (e.g. altered flows) and amenity changes (e.g. dust, noise, vibration and aesthetic) to the environment • potential changes to land use and access in areas of potentially affected area, including traffic impacts on Keep River Plains Road and/or Spirit Hills Road • impacts to recreational fishers, from potential loss of access to popular fishing sites and/or reduced fishing quality in the Keep River • potential risk of creating biting-insect habitats and exposure of people to mosquito borne diseases, from land use changes and on-farm water storage • potential benefits from farm development, improved access to the Keep River and any additional benefits of the proposal that emerge during development of the EIS. Evaluate whether potential economic and social impacts are significant, or whether they (cumulatively) affect the proposal's overall value proposition, acceptability and consistency with relevant principles of ecologically sustainable development. Demonstrate that the assessment of the economic and social impacts and benefits of the proposal is informed by an inclusive and collaborative community and stakeholder engagement and consultation process, including

Aspect	Specific information required
	consultation with native title holders, other Aboriginal stakeholders and their representatives, and relevant farm operators in the region. Describe any uncertainties and further work required to improve understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act). Quantify the significance and extent of impacts, at the proposal level and cumulatively.
Avoidance, mitigation, and management	Provide a social impact management plan (SIMP) that describes the measures to avoid, mitigate and manage potentially significant social and economic impacts. Address: • views and advice from the relevant stakeholders, including government advisory agencies, native title holders, other Aboriginal stakeholders and their representatives • strategies and measures to avoid and mitigate impacts on identified social and economic values (e.g. access and land use), and enhance benefits to the local community (e.g. training and employment opportunities) • the roles and responsibilities of the proponent, its contractors and other stakeholders for implementation of the identified social and economic mitigation and management measures. Demonstrate that there is agreement with native title holders and traditional owners of the land on the management and use of land and waters, for example through the application of an Indigenous Land Use Agreement with native title holders, or through any other culturally appropriate method. Demonstrate approaches to resolve issues related to potential significant impacts on the environment, specific to any relevant matters raised by native title holders.
Monitoring and reporting	Include at a minimum the following in the SIMP: • clear and measurable outcomes and commitments for mitigating identified potential significant impacts and improving socio-economic benefits. • proposed monitoring and reporting activities that will be used to demonstrate and measure how enhancement of the community and economy is achieved. • how the proposed monitoring and reporting responds to advice from relevant government advisory agencies, native title holders, other Aboriginal stakeholders and their representatives.
Residual impact	Assess the significance of any residual impact or risk to identified values and the acceptability of the residual impact to stakeholders. Assess the significance of any residual impacts on local and regional

Aspect	Specific information required
	communities and the Territory economy.

2.5.8. Culture and heritage and Landforms

The assessment of these environmental factors should consider the potential for the proposal to significantly impact Culture and heritage and Landforms. The EIS is to cover all matters in Table 10 to address the NT EPA objectives to protect culture and heritage and conserve the variety and integrity of distinctive physical landforms.

Table 10: Minimum information required for assessment of Culture and heritage and Landforms

Aspect	Specific information required
NT EPA objective for Culture and heritage factor: Protect culture and heritage. **NT EPA objective for Landforms:** Conserve the variety and integrity of distinctive physical landforms	
Environmental values	Undertake and report on a comprehensive assessment to identify, describe and characterise existing culture and heritage values that may be affected by the proposal, including but not limited to: • Aboriginal sacred sites • heritage places and objects • cultural values associated with any native title claim applications and determinations in potentially affected areas outside the immediate proposal area • cultural practice areas • environmental values and areas important under Aboriginal tradition. Discuss the suitability of studies, surveys and investigations used to identify culture heritage values. Provide results of studies (e.g. archaeological and anthropological investigations and surveys, statutory/ regulatory processes, consultations and other research) undertaken to inform the information provided in the EIS. Provide maps showing the location and extent of cultural heritage values in the potentially affected area (including sacred sites, heritage places and objects, traditional owner land and cultural practice areas). The maps of cultural heritage values must include the location and boundaries of each component of the proposal, including all infrastructure elements necessary for the proposal. Discuss the Commonwealth and NT legislation relevant to the identified culture and heritage values. Describe any gaps, uncertainties and further work required to improve understanding of cultural heritage values and reduce uncertainty.
Potential significant impacts and risks	Describe and assess the potential significant impacts on culture and heritage values from implementing the proposal. Include at a minimum an assessment of: • the risk of damage or destruction of archaeological features and sites of cultural heritage significance (including Spirit Hills rock outcrop), during clearing, construction, operation or other disturbances that may occur due to mitigation or management activities. Discuss potential impacts related to:

Aspect	Specific information required
	• land clearing, soil disturbance, dust, erosion, vehicle and equipment movements • farm operations, e.g. water harvesting and reuse (and resultant impacts on water resources), agricultural chemicals application, unplanned runoff • increased public access from new roads, tracks and crossings, and increased awareness of archaeological and cultural heritage values • changes to amenity (e.g. noise, odour, dust, vibration and aesthetics) and the extent of its importance in maintaining cultural heritage values • the extent of any temporary or permanent land access or use restrictions for cultural practices (e.g. traditional hunting and fishing) • the extent of impacts on traditional food resources, including medicinal plants • potential cumulative impacts to cultural heritage values from the proposal and other activities in the region, combined with the potential impacts of a changing climate • intergenerational impact to the perception of a cultural heritage value once it has been altered i.e. assess if the proposed action could have an effect on intergenerational transmission of cultural traditions, and its significance. Provide details of consultation with the AAPA, DLPE Heritage Unit, native title holders, other Aboriginal stakeholders, and their representatives, regarding potential significant impacts to culture and heritage values, including identification of participants, and results of consultation. Present information in accord with the wishes of Aboriginal stakeholders regarding the confidentiality of cultural information and traditional knowledge, noting the proponent may request that identified information not be made public in accordance with section 281(2)(b) of the EP Act. Quantify the duration, magnitude and extent of potential significant impacts to cultural heritage values, based on engagement with the relevant stakeholders, scientific studies of the biophysical environment, anthropological and archeological studies and other research. Discuss the legislative framework or statutory decision-making processes that will consider the impacts identified above. Provide details about any potential significant impacts to cultural heritage values that would not be mitigated through other statutory decision-making processes, and the proposed measures to avoid and then mitigate those impacts. Describe any uncertainties and further work required to improve understanding of potential significant impacts and reduce uncertainty. Where uncertainty remains, demonstrate how the precautionary principle has been applied (section 19 of EP Act).
Avoidance,	Outline the measures for avoiding and mitigating the impacts identified above,

Aspect	Specific information required
mitigation, and management	with consideration of section 26 (environmental decision-making hierarchy) and section 27 (waste management hierarchy) of the EP Act. Provide a cultural heritage management plan (CHMP) that identifies and describes the measures that will be implemented to avoid, mitigate and manage impacts to identified cultural heritage values. Include standards and controls, and at a minimum address the following: • views and advice from the relevant stakeholders, including government advisory agencies, native title holders, other Aboriginal stakeholders and their representatives • measures to protect, and avoid entry to sacred sites e.g. compliance with sacred sites clearance and Authority Certificates • provide strategies to avoid and mitigate impacts to identified cultural heritage values during clearing, construction and operation • any requirement to obtain authorisation under the *Heritage Act 2011* to carry out work on a heritage place or object • a strategy to address how unexpected archaeological finds of heritage places and objects (additional to those identified in the EIS) would be identified and managed during implementation of the proposal. Demonstrate that there is agreement with native title holders and traditional owners of the land on the management and use of land and waters e.g. through the application of an Indigenous Land Use Agreement with native title holders or through any other culturally appropriate method.
Monitoring and reporting	Include at a minimum the following in the CHMP: • clear and measurable outcomes and commitments for the protection of cultural heritage values. • proposed methodology and timeframes for monitoring and reporting activities related to detect impacts to identified cultural heritage values. • specify which proposal phase (i.e. clearing, construction or operation) the proposed monitoring and reporting relates to. • how the proposed monitoring and reporting responds to advice from relevant government advisory agencies, native title holders, other Aboriginal stakeholders and their representatives. • how monitoring results and management outcomes will be communicated to stakeholders.
Residual impact	Determine whether there are likely to be any significant residual environmental impacts or risks to identified cultural heritage values.

2.6. Offsets

Provide details of an overall biodiversity offset strategy for any significant residual impacts of the proposal on the terrestrial and aquatic environment, ensuring the strategy is sufficiently detailed to demonstrate a

reasonable level of feasibility in line with the NT Offsets Framework and Biodiversity Offsets Policy. Offsets must be consistent with the NT Offsets Framework if an offset is required as a condition of any approval under the EP Act.

Offsets may also be required as a condition of any approval under the EPBC Act and must be consistent with the EPBC Act environmental offsets policy if an offset is required as a condition of approval under the EPBC Act.

3. Other requirements

3.1. Stakeholder engagement and consultation

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

The proponent must engage and consult with stakeholders[2] who are affected by and interested in the proposal. The proponent must document the following in the EIS:

- the proponent's approach to stakeholder engagement and consultation for the life of the proposal, through provision of a stakeholder engagement plan, including demonstration that this is consistent with the NT EPA's guidance for proponents: Stakeholder Engagement and Consultation, Australian Government's guidance The Interim Engaging with First Nations People and Communities on Assessments and Approvals under Environment Protection and Biodiversity Conservation Act 1999
- a summary of information presented in the referral on consultation undertaken up until mid-2025, including identified stakeholder groups, issues raised, and adjustments made to the proposal because of consultation.
- details of further stakeholder engagement and consultation undertaken on the proposal during the EIS phase including:
    - the engagement approach
    - any additional identified stakeholders
    - methods use for the communication with stakeholders and how proposal information was disseminated and communicated
    - how stakeholder input was invited
    - how any new information on the potential significant impacts/benefits of the proposal were communicated (if necessary)
    - issues raised in consultations
    - any further adjustments to the proposal as a result of consultation.

3.1.1. Aboriginal stakeholders

The draft EIS, including a stakeholder engagement plan, a CHMP and an economic and social impact assessment, is to be informed by consultation with stakeholders, including Aboriginal stakeholders. The draft EIS should set out the processes applied to identifying and determining Aboriginal stakeholders.

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

Aboriginal stakeholders must include:

- native title holders of Spirit Hills Station, whose prescribed body corporate is the Top End (Default PBC/CLA) Aboriginal Corporation RNTBC represented by the Northern Land Council
- traditional owners of land within the potentially affected area.

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

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

3.2. Public consultation requirements

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

3.2.1. Submission period

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

3.2.2. Form and manner for publication

The draft EIS must:

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

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

3.2.3. Public consultation locations

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

- NT EPA, Level 1, Arnhemica House, 16 Parap Road, Parap, NT 0820
- Department of Agriculture and Fisheries, Berrimah Farm Science Precinct, 29 Makagon Road, Berrimah, NT, 0828
- Northern Territory Library, Parliament House, Darwin, NT 0800
- Environment Centre Northern Territory, Unit 3, 98 Woods St, Darwin, NT 0800
- Northern Land Council, 45 Mitchell Street, Darwin
- NT Farmers Association, Shop 15A, 460 Stuart Highway, Coolalinga
- Victoria Daly Regional Council, Lot 79 Victoria Highway, Timber Creek, NT 0852
- Victoria River Roadhouse, 19405 Victoria Highway, Gregory, NT 0852
- Kununurra Community and School Library, Coolibah Drive & Mangaloo St, Kununurra WA 6743

4. Appendix A – List of relevant guidance material

The following guidance material, in addition to the guidance material referenced in 2.7 (Matters of national environmental significance) is considered relevant to the TOR. This list is not exhaustive, but captures guidance used in the preparation of these TOR and to inform the preparation of the EIS. The proponent must draw on further relevant industry and best practice guidance as part of developing the EIS.

- Brocklehurst, P. S. et al., 2007. Northern Territory guidelines and field methodology for vegetation survey and mapping. Available at: https://territorystories.nt.gov.au/10070/635994/0
- CSIRO 2020. Climate Change in the Northern Territory: State of science and climate change impacts. https://depws.nt.gov.au/__data/assets/pdf_file/0011/944831/state-of-the-science-and-climate-change-impacts-final-report.pdf
- 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://climatechange.nt.gov.au/nt-climate-change-response/northern-territory-climate-change-response-towards-2050
- DEPWS, 2020. Northern Territory guidelines for targeted surveys of threatened and significant plant species – Supplement 1: Typhonium field surveys: https://environment.nt.gov.au/media/docs/ survey-guidelines/supplement-1-typhonium-survey-guidelines.pdf
- DEPWS, 2021. Northern Territory Offsets Framework. Department of Environment, Parks and Water Security: https://depws.nt.gov.au/environment-information/northern-territory-offsets-framework/northern-territory-offsets-framework
- DEPWS, 2023. Biodiversity Offsets Policy. Department of Environment, Parks and Water Security https://depws.nt.gov.au/__data/assets/pdf_file/0003/1182450/biodiversity-offsets-policy.pdf
- DoH, 2017. Guidelines for Preventing Mosquito Breeding Associated with Construction Practice near Tidal Areas in the NT. https://digitallibrary.health.nt.gov.au/.
- Infrastructure Australia, 2021. Guide to economic appraisal. https://www.infrastructureaustralia.gov.au/guide-economic-appraisal
- NESP Earth Systems and Climate Change Hub, 2020. Climate change in the Northern Territory: state of the science and climate change impacts. National Environment Science Programme, Earth Systems and Climate Change Hub: http://nespclimate.com.au/building-understanding-of-climate-change-in-the-northern-territory/
- Northern Territory Government, 2017. Preventing weed spread guide, Weed Management Branch: https://nt.gov.au/environment/weeds/how-to-manage-weeds/prevent-weed-spread-industry-and-recreation
- NT EPA, 2013a. 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, 2013b. Guidelines for the Preparation of an Economic and Social Impact Assessment. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management
- NT EPA, 2013c. Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the NT. Northern Territory Environment Protection Authority. https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/284685/siting_design_landfills.pdf
- NT EPA, 2015. Waste Management Strategy for the Northern Territory 2015-2022. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-

advice/environmental-management

- NT EPA, 2017. Guideline: Recommended Land Use Separation Distances. https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/453192/guideline_recommended_land_separation_distances_oct.pdf
- NT EPA, 2018. Guidance on Adaptive Management. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/__data/assets/pdf_file/0003/622092/guideline_adaptive_management.pdf
- NT EPA, 2019. 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/0004/744862/guidance_proponents_preparing_eis.PDF
- NT EPA, 2020a. Environmental impact assessment guidance: NT EPA Environmental Factors and Objectives. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/publications-and-advice/environmental-management
- NT EPA, 2021. Environmental impact assessment guidance for proponents: Stakeholder Engagement and Consultation. Northern Territory Environment Protection Authority: https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/884696/guidance-proponents-stakeholder-engagement-and-consultation.pdf
- NT EPA, 2022. Waste. https://ntepa.nt.gov.au/your-environment/waste
- NT EPA, 2023. Environmental factor guidance: Atmospheric Processes. Greenhouse Gas Emissions https://depws.nt.gov.au/__data/assets/pdf_file/0007/1278511/environmental-factor-guidance-atmospheric-processes-august-2023.pdf