Mining Management Exploration Activities

Northern Territory of Australia – *Mining Management Act 2001*

It is recommended that the Mining Management Plan (MMP) is completed in conjunction with the user guide available on the <u>Northern Territory Government website</u>.

Section 1 – Project Details

Project Name	Box Hole
Provide new or existing project name	

Authorisation Number Insert existing authorisation number, where applicable	A1136-01
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Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	MetalsGrove Mining Ltd
Operator ABN and ACN numbers	

Include brief description of the location, access details, and distance to nearest town or community	The Box Hole lead-zinc project is located approximately 250km north-east of Alice Springs. The most accessible route is via the Plenty Highway, onto the Sandover Highway and travel to Ammaroo Station. Station tracks are then used to access the project area.
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Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	Base Metals and Rare earths

Mining Activities Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation.	Metals Grove Mining Ltd. proposed to drill 17 Reverse Circulation (RC) holes, for a total of 1200 metres, into the prospect area to gain a better understanding of the mineral potential. The proposed drilling program is also designed to increase our confidence level of previous activities
Drilling programs over a maximum of four years are supported and	undertaken in the area. Holes are designed to be no more than 110 metres deep with most averaging about 60 metres deep.
encouraged and can be staged. Please refer to the guidelines for further information.	APPENDIX 1 – EL32419 Location plan APPENDIX 2 – EL32419 Proposed drill sites + Access Track

Proposed Schedule Include start and finish dates of	Work is planned to commence in 2022 and completed by 2023.
ground disturbing work	

Mining Interest and Land Ownership

List the mining interests (titles), the title holder name/s, the title expiry date and the Property name/Land holder (e.g. pastoralist or Aboriginal land trust) for each title.

Title Number	Title Holder	Expiry Date	Underlying Property Name or Land Holder
EL32419	Territory Lithium Pty. Ltd	14/03/2027	Arapunya Station

Delete or add rows as required

Please note a Land Access Agreement (LAA) is required for disturbance proposed on Pastoral Properties on Exploration Licence (EL).

Organisational Structure

Position Title	Name
Managing Director	Sean Sivasamy
General Manager	
Project Manager	Rudy Lennartz
Senior Geologist	
Environmental Manager	
Radiation Safety Officer	

Delete or add rows for various position titles as required

Section 2 – Operator Self-Assessment of the Environmental Risk

The purpose of this self-assessment is to ensure Operators complete a project risk assessment of potential environmental impacts and are aware of other legislative obligations from various Agencies. As a result of this self-assessment, further information may be required in the form of a management plan to enable full assessment of the MMP. If you have any queries, please contact a Mining Officer prior to submitting the MMP. Useful resources to assist with this self-assessment are provided in the User Guide.

Environmental considerations

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g., evidence of consultation with DEPWS and/or management plan where required).
Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	No	The Operator must assess the likelihood of threatened species or their habitats occurring at or near the site. If the likelihood is high, then a "Significant Impact Assessment" must be undertaken and appended to this document.	Consulted NR Maps. Refer to APPENDIX 3 – EL32419 Flora Atlas Consulted NR Maps. Refer to APPENDIX 4 – EL32419 Fauna Atlas
Step 2: Are there any known declared weeds within the proposed work area?	No	Seek advice from DEPWS – Weed Management Branch to determine if weeds are present on site and ensure management measures are appropriate for the level of activity proposed and attach a Weed Management Plan (if required).	Consulted DEPWS and NR Maps. Refer to APPENDIX 5 – EL32419 - Weeds Map
Step 3: Will you be using water from bores or other sources for the operation?	Yes	Water related matters on mineral titles are no longer exempt from the <i>Water Act 1992</i> . Please consult with DEPWS Water Resources and/or familiarise yourself with the <i>Water Act</i> to ensure compliance under this Act when undertaking exploration activities.	The exploration program will not require more than 5ML of water. Operational and Potable water will be sourced from Station supplies by consultation with the Property owner/manager.

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
Step 4: Is your project likely to have a significant impact on the environment?	No	Refer to the NTEPA Environmental Factors and Objectives Guideline. Refer to APPENDIX 6 – EL#2420 NT EPA pre-referral checklist
Step 5: Are there Aboriginal sacred sites in the Project area?	UNCERTAIN	Sacred Sites are protected under the NT <i>Aboriginal Sacred Sites Act 1989</i> and administered by the Aboriginal Areas Protection Authority (AAPA). It is recommended that advice be sought from AAPA in relation to sacred site protection. Currently being assessed – Authority Certificate Application, Box Hole Project - #202212856
Step 6: Are there archaeological and heritage sites in the Project area?		 Heritage and archaeology sites are protected in the NT. NT Department of Territory Families, Housing and Communities (DTFHC) administers the <i>Heritage Act 2011</i>. A search of the Arapunya Station region on; <u>http://www.ntlis.nt.gov.au/heritageregister/f?p=103:300:1415566951</u> <u>7847</u>: indicates that "no sites have been returned".

Environmental assessment and cultural considerations

Section 3 – Amendments

As per Section 41(3) of the *Mining Management Act*, an MMP reviewed and amended under Section 41(1)(a) is to have amendments made since the previous MMP submission clearly identified.

Section	Amendment

Delete or add rows as required

Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL32420	EL	EL	EL
Number and type of proposed exploration drill holes	17 Reverse Circulation			
Maximum depth of proposed holes (m)	110 metres			
Number and size of drill pads to be cleared (Length:25 m x Width:25 m)	17 drill pads			
Total area of drill pads to be cleared (ha)	approx. 1.0625 ha			
Number of proposed water bores	N/A			
Is drilling likely to encounter groundwater in multiple or confined aquifers? (Y, N, unsure) If answering yes, please provide the number of exploration holes where this is likely to occur	N			
Number of costeans	N/A			
Volume to backfill costeans (Length: m x Width: m x Depth: m)	N/A			
Number of bulk sample pits	N/A			
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	N/A			
Bulk sample pits approved under <i>Mineral Titles Act?</i> (Y or N). If Yes provide approval	N/A			
Line/track clearing: (length 3km x width 3m)	approx. 0.9 ha			

Mining Interests (i.e. titles)	EL32420	EL	EL	EL
Area of proposed line/track clearing (ha)	approx. 0.9 ha			
Camp area to be cleared (ha)	N/A			
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	N/A			
Other				
Total proposed area of disturbance (ha)	approx. 1.9625ha			

Staging approach based on disturbance can be proposed and will be considered by the Department.

Section 5 – Previous Disturbance (for existing Authorisations only)

The 'Disturbance Tracking' spreadsheet must be completed and attached to the MMP submission to complete this section. The spreadsheet is available on the departmental web page where this template is located.

Section 6 – Environmental Management

By checking these shaded boxes, you are agreeing to implement the following minimum environmental management standards on the project area. Where boxes have been left unchecked, justification is required.

6.1	Y	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
6.2	Y	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	Y	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	Y	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	Y	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes
6.6	Y	All employees and contractors will be trained and inducted in relation to the management of environmental risks in the work area, including weeds, waterways, threatened species, soil erosion, sacred sites and heritage areas
6.7	Y	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
6.8	Y	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses
6.9	Y	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	Y	Drill holes will be securely capped immediately after drilling
6.11	Y	Vehicle hygiene measures will be employed to prevent the introduction and spread of invasive species and pathogens when mobilising vehicles and equipment from one location to another
6.12	Y	Hydrocarbon spills will be minimised using liners and drip trays under machinery, and appropriately sized spill-kits available in the event of a spill
6.13	Y	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	Y	Hydrocarbons will be stored in lined and bunded areas
6.15	Y	Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals
6.16	Y	Waste will be removed off-site and disposed of at an appropriate waste management facility
6.17	Y	All environmental incidents will be reported to the Department in accordance with Section 29 of the <i>Mining Management Act</i> .
6.18	Y	Acid and Metalliferous Drainage (AMD) and Potentially Acid Forming (PAF) material derived from drilling cuts will be managed to avoid AMD and PAF related issues on site.

6.19	Y	Radioactive/NORM drill cuttings will be managed to avoid radiation related issues on site.
6.20	Y	Dust management will be implemented on site.

Justification and alternative management measures:

Section 7 – Rehabilitation and Closure

By checking these shaded boxes, you are agreeing to implement the following minimum rehabilitation standards on the project area. Where boxes have been left unchecked, justification is required.

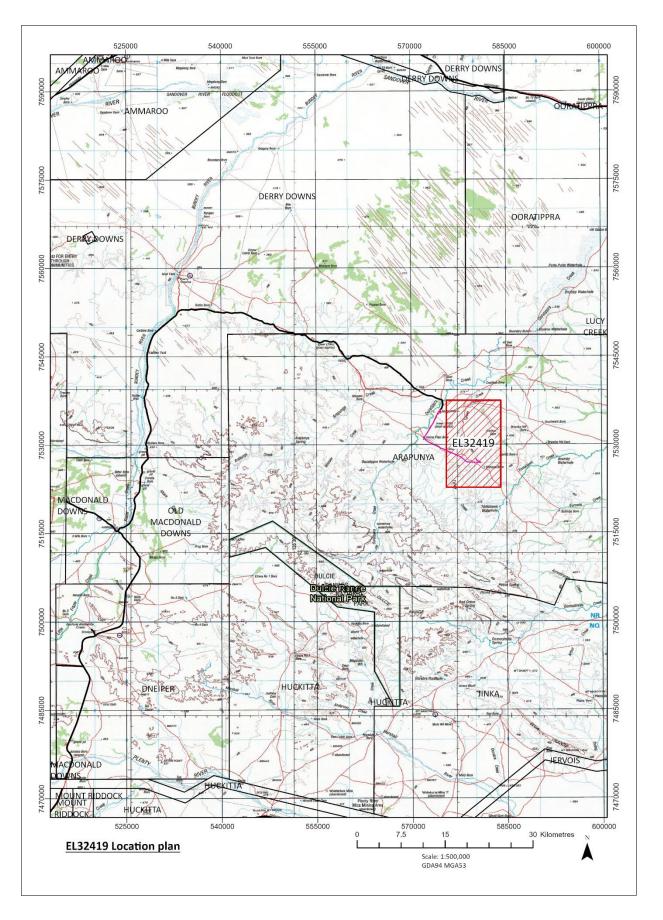
A refund of security related to completed rehabilitation on site requires the submission of a rehabilitation report including photographs, an updated security calculation and updated disturbance tracking spreadsheet to the Department.

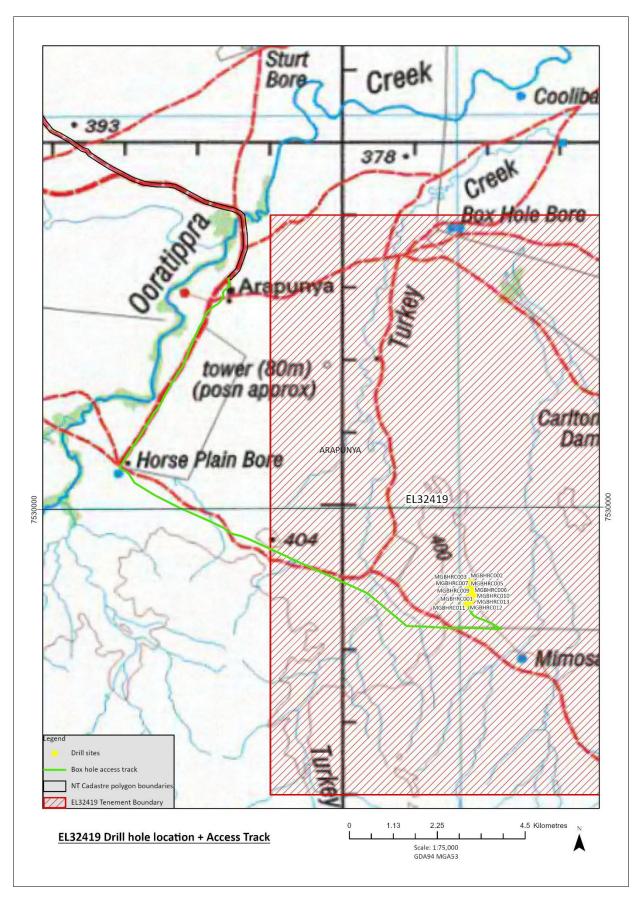
7.1	Y	Drill holes will be plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling.
7.2	Υ	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	Y	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	Y	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	Y	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	Y	Drill pads and compacted areas along the contour (on sloping ground) will be ripped/scarified of and tracks will be cross-ripped (zig-zag).
7.7	Y	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party.
7.8	Y	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur.
7.10	Y	Access through watercourses will be removed and banks restored.
7.11	Y	All previously disturbed areas will be stable, with no evidence of active soil erosion.
7.12	Υ	All excavations will be backfilled within 6 months of their completion.
7.13	Y	All water bores will be decommissioned unless otherwise agreed in writing by the land holder or appropriate third party.
7.14	Υ	All rubbish and infrastructure will be removed from site.
7.15	Υ	Topsoil will be replaced and vegetation re-established.
7.16	Y	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be rehabilitated or removed from site.
7.17	Y	Monitoring will be undertaken following the wet season or a significant rainfall event.

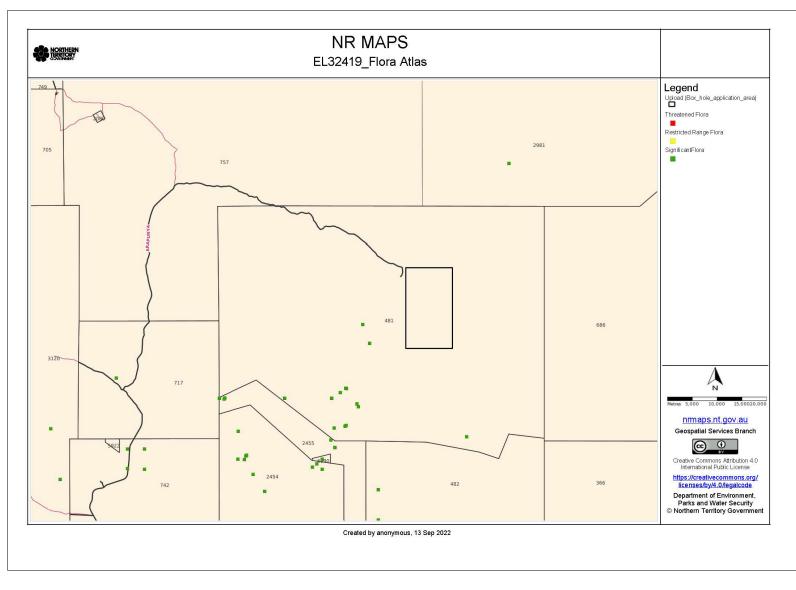
Justification and alternative management measures:

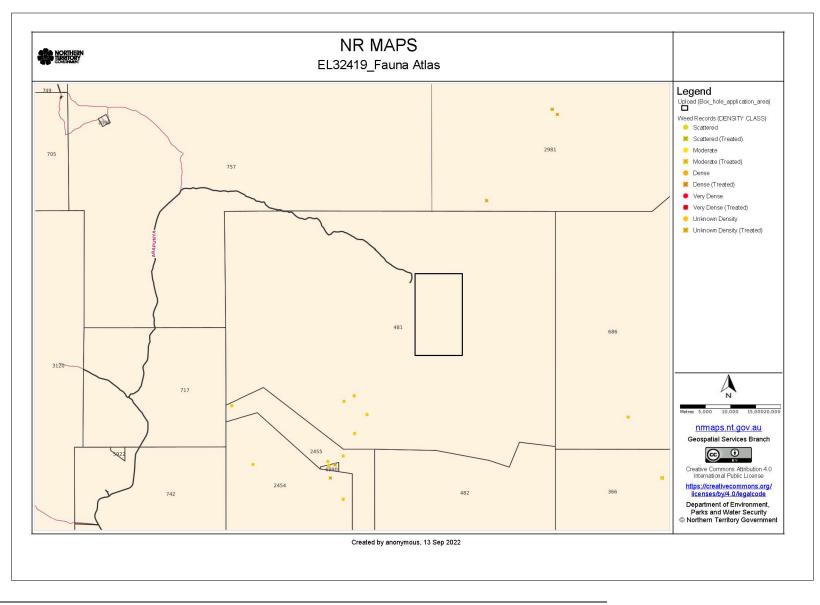
Section 8 – Required Attachments

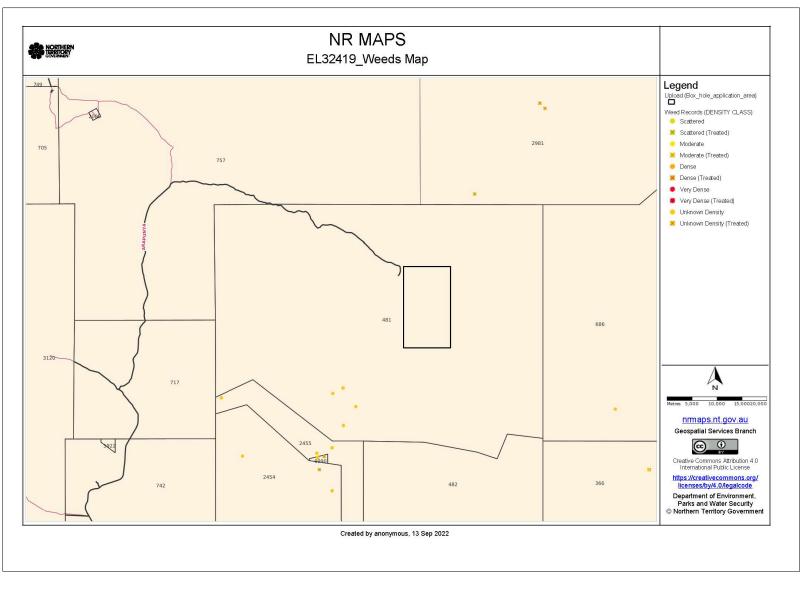
8.1	Y	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed).
8.2	Υ	Nomination of Operator Form, where required
8.3	Υ	Security Calculation Spreadsheet
8.4	Y	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email)
8.5		Disturbance tracking spreadsheet (for existing Authorisations)
8.6	Υ	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.7		KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas
8.8	Υ	Map(s) of the work area(s) showing:
		1. title boundaries and title numbers
		2. current and proposed drill holes, or polygons of target areas
		3. current and proposed tracks
		4. rehabilitated areas
		5. camp sites
		6. heritage sites or significant environmental areas
0.10		7. environmental constraints
8.10		Radiation Management Plan (if applicable)
8.12		Document(s) being appended in relation to Section 2 (if any):
		APPENDIX 1 – EL32419 Location plan
		APPENDIX 2 – EL32419 Drill hole + Access track
		APPENDIX 3 – EL32419 Flora Atlas
		APPENDIX 4 – EL32419 Fauna Atlas
		APPENDIX 5 – EL32419 Weeds Map
		APPENDIX 6 – EL332419 NT EPA pre-referral checklist











possible en	vironmental values for each environme	ne screening tool. Indicate answer to questions 1-5 in corresponding checkbox. The i ental factor that should be considered when considering each question. If the answe gnificant impact on the environment and the proposal should be referred to the NT	er to a questi					
Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponen questions is required					ferral
				Q1	Q2	Q3	Q4	Q
			Yes					
			No					
物准正门	1) Landforms	distinctive features in the landscape, either geological or anthropogenic	Yes	N/A				
	Objective: Conserve the variety and	 subterranean karstic terrain and faults craters, gorges, ranges, caves, massifs, escarpments, plateaus 	No					
	integrity of distinctive physical landforms.		Uncertain					
			Not Applicable					
	2) Terrestrial environmental	 good quality soils, including chemical, physical, biological and aesthetic qualities that support life the biological processes that depend on soil quality 	Yes	N/A				
LAND	quality		No					
-	<u>Objective</u> : Protect the quality and integrity of land and soils so that		Uncertain					
	environmental values are supported and maintained.		Not Applicable					
	3) Terrestrial ecosystems	 'sensitive or significant' vegetation or buffers (as defined in the NT Land Clearing Guidelines) 	Yes	N/A				
	Objective: Protect terrestrial habitats to maintain environmental values including biodiversity,	 vegetation that provides an important ecological function listed threatened species and their habitat (NT and Commonwealth) listed migratory species and their habitat (Commonwealth) 	No					

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponent's answer to screening questions 1-5. If answer is 'yes' re is required					erral
				Q1	Q2	Q3	Q4	Q5
	ecological integrity and ecological	Iisted threatened ecological communities (Commonwealth)	Uncertain					
	functioning.	 locally endemic species or species with restricted habitat species of social, cultural, livelihood and/or economic significance species that are data deficient and their status is unknown protected area or reserve, including Indigenous Protected Area 	Not Applicable					
		 existing conservation and management activities introduced species and/or invasive species integrity of terrestrial ecosystems and the ecological services they provide biological and functional diversity provision of refuge 						
		 food supply the supply and quantity of water in surface water features including rivers, lakes, 	Yes	N/A				
	 Hydrological processes <u>Objective</u>: Protect the hydrological 	 the supply and quantity of water in surface water reactines including rivers, rakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines 	(No)	NA				
	regimes of groundwater and surface water so that environmental values	 the supply and quantity of water in groundwater features including aquifers, aquitards and water tables 	Uncertain					
WATER	including ecological health, land uses and the welfare and amenity of people are maintained.	 declared beneficial uses present and future uses, and users of water current or potential water supplies, including regional scale aquifers culturally important water features or other features affected by water level 	Not Applicable					
1×	2) Inland water environmental	• the quality of water in surface water features including rivers, lakes, wetlands, swamps,	Yes	N/A				
	quality	creeks, billabongs, intermittent streams, floodplains, mangroves and drainage linesthe quality of water in groundwater features including aquifers and water tables	No					
	Objective: Protect the quality of groundwater and surface water so	 declared beneficial uses present and future uses and users of water 	Uncertain					
	that environmental values including ecological health, land uses and the	 current or potential water supplies, including regional scale aquifers potability / drinkability culturally important water features 	Not Applicable					
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Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponent questions is required	1-5. lf								
				Q1	Q2	Q3	Q4	Q5				
	welfare and amenity of people are maintained.											
	3) Aquatic ecosystems	threatened species	Yes	N/A								
	Objective: Protect aquatic habitats	 the health of the biota in inland waterways the habitats that support the lifecycle of aquatic biota 	No									
	to maintain environmental values including biodiversity, ecological	groundwater dependent ecosystems	Uncertain									
	integrity and ecological functioning.	 Ramsar wetlands species of social, cultural, livelihood and/or economic significance 	Not									
		 integrity of aquatic ecosystems and the ecological services they provide 	Applicable		-		-	-				
		biological and functional diversityprovision of refuge	\smile									
	A) . Co., the large states	 processes that support marine ecosystems (see Marine Ecosystems Factor below) such 	Yes	N/A								
	 Coastal processes Objective: Protect the geophysical 	as coral reefs, mangroves, salt marshes, seagrass meadows and sponge gardens • primary productivity	No									
	and hydrological processes that	nutrient cycling	Uncertain									
	shape coastal morphology so that the environmental values of the	carbon storage climate regulation	Not									
	coast are maintained.	 conservation significant low lying areas including tidal creeks, deltas and river mouths 	Applicable)								
SEA		storm surge protection unique coastal landforms	\smile									
S		cultural and aesthetic values										
		active or passive recreation										
	2) Marine Environmental Quality	quality of the water, sediment and biota	Yes	N/A								
	Objective: Protect the quality and	 ecosystem health condition physical parameters that support fishing and aquaculture 	No									
	productivity of water, sediment and	 physical parameters that support restance and addeduced a physical parameters that support recreation and aesthetics 										
	erritory Environment Protection Author											

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponen questions is required	1-5. lf				erral
				Q1	Q2	Q3	Q4	Q5
	biota so that environmental values	industrial water supply	Uncertain					
	are maintained.	cultural and spiritual values	Not					
	3) Marine ecosystems	 conservation significant marine and coastal fauna and critical habitat such as nesting, baseding as families habitat 	Yes	NA				
	Objective: Protect marine habitats to maintain environmental values	 breeding or foraging habitat conservation significant marine and coastal benthos, flora and vegetation (seagrass meadows, sponge gardens, coral reefs, mangrove communities and salt marshes) 	No					
	including biodiversity, ecological integrity and ecological functioning.	 groups of species (species richness and assemblages of species) 	Uncertain	~				
		 ecological functions and processes species of social, cultural, livelihood and/or economic significance. integrity of marine ecosystems and the ecological services they supply biological diversity functional diversity provision of refuge food supply 	Not Applicable	(
	1) Air quality	 the chemical, physical and biological characteristics of quality air the biological processes that depend on the air quality 	Yes	(N/A)				
	Objective: Protect air quality and minimise emissions and their impact	The bological processes that depend on the an quanty	No					
	so that environmental values are maintained.		Uncertain					
			Applicable					
	2) Atmospheric processes	 a contribution to the NT's greenhouse gas emissions adaptation to a changing climate 	(No)	N/A				
	Objective: Minimise greenhouse gas emissions so as to contribute to the	capacity of communities and country to respond or adapt to climate change	Uncertain					
	NT Government's goal of achieving		Oncertain					

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponent questions is required	1-5. lf				erral
				Q1	Q2	Q3	Q4	Q5
	net zero greenhouse gas emissions by 2050.		Not Applicable					
	1) Community and economy	dwellings, homelands, communities, towns and suburbs where people live liveable environment	Yes	N/A				
	Objective: Enhance communities and the economy for the welfare, amenity and benefit of current and future generations of Territorians.	 good amenity - air quality, noise, aesthetics access to natural resources including bush food recreational use of the natural or built environment (e.g. fishing, cycling, sports, 	Uncertain					
PEOPLE		 picnics) access to social infrastructure and services including transport and logistics Healthy lifestyles sense of wellbeing good mental health community aspirations Financial security affordable access to food, water, electricity, transport and communication networks livelihoods participation in jobs, businesses and education existing industries such as agriculture, pastoralism, tourism, fisheries vulnerable sectors of the community (that are not explicitly protected under culture and heritage legislation addressed in the Culture and heritage factor) Aboriginal rights and interests, including right of access cultural practices sense of belonging, inclusion, connectedness and cohesion healthy social relationships 	Not Applicable					
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Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponen questions is required					erral	
		ter de construit de la seconda participation de la forma de la classification de la superior de la seconda de La construit de la construit de		Q1	Q2	Q3	Q4	Q5	
	2) Culture and heritage	 sacred sites historic heritage and places 	Yes	N/A					
	Objective: Protect sacred sites, culture and heritage.	world heritage	Uncertain						
			Not Applicable						
	3) Human health <u>Objective</u> : Protect the health of the	 drinking water recreational water air quality 	Yes	No	N/A				
	Northern Territory population.	bush tucker radiological limits	bush tucker Uncertain radiological limits biting insects Not						
		Diting insects	Not Applicable						
uitably qua etained by	lified person identifying that a refer the proponent to demonstrate the s	suitably qualified person and all responses in the checklist are 'no', a referral to the N ral is not required, the NT EPA and DEPWS does not require the completed checklist screening has been conducted, and the name and qualifications of the professional w e, and may not cover the full range of environmental values or impacting activities.	t to be subm	itted, I	nowev	er it sl			