

Submission to the Environmental Protection Agency of the Northern Territory

Ammaroo Ammonium Phosphate Fertiliser Project

Comments on draft terms of reference for the environmental impact statement to be prepared by Verdant Minerals Pty Limited

ACKNOWLEDGEMENT

The Central Land Council (**CLC**) acknowledges the traditional owners of the Northern Territory who, with their ancestors, have been custodians and stewards of the Territory and its resources for tens of thousands of years.

EXECUTIVE SUMMARY

- CLC welcomes the opportunity to comment upon the draft terms of reference (draft TOR) for an environmental impact statement (EIS) concerning the Ammaroo Ammonium Phosphate Fertilizer Project.
- 2. The CLC submits that the draft TOR needs to be broadened in three general respects:
 - a. The environmental and cultural impacts caused by the Phosphate Mine and the Fertiliser Production Plant must be assessed cumulatively throughout the entire EIS.
 - b. Aboriginal people's relationship to the land is broader than sacred sites. Other cultural values face significant impacts from the project. They need to be captured in the EIS.
 - c. Traditional owners' and native title holders' entitlement to representation of their choice needs to be enshrined. That is critical to ensure culturally appropriate engagement on a statutory process which is outside of cultural experience or norms.
- 3. Those general themes recur throughout this submission. The specific comments on each component of the EIS should be read with those theme in mind.
- 4. CLC welcomes further discussion with the NT EPA about any matter outlined in this submission. Contact details are set out below.

A. INTRODUCTION

Verdant Minerals Pty Ltd (Verdant) has referred a proposed action (Proposal) that significantly alters the Ammaroo Phosphate Project. The original project involved mining and beneficiation of ore to produce phosphate rock concentrate (Phosphate Mine). The Proposal involves developing downstream processing facilities for producing ammonium phosphate fertilisers from the phosphate rock concentrate onsite (Fertiliser Production Plant). The Proposal requires the construction of a phosphoric acid plant, sulfuric acid plant, ammonia plant, granulation plant, and changes to amenity, storage, export/import and service infrastructure. The alterations will require the importation of 500,000 tonnes per year of elemental sulphur through the Port of Darwin, natural gas use to 8.7 petajoules per year, and an expanded bore-field to supply an extra 3.9 gigalitres per year of groundwater.

- 6. The draft TOR were released by the NT EPA on 3 May 2023 and are published on the NT EPA's website. The structure of this submission follows that draft TOR. Where changes are advised, the suggestions are shown in green text in the draft TOR tables.
- 7. The submission incorporates this covering note and:
 - a) **ANNEXURE A: CLC Advice**. The CLC Advice addresses <u>sections 2.3, 2.4.5 and</u> 4 of the draft TOR.
 - b) ANNEXURE B: WolfPeak Advice, prepared by WolfPeak Pty Ltd (WolfPeak). The WolfPeak Advice addresses sections 1, 2.1, 2.2, 2.4 (excluding 2.4.5) and 3 of the draft TOR. WolfPeak is a specialist environmental and sustainability consultancy based in New South Wales. CLC adopts the WolfPeak Advice, and commends it to the NT EPA.
 - c) ANNEXURE C: Information Cultural Values. This information about some potential impacts on cultural values demonstrates how the values to be considered are broader than simply protecting sacred sites. It provides an example of some of the impacts to cultural heritage matters, and their significance. It is not intended to be comprehensive.
 - d) **ANNEXURE D: Information CLC's statutory functions**, which relates to the role the CLC can play to assist traditional owners and native title holders throughout the EIS process.

B. CLC's ROLE

- 8. In making these submissions, the CLC represents and has considered the interests of:
 - a) affected native title holders for Ammaroo Pastoral Lease, Elkedra Pastoral Lease,
 Murray Downs Pastoral Lease and Neutral Junction Pastoral Lease;
 - Kaytetye Alyawarr Awenyerraperte Ingkerr-wenh Aboriginal Corporation RNTBC (ICN 7655) (KAAI), Eynewantheyne Aboriginal Corporation RNTBC (ICN 7947) (EAC) and Kaytetye Tywerate Arenge Aboriginal Corporation RNTBC (ICN 7745) (KTAAC);
 - c) traditional Aboriginal owners of neighbouring Aboriginal land trusts (ALTs) including Aherrenge ALT and Alyawarra ALT; and
 - d) residents of surrounding Aboriginal communities and outstations which include Ampilatwatja, Honeymoon Bore, Imperrenth, Indaringinya (Antarrengeny), Inkawenyerre (Rocket Range), Atnwengerrpe and Irrultja,

(together, the affected Aboriginal constituents).

9. Further information about the CLC's statutory functions and role in support of its affected Aboriginal constituents is set out at Annexure D.

C. THEMES

- 10. There are several themes running through the Annexures.
 - a. The need to assess the cumulative impact of the Fertiliser Production Plant and the Phosphate Mine. These two components are inextricably linked parts of one project. The project's cumulative environmental and cultural impacts must be assessed as a whole and, in many places, the draft TOR acknowledges that. The CLC submits that it should do so in all places. The NT EPA made clear in Assessment Report 87 in relation to the Phosphate Mine, that "this Report is not intended to provide an environmental approval although it will guide the decision for authorisation (by the Responsible Minister)." The relevant decision makers for both the Fertiliser Production Plant and the Phosphate Mine will need information on their cumulative environmental and cultural impacts in order to make informed, lawful decisions which take into account all relevant matters.
 - b. Sacred site protection is, of course, critical, but other aspects of Aboriginal people's cultural heritage need to be considered. The draft TOR should be expanded to incorporate the likely impacts upon other aspects of Aboriginal cultural heritage and spiritual wellbeing. For example, there are cultural and spiritual impacts which will occur as a result of land clearing, landscape modifications and the loss of culturally important biodiversity. Those matters affect how Aboriginal people live on their country; how they use it to access food, water, hunting, herbs and other resources; how they relate spiritually; how they practice their culture and transmit it through the generations. The draft TOR, and hence EIS, should reflect the fact that the whole landscape is important to Aboriginal people and their culture.
 - c. Given the significant cultural impacts of this project, CLC is deeply concerned that community engagement be undertaken thoroughly and appropriately. The potential disturbance to, or destruction of, Aboriginal cultural practices, ritual and sacred sites, could have an immense detrimental effect on Aboriginal cultural values. Given that particular vulnerability, traditional owners and native title holders are entitled to be represented throughout the EIS the process by their choice of representative. Involvement of an organisation like the CLC ensures that consultations with traditional owners and native title holders are conducted in a

culturally appropriate manner. This is especially important in a region where

mining and industry are rare, language barriers are abundant, traditional owners

are known to be non-confrontational and when they appear acquiescent, that may

not actually be the case.

11. Alongside those general themes, the CLC makes the specific submissions set out in the

CLC and WolfPeak Advice at Annexures A and B.

12. Measures cannot be designed to avoid, mitigate or manage significant impacts that are

not understood. The level of confidence in such measures would be increased if the

identified gaps in the draft TOR are filled as proposed.

D. **CLC CONTACTS**

CLC would welcome further discussion with the NT EPA about any matter outlined in this

submission. Please contact either of the following staff members should the NT EPA wish to

take up that offer.

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ANNEXURE A: CLC ADVICE

This section outlines the CLC's review of <u>sections 2.3, 2.4.5 and 4</u> of the draft TOR. Recommended additions to the draft TOR are in green text, while the rationale is in black. Table 7 is reproduced in full, with recommendations marked in green text.

Draft TOR, Section 2.3: Stakeholder engagement and consultation

- 1. (Social & economic impact assessment) The affected Aboriginal constituents for the area of the Phosphate Mine and Fertiliser Production Plant stand to be more affected by its direct impacts than almost any other group. They need to be central to the engagement and consultation processes. Their free, prior and informed consent must be sought for the combined Phosphate Mine and Fertiliser Production Plant.
- 2. The EIS should incorporate a thorough social and economic impact assessment conducted in accordance with best practice guidelines. The significance of the potential impacts upon traditional owners, native title holders and their cultural practices mean that the appropriate level of engagement on the IAP2 Public Participation Spectrum is empowerment (or, at bare minimum, collaboration).
- 3. (Culturally appropriate engagement) Methods of disseminating information and measures of accountability should be developed with input from the affected groups and communities to ensure their needs are meet. Engagement needs to be done in a culturally appropriate manner (in accordance with section 43(a) of Environmental Protection Act (NT) 2019). That requires acknowledgements that:
 - mining and heavy industry in the Sandover region are rare and, consequently, underlying understanding of the processes to be described in the EIS is lower than in areas of the Territory where those processes are more common;
 - b) Alyawarr and Kaytetye people are known to be non-confrontational and in consultations may appear to acquiesce when, in fact, agreement is not intended;
 - c) English is the not the primary language for most residents in the project region, so there will be significant language barriers for those who live in the outstations and communities surrounding the project.
- 4. To date, Verdant has not indicated that it has engaged with traditional owners and native title holders about the EIS in a manner that overcomes those barriers. Given the complexity of the Proposal, unless those barriers are carefully managed there will be limited capacity

for communities and individuals likely to be affected to access and understand information about the project and its potential significant impacts.

- 5. To counteract those barriers, engagement strategies should be developed in conjunction with an organisation with a long-term relationship with traditional owners and native title holders. The CLC is ideally placed to perform that role.
- 6. (**Relationship with other negotiations**) Stakeholder engagement and consultation with native title holders about the EIS cannot occur in isolation. The delicate balance native title holders are required to make when considering whether to consent to a project means that they need not only the information contained in the EIS, but also information about what could be included in an Indigenous Land Use Agreement (or similar agreement).
- 7. Such an agreement cannot be negotiated without Verdant sharing of information about the Phosphate Mine and Fertiliser Production Plant, including its viability and economic underpinnings. In order to *empower*, or at least *collaborate* with, native title holders Verdant should be encouraged to provide information requested on behalf of native title holders. Without that level of openness, it will not be possible for Verdant to obtain native title holders' free, prior and informed consent to its project.
- 8. (*Recommendation*) The following paragraph should be added to section 2.3 of the draft TOR:

Engagement strategies with traditional owners and native title holders should:

- be developed in conjunction with the Central Land Council (as the representative of those groups),
- incorporate methods of disseminating information in culturally appropriate ways, and
- include measures of accountability that meet community needs.

The Proponent should develop social and economic impact assessments which aim to empower traditional owners and native title holders. That involves sharing information required by native title holders not only to understand and evaluate the EIS but also to negotiate an Indigenous Land Use Agreement for the entire project.

Draft TOR, Section 2.4.5: Culture and heritage

- 9. (Sacred sites) The draft TOR includes protection for sacred sites that are recorded or registered under the Northern Territory Aboriginal Sacred Sites Act 1989 (NT). It does not adequately protect sites that have not been recorded or registered by the Aboriginal Areas Protection Authority (AAPA). There is no legal requirement to record or register all sacred sites. In fact, there are strong cultural norms which mean that many sites are not recorded or registered. For example, sites may be restricted to initiated men only. Recording and registration necessarily breaks that privacy.
- 10. The CLC, through its long term relationship with traditional owners and native title holders, often holds complementary but distinct information from that held by AAPA. At times, that means the CLC has knowledge of sites not recorded or registered by AAPA.
- 11. For sacred site protection to be comprehensive, Verdant ought to obtain sacred site clearance advice from the CLC as well as from AAPA.
- 12. (*Broader cultural values*) The draft TOR should be expanded to incorporate the likely impacts upon other aspects of Aboriginal cultural heritage and spiritual wellbeing. Table 7 in section 2.4.5 does not expressly identify cultural and spiritual impacts of land clearing, landscape modification and the loss of culturally important biodiversity. That omission means that while traditional owners would be spiritually affected by many trees dying due to groundwater drawdown (regardless of whether they were sacred trees or not), that significant spiritual impact may not have been explored in the EIS unless they were, in fact, sacred trees.
- 13. Such matters affect how Aboriginal people live on their country, how they use it to access food, water, hunting, herbs and other resources, how they relate spiritually and how they practice their culture and transmit it through the generations. The draft TOR, and hence EIS, should acknowledge that the whole landscape is important to Aboriginal people and their culture.
- 14. Annexure C includes information about some cultural values which may be affected by the Proposal, and describes some likely effects on traditional owners should those impacts occur. Annexure C is not and does not purport to be comprehensive. It is included solely to give some examples of how sacred sites and broader cultural values are interconnected and may be affected by the project as a whole.
- 15. (Catastrophic release of hazardous materials) Some areas (including sacred sites) within the anticipated emission dispersal area may be vulnerable to corrosion from standard emissions from the plant (for example, mineral based sites and rock formations).

- 16. Similarly, the impact to humans from non-catastrophic releases of hazardous materials can be significant to human health and the natural environment, and may restrict access to country. The potential significant impacts should not be limited to circumstances of accident or disaster, and but should include standard release of hazardous materials and emissions.
- 17. (**Recommendation**) The amendments in green below should be made to table 7 in section 2.4.5 of the draft TOR.

Table 7: Minimum information required for assessment of Culture and heritage.

Aspect	Specific information required		
NT EPA objective: F	NT EPA objective: Protect culture and heritage.		
Relevant activities	 Extraction of groundwater from the expanded borefield Construction and operation of ammonium phosphate fertiliser plant and all its components, including the mine Re-alignment of the Murray Downs Road Air and road traffic Rehabilitation and closure of either (or both) the mine and industrial plant Activities with the potential for direct and indirect disturbance of sacred sites, heritage sites and sites of cultural significance Activities with the potential for direct or indirect impact on, or modification of, the cultural and spiritual 		
Environmental values	Identify the Aboriginal communities and traditional owners within (or in proximity to) the proposal area, including the area of influence, and any native title claims.		
	Describe the characteristics and current condition of sacred sites, cultural and heritage values and the current landscape within the proposal area, including the area of influence (which includes the anticipated extents of groundwater drawdown and emission dispersal), 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, current use and spiritual significance e.g. songlines, and sites used for maintaining cultural traditions.		
	Heritage places or objects protected under the <i>Heritage Act 2011</i> includes both the automatic protection of Aboriginal and Macassan archaeological sites and the protection of other declared places		
	traditional land use or industry within or in proximity to the		

proposal area

- importance of amenity (i.e.eg visual, noise, odor, dust, vibration) to maintaining cultural values
- importance of terrestrial ecosystems (including groundwater dependent ecosystems) and biodiversity to maintaining cultural and spiritual values
- registered or recorded sacred sites under the Northern Territory Aboriginal Sacred Sites Act 1989 (Sacred Sites Act) taking into account confidentiality requirements
- advice from the Central Land Council about sacred sites (including those not recorded or registered under the Sacred Sites Act) and cultural and spiritual values requiring protection across the project's area of influence, including the mine (redacted to meet confidentiality requirements).

Information sources must include published, independent archaeological and anthropological information, site surveys, respective registers, consultations and other research.

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 cumulative impacts on cultural, spiritual and heritage values from the proposal and the previously assessed mine, including:

- disturbance to sites of cultural or spiritual significance during construction, operation, and maintenance activities
- disturbance to traditional and/or contemporary Aboriginal values (including but not limited to sacred sites) or uses of land (e.g. hunting and ceremonial use) or amenity due to construction and operation activities (including the cultural and spiritual impacts of land clearing or loss of biodiversity)
- predicted exclusion zones / risk contour around infrastructure describing risks to human health and landscape (including sacred sites) from catastrophic release of hazardous materials (e.g. sulfuric acid, ammonia and standard emissions from the processing plant) and how this may impact cultural use of the area
- temporary or permanent land access or use restrictions within and beyond the in areas of proposal infrastructure, including exclusion zones around the ammonium phosphate fertiliser plant boundary and whether they impact upon ability of people to exercise their culture.

Assess the potential for impact to archaeological and cultural sites and the livelihood of traditional owners (including hunting and

foraging for food) through:

- air pollutants, including dust and chemicals within the proposal area and area of influence
- groundwater drawdown from the proposed increase in groundwater abstraction
- actual or planned future land clearing by any means (including through groundwater drawdown)
- loss of culturally important biodiversity.

Determine the proposal footprint and area of influence that could feasibly experience those impacts.

The assessment must:

- quantify the significance of potential impacts and risks to sacred sites and cultural heritage
- identify any effect on intergenerational transmission of cultural traditions, including any effect on practicing cultural traditions
- consider cumulative impacts and the reversibility of potential impacts.

Assess the potential 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. Where uncertainty remains, adopt the precautionary principle and demonstrate how it has been met (section 19 of EP Act). At all times comply with the Sacred Sites Act which prohibits entry upon, damage to or desecration of sacred sites.

Avoidance, mitigation and management

Describe the measures for avoiding and mitigating impacts on cultural heritage values and the practice and transmission of cultural and spiritual traditions

Avoidance and, mitigation and offset measures must be developed with consideration given to the following:

- substantial initial and ongoing consultation and engagement with native title holders, traditional owners and their representatives.
- best practice, including advice from relevant NTG advisory agencies, the Central Land Council, native title holders and traditional owners
- appropriate independent surveys and consultation to identify and characterise any sites, places or objects of cultural significance
- requirements for an Authority Certificate that covers all areas of the proposal, and the mine, in accordance with the Sacred Sites Act
- advice from the Central Land Council about sacred sites (including those not recorded or registered under the

Sacred Sites Act) and cultural and spiritual values requiring protection across the project's area of influence, including the mine (redacted to meet confidentiality requirements).

Demonstrate the application of the mitigation hierarchy to avoid and minimise impacts on cultural heritage values, including any considerations for rehabilitation and closure. Undertake public consultations (including with traditional owners, native title holders and their representatives) about rehabilitation and closure plans prior to finalizing them.

Identify and address the potential impacts on potentially affected Aboriginal people and communities, landholders, tourism and operators as stakeholders.

All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant government advisory agencies, the Central Land Council, native title holders and traditional owners.

Demonstrate and document in the EIS how the NT EPA's objective for this factor can be met and the predicted environmental outcomes.

Monitoring and reporting

Outline proposed monitoring and reporting activities related to potential impacts and risks and mitigation and management measures to culture and heritage and the practice and transmission of cultural and spiritual traditions.

The proposed monitoring and reporting should specify which project phases it relates to.

All monitoring activities should be substantiated and in accordance with best practice advice from relevant government advisory agencies, the Central Land Council, native title holders and traditional owners.

Residual impact

Identify the significance of any residual impact or risk of the proposal to identified values.

What are the consequences for Aboriginal people if the residual impacts occur?

Draft TOR, Section 4: Public consultation requirements

- 1. CLC research shows that up to 14 distinct traditional owner estate groups may be responsible for country within the area of influence of the Phosphate Mine and Fertiliser Production Plant. All will be entitled to participate in consultations about the EIS.
- 2. In order to ensure the affected Aboriginal constituents have access to independent advice about the EIS, the CLC intends to ask WolfPeak to present direct to them.
- 3. Such consultations are intense and require planning which is not always possible during short consultation periods.
- 4. The CLC recommends that an extended 90 day consultation period be adopted instead of the usual 30 or 60 days period. If such an extension is not permitted, then the CLC asks that 30 days advance notice be given of the impending release of the EIS. That will assist in scheduling complex consultations. It also ties in with WolfPeaks's recommendation for an indicative assessment timeline (section 1.2, Assessment Period).

ANNEXURE B: WOLFPEAK ADVICE



REVIEW OF DRAFT TERMS OF REFERENCE FOR THE AMMAROO AMMONIUM PHOSPHATE FERTILISER PROJECT EIS

CENTRAL LAND COUNCIL

MAY 2023



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Project EIS

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INTRODUCTION 1.

On behalf of the Central Land Council (CLC) WolfPeak Pty Ltd (WolfPeak, we) have reviewed the following documents prepared by the Northern Territory Environment Protection Authority (NT EPA) for the proposed Ammaroo Ammonium Phosphate Fertiliser Project (the proposal or project):

- Notice of Decision and Statement of Reasons, 8 February 2023
- Draft Terms of Reference for an Environmental Impact Statement (the TOR), May 2023

Following the Referral phase, the NT EPA decided the proposal requires a Tier 3 assessment, by which an Environmental Impact Statement (EIS) must be prepared by Verdant Minerals for the proposal, as outlined under the Northern Territory Environment Protection Act 2019. The TOR set out the matters relating to the environment that are to be addressed in the EIS for the proposal.

We consider the draft TOR to have gaps in the information required to be provided in the EIS. These omissions would limit the level of confidence in assessing the potential impacts of the proposal and the effectiveness of the proposed measures to manage these impacts.

We also identify a lack of clarity and consistency regarding the consideration of the previously assessed mine in the EIS for the proposal.

1.1 **About this Review**

This document outlines our findings from our review of the draft TOR, including gaps, inconsistencies and items that require further detail. We have provided justification for the matters to be addressed and recommendations for inclusion in the final TOR. This is to assist the NT EPA in its consideration of the matters raised by our review.

We have assessed the following sections of the TOR:

- Section 1 Introduction
- Section 2.1 Executive Summary
- Section 2.2 Proposal Description
- Section 2.4 Information Requirements for Environmental Factors (excluding Section 2.4.5)
- Section 3 Other Requirements

A review of the remaining sections of the TOR - in particular culture and heritage and stakeholder engagement and consultation (Sections 2.3, 2.4.5 and 4) - has been undertaken by the CLC and are addressed in its submission.





DETAILED REVIEW OF THE TERMS OF 2. REFERENCE

Our review of the draft TOR are set out in sections 2.1 to 2.3 below.

Construction and operation (Section 2.2.6) 2.1

This section outlines our proposed additions and clarifications to Table 1 in Section 2.2.6 of the TOR.

We consider the proposal to be inextricably linked to the previously assessed mine, would not operate without it and is located on the same site. Therefore, the information provided to describe the proposal should include reference to the mine. This will provide essential context to the proposal and help ensure all direct, indirect and cumulative impacts of the proposal are appropriately considered.

We have included our recommended additional information requirements and clarifications directly in the table as presented in the TOR. Our additions are in green in Table 1 below.

Table 1 Minimum information requirements for the proposal description

Topic	Required information
Site layout maps	The description of the proposal must include site layout maps that depict the proposed location and dimensions of the components clearly identifying the areas of:
	existing disturbance, infrastructure, roads/tracks, natural and modified landforms
	new disturbance and infrastructure, including (where applicable):
	○ all areas to be cleared ¹ and disturbed
	 laydown areas, borrow areas, access and haul roads associated with the construction phase
	o service corridors and firebreaks
	o structures to be built
	 infrastructure related to water storage, water treatment (including potable water and wastewater) and electricity transmission
	o erosion and sediment controls
	o stormwater drainage
	 chemical and waste storagefacilities
	o load in and load out facilities
	 airstrip and associated infrastructure and access arrangements
	 current land tenure, owner(s) and lease(s) of the land of which the proposal area covers and any other interests including agriculture, petroleum, native title (claims or determined), and Aboriginal freehold land
	sensitive environment (including permanent and seasonal residential communities, sites where cultural activities are undertaken, and no-go work areas/exclusion zones) overlying the proposal area and surrounds i.e. within the area of influence of the proposal.





Topic	Required information
	area of influence of the proposal, including actual and potentially impacted environments, communities and sites that are covered by the EIS
	 proposed or indicative location and extent of renewable energy infrastructure including transmission lines and access roads
	 water supply infrastructure required for the construction and operation of the proposal including bores, pipelines, access roads, dams, turkey nests etc.
	The site layout maps and plans must demonstrate the relationship of the proposal to the previously assessed mine.
	Provide a high-quality contemporary aerial view of the proposal area and area of influence to describe current site conditions including existing disturbance.
	Provide high-quality contemporary elevation plans of the proposal area and area of influence to demonstrate how the proposal will fit into the existing landscape.
	Provide high-quality elevation plans / drawings of the proposed fertiliser plant and associated facilities (including any stacks and emission plumes from them, aerials, telecommunication masts etc.) from relevant vantage points including cultural heritage sites
Construction	Describe all elements and stages of the construction phase including:
	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
	erosion, sediment and drainage control
	location, extent and nature of temporary stockpiles
	any new ancillary infrastructure and upgrades required to service the proposal, including road access, and supply of electricity, water and sewerage
	waste management including classification of waste streams
	maintenance of components and servicing of infrastructure
	controls to avoid spills/discharges to the environment
	location and size of construction accommodation facility
	noise management and control
	biosecurity management and control in relation to weeds and feral animals
	fire management and control
	exclusion/no-go work areas
	timeframes for completion.
	Where multiple alternatives exist, the choice of the preferred option(s) should be clearly explained and a comparison provided against other options in terms of potential environmental impacts





Topic	Required information	
Operation	Describe all elements and stages of the operation phase including:	
	infrastructure – location, size and type	
	materials and chemicals required - major types, quantities, qualities, sources, storage requirements and potential hazards	
	any limitations to the effective operation and management of proposed infrastructure e.g. ore grade, climatic conditions, stack height	
	timeframes for the commencement and completion of staged operations	
	ongoing maintenance and upgrades required to service any infrastructure including roads, railways, and erosion and sediment controls	
	applicable legislation, guidelines, standards and permits	
	location, shape, size and nature of temporary and permanent stockpiles	
	erosion and sediment control	
	weed management	
	noise management and control	
	fire management and control	
	air quality controls and management	
	controls to avoid spills/discharges to the environment	
	information on contaminated materials that will pose a risk 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.	
Water requirements	Describe all water requirements relevant to each proposal phase. Provide detailed information on demand/volume required, sources, storage, treatment, management of water aspects and criteria for discharge (provide a water balance).	
Transport and traffic	Describe traffic and transport activities during construction and operation, including but not limited to:	
	 proposed transport methods including locomotive and aircraft, light and heavy- duty vehicles 	
	 existing transport baseline information i.e. data on current traffic numbers and movement patterns and how these will be impacted during the construction and operational stages of the project 	
	vehicle movements for both mine-related and proposal transport including type, size, number and frequency of movements to and from site	
	 marine vessel movements including type, size, number and frequency of movements to and from Darwin Port 	
	hours of operation	
	details on access and transport routes including proximity to sensitive receptors (e.g. waterways, townships or communities, sensitive and/or significant vegetation and culturally sensitive sites) within 50 metres of access and transport routes	
	details on traffic management aspects, incident reporting and	





Topic	Required information
	emergency response measures to be undertaken in the event of a hazardous material spill.
Energy	Provide relevant information with respect to energy during construction and operation, including but not limited to:
	energy requirements and sources
	options for sourcing energy from renewable and non-renewable sources, with a preferred option and justification for the selected option
Waste	Describe all waste (i.e. type and quantity) that will be generated during the proposal life, including construction and operation phases, on a regular basis. Classify waste in accordance with NSW Waste Classification Guidelines .
	Provide demonstrated application of the waste hierarchy.
	Provide relevant information on the disposal/recycling facility that will be used to manage solid wastes.
	Outline nominated recycling and/or landfill facilities licensed for the waste type, and whether there is sufficient capacity and indicative agreement from those facilities to accept the waste from the proposal.
Ammonium phosphate fertiliser	Provide a process diagram for ammonium phosphate fertiliser production identifying all inputs and outputs for each proposal component.
production, material storage and management	Estimate the maximum and annual quantities of inputs (e.g. energy, water, catalysts, reagents) and outputs (e.g. heat, solid/liquid wastes) for each of the ammonium phosphate fertiliser production process components.
	Detail environmental management of the whole process (including products and chemicals), ensuring alignment with best practices and standards, including the effectiveness of management methods and potential residual impacts to the environment.
	Document applicable legislation, guidelines, standards and permits.
	Provide a description of the storage facilities for all materials required for the production of ammonium phosphate fertiliser (e.g. catalysts, reagents, wastes). The description must include but not be limited to:
	location, extent and nearby sensitive environment
	dimensions and storage capacity
	safety controls and checks
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 (including accommodation).
	- on the facilities provided (including accommodation).





Topic	Required information
Visual impact	Provide a landscape visual impact assessment i.e. a prediction of the nature, likelihood and significance of changes that may occur as a result of the construction and operation of the project including any associated infrastructure (including potential renewable energy related infrastructure) including cumulative impacts. The assessment must include the importance of visual amenity to maintaining cultural values.

Information requirements for environmental factors 2.2 (Section 2.4)

The following sections outline WolfPeak's proposed additions and clarifications to Section 2.4 of the TOR. These are the five environmental factors identified by the NT EPA in the Referral as having the potential to be significantly impacted by implementing the proposal. As such, it is critical that the TOR provides sufficient detail to ensure these factors are appropriately assessed in the EIS.

We have included our recommended additional information requirements and clarifications directly in the tables as presented in the TOR. Our additions are in green in Sections 2.1.1 to 2.1.4 below.

Terrestrial ecosystems 2.2.1

The proposal includes several activities that have the potential to significantly impact the terrestrial ecosystems environmental value if not considered and managed appropriately.

There were several key components identified in the Referral that required a greater level of assessment on their impacts to biodiversity. A number of these require assessment at a federal level (under the Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC Act)), including assessment of the Grey Falcon which is listed as vulnerable under the EPBC Act (as of July 2020), as well as updated assessment of all threatened species listed in the Referral with respect to extended land clearing and increased greenhouse gas emissions from the proposal.

We do not consider these key components to be appropriately addressed in the TOR. In Table 2 below, we have included specific information requirements to ensure a complete assessment of impacts to terrestrial ecosystems, in particular the impacts of the proposal to threatened and/or migratory species.

Table 2 Minimum 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	 Use of groundwater for construction and operational water supply, including dewatering of the previously assessed mine site 	
	 Use of plant and equipment during construction and operations 	
	 Operation of the ammonium phosphate fertiliser plant 	
	Dust generation from operations	





	 Land clearing to accommodate any proposed renewable energy infrastructure Clearing required for the airfield, access roads, water supply infrastructure and cumulative impacts Vegetation loss due to groundwater drawdown or surface water extraction.
Environmental values	Provide a description of all terrestrial ecological values present or likely to be present within the proposal footprint and area of influence. This must include, but not be limited to:
	 a description of groundwater dependent ecosystems,
	 resident flora and fauna species and their importance in local and regional settings, including to Aboriginal custodians,
	 occurring and potentially occurring listed terrestrial threatened and/or migratory species under the Territory Parks and Wildlife Conservation Act and EPBC Act.
Potential impacts and risks	Identify, describe and assess potential direct and indirect impacts and risks of implementing the proposal, and cumulative impacts, on terrestrial ecosystems and identified environmental values including:
	 loss of flora/ecological communities from water availability/quality, including loss of significant/sensitive vegetation¹.
	 impacts to groundwater dependent ecosystems (e.g. deep- rooted vegetation) from drawdown of the water table.
	 disturbance or degradation of vegetation communities, possibly resulting in a long-term decline or loss over time, for example from erosion, dust and other air emissions, weeds/pathogens, pests, disturbance or acidification of soils, changes in bushfire risk (fire frequency and intensity).
	impacts to terrestrial ecosystems, including groundwater dependent ecosystems from spills of hazardous materials (including, but not limited to, sulfuric acid and ammonia)
	 impacts to listed threatened and/or migratory species associated with the loss of habitat caused by land clearing.
	 impacts to listed threatened and/or migratory species associated with injury/mortality and habitat degradation from use of the airfield.
	 impacts to listed threatened and/or migratory species associated with loss of climatic habitat caused by anthropogenetic emissions of greenhouse gases (Key Threatening Process under the EPBC Act).
	Determine the areas that could feasibly experience those impacts including uncertainty associated with the impact predictions.
	Using appropriate studies, investigations and relevant information, quantify the extent of impacts and their significance at the proposal level and in regional settings.

¹ Refer to NT Land Clearing Guidelines





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Avoidance, mitigation and management	Outline the measures for avoiding, mitigating, or offsetting 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 personnelinvolved.
	Demonstrate that mitigation measures are in accordance with best-practice, including advice from relevant Government authorities and species experts.
	The EIS should demonstrate that the proposal has been appropriately sited and has taken into consideration the minimum requirements outlined in the NT Land Clearing Guidelines.
	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.
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential impacts and risks to terrestrial ecological values (including groundwater dependent ecosystems and culturally significant sites and other cultural values), 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 acceptable.
	The proposed monitoring and reporting should specify which proposal phase it relates to i.e., construction or operations.
	Demonstrate that monitoring activities are in accordance with best-practice, including advice from relevant NT Government authorities.
Residual impact	Identify any potential 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 .

2.2.2 Hydrological processes

WolfPeak welcomes the inclusion of hydrological processes as a key environmental factor for assessment in the EIS. The groundwater consumption for the proposal is almost double the volume that was proposed in the previously assessed mining project. This may have significant direct impacts to the water supply for local communities as well as the indirect impacts to water dependent sacred sites and terrestrial ecosystems from the lowering of the water table.

The specific information requirements for hydrological processes in the draft TOR provides coverage of the impacts to be assessed and the scope of mitigation measures to be articulated. Table 3 below outlines several clarifications to the proposed requirements to provide more specificity.

Table 3 Minimum 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	Extraction of groundwater from the expanded borefield and previously assess mine site.			
Environmental values	Describe the following for the proposal footprint and the area of influence:			
values	 climate and meteorological conditions in the proposal area, the frequency and severity of extreme weather conditions 			
	 hydrogeology including groundwater systems, yields, storativity, storage properties (specific yield and storativity), transmissivity, water movement, recharge rates, recharge/discharge pathways and quantitative water balance 			
	 declared beneficial uses, existing users, water quality objectives and environmental values including sacred sites and sites of cultural significance. 			
	 extent and value of groundwater dependent ecosystems, including but not limited to culturally significant sites and other cultural values (e.g., areas where hunting and gathering etc. occur) characterised by groundwater dependent vegetation or groundwater dependence of surface water features such as (but not limited to) aquatic groundwater dependent ecosystems, soakages and springs. 			
	current and potential (future) water use potentially affected by the proposed water abstraction (e.g. access to water sources by livestock)			
	 the likelihood of stygofauna occurrence, based on a desktop assessment of the suitability of habitat present, including their management if stygofauna are likely. 			
	Provide detailed maps to support the above descriptions. Outline studies used in the assessment, including their results, limitations and uncertainties, including in relation to the desktop stygofauna assessment.			
Potential impacts and risks	Identify, describe and assess potential direct and indirect impacts and risks of implementing the proposal, and cumulative impacts, on hydrological processes including:			
	 drawdown of water table, with likely effects to groundwater dependent ecosystems (e.g. springs, wetlands, deep-rooted vegetation, stygofauna (if likely to be present)), connected surface water systems and related water values 			
	impacts from the proposed water abstraction on declared beneficial uses and water quality objectives associated with the targeted groundwater system			
	 impacts to other groundwaterusers, including the environment, Aboriginal economic development and cultural uses. 			
	 salinity risks, including any impact on ecosystems, terrestrial landscapes and soils, water users, communities and culturally sensitive sites and other cultural values. 			
	The assessment of impacts must use the outcomes of relevant studies and information. As a minimum, the assessment must include:			
	 description of all types of groundwater dependent ecosystems and understanding of their interconnectivity, waterdependence, including reference points and management triggers. 			
	 predictions based on modelling (class 2 model⁵ including predictive uncertainty) for relevant characteristics such as: 			
	o alterations to recharge			
	 groundwater drawdown levels, spatial extent and recovery time 			





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- Modelling should be conducted using best practice precautionary scenarios for arid zone aquifers, include predicative uncertainty analysis, and should account for different proposal stages, such as initial conditions (baseline) and relevant intervals in construction, operation and closure phases. Future predicted climatic conditions must also be considered.
- Assumptions and parameters used in the predictive model and
 justification for their use, including a description of how the predictions
 would change in the event critical assumptions (including the
 conceptual model, boundary conditions, transmissivity, hydraulic
 conductivity and porosity) were found to be incorrect.
- overall water balance of the target groundwater system, including inputs and outputs, and feasibility assessment to illustrate the availability of a sustainable water supply for optimal abstraction of groundwater to achieve the desired abstraction volume while minimising adverse impacts to the environment, and current and future groundwater users.

Describe and quantify any uncertainties and further work required to increase understanding of potential impacts and reduce uncertainty. Quantify the significance and extent of impacts at the project level and cumulatively.

Quantify the significance of proposal impacts using:

- the latest draft of the Western Davenport Water Allocation Plan
- the latest draft of the Northern Territory Water Allocation Planning Framework
- Relevant guideline thresholds.

Avoidance, mitigation and management

Outline the measures for avoiding, mitigating, or offsetting 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, mitigation and offset measures must be developed with consideration given to the following:

- proposal design and layout
- alternative water supply options
- water conservation and efficiency
- compliance with any legislation, standards and policies relevant to the proposed measures.

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.

Demonstrate that mitigation measures are in accordance with best-practice, including advice from relevant NT Government authorities.

Monitoring and reporting

Provide proposed monitoring and reporting activities related to potential impacts and risks, including proposed management actions where and when breaches of triggers occur 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 acceptable.

Demonstrate that the proposed monitoring locations/bores are appropriately sited to monitor relevant formations for impacts as a result of the proposed increased water abstraction. Including formations connected to groundwater dependent ecosystems, culturally significant sites and other cultural areas.

The proposed monitoring and reporting should specify which proposal phase it



	relates to i.e., construction, operations, closure or post-closure. Demonstrate that monitoring activities are in accordance with best-practice, including advice from relevant NT Government authorities.
Residual impact	Identify any potential residual impact or risk of the proposal to identified values.
Offsets	Where a significant residual impact may remain after applying the environmental decision-making hierarchy, identify offsets and describe how any proposed offset is consistent with the NT Offsets Framework .

2.2.3 Air quality

This section outlines WolfPeak's proposed additions and clarifications to Table 4 in Section 2.4.3 of the TOR. We have included our recommended additional information requirements and clarifications directly in the table as presented in the TOR. Our additions are in green in Table 4 below.

Table 4 Minimum information requirements for the 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	Construction and operation of ammonium phosphate fertiliser plant and its components			
	Handling, processing, transport and storage of materials including but not limited to sulfur and phosphogypsum			
	Power generation			
	Rehabilitation and closure			
	Construction and operation of the previously assessed mine site			
	 Clearing of vegetation and topsoil stripping for the construction of the proposal, including the previously assessed mine site, ancillary facilities, any proposed renewable energy infrastructure, access roads and rail, pipelines and telecommunication infrastructure 			
	Management of spoil and topsoil stockpiles			
	 Vehicle movements to and from the proposal during construction and operation including cumulative impacts and transportation of workers associated with the accommodation facilities, airfield and any travel to local communities and facilities outside the project site 			
Environmental values	Describe the sensitive receptors within the proposal footprint and area of influence, supported by air dispersion modelling			
	Describe the existing air environment			
	Describe areas of current and predicted public use (including cultural use) within the proposal footprint and area of influence.			
	Provide maps and figures to support descriptions as appropriate.			





Potential significant	Describe potential impacts, including cumulative impacts, on air quality and identify:	
impacts and risks	 emissions which could impact air quality, and their source (including emissions from unplanned upsets, shutdowns and releases from storage tanks due to overpressure) 	
	the impacts from emissions on local air quality and sensitive receptors, including potential incremental impacts on culturally significant sites and other areas of cultural value (e.g., areas where people go hunting and gathering etc.)	
	 the volumes of emissions and impacts from their accumulation (including bioaccumulation and bio-magnification, if relevant) over the 25 year operation, including potential limitations on future land use 	
	 the proposal footprint and area of influence that could feasibly experience those impacts. 	
	Provide an assessment of potential impacts on air quality using outcomes of investigations and/or other relevant information. As a minimum, the assessment should take into consideration:	
	methods, equipment, timing and frequency	
	 the likely source, scale and extent of emissions (including emissions from unplanned upsets, shutdowns and releases from storage tanks due to overpressure) 	
	cumulative impacts with other activities or proposals	
	the duration, magnitude and extent of potential impacts.	
	The assessment must identify and quantify potential impacts on air quality against relevant contemporary guidelines and standards, ensuring that ground level concentrations are compared to the current Ambient Air Quality NEPM standards and account for anticipated amendments to the NEPM in 2025.	
	Assess the potential impacts of a changing climate on air quality in the context of cumulative impacts from the proposal and other activities in the region.	
Avoidance, mitigation and management	Outline the measures for avoiding, mitigating, or offsetting 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 offset measures must be developed with consideration given to the following:	
	design and layout of the proposal	
	cumulative impacts	
	best available technology	
	emission avoidance, mitigation or management measures	
	compliance with any statutory or policy basis for the proposed measures.	
	All mitigation measures should be substantiated and in accordance with best practice, including advice from relevant government advisory agencies.	
Monitoring and reporting	Outline any proposed monitoring and reporting activities related to potential impacts (including cumulative impacts) and risks, and mitigation and management measures.	
	The proposed monitoring and reporting should specify which project phase it relates to, i.e. construction or operations, and must be sufficiently robust to detect and quantify unplanned releases to the atmosphere.	
	All monitoring activities should be substantiated and in accordance with best practice advice from relevant government advisory agencies.	
Residual impact	Identify any potential residual impact of the proposal on environmental values.	





2.2.4 Atmospheric processes

WolfPeak welcomes the inclusion of atmospheric processes as a key environmental factor for assessment in the EIS. The proposal's estimated contribution to the state and national annual greenhouse gas emissions is substantial. It poses a significant risk to the NT EPA's ability to achieve its environmental objectives, as well as the NT Government and Australian Government's net zero targets if greenhouse gas emissions are not carefully managed.

The draft TOR provides coverage of the impacts to be assessed and the scope of mitigation measures to be articulated. However, to provide a greater level of confidence in the effectiveness of the proposed measures to avoid, mitigate or manage potential significant impacts, as required under EP Regulation 59 (c), further detail is necessary to justify the conclusions and decisions to be presented in the EIS.

In Table 5 below, we have included specific information requirements to provide greater transparency to the assessment of atmospheric processes. We recommend further detail on the sources and methods for emissions calculations and a description of how key decisions have been made including options analysis for mitigation measures.

The EIS should include an assessment of the cumulative emissions impacts from the proposal, including the emissions from the previously assessed phosphate mine as these were not included in the previous 2017 EIS. The specific information requirements in the TOR should clearly articulate this requirement.

Table 5 Minimum 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	Land clearing		
	 Fuel combustion for the operation of heavy machinery, vehicles and diesel generator sets, especially duringconstruction 		
	Ammonia production		
	Power generation		
	Transportation of goods, materials and workers		
	Embodied emissions from materials		
	Construction and operation of the previously assessed mine		
Environmental	Describe the current emissions profile for the NT by industry/sector.		
values	Describe greenhouse gas emissions trajectories for the NT by		
	industry/sector.		
Potential impacts and risks	Estimate the proposal's annual and total Scope 1 and Scope 2 emissions over the life of the proposal (e.g., emissions from land clearing, diesel exhaust/etc. during construction and operation, and fugitive emissions from the ammonium phosphate fertiliser plant and its components) and how these emissions will contribute to the NT emissions profile, in accordance with the NT Government policy: <i>Greenhouse Gas Emissions Management for New and Expanding Large Emitters</i> .		
	Estimate the annual and total Scope 3 emissions over the life of the proposal.		
	Describe the emissions sources that have been excluded from the proposal's emissions calculations and provide justification for these exclusions.		
	Estimate the cumulative annual and total Scope 1, Scope 2 and Scope 3 emissions over the life of the proposal (e.g. emissions from the previously		





assessed phosphate mine.)

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)

Provide details on the projected emissions intensity (emissions per unit of production) and benchmarking against other comparable projects, industry standards and best practice.

Provide an inventory of projected annual emissions for each relevant greenhouse gas, with total emissions expressed in 'CO2 equivalent' terms. Provide justification for the suitability of methodologies or surveys used to calculate greenhouse gas emissions. Where any information gaps or uncertainty remains, adopt the precautionary principle.

Estimate emissions from upstream activities associated with the proposal, including electricity to be used during construction, operation and decommissioning and briefly describe the methods used to make the estimates.

Describe the proposal's contribution to the NT Government's target of net zero greenhouse gas emissions by 2050 and broader efforts to reduce global greenhouse gas emissions.

Provide detailed information (including data), modelling or studies necessary to support the Scope 1, 2 and 3 emissions calculations from the construction and operation of the proposal (including cumulative impacts) over its lifetime.

Avoidance, mitigation and management

Outline the measures for avoiding, mitigating or offsetting 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:

- 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 net zero greenhouse gas emissions by 2050
- how the proposal's requirements under the Australian Government's <u>Safeguard Mechanism</u> will affect greenhouse gas emissions reductions over the life of theproposal
- the actions that will be implemented to meet the proposal's requirements under the Australian Government's <u>Safeguard</u> <u>Mechanism</u> (e.g. a 4.9% annual emissions reduction against baseline until at least 2030) and a contingency plan should the proposal not meet these requirements

Provide a detailed comparison of options for energy efficiency and mitigation measures. Provide selection/evaluation criteria and justification of selected options.

Demonstrate that proposed mitigation measures are in accordance with bestpractice 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.

Provide detailed information to justify how the proposed measures will contribute to the NT Government's target of net zero emissions by 2050, including the quantification of emissions reductions measures with evidence to support to the suitability of methodologies or surveys used to calculate greenhouse gas emissions reductions.

Outline the key management plan/s that would be implemented over the lifetime of





	the proposal and the appointed performance indicators (minimum five year		
	the proposal, and the associated performance indicators (minimum five-year targets), timeframes for implementation, and the roles and responsibilities of the personnel involved.		
	Demonstrate that the management plan/s and associated measures address (at a minimum) compliance with the NT Large Emitters Policy, including preparation of a Greenhouse Gas Abatement Plan.		
	Identify uncertainties that may impact the proposal's ability to reduce emissions in line with the NT and Australian Government's targets and provide a detailed description of how uncertainties would be addressed.		
Monitoring and reporting	Provide proposed monitoring and reporting activities related to potential 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 acceptable.		
	The proposed monitoring and reporting should specify which proposal phase it relates to i.e., construction or operations.		
	Demonstrate that monitoring activities are in accordance with best-practice, including advice from relevant NT Government authorities.		
Residual impact	Identify any potential residual impact or risk of the proposal to the current emissions profile and the greenhouse gas emissions trajectory for the NT.		
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 .		





2.3 Other sections of the Terms of Reference

Table 6 below outlines WolfPeak's recommended additions and clarifications to Sections 1, 2.1, 2.2 and 3 of the TOR. As noted in the introduction to this report, the CLC has responded to the remaining sections of the TOR, and included comments in its own submission.





Table 6 Summary of WolfPeak's review of Sections 1, 2.1, 2.2 & 3 of the TOR

Section of TOR	Theme or issue	Comment
1.1 Overview	Cumulative impacts	There is inconsistency throughout the TOR in how the cumulative environmental impacts of the previously assessed phosphate mine and the fertiliser plant are to be assessed in the EIS.
		For example Section 2.4 of the draft TOR states that: "The EIS should identify and consider the proposal footprint (direct disturbance) and the area of influence (indirect disturbance), and cumulative disturbance in consideration of other known or proposed activities in the region (including the previously assessed mine), to identify the environmental aspects (under each environmental factor) and their specific values that could be impacted by the proposal." However, this linkage does not seem to be consistently reflected throughout Tables 3 to 7, and there is no mention of cumulative impacts in Table 6 at all.
		We believe it is critical that the cumulative impacts of the previously assessed phosphate mine are clearly and consistently considered in the EIS for the proposal given the inextricable link between it and the proposal. To do otherwise would make a mockery of the EIS process itself (see also comments on 2.2.1 below)
1.1 Overview	Description of proposal	The description of the proposal in Section 1.1 lists the infrastructure required (and associated with) the construction and operation of the fertiliser plant but does not list all the infrastructure that will be required for operation of the proposal (i.e. infrastructure associated with the previously assessed mine, future renewable energy infrastructure, transport and access related infrastructure, pipelines). This is a glaring omission as the fertiliser plant could not operate without the associated mine and they are situated on the same site for all intents and purposes.
		It is recommended that a list of the infrastructure required for the functioning of the previously assessed mine is included in Section 1.1. to provide greater clarity and transparency as to the <i>cumulative</i> infrastructure requirements of the proposal.





Section of TOR	Theme or issue	Comment
1.1 Overview	Background	The proposal background has not been clearly described in the TOR Overview. The previously assessed mine is referenced with a link to the NT EPA's assessment report but an outline of the scope of the mine and its relationship to the current proposal is not provided.
		The two components have strong dependencies and cumulative environmental impacts. More details on how this proposal interacts with the previous assessment for the mine, and a recognition that there are likely to be cumulative impacts of both projects running concurrently during construction and operational phases, are needed. A layperson could easily miss the link between these two major projects or that they are even located on the same site.
		Accordingly, further detail on the full background of the Project should be provided in the TOR.
1.2 Assessment period	Assessment timeline	It is recommended that Section 1.2 includes an indicative assessment timeline for the proposal, consistent with other TORs prepared by the NT EPA. This provides respondents with more clarity on the key assessment milestones.
2.1 Executive summary of the draft EIS	Environmental factors	The TOR notes that the Executive Summary of the draft EIS is to be written as a standalone document. It is recommended that the list of requirements for the Executive Summary include specific reference to the assessment of the significant environmental factors as identified by the NT EPA. A suggested dot point for inclusion in the list in Section 2.1. includes:
		the predicted outcomes for each of the NT EPA's environmental factors
2.1 Executive summary of the draft EIS	Options assessment	It is recommended that where the proponent is required to provide a summary of options and alternatives considered, they also provide a summary of the reasoning behind the selection of the preferred option.





Section of TOR	Theme or issue	Comment
2.2.1 Overview	Description of proposal	We recommend that consistent with our comments on section 1.1, that the second bullet point in section 2.2.1 be amended as follows: • distinction between the proposal and the previously assessed mine components and how they interact, as well as the dependencies and cumulative environmental impacts of both projects running concurrently, during construction, operational and decommissioning phases
2.2.2 Proponent	Compliance	It is recommended that the following additional requirement is included in Section 2.2.2: • compliance and environmental management systems, capability and performance in relation to the management of existing or previous state/territory and Commonwealth environmental project approval conditions This provides greater transparency on the performance of the proponent in terms of environmental compliance and is consistent with the proponent information requirements in other TORs prepared by the NT EPA.
2.2.4 Statutory Framework	Water	The statutory framework should include express reference to: • a groundwater extraction licence under the Water Act 1992 (NT); and • any further approval to be sought from the Minister under the EPBC Act 1999 (Cth)
2.2.5 Site selection and design	Future components	The need for at least one future component is known (solar farm). Although not included in the current proposal, it will impact on the cumulative effects of other parts of the proposal and mine. At minimum, it ought to be included in considerations of site selection and design.





Section of TOR	Theme or issue	Comment
2.2.7 Rehabilitation and closure		Details for the proposed decommissioning, closure and rehabilitation of the proposal includes a description of the proposed land use after closure. However, the potential for enduring environmental and cultural impacts of the proposal should also be considered.
		It is recommended that the following additional requirements are included in Section 2.2.7:
		 prediction of final post closure ongoing environmental and cultural heritage impacts incorporating uncertainty in predictions where possible.
		 a landscape baseline that describes the underlying physical influences, such as geology and soils, land cover, the influence of human activity and aesthetic and perceptual aspects, including how these come together to create the current landscape character
		details on how public consultation on rehabilitation and closure plans will take place, including with native title holders
3 Other requirements	Offsets	Due to the scope and nature of the proposal, a significant volume of offsets is likely to be required to mitigate the significant residual impacts on the environment over the lifetime of the proposal.
		It is recommended that the TOR includes the requirement to provide details of an overall offset strategy for the significant residual impacts on the environment. Offsets should be consistent with the NT Offsets Framework, the EPBC Act environmental offsets policy and the Australian Government's Safeguard Mechanism.





LIMITATIONS

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ANNEXURE C: INFORMATION – CULTURAL VALUES

- 1. The project is located on country traditionally belonging to Alyawarr and Kaytetye people associated with the Aharreng, Angkeperretyey, Akaneng, Arnerre, Arlpaw, Arnapwentye Imangker and Antarrengeny landholding groups.
- 2. The draft TOR needs to address the high risk that the project could result in disturbance to or interference with or destruction of sacred sites, which will significantly and adversely impact Aboriginal cultural practices and values and the almost certain significant impacts that will occur on the cultural landscape in the vicinity of the sites.
- 3. The draft TOR also needs to address the potential impact of the project on key Aboriginal cultural values. The project will potentially significantly impact Alyawarr and Kaytetye people's ability to observe their traditional Law and practice ritual activity in situ and to exercise their cultural obligations to maintain spiritual connections to country and protect sacred sites.

Impact of noise on ritual activity, teaching and cultural responsibilities

- 4. There are at least ten recorded sacred sites located within the proposed pit for the Phosphate Mine and direct vicinity of the Phosphate Mine and proposed Fertiliser Production Plant. These sites will need to be regularly accessed by traditional owners for ritual activity, cleaning sites, removal of grass, ritual actions, singing of songs and sharing traditional stories of the sites with younger generations.
- 5. Under Aboriginal tradition, teaching and instructing younger people around songs and stories associated with sites must occur at site. The ability of traditional owners to effectively communicate knowledge and sing songs to younger generations will be impacted by noise.

Visual impact on ritual activity, teaching and cultural responsibilities

6. Further consultation and consideration is required as to the visual impact that the project will have on Aboriginal cultural values. There is currently a restricted men's site in the proposed pit which is not visible from a distance at ground level due to surrounding vegetation. However, there is a risk that the infrastructure will allow others with visual access to the restricted men's site thus impacting their ability to conduct ritual activity, teaching and other cultural responsibilities.

- 7. This will deeply concern traditional owners as they have a cultural obligation to protect sacred sites and many cultural practices are gender restricted, secret and sacred. Access to sites may also be gender and ritual-status restricted.
- 8. Significant distress and cultural repercussions may occur if people of the incorrect gender or ritual-status are at or in the vicinity of such sites or witness to ritual activity. Some of the repercussions of this are those set out in paragraph 16.

Culturally important biodiversity

9. For traditional owners, land, people, and local plant and animal species are spiritually interconnected. Loss of biodiversity from an area is often seen by traditional owners as an indication that there is disturbance to spiritual equilibrium and interconnectedness of the spiritual and physical world. When species are lost, traditional owners often feel deep grief associated with that loss. Loss of biodiversity could have a significant impact on Aboriginal cultural values, including cultural responsibilities to care for country.

Culturally sensitive ground and surface water dependant sites

- 10. There are at least 72 culturally sensitive and groundwater dependent sites within the P90 1m drawdown contour. The potential impacts of the significantly increased groundwater drawdown associated with the project need to be carefully assessed in an EIS. See accompanying map (2022-316d) showing the community bores and sites within the water table drawdown for ML 31713, ML 29463 and ML 29854.
- 11. These culturally sensitive groundwater dependent sites include soaks, creeks, flood outs, swamps, and trees which continue to be valued by traditional owners today as the physical manifestations of the Altyerr (Dreaming) ancestors. Traditional owners continue to visit these sites to conduct ritual activities and to teach their younger generations about the spiritual value of these sites. While these sites are primarily valued and revered for their intangible religious qualities, they are also valued by Affected Aboriginal constituents as being critical sources of water and associated natural resources (e.g. plant and animals, bushfoods and bush medicines).
- 12. Disturbance to and destruction of sacred sites that consist of vegetation (such as trees due to the lowering of the water table) has a significant adverse effect on Aboriginal cultural values. Further information regarding these serious impacts is set out in paragraph 16.

Access to sacred sites

13. The project will place significant limitations on traditional owners' ability to access significant sacred sites. Traditional owners have advised CLC that they will need to continue to access these sites regularly to undertake the ritual activity, teaching and cultural responsibilities set out in paragraphs 4 and 5. Any limitations on traditional owners' ability to access sites will have a significant effect on Aboriginal cultural values, including the maintenance of tradition and the intergenerational transmission of cultural knowledge.

Significant cultural impacts of Murray Downs Road Re-alignment

14. In previous consultations (related to the original project) with traditional owners, they expressed concerns about the proximity of the proposed road realignment to restricted men's sites, and that this could put women and children (and un-initiated men) at risk of inadvertently trespassing on restricted men's sites. There are serious cultural repercussions for such trespassing for both those undertaking the trespassing and those who experience it including negative impacts on health and physical wellbeing and other impacts set out in paragraph 16 below.

Impact of sacred site interference, damage and destruction

- 15. The project will result in significant damage to a cultural landscape that consists of interlinked sites of living spiritual importance, ten of which are located in the project footprint or adjacent to it. There is also a high risk of damage or destruction of discrete sacred sites, particularly those within the proposed pit area. While exclusion zones offer some protection, history has shown that there is a risk of companies not complying and that damage and destruction can occur despite efforts to protect sacred sites.
- 16. Some of the significant cultural impacts of site damage, interference or destruction include (but are not limited to):
 - a) Due to the spiritual interconnection between traditional owners and the sacred sites that are the physical manifestations of Dreaming ancestors, any damage, interference with or destruction of a site negatively impacts the health and physical wellbeing of the traditional owners of a site. Traditional owners often describe particular instances of sickness, injuries and death as resulting from sacred site damage, interference or destruction and the associated physical harm caused to the Dreaming ancestor/s embodied in the site.
 - b) Sacred site damage, interference or destruction also causes significant emotional distress, anger and grief for traditional owners. This has obvious consequences

for psychological and physical wellbeing and can lead to ongoing intergenerational trauma.

- c) Sacred site damage, interference or destruction can permanently undermine the ability of traditional owners to maintain and transmit their traditions to the next generation.
- disruptions. Regardless of the circumstances of damage, interference or destruction and even when it is clearly caused by external factors, traditional owners will be held accountable by their extended kin. This can lead to arguments, fights and tensions centred on the attribution of blame. It can also result in some traditional owners 'acting up' in their behaviour towards others and/or engaging in potentially destructive self-inflicted activities as they attempt to deal with their feelings of shame in not being able to protect their sacred sites.
- e) Traditional owners also believe that sacred site damage, interference or destruction can cause destructive environmental phenomena e.g. floods, fires, storms. These are understood as being the repercussive actions of the Dreaming ancestors in response to the damage, interference or destruction of sacred sites.

ANNEXURE D - ABOUT THE CLC

- The CLC is a statutory authority established under section 21 of the Aboriginal Land Rights (Northern Territory) Act 1976 (Cth) (Land Rights Act) and has functions and duties under Land Rights Act. These functions include:
 - a) ascertaining and expressing the wishes and opinion of Aboriginals living in the area of the CLC's responsibility as to the management of Aboriginal land in the area;
 - b) protecting the interests of traditional Aboriginal owners of, and other Aboriginals interested in, Aboriginal land in the area of the CLC's responsibility; and
 - c) assisting Aboriginals in the taking of measures likely to assist in the protection of sacred sites on land (whether or not on Aboriginal land) in the area of CLC's responsibility.¹
- 2. The CLC is also the recognised Aboriginal/Torres Strait Islander body for the southern region of the Northern Territory pursuant to section 203AD of the Native Title Act 1993 (Cth) (Native Title Act) which includes Ammaroo Pastoral Lease, Elkedra Pastoral Lease, Murray Downs Pastoral Lease and Neutral Junction Pastoral Lease. The function of a native title representative body includes performing assistance and facilitation functions set out in section 203BB of the Native Title Act. Such functions are carried out pursuant to service agreements between CLC and the registered native title bodies corporate.
- 3. Ammaroo Pastoral Lease, Elkedra Pastoral Lease and Murray Downs Pastoral Lease are subject to a native title determination, *Apetyarr v Northern Territory of Australia [2014] FCA 1088* (Sandover River Determination). KAAI is the prescribed body corporate for this determination for the purposes of section 57(2) of the Native Title Act. KAAI performs the registered native title body corporate functions contained in section 57(3) of the Native Title Act in relation to the Sandover River Determination. The CLC assists KAAI with its functions.
- 4. Neutral Junction Pastoral Lease is subject to two native title determinations:
 - a) Pwerle v Northern Terrritory of Australia [2016] FCA 304; and
 - b) Arnerre, Wake-Akwerlpe, Errene and Ileyarne Landholding Groups v Northern Territory of Australia [2011] FCA 765,

¹ Section 23(1) of the Land Rights Act

(together the Neutral Junction Determinations).

- 5. EAC and KTAAC are prescribed bodies corporate for the Neutral Junction Determinations for the purposes of section 57(2) of the Native Title Act. They are the registered native title bodies corporate which perform the functions in section 57(3) of the Native Title Act in relation to the Neutral Junction Determinations. The CLC assists EAC and KTAAC with their functions.
- 6. As the existing representative of these groups, the CLC is well placed to assist them in EIS processes.