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

Drainet Name	Edwards Creek
Project Name Provide new or existing project name	Edwards Creek
Authorisation Number Insert existing authorisation number, where applicable	A1134-01
Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	MetalsGrove Mining Ltd
Operator ABN and ACN numbers	
Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	EL32420 straddles the northern boundary of the Alice Springs I :250 000 map sheet area approximately 80km north northeast of Alice Springs township.
	Access is via the Stuart Highway for 70 kilometres until the turnoff to the Plenty Highway thence 45 kilometres east until Edwards Creek is reached. A bush track commencing 100 metres east of Edwards Creek trending southeast for 5 kilometres ends at the Edwards Creek base metal prospect.
Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	Gold, Copper, Rare earths, and Base Metals

Mining Activities

Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation.

Drilling programs over a maximum of four years are supported and encouraged and can be staged. Please refer to the guidelines for further information.

Metals Grove Mining Ltd. proposed to drill 2 Reverse Circulation (RC) holes, for a total of 300 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 undertaken in the area. Holes are designed to be 130 metres deep.

APPENDIX 1 - Location plan + Drill hole location + 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
EL32420	Territory Lithium Pty. Ltd	14/03/2027	Bushy Park 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 2 – EL32420 Flora Atlas Consulted NR Maps. Refer to APPENDIX 3 – EL32420 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 4 – EL32420 Weeds Map

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 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. The Aircore program will not be required water. Potable water will be sourced from Station supplies by consultation with the Property owner/manager.

Environmental assessment and cultural considerations

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 5 – 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 Aboriginal Sacred Sites Act 1989 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, Edwards Creek Prospect - #202212534
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 Bushy Park Station region on; http://www.ntlis.nt.gov.au/heritageregister/f?p=103:300:14155669517847 : indicates that "no sites have been returned".

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	2 Reverse Circulation			
Maximum depth of proposed holes (m)	150 metres			
Number and size of drill pads to be cleared (Length: 25m x Width: 25m)	2 drill Pad			
Total area of drill pads to be cleared (ha)	approx. 0.12ha			
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 6000m x width 3m)	1.8ha			

Mining Interests (i.e. titles)	EL32420	EL	EL	EL
Area of proposed line/track clearing (ha)	1.8ha			
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. 1.92ha			

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	Υ	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	Υ	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	Υ	Drill holes will be securely capped immediately after drilling
6.11	Υ	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	Υ	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	Υ	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	Υ	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	Υ	All environmental incidents will be reported to the Department in accordance with Section 29 of the Mining Management Act.
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.

ustification 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.

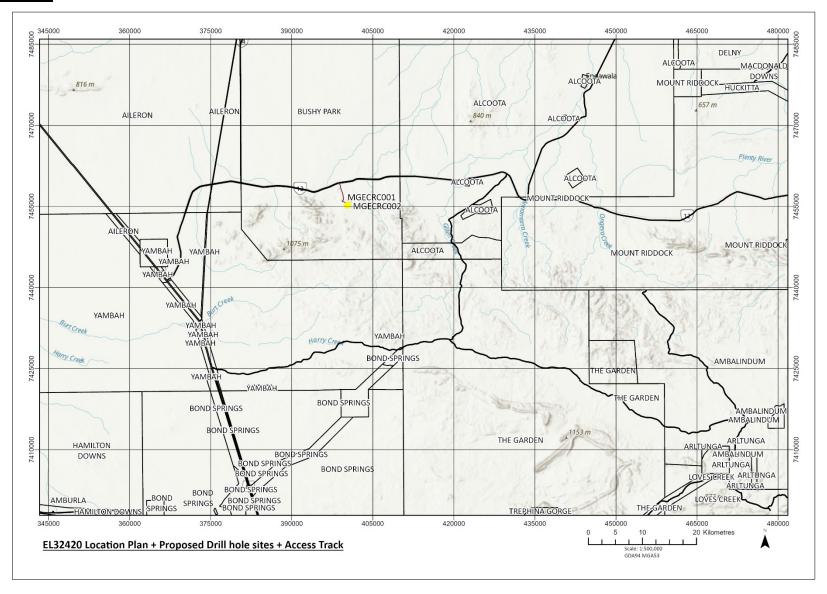
7.1	Υ	Drill holes will be plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling.
7.2	Υ	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	Υ	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	Υ	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	Υ	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	Υ	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	Υ	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party.
7.8	Υ	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	Υ	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	Y	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.

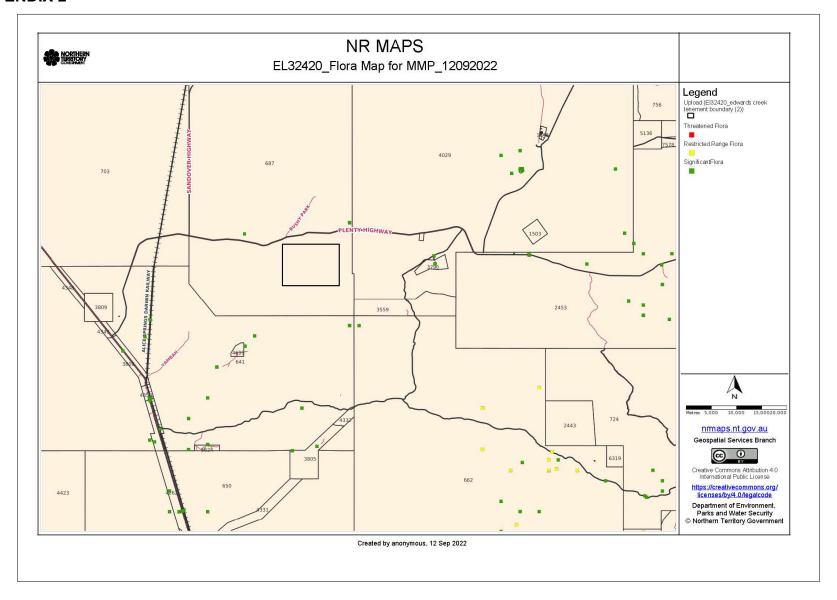
Justification and alternative management measures:

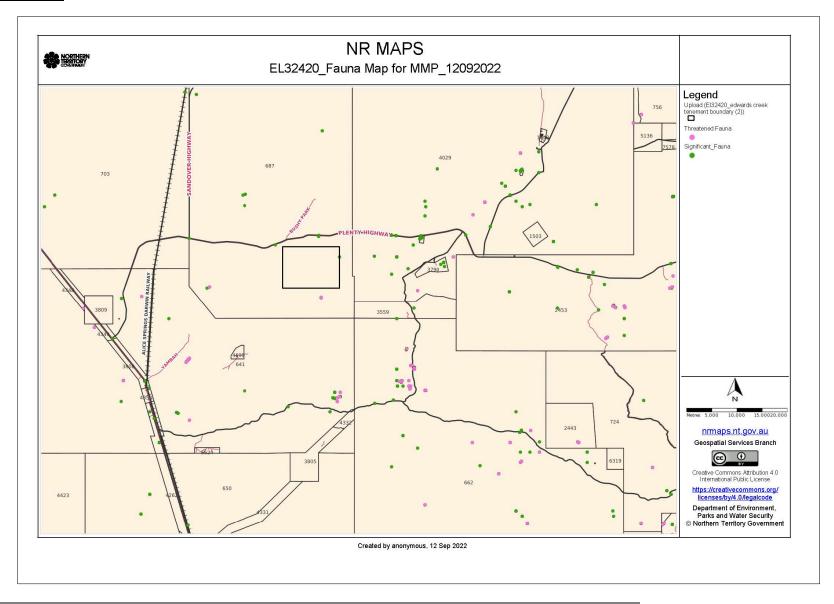
Nil

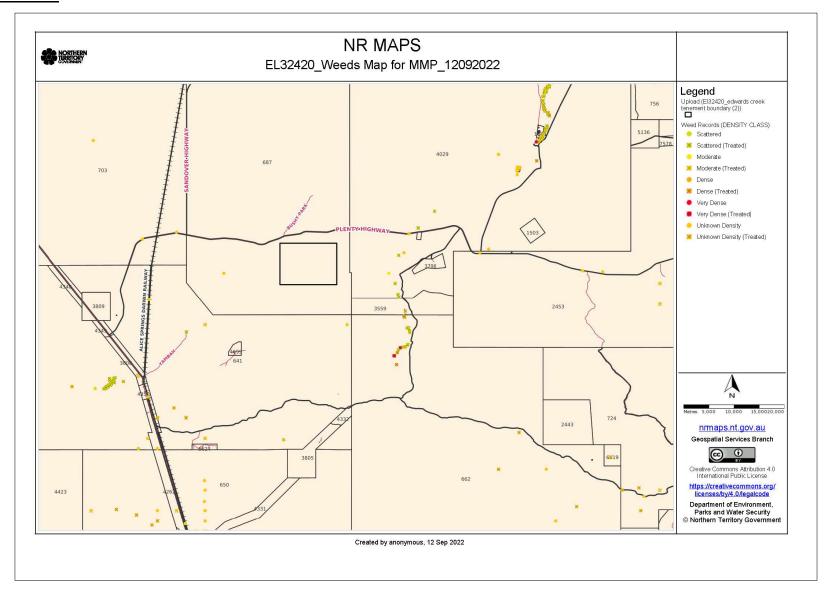
Section 8 – Required Attachments

8.1	Υ	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	Y	Map(s) of the work area(s) showing:
		title boundaries and title numbers
		2. current and proposed drill holes, or polygons of target areas
		current and proposed tracks
		4. rehabilitated areas
		5. camp sites
		heritage sites or significant environmental areas
		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 - Location plan
		APPENDIX 2 – EL32420 Flora Atlas
		APPENDIX 3 – EL32420 Fauna Atlas
		APPENDIX 4 – EL32420 Weeds Map
		APPENDIX 5 – EL31225 NT EPA pre-referral checklist









ossible en	vironmental values for each environmental	ne screening tool. Indicate answer to questions 1-5 in corresponding checkbox. The 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		Proponent's answer to screening questions 1-5. If answer is 'yes' referral							
				Q1	Q2	Q3	Q4	Q5			
			Yes								
	Landforms Objective: Conserve the variety and	distinctive features in the landscape, either geological or anthropogenic subterranean karstic terrain and faults craters, gorges, ranges, caves, massifs, escarpments, plateaus	Yes	N/A			0				
	integrity of distinctive physical landforms.	 monuments tourism related to landforms 	Uncertain Not Applicable			0	0				
LAND	Terrestrial environmental quality Objective: Protect the quality and	good quality soils, including chemical, physical, biological and aesthetic qualities that support life	Yes	N/A		0	0	0			
	integrity of land and soils so that environmental values are supported and maintained.		Uncertain Not Applicable								
	3) Terrestrial ecosystems Objective: Protect terrestrial habitats to maintain environmental values including biodiversity,	'sensitive or significant' vegetation or buffers (as defined in the NT Land Clearing Guidelines) vegetation that provides an important ecological function listed threatened species and their habitat (NT and Commonwealth) listed migratory species and their habitat (Commonwealth)	Yes	N/A		0	0				

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' referral is required							
				Q1	Q2	Q3	Q4	Q5		
	ecological integrity and ecological	listed 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 								
	Hydrological processes Objective: Protect the hydrological	 the supply and quantity of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines 	Yes	N/A						
	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					0		
8	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 that environmental values including	declared beneficial usespresent and future uses and users of water	Uncertain							
	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		swer to screening If answer is 'yes' referr				
				Q1	Q2	Q3	Q4	Q5
	welfare and amenity of people are maintained.							
	Aquatic ecosystems Objective: Protect aquatic habitats	 threatened species the health of the biota in inland waterways the habitats that support the lifecycle of aquatic biota 	Yes No	N/A				
	to maintain environmental values including biodiversity, ecological	trie habitats that support the intervale or aquatic blota groundwater dependent ecosystems Ramsar wetlands	Uncertain					
	integrity and ecological functioning.	species of social, cultural, livelihood and/or economic significance integrity of aquatic ecosystems and the ecological services they provide biological and functional diversity provision of refuge	Not Applicable					
	Coastal processes	 processes that support marine ecosystems (see Marine Ecosystems Factor below) such as coral reefs, mangroves, salt marshes, seagrass meadows and sponge gardens 	Yes	N/A				
	Objective: Protect the geophysical and hydrological processes that	as coral reets, mangroves, sait maisnes, seagrass meadows and sponge gardens primary productivity nutrient cycling	No Uncertain					
SEA	shape coastal morphology so that the environmental values of the coast are maintained.	carbon storage climate regulation conservation significant low lying areas including tidal creeks, deltas and river mouths storm surge protection unique coastal landforms cultural and aesthetic values active or passive recreation	Not Applicable)				
	Marine Environmental Quality Objective: Protect the quality and productivity of water, sediment and	 quality of the water, sediment and biota ecosystem health condition physical parameters that support fishing and aquaculture physical parameters that support recreation and aesthetics 	Yes	N/A				
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Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Proponen questions is required	1-5. If				erral
		Talle II all 2006 com la como de la francisca de la formación de la fermación de la formación de la construición		Q1	Q2	Q3	Q4	Q5
	biota so that environmental values are maintained.	industrial water supply cultural and spiritual values	Uncertain					
	die mantamed.	• Cultural and spiritual values	Not Applicable					
	3) Marine ecosystems	 conservation significant marine and coastal fauna and critical habitat such as nesting, breeding or foraging habitat 	Yes	N/A)				
	Objective: Protect marine habitats to maintain environmental values	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) ecological functions and processes 	Uncertain					
		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	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		No Uncertain					
	so that environmental values are maintained.	Not						
	2) At	a contribution to the NT's greenhouse gas emissions	Applicable	N/A				
	2) Atmospheric processes Objective: Minimise greenhouse gas	 adaptation to a changing climate capacity of communities and country to respond or adapt to climate change 	No				0	
	emissions so as to contribute to the NT Government's goal of achieving		Uncertain					
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Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor		nt's answer to screening s 1-5. If answer is 'yes' ref ed				
				Q1	Q2	Q3	Q4	Q5
	net zero greenhouse gas emissions by 2050.		Not Applicable					
	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 ogood amenity – air quality, noise, aesthetics access to natural resources including bush food recreational use of the natural or built environment (e.g. fishing, cycling, seeming)		Uncertain					
PEOPLE	future generations of Territorians.	picnics)	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		
				Q1	Q2	Q3	Q4	Q5
	2) Culture and heritage	sacred sites historic heritage and places	Yes	N/A		0		0
	Objective: Protect sacred sites, culture and heritage.	odrinking water recreational water air quality odrinking water recreational water air quality odrinking water	Uncertain					
			Not Applicable				0	
	3) Human health <u>Objective</u> : Protect the health of the Northern Territory population.		Yes	N/A				
			Uncertain					0
			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 checklis creening has been conducted, and the name and qualifications of the professional we, and may not cover the full range of environmental values or impacting activities.	t to be subm	itted, I	nowev	er it sh		