



GRANTS LITHIUM PROJECT

Environmental Impact Statement

Appendix B

Table cross-referencing Terms of Reference to the EIS

Prepared by EcOz

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ToR Section	Details requested in EIS	EIS Section / Appendix
2 DESCRIPTION OF THE PROJECT		
2.1 General Information	The draft EIS should describe the Proposal, including, but not limited to, the following information:	
	• the title of the proposed action	Chapter 1.1
	• the full name, contact details and postal address of the Proponent	Chapter 1.2
	• a clear outline of the objective of the Proposal	Chapter 1.3
	• identification of areas under exploration that may be mined in future, or any other potential future activities being planned that would be subject to a separate referral	Chapter 1.5
	• description and maps of the location of the Proposal in the region and its proximity to:	Chapter 1.2
	o landmark features	
	o sites of cultural significance	
	o sites of social significance	
	o regional community centres	
	o areas on the National Reserve System	
	o police, fire and emergency services infrastructure	
	o sensitive environments, such as major waterways or coastal waters; significant groundwater resources; significant natural features and conservation reserves	Chapter 1.2
	• description of the regional setting of the site, including:	
	o current land use, including on adjacent areas	
	o detailed background of previous, current and proposed developments in the area	Chapter 2.2, Figure 2-2
	o a map showing how the proposal relates to any other proposals or actions, of which the Proponent should reasonably be aware, that have been or are being taken, or that have been approved in the region	
	• the location of all infrastructure (both existing and proposed) relating to any aspect of the construction, operation and decommissioning/rehabilitation of the Proposal	Chapter 1.4
	• the background to the development of the Proposal, including discussion of previous or other environmental impact assessment	Chapter 1.7
	• National, State and/or Territory standards, codes of practice and guidelines relevant to the Proposal	Chapter 1.6
	• the consequences both positive and negative of not proceeding with the Proposal.	
2.2 Environmental history	The draft EIS must include details of the environmental record of the Proponent including:	
	• details of any proceedings under Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Proponent and details of systems and processes that have been subsequently upgraded	Chapter 1.2
	• environmental awards or other recognition for environmental performance	NA
	• if the Proponent is a corporation, details of the corporation's environmental policy and planning framework.	Chapter 1.2

2.3 Proposal components	The draft EIS should identify all the processes and activities intended for the Proposal and associated ancillary activities, during the life of the Proposal. To provide background to discussion of specific components, the following should be included:	
	<ul style="list-style-type: none"> • an overview of the life-of-mine schedule for the Proposal phases: <ul style="list-style-type: none"> o construction o operations o rehabilitation o decommissioning and closure. 	Chapter 2.3
2.3.1 Infrastructure overview	Identify the Proposal footprint using eastings/northings. Provide a description of the whole of proposal footprint, using detailed maps and diagrams, including:	
	<ul style="list-style-type: none"> • the location and dimensions of any works to be undertaken, structures to be built or elements of the Proposal, including but not limited to: <ul style="list-style-type: none"> o existing infrastructure o mine pits o roads (new and existing) o hardstands o stockpiles o waste rock dumps o processing plant o water-related infrastructure, including: <ul style="list-style-type: none"> • existing and proposed construction or modifications to water supply sources • storage facilities • pipelines and access easements 	Chapter 2.2, Figure 2-2
	<ul style="list-style-type: none"> • mineral resources to be explored, developed, mined and included in mine rehabilitation and closure • all areas where native vegetation will be cleared or disturbed, both temporarily and for the life-of-mine. 	Chapter 2.1 Chapter 2.2, Figure 2-2
2.3.2 Mining construction and operation	Provide details of the following aspects of mine construction and operation:	
	<ul style="list-style-type: none"> • the site, including handling/stockpiling/management/ disposal of vegetation and topsoil 	Chapter 2.6, Chapter 2.7, Appendix S
	<ul style="list-style-type: none"> • methods for open pit construction 	Chapter 2.7
	<ul style="list-style-type: none"> • volumes, sources and characterisation of materials required to support the operation, closure and rehabilitation of the mine (e.g. fill, clays) 	Chapter 2.4
	<ul style="list-style-type: none"> • plant and machinery required 	Chapter 2.7
	<ul style="list-style-type: none"> • design details and dimensions or design concepts for: <ul style="list-style-type: none"> o open pits o waste rock dumps o run of mine pad o mine access and haul roads o explosives and detonator magazines o product and other stockpiles o other significant mine infrastructure. 	Chapter 2.4

	<ul style="list-style-type: none"> • type (e.g. cut-off grades), storage and management of the stockpiled materials (e.g. top soil, waste rock) 	Chapter 2.6, Chapter 2.9
	<ul style="list-style-type: none"> • quantity of material to be mined annually, including any proposed ramping up of production or staging of development 	Chapter 2.4, Chapter 2.7
	<ul style="list-style-type: none"> • how target resource grades will be produced 	Chapter 2.8
	<ul style="list-style-type: none"> • product handling requirements 	Chapter 2.8, Chapter 2.11
	<ul style="list-style-type: none"> • timetable for mining operations, including staging of progressive rehabilitation activities. 	Chapter 2.3, Chapter 2.15
2.3.3 Ore processing	Provide relevant information with respect to processing, including but not limited to:	
	<ul style="list-style-type: none"> • transport of materials to and from the processing facility 	Chapter 2.11
	<ul style="list-style-type: none"> • processing methods, including the major equipment to be used in the various ore processing unit 	Chapter 2.8
	<ul style="list-style-type: none"> • volumes and storage of materials required, including, if applicable, any chemicals, reagents and fuel 	Chapter 2.8
	<ul style="list-style-type: none"> • water requirements, sources and treatment 	Chapter 2.5, Chapter 2.12 Appendix J
	<ul style="list-style-type: none"> • storage requirements for process water 	Chapter 2.4, Appendix J
	<ul style="list-style-type: none"> • details of the two processing options (DSO and DMS) and how those options impact the following: <ul style="list-style-type: none"> o mine schedule and life-of-mine o potential impacts to water quality and use o final landform, rehabilitation and closure planning o potential socio-economic impacts 	Chapter 2.8
2.3.4 Non-mineral waste and hazardous materials	Describe the potential sources and proposed methods for storage and disposal of non-mineral waste and the management of hazardous materials, including:	
	<ul style="list-style-type: none"> • descriptions of predicted waste streams, both industrial and domestic, including solid and liquid wastes at the mine site and other relevant locations and information on any wastes likely to be disposed in landfill 	Chapter 2.10
	<ul style="list-style-type: none"> • information on potentially hazardous materials to be used or produced and methods for storage, transport, handling, containment, disposal and emergency management of these materials (including fuel) 	
	<ul style="list-style-type: none"> • legislation, guidelines, and standards applicable to the Proposal's landfill, sewage treatment and any other waste disposal facilities, such as the NT EPA's Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the NT, the Code of practice for on-site wastewater management. 	Chapter 1.7
2.3.5 Transport	Describe the proposed methods and routes for transporting and exporting product, including:	
	<ul style="list-style-type: none"> • product handling requirements 	Chapter 2.11
	<ul style="list-style-type: none"> • storage and laydown areas 	Chapter 2.4, Chapter 2.11
	<ul style="list-style-type: none"> • transport and export alternatives, and justification for the proposed option. 	Chapter 2.11, Appendix G
	Provide relevant information with respect to any changes to the existing road network and access track construction, including: <ul style="list-style-type: none"> • the sections of road proposed to be upgraded • methods for crossing sensitive areas, such as waterways and/or land units with poor soil recovery potential and if there will be any alteration to local water flow patterns (e.g. pipeline easement) • methods for intersecting linear infrastructure and major roads • source of construction inputs and materials for bulk earth works • ongoing provisions for road and access track repairs and maintenance, including source and extraction of maintenance inputs and materials. 	Chapter 2.11

	<p>Details of road use associated with the Proposal should be provided, including:</p> <ul style="list-style-type: none"> • estimated frequency of Proposal-related vehicle use on public roads • the annual or seasonal operational period • hours of operation, including peak user times. 	Chapter 2.11 Appendix G
2.3.6 Water	<p>Describe water requirements for the Proposal and outline the options for sources of supply. The description should be in accordance with the Northern Territory Department of Primary Industry and Resources Template for the Preparation of a Mining Management Plan (Section 6 – Water Management), including:</p>	
	<ul style="list-style-type: none"> • Weather and climate summary and patterns, which may influence water management during operation and/or rehabilitation 	Chapter 7.1, Appendix H
	<ul style="list-style-type: none"> • Proposal water balance and account. Predictions should include rainfall over wet, dry and average years. Water account should be based on the Minerals Council of Australia Water Accounting Framework 	Chapter 2.1 Chapter 2, Appendix J
	<ul style="list-style-type: none"> • water demand requirements for each aspect of the Proposal (including dust suppression, drinking water, ablutions and sewage treatment, mine water, processing of low grade ore and any other uses) 	
	<ul style="list-style-type: none"> • any requirements for additional clean water in the Dry season and Wet season discharge options for excess contaminated water 	
	<ul style="list-style-type: none"> • pit dewatering requirements 	
	<ul style="list-style-type: none"> • management of process waters • diversion of surface waters • water efficiency and recycling. 	
2.3.7 Energy	<p>Provide relevant information with respect to energy, including but not limited to:</p>	
	<ul style="list-style-type: none"> • details of energy infrastructure requirements, for all components of the Proposal, including fuel storage • consideration of alternative (renewable) sources of energy and justification of selected option • any initiatives to improve energy efficiency • estimates of the greenhouse gases emitted during the Proposal (scope 1 and scope 2), including from land clearing as well as construction and operation. • details of the Proponent’s reporting obligations for greenhouse gas emissions under the National Greenhouse and Energy Reporting Act 2007. 	Chapter 2.13
2.3.8 Workforce	<p>Provide relevant information with respect to the workforce and any requirements for employee accommodation, including but not limited to:</p>	
	<ul style="list-style-type: none"> • details of the estimated number of people to be employed, skills base required, and likely sources (local, regional, overseas) for the workforce during construction, operation and decommissioning and closure phases • the number of people that may be employed to manage or undertake environmental duties on the site, including the specific qualifications and the level of experience with mining or other related activities • the Proponent’s proposed organisation chart • arrangements for transport of workers to and from Proposal areas, including air and road services if 	Chapter 2.14

2.4 Approvals and conditions	The draft EIS must provide information on requirements for approval or conditions that apply, or that the Proponent reasonably believes are likely to apply, to the Proposal, including, but not limited to:	
	<ul style="list-style-type: none"> • a description of any approval(s) certificate(s), permit(s) etc. that has been obtained from a State, Territory or Australian Government agency or authority including any conditions imposed • a summary of current agreements between the Proponent and the Northern Territory Government; and/or the Australian Government; and/or other stakeholders (e.g. Traditional Owners, land occupiers, land • a statement identifying additional approvals that are required • relevant legislation that may apply to the proposal • a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the Proposal. 	Chapter 1.7
3 IMPACT ASSESSMENT	The EIS should be undertaken with specific emphasis on the identification, analysis and mitigation of potential environmental impacts and risks through a whole-of-Proposal impact analysis and risk assessment. Through this process, the EIS should:	
	<ul style="list-style-type: none"> • transparently identify any inherent potentially significant environmental impacts associated with the Proposal including potential direct, indirect and cumulative environmental impacts • analyse the likelihood and consequence of predicted significant impacts to the environment • evaluate the significance of the potential impacts and risks in a local and regional context • identify management measures to avoid and mitigate environmental impacts and risks, and monitoring measures to demonstrate effectiveness in achieving predicted outcomes • identify levels of uncertainty about the assessment and the effectiveness of controls in minimising/mitigating potential impacts • explicitly identify those members of the community expected to accept residual significant impacts and their consequences • demonstrate that the Proposal represents best practicable technology • demonstrate that the Proposal is consistent with ecologically sustainable development principles and the National Strategy for Ecologically Sustainable Development. <p>A number of environmental factors that could potentially be impacted have been identified through a preliminary assessment of the Proposal. Further potential environmental impacts and risks may be identified during the course of the EIS process that were not apparent at the time these Terms of Reference were prepared. If relevant, these potential impacts and risks should be outlined and appropriate management initiatives developed to demonstrate that:</p> <ul style="list-style-type: none"> • the Proponent is fully aware of the potential environmental impacts and risks associated with all predictable aspects of the Proposal • the prevention and mitigation of potential impacts and risks is properly addressed in the design • the potential impacts and risks can and will be managed effectively during the construction, operation, decommissioning, closure and post-closure phases of the Proposal. 	Appendix O Chapter 3 Chapter 10

	<p><i>Cumulative impacts</i>- An assessment of cumulative environmental impacts should be undertaken that considers the potential impact of the Proposal in the context of existing developments, and reasonably foreseeable future developments. The impact and risk assessment should consider and discuss cumulative impacts, where relevant, and account for impacts on an appropriate scale, recognising that:</p> <ul style="list-style-type: none"> • landscape change originates not only from single projects and management actions, but also from complex and dynamic interactions of multiple past, present and future management actions • biophysical, social and economic change accumulates through additive or interactive (or synergistic) processes. The aggregate impact of multiple actions on the environment can be complex and may result in impacts that are more significant because of interactive processes • any given action does not operate in isolation. The most significant changes are often not the result of the direct effects of an individual action, but from the combination of multiple minor effects over time. 	Chapter 4.3
4 PRELIMINARY KEY ENVIRONMENTAL FACTORS	The EIS is to provide sufficient information regarding the potential impacts and risks arising from the Proposal and the proposed management and mitigation measures to be implemented to meet the NT EPA’s environmental objectives relating to each of the factors as detailed below.	
4.1 Land		
4.1.1 Terrestrial flora and fauna		
4.1.1.3 Assessment of impacts	The draft EIS should describe, quantify and map, where relevant:	
	<ul style="list-style-type: none"> • The area of habitat and the results of targeted surveys for <i>Styliidium ensatum</i>. The surveys should be undertaken at an appropriate time of year by a suitably qualified and experienced person that has demonstrated experience in surveying for and the identification of threatened species in the Northern Territory. If targeted surveys find <i>S. ensatum</i>, potential impacts should be evaluated using the EPBC Significant Impact Guidelines⁴ 	Appendix R
	<ul style="list-style-type: none"> • A comprehensive assessment of the regional status of <i>Typhonium praetermissum</i>. The assessment should include the known number of individual plants and patches. The assessment should consider the potential habitat (in ha) and the percentage of habitat that would be impacted by the proposal. The assessment should use the most recent habitat modelling for the species and the NT Flora and Fauna Atlas (via NR Maps). 	Chapter 5.2, Appendix Q
	<ul style="list-style-type: none"> • The location of threatened flora species and significant and sensitive vegetation with respect to waterways, indicative surface water flow directions and location of all proposed infrastructure, including the alignment of the pipeline easement, alternative water sources and diversion bunds including at post closure • The presence, or likely occurrence, of introduced and invasive species (both flora and fauna) within and adjacent to the Proposal area, and regionally, including weed species declared under the Weeds Management Act. 	Chapter 5.2

4.1.1.4 Mitigation and management	The draft EIS should include an Environmental Management Plan (EMP) which outlines the measures for minimising and managing the potential impacts and risks to terrestrial flora and fauna including native vegetation that is to be maintained onsite. The EMP should include the following:	5.4
	<ul style="list-style-type: none"> • Vegetation Clearing Management Procedure • Weed Management Plan, including: <ul style="list-style-type: none"> o weed hygiene protocols and measures to prevent the introduction and spread of weeds during mining o measures for maintaining weed free stockpiles throughout the life of the Proposal o rehabilitation and weed control of the site, access routes and surrounding bushland for a minimum of two years post-mining. 	Appendix S
	In the event that threatened species are identified during targeted surveys, the Proponent shall prepare a Threatened Species Management Plan as part of the EMP. The Threatened Species Management Plan should contain clear and concise methods outlining how the Proponent intends to mitigate the potential impacts and risks to threatened species. All mitigation and monitoring measures should be substantiated and in accordance with best practice advice from relevant Northern Territory advisory agencies.	N/A refer to Appendix Q, Appendix R
	Where suitable habitat for threatened species occurs on/adjacent to mining related infrastructure, the Proponent should demonstrate in the draft EIS that it has considered all feasible alternatives with the aim or avoiding/reducing impacts to those areas including exclusion of clearing from areas of suitable habitat.	N/A
4.1.1.5 Monitoring and reporting	Provide detailed program(s) to monitor the potential impacts identified from the proposed actions. The draft EIS should:	
	<ul style="list-style-type: none"> • identify the methods for monitoring the impacts to biodiversity values • identify effective control sites and clear thresholds to inform remedial action and ensure early identification of potential negative impact • provide sufficient detail in monitoring programs to assess their effectiveness to inform management plans for all stages of the development. 	Chapter 5.3, Chapter 10, Appendix D
4.1.1.6 Statement of residual impact	The draft EIS should provide a statement of residual impact detailing the extent to which mitigation and management measures will address potential impacts to ensure that the objective of this environmental factor is met or highly likely to be met.	Chapter 5.4
4.1.2 Terrestrial environmental quality	The NT EPA's objective is <i>'to maintain the quality of land and soils so that environmental values are maintained.'</i> This objective recognises the essential link between soil quality and protection of the ecological and social	
4.1.2.3 Assessment of	The draft EIS should describe, quantify and map, where relevant, the existing:	
	<ul style="list-style-type: none"> • soil types and land unit(s) • properties of the soils and substrate types/land units within the proposal footprint 	Chapter 6.1, Appendix E

4.1.2.4 Mitigation and management	To mitigate and manage the potential impacts and risks to the environmental values related to land and soils, the draft EIS should include a draft Mine Closure Plan. The Mine Closure Plan should identify all closure objectives (including those associated with stakeholder expectations) and outline how those objectives would be achieved. The Mine Closure Plan should include description of:	
	<ul style="list-style-type: none"> proposed closure objectives, standards and criteria and future land tenure and land-use arrangements 	Appendix D Section 5
	<ul style="list-style-type: none"> proposed approach for securing a safe, stable and non-polluting mine-site 	Appendix D Section 9
	<ul style="list-style-type: none"> proposed staging and timing of rehabilitation and closure 	
	<ul style="list-style-type: none"> removal of plant, equipment, infrastructure and water storages, and methods proposed for stabilisation of affected areas 	
	<ul style="list-style-type: none"> proposed methods for topsoil management and soil profile reconstruction, with demonstration of their effectiveness for rehabilitating disturbed areas 	
	<ul style="list-style-type: none"> proposed revegetation strategies, including seed collection and any research and investigations that may be required 	
	<ul style="list-style-type: none"> measures to stabilise soils to erosion levels similar to comparable landforms in surrounding undisturbed 	Appendix D Section 8
	<ul style="list-style-type: none"> contingencies to make landforms and mine components secure and non-polluting in the long term 	
	<ul style="list-style-type: none"> proposed funding and management arrangements for closure (both planned and unexpected), including responsibilities for post-closure management. 	Appendix D Section 8
	<p>It is the NT EPA's preference that open pits or voids are progressively backfilled and rehabilitated. The draft Mine Closure Plan should include rehabilitation options for the site including progressive backfilling of the pit.</p>	Appendix D Section 9.2
	<p>The draft Mine Closure Plan should identify risks to the successful rehabilitation and closure of the Proposal, including:</p>	Appendix D Section 8
	<ul style="list-style-type: none"> closure timeframes and objectives 	
	<ul style="list-style-type: none"> risks that the Proposal may create an ongoing environmental, social and/or economic legacy if operations are required to cease ahead of schedule due to unforeseen circumstances, prior to the planned closure and rehabilitation of the site 	
	<ul style="list-style-type: none"> the post-closure risk assessment should include a discussion of the effects of: 	
	<ul style="list-style-type: none"> o changes in the assumptions used as a basis for the post-closure risk assessment o natural events, including earthquakes, rainfall events, fire and flood. 	
<p>The draft Mine Closure Plan should identify the factors that could influence unanticipated or early closure or care and maintenance of the mine and the impacts to rehabilitation objectives.</p>		
<p>Given the short term life of mine, the following should be provided in the draft Mine Closure Plan:</p>		
<ul style="list-style-type: none"> agreed closure objectives and post mining land use 	Appendix D Section 5	
<ul style="list-style-type: none"> qualitative development of completion criteria 	Appendix D Section 6	
<ul style="list-style-type: none"> detailed closure-based risk assessment and mitigation measures 	Appendix D Section 8	
<ul style="list-style-type: none"> well advanced closure and monitoring plans 	Appendix D Section 10	
<ul style="list-style-type: none"> commitment to addressing knowledge gaps relating to informing closure specific information 	Appendix D Sections 7 &	
<ul style="list-style-type: none"> details of closure objectives with regard to final dimensions of landforms and topography for disturbed areas and availability, quantity and quality of materials (including cover material) required for closure. 	Appendix D Sections 7 & 5.4	
4.1.2.5 Statement of residual impact	The draft EIS should provide a statement of residual impact detailing the extent to which mitigation and management measures will address potential impacts to ensure that the objective of this environmental	Chapter 6.4

4.2 Water		
4.2.1 Inland water environmental quality	<p>NT EPA’s objective related to Inland water environmental quality is to <i>'maintain the quality of groundwater and surface water so that environmental values including ecological health, land uses, and the welfare and amenity of people are protected'</i>.</p> <p>This objective recognises the integral link between water quality and the environmental values supported by good water quality. Water quality can be impacted by direct discharge of waste and diffuse sources of pollution (both natural and artificial) associated with land uses.</p>	
4.2.1.3 Assessment of	The draft EIS should provide, quantify and map, where relevant:	
	<ul style="list-style-type: none"> the rivers/drainage lines that would be receiving surface runoff and groundwater from the Proposal area 	Appendix C Section 3.2 & Appendix H
	<ul style="list-style-type: none"> declared beneficial use areas of receiving waters downstream of the Proposal 	Appendix C Section 3.2
	<ul style="list-style-type: none"> the results of baseline water quality (major cations and anions, metals, metalloids, acidity/alkalinity, etc.) of receiving waters (surface and groundwater) 	Chapter 8.1, Appendix C
	<ul style="list-style-type: none"> predicted long term water quality levels of the final mine pit lake 	Appendix I & Chapter 8.2
	<ul style="list-style-type: none"> existing users of surface and/or groundwater resources. 	Chapter 8.1
4.2.1.4 Mitigation and monitoring	To manage the potential impacts to surface and groundwater quality in receiving waters the draft EIS should include a Water Management Plan. The Water Management Plan should include, but not be limited to, the following information:	Appendix C
	<ul style="list-style-type: none"> prediction of expected long term water quality and management of the final pit lake 	Appendix I & Appendix C Section 5.1
	<ul style="list-style-type: none"> strategies and controls for avoiding and/or managing the risks associated with the transportation of hazardous materials 	Appendix C Section 9
	<ul style="list-style-type: none"> provide a Water Quality Monitoring Program which includes the following: <ul style="list-style-type: none"> baseline water quality and site specific trigger values for all analytes the timing of sampling as well as the methods and parameters for the collection of surface and groundwater quality information contingency measures that would be implemented in the event that the identified water quality triggers are exceeded during mining activities and until the site is rehabilitated. 	Appendix C Section 10
	All mitigation measures in the Water Management Plan should be adequately detailed to demonstrate best practicable management to ensure that the environmental values of receiving waters are maintained. The Water Management Plan is to be peer reviewed by an independent, third party. The NT EPA expects the peer reviewer to be recognised by industry as a senior practitioner and be independent from the Proponent/principal consultant and the proposal. The reviewer should demonstrate independence by acting objectively, disclose interests as appropriate and be free from conflicts of interest that may arise in relation to	Appendix C Section 1.1
	The Water Management Plan should link closely with an Erosion and Sediment Control Plan (ESCP). The ESCP should be prepared by a Certified Practitioner in Erosion and Sediment Control. The ESCP should clearly identify areas that are vulnerable to erosion, receiving waters and outline the measures that would be implemented to manage the movement of sediment across the site.	Appendix F

	The draft EIS should include a waste rock characterisation program that includes the results of investigations to identify the presence of sulfides and other potential contaminants in material to be mined. The investigation should characterise individual lithologies and the level of homogeneity for each. Mined volumes of each lithology should be identified and characterisations should include analysis for chemical concentration of NORM. Spatial distribution and density should be designed to define waste and not limited to sampling from locations intended for ore definition. The waste rock characterisation program should be undertaken to the satisfaction of the Department of Primary Industry and Resources.	Appendix E
	The draft EIS should include details of how the Proponent intends to avoid, manage and treat waste rock that is identified during investigations as being non-benign.	N/A
	The draft Mine Closure Plan required in section 4.1.2.4 should outline a plan for mine closure that takes into account the results of materials characterisation, data on the local environmental and climatic conditions, and consideration of potential impacts through contaminant pathways and environmental receptors. The Plan	Appendix D
	<ul style="list-style-type: none"> describe post-mining management, monitoring and reporting for potential impacts and risks to downstream water quality following mine closure including evaluation of rehabilitation success and progress toward achieving closure objectives 	Appendix D
	<ul style="list-style-type: none"> provide detail on the impacts and risks of the final mine pit lake with focus on appropriate water sampling, monitoring programs, risk avoidance measures and mitigation actions as per the WA guidelines (Appendix H) 	Appendix C Section 10
	<ul style="list-style-type: none"> include contingency measures to be implemented in the event that monitoring demonstrates that rehabilitation closure objectives are not being met 	Appendix D Section 10
	Given the NT EPA's preference that open pits or voids are progressively backfilled and rehabilitated, the draft Mine Closure Plan should provide details on the potential impacts of alternative rehabilitation and closure options with respect to contaminant pathways and environmental receptors.	Appendix D Section 7
4.2.1.5 Statement of residual impact	The draft EIS should provide a statement of residual impact detailing the extent to which mitigation and management measures will address potential impacts to ensure that the objectives of this environmental	Chapter 8.4

<p>4.2.2 Hydrological processes</p>	<p>NT EPA’s objective related to Hydrological processes is to ' <i>maintain the hydrological regimes of groundwater and surface water so that environmental values are protected</i>'</p> <p>This objective recognises the fundamental link between hydrological regimes and the environmental values they support. Values include water dependent ecosystems, amenity, cultural values, recreational, public drinking water and agricultural and industrial use of water. The emphasis of this factor and associated objective is on how any modification to hydrological regimes may significantly impact these values supported by both ground and surface waters.</p>
<p>4.2.2.3 Assessment of</p>	<p>The draft EIS should describe, quantify and map, where relevant:</p>
	<ul style="list-style-type: none"> • the surface water hydrology of the site, including: <ul style="list-style-type: none"> o major and minor rivers and drainage lines (permanent and ephemeral) o surface water flow directions and rates o water reservoirs (natural and artificial) o wetlands o beneficial uses • groundwater aquifers and hydrogeological properties, including: <ul style="list-style-type: none"> o groundwater flows and volumes considering seasonal variation (of mine site and surrounding area of o surface connections via springs or recharge zones o local and regional aquifers o depth to water tables, including temporal variation. • water demand requirements of the Proposal (a water balance and account) • proposed and existing water supply source(s), volumes and sustainability • proposed changes to surface and groundwater flows • estimated dimensions of stabilised water depth and pit edge of the mine pit lake • predicted hydrological classification of the mine pit lake in accordance with the WA closure guidelines (Appendix H) • potential impacts to other water users including local communities, groundwater dependent ecosystems, waterways and the environment.
<p>4.2.2.4 Mitigation and management</p>	<p>To manage the potential impacts to the local surface and groundwater hydrology the Water Management Plan should outline how impacts to surface and groundwater hydrology would be managed for all mine-life stages and seasons including post mining, according to its source, quality, volume, end use or other parameters, including (but not limited to):</p>
	<ul style="list-style-type: none"> • measures to quantify, record and report volumes of water extracted from surface and groundwater • options to safeguard surface and groundwater resources and their environmental values, including options for minimising water use • measures for ensuring the protection and resilience of water dependent ecosystems, including wetlands downstream of the mine. <p>The draft EIS should include a sampling program for baseline surface hydrology. The sampling program should include a commitment to undertake further hydrological modelling for any proposed new water supply sources or modifications to existing water supply sources and a risk assessment of the flood diversion bund</p>

	The Mine Closure Plan that is required in section 4.1.2.4 should include a final site-plan. The site plan would identify the final landform during and post rehabilitation and closure landform of the site. The site-plan would identify the final structures that are designed to divert, capture, retain and/or treat surface runoff from the	Appendix D Section 5.4
4.2.2.5 Monitoring and reporting	Provide a detailed program(s) to monitor the potential impacts identified from the Proposal. The draft EIS should:	
	<ul style="list-style-type: none"> • identify the methods for monitoring the impacts to hydrological regimes • identify effective control sites and clear thresholds to inform remedial action and ensure early identification of potential negative impacts • provide sufficient detail in monitoring programs to assess their effectiveness to inform management plans for all stages. 	Appendix C Section 10
4.2.2.6 Statement of residual impact	The draft EIS should provide a statement of residual impact detailing the extent to which mitigation and management measures will address potential impacts to ensure that the objective of this environmental	Chapter 7.8
4.3 PEOPLE AND COMMUNITIES		
4.3.1 Social, economic and cultural surroundings	NT EPA's objective related to social, economic and cultural surroundings is to ' <i>protect the rich social, economic, cultural and heritage values of the Northern Territory</i> '. This objective recognises the importance of ensuring that social, economic and cultural values are considered together and not significantly impacted as a result of the proposal.	
4.3.1.3 Assessment of impacts	The draft EIS should include a balanced summary of the social and economic value and potential impacts (positive and negative) of the Proposal on a regional, state and national scale. The following are suggestions that may assist with identifying and assessing the social and economic value/impacts of the Proposal:	
	<ul style="list-style-type: none"> • current population, demography and key stakeholders 	Chapter 9.1
	<ul style="list-style-type: none"> • a summary of the economic feasibility of the Proposal • estimated capital and annual operational expenditure and estimated total revenue for the duration of the Proposal (to provide the economic scale of the Proposal) • estimated overall tax and estimated total contribution to Gross State Product and Gross Domestic Product over the economic life of the Proposal 	Chapter 9.2
	<ul style="list-style-type: none"> • opportunities available to regional centres based on the activity generated by the Proposal (construction, operation and rehabilitation) 	Chapter 9.3
	<ul style="list-style-type: none"> • estimated workforce and contractor numbers by occupational classification and overall employment training proposed during construction, operation and rehabilitation 	Chapter 2.14
	<ul style="list-style-type: none"> • planned Aboriginal employment, training, participation and other potential benefits 	Chapter 9.3
	<ul style="list-style-type: none"> • availability of goods and services and other contributions to local communities. 	Chapter 9.3
	The information provided in the draft EIS should not be limited to the social impacts identified in the ToR. Where additional social impacts are identified, these should be assessed and mitigated as they become	
4.3.1.4 Mitigation and management	EMP should describe measures to avoid or mitigate potential impacts and risks to social, economic and cultural values identified through the SIA and should include:	
	<ul style="list-style-type: none"> • strategies for engaging with local Aboriginal communities to facilitate employment on the Proposal. This should include the delivery of training, the identification of suitable roles, and a discussion of how cultural values will be accommodated • measures for mitigating/managing and monitoring any potential negative economic and social impacts on the locality and region 	

	<ul style="list-style-type: none"> • provide outcome and assessment criteria that will give early warning in the event that management and mitigation measures are not achieving the outcomes and benefits identified and expected by the Proponent • provide a stakeholder communications strategy including identification of, and ongoing consultation and negotiations with, all relevant stakeholders, ensuring the full range of community viewpoints are sought and included in the draft EIS • procedures that would be implemented in the event that surface or sub-surface items of heritage and/or cultural significance are identified. 	Chapter 10.6
	When preparing the EMP, the Proponent should consult with local communities and relevant stakeholders that may be affected by the Proposal. The outcome of these consultations should be included in the draft EIS.	Chapter 3
	The draft EIS should outline plans for rehabilitation and closure that ensures risks to social parameters, including Aboriginal stakeholders will be as low as is reasonably achievable. This should include mechanisms for evaluating rehabilitation success and progress toward achieving closure objectives associated with community expectations and agreements.	Appendix D
	The draft Mine Closure Plan required in section 4.1.2.4 should demonstrate that ecologically sustainable mine closure can be achieved, consistent with proposed post-mining outcomes and agreed stakeholder land uses, without unacceptable liability to the Territory, and how this will be monitored in the long term. The draft Mine Closure Plan should outline the final landform including measures for managing unauthorised access by people post rehabilitation.	Appendix D
	To manage the risks and potential impacts from construction traffic, the draft EIS should include a Traffic Impact Assessment which is prepared in accordance with the Guide to Traffic Management Part 12: Traffic Impacts of Development (AUSTROADS)7. The Traffic Impact Assessment is required to assess the impact of mining related traffic on existing road users and sensitive receptors. The draft EIS should include measures to avoid/manage the risks and potential impacts to existing road users and sensitive receptors.	Appendix G
4.3.1.5 Statement of residual impact	The draft EIS should provide a statement of residual impact detailing the extent to which mitigation and management measures will address potential impacts to ensure that the objective of this environmental	
5 ENVIRONMENTAL MANAGEMENT		
	The specific safeguards and controls proposed to be employed to minimise or mitigate potential impacts and risks identified in the impact assessment process are to be included in a draft Environmental Management Plan (EMP). The EMP should be strategic, describing a framework for continuing management, mitigation and monitoring programs for the significant potential environmental impacts and risks of the Proposal.	Chapter 10
	The scope, content and structure of the EMP will be a function of the outcomes of the environmental impact assessment and determined by the significance of the potential environmental impacts and risks. The EMP should not be prepared in isolation but should be consistent and integrated with the principles of an environmental management system. The EMP should include specialised management plans where it is necessary to provide a high level of operational detail. As much detail as is practicable should be provided to enable adequate assessment of the proposed environmental management practices and procedures.	
	The EMP needs to address the Proposal phases (e.g. construction, operation and decommissioning/rehabilitation) separately. It must state the environmental objectives, performance criteria, monitoring, reporting, corrective action, necessary resourcing, responsibility and timing for addressing each	Chapter 10 Appendix D

