



# Finniss Lithium Project BP33 Underground Mine

## Supplementary Environmental Report

*Prepared for assessment under the Environment Protection Act 2019*

NT EPA Assessment Number: P2020/001

## **Executive Summary**

November 2021

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## Introduction

This document provides a summary of the *BP33 Underground Mine Supplementary Environment Report (SER)* prepared by Core Lithium Limited (Core) for assessment by the NT Environment Protection Authority (NT EPA). Core is seeking environmental approval for their proposal to construct and operate the BP33 underground mine. The proposed mine site is located on the Cox Peninsula approximately 27 km south of Darwin, on Mineral Leases (ML) ML32346 and MLN16. The proposal is part of the broader Finnis Lithium Project, which comprises the approved Grants open pit lithium mine and processing facility (under construction in November 2021), and several other areas prospective for lithium (in addition to the BP33 resource). The proposal is being assessed under the *Environmental Protection Act (EP Act) 2019*.

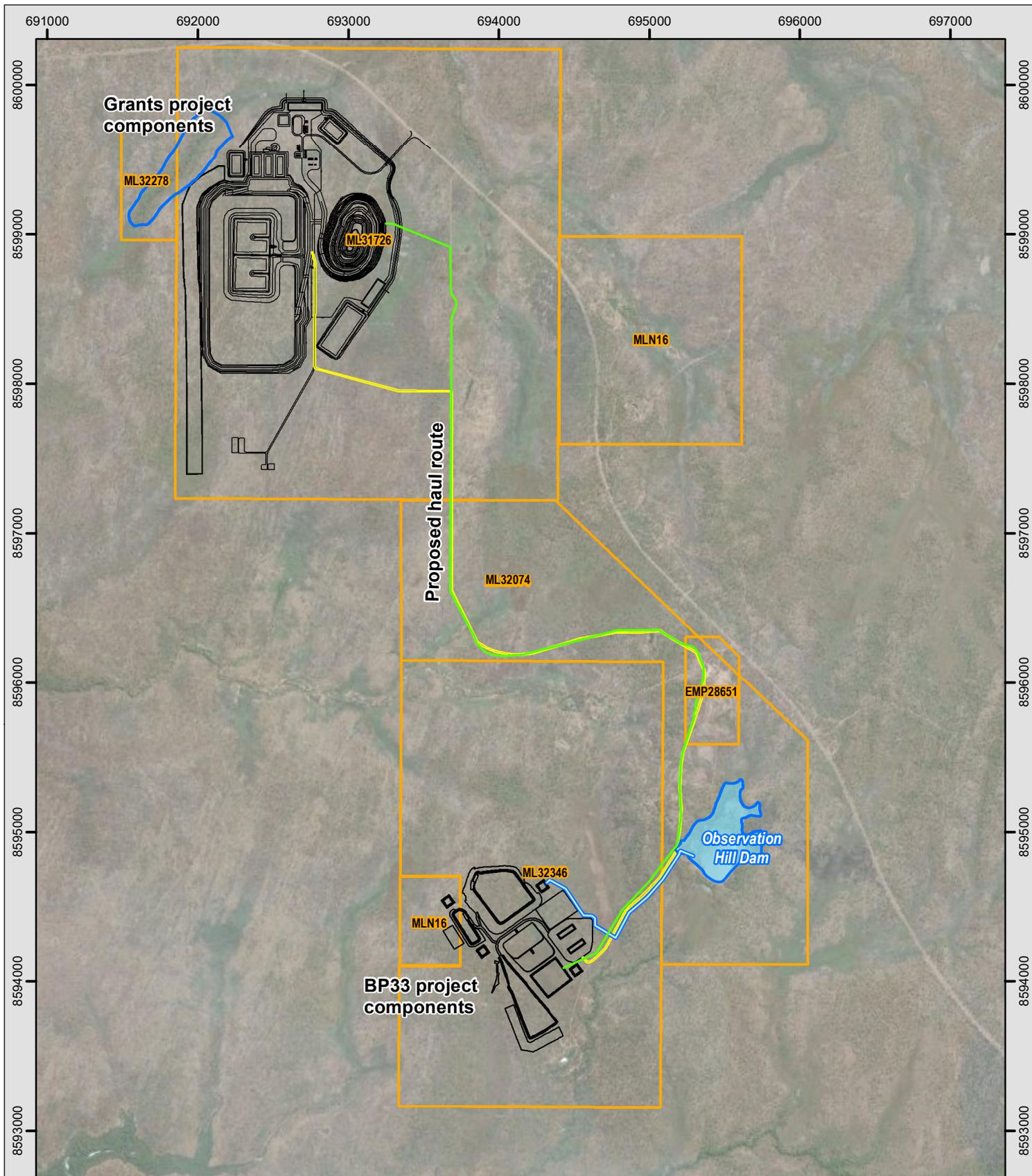
## Environmental approvals process

The approvals process under the *EP Act* commenced in July 2020, when Core submitted a Referral to the NT EPA. The Referral was available for public comment for a period of 20 business days from 10 July 2020 to 10 August 2020. Ten submissions were received: one from the Aboriginal Areas Protection Authority, seven from NT Government agencies, one from Environment Centre NT and one from a private individual. The submissions can be viewed on the [NT EPA website](#). The NT EPA decided that a Supplementary Environment Report (SER) was required to respond to comments received on the Referral and provide additional information to assess the potential for significant environmental impacts.

Over the past 12-months Core has worked with EcOz Environmental Consultants and other technical specialists to undertake additional studies and prepare the SER. The key stages of the environmental impact assessment (EIA) process under the *EP Act* are summarised in Table 1, with opportunities for public comment highlighted with an \* asterix.

**Table 1. Environmental assessment milestones**

Key assessment milestone	Status	Dates
Referral submitted to NT EPA	Complete	2 July 2020
Acceptance of Referral	Complete	9 July 2020
Referral public consultation period (20 business days) *	Complete	10 July – 10 August 2020
Decision on referral – SER required	Complete	14 September 2020
NT EPA Direction to Provide Additional Information in SER	Complete	Complete - 16 October 2020
Core preparing SER	Complete	October 2020 – October 2021
SER submitted to NT EPA by Core	Planned	12 November 2021
SER public consultation period (25 business days) *	Planned	Refer <a href="#">[NTEPA website]</a> for dates
NT EPA Assessment Report prepared	Planned	Refer <a href="#">[NTEPA website]</a> for dates
Ministers Decision – Environmental approval granted or refused	Planned	Refer <a href="#">[NTEPA website]</a> for dates



**Legend**

- Excess water indicative pipeline
- Water supply indicative pipeline
- Mine site footprint
- Water supply infrastructure
- Proposed haul road
- Observation Hill Dam
- Mineral lease boundary



0 0.25 0.5 1  
Kilometres



**MAP INFORMATION**  
 Scale: 1:35,000 @ A4  
 Projection: GDA 1994 MGA Zone 52  
 Date Saved: 15/09/2021  
 Client: Core Lithium Ltd  
 Mapper: DC

**DATA SOURCE**  
 Topographic data: Geoscience Aust.  
 Project data: Client  
 Imagery: ESRI

**Figure 1. Map of Finnis Lithium Project location and components**

## Proposal overview

Key components of the proposal are summarised in Table 3. The proposal covers the mining of spodumene (a lithium-bearing ore) using an underground mining method referred to as Sub Level Open Stope (SLOS). Mined ore will be trucked approximately 7.5 km to the Grants processing plant via a purpose-built haul road<sup>1</sup>. Water for the underground mine operations will be sourced from Observation Hill Dam (OHD), an existing dam located on ML32074 which was established by past mining operators. The BP33 life of mine is approximately four years, after which all surface landforms and infrastructure will be removed, and the site will be rehabilitated with plant species native to the area.

## Potential environmental impacts requiring further assessment

The NT EPA, following review of the Referral documents and comments received, determined that the proposal has the potential to significantly impact five environmental factors<sup>2</sup> and associated values (Table 2). For each of these factors, the NT EPA directed Core to provide additional information to inform their decision on whether to grant or refuse an Environmental Approval. The direction also requested additional information be provided to respond to public and stakeholder comments received on the referral and to demonstrate compliance with specific sections 3, 26, 27, 42 and 43 of the *EP Act 2019*. The Direction is published on the [NTEPA website](#) and provides specific details of the information to be provided in the SER.

**Table 2. Extract from NT EPA Notice of Decision and Statement of Reasons**

Statement of Reasons	
<p><b>Potential significant environmental impacts:</b> The NT EPA identified that the proposed action has the potential to significantly impact the following environmental factors and associated environmental values:</p>	
Land	<ul style="list-style-type: none"> <li>• <b>Terrestrial environmental quality</b> – soil quality may be significantly impacted by vegetation clearing; loss of containment of hydrocarbons or other chemicals; generation of acid metalliferous or saline drainage; and seepage from waste rock storage.</li> <li>• <b>Terrestrial ecosystems</b> – threatened flora may be significantly impacted by vegetation clearing; and the viability of sensitive and significant vegetation may be significantly impacted through alteration of surface water flows.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• <b>Hydrological processes</b> – the surface hydrology of downstream ephemeral waterways may be significantly impacted by altered surface water flows, and altered groundwater hydrology of the Charlotte River sub-catchment.</li> <li>• <b>Inland water environmental quality</b> – the proposal has the potential to act as a contaminant source and significantly impact downstream surface water quality; and the water quality of the underlying aquifer.</li> </ul>
People	<ul style="list-style-type: none"> <li>• <b>Communities and economy</b> – the proposal has the potential to significantly impact the regional community, including the Aboriginal community. Potential benefits include contribution to the economy, and training and employment for 125 – 150 people.</li> </ul>
<p><b>Other factors:</b> The NT EPA considered the importance of other environmental factors during its consideration of the referral; however, the impact on those factors was not identified as potentially significant.</p>	

<sup>1</sup> The processing requirements of the BP33 ore resource have previously been assessed by the NT EPA as part of the Grants Lithium Project EIS and therefore are not part of the current proposal.

<sup>2</sup> Refer NT EPA Environmental Factors and Objectives – EIA General Technical Guidance (2019)

**Table 3. Summary of key proposal components**

Aspect	Component	Details
<b>Footprint</b>	Mine site development envelope	88ha
	Haul road	7.3km from BP33 to Grants processing facility
	Water pipeline from OHD to mine	0.4ha
	Total land clearing footprint	~100.9ha
<b>Schedule</b>	Construction phase	6 months
	Operations phase	44 months
	Closure phase	5 months of reinstatement and rehabilitation works
	Operating hours	24hrs/day, 7 days/week
<b>Mining</b>	Methods	Underground sublevel open stope with pillar support
	Production	1 Mt/ore per annum; 2.09Mt over life of mine at 1.42% LiO <sub>2</sub>
<b>Waste Rock Management</b>	Geochemical characteristics	Low risk of Acid Rock Drainage; potential risk of metals/metalloids leaching under neutral conditions
	Waste rock dump 1 (WRD1)	WRD1 will temporarily store weathered waste rock material from box cut, prior to material being used as backfill.
	Waste rock dump 2 (WRD2)	WRD2 will temporarily store transitional and fresh waste rock material from the underground mine, prior to material being returned underground on closure.
<b>Processing</b>	Not applicable.	Ore will be transported to the Grants Lithium Project processing facility. Environmental impacts associated with ore processing, including tailings management, were addressed in the Grants Lithium Project EIS.
<b>Water Management</b>	Demand	~2.62ML/day for haul route and underground dust suppression and ablutions/facility operations.
	Sources	Observation Hill Dam; underground mine dewatering
	Controlled release (discharge)	Controlled release of excess water from MSD to ephemeral drainage line to the south of the mine site during the wet season. Subject to granting of a Waste Discharge Licence under the <i>Water Act</i> .
	Land irrigation area (option)	Land irrigation area 20ha may be required to manage excess water during BP33 construction phase. Actual requirement, size and location to be determined through detailed design.
	Transfer to Grants open pit	Excess water pumped to Grants open pit for storage and reuse. Forecast up to 60-180 ML/month.
<b>Power Supply</b>	Power supply to mining operations	Onsite diesel power generation is base case. Potential for connection to mains power under consideration.
<b>Roads and Traffic</b>	Internal haulage	Mined ore hauled from BP33 to Grants processing facility - 18 trucks/day (90t capacity)
	Product transport	Quad road trains will transport product from site to Darwin Port via Cox Peninsula Road and Stuart Highway; 10 return trips/day.
<b>Workforce</b>	Construction	~60 personnel
	Operations	~125 to 150 personnel
<b>Mine Closure</b>	Infrastructure	Removed from site on completion of mining
	Backfilling	WRD's and other landforms backfilled to box cut and underground
	Plugging	Box cut portal and shaft vents plugged with concrete
	Rehabilitation	Site revegetated with native species. Nil impact to future land uses.

## Summary of stakeholder engagement and studies undertaken

To refine mine planning and design, and address the information requirements of the NT EPA, Core undertook additional stakeholder engagement and studies. This work was used to further characterise the receiving environment, assess potential impacts and opportunities, and develop management strategies. Table 4 summarises the work undertaken. Study reports prepared by technical specialists have been provided as appendices to the SER, with key findings summarised in the main document and used to inform the EIA process.

**Table 4. Additional stakeholder engagement and studies undertaken**

Factor	Description of additional work
<b>Stakeholder engagement</b>	<p>Core, with the assistance of engagement and communications specialists True North, have undertaken two rounds of engagement activities in July/August 2020 and May 2021. These activities have involved providing information to stakeholders and the community in the form of fact sheets and letters to residents. Community information stalls, posters and social media posts were used to try and reach as many in the local community as possible. Targeted briefings and interviews were held with stakeholders holding a key interest in the project. Details of the consultation activities and findings can be found in Appendix D of the SER.</p> <p>Generally, the feedback received from the community was positive, with support for the potential employment opportunities and economic benefits. People raised concerns about road safety and degradation issues when the haul trucks are using Cox Peninsula Road. Some people are not supportive of the project, mainly citing environmental concerns.</p>
<b>Terrestrial ecosystems</b>	<p>Targeted field surveys for <i>Stylidium ensatum</i> were undertaken in June 2020 during the optimal detection period using methods approved by the NT Herbarium. The species was not detected and is considered unlikely to occur. The survey report is provided as Appendix I to the SER.</p>
<b>Terrestrial Environmental Quality</b>	<p>Additional geochemical testing was undertaken to refine the waste rock characterisation and assessment of potential for acid and metalliferous drainage. The study found there is a low likelihood of acid drainage but could not rule out the potential for metalliferous drainage. Long term kinetic leach tests have been established to address this uncertainty. The study report is provided as Appendix H to the SER.</p>
<b>Hydrological Processes</b>	<p>A network of monitoring bores was installed around the proposed mine site in late 2020. Baseline groundwater levels and water quality have been monitored monthly and the data used to develop a groundwater model. The groundwater model report is provided at Appendix B to the SER.</p> <p>A site water balance was prepared to inform the water management system requirements for the site. The water balance report is provided at Appendix A to the SER.</p>
<b>Inland Water Environment Quality</b>	<p>Baseline surface water and groundwater quality sampling has been undertaken monthly to establish a baseline dataset. Details of the monitoring program and summary of the water quality baseline findings are provided in the draft Water Management Plan (WMP) (Appendix C).</p>
<b>Communities and economy</b>	<p>A Social Impact Assessment (SIA) was undertaken and a Social Impact Management Plan (SIMP) prepared to provide a framework for maximising opportunities and minimising impacts from the proposal. Reports are provided at Appendix J and Appendix E to the SER.</p>

## Environmental impact assessment

The SER identifies and assesses potential direct, indirect and cumulative impacts to each environmental factor<sup>3</sup>. The significance of impacts was assessed taking into consideration the following:

- **Likelihood** of the impact occurring
- **Severity** (consequence) of the impact having regard to the context and intensity of the impact; and the sensitivity, value and quality of the environment impacted on and the duration, magnitude and geographic extent of the impact<sup>4</sup>

The approach and methods used to assess social impacts and opportunities were bespoke, incorporating community/stakeholder perceptions and assessment of opportunities. The criteria are detailed in the SIA Report provided at Appendix J to the SER.

Core worked with its technical specialists, to consider how environmental impacts could be avoided or mitigated. Where the EIA process indicated there is still uncertainty about the likelihood or scale of potential impacts, monitoring and adaptive management commitments are made in the SER to verify the impact predictions and to provide early indication of impacts that require further mitigation. The SER provides details of impact avoidance, mitigation and monitoring measures for each key environmental factor. Core expects that environmental approval for the BP33 underground mine proposal will be conditional on these commitments being met.

The sections below provide a summary of the EIA findings presented in the SER for each assessed factor.

## Terrestrial ecosystems

The NT EPA's objective for Terrestrial Ecosystems is to:

*Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.*

Terrestrial Ecosystems impacts are addressed in Section 7 of the SER. The EIA process identified and assessed the following potential impacts to Terrestrial Ecosystems:

- Loss of threatened flora (*Styloidum ensatum*) through vegetation clearing
- Riparian vegetation degradation cause by alteration of surface flows and groundwater drawdown.

A *Styloidum ensatum* survey report is provided as Appendix I of the SER. The surveys did not detect the species and it is not expected to occur in the area.

The outcomes of the EIA process indicate that localised impacts to habitats, flora and fauna will occur over the 100 ha of land that will be cleared and developed. This loss of primarily Eucalyptus woodland habitat is not predicted to affect local biodiversity because surveys have confirmed the area does not provide important habitat for any threatened species and similar habitats are available in surrounding areas that are undisturbed that fauna can move into.

It is possible that the health of riparian vegetation along a 4.5 km section of watercourse downstream could be affected by the cumulative impacts of the mine operations on the Hydrological processes (water availability) and Inland Water Quality (water quality) factors. Riparian habitats may tolerate the period of reduced water availability that is predicted to be caused by mining operations; however, the system response is uncertain and therefore Core has committed to monitoring to measure the level of impact and to rehabilitating or offsetting impacts if they do occur.

<sup>3</sup> Note that the SER focusses on assessing impacts that were not adequately assessed in the Referral (as per the direction given by the NT EPA). The NT EPA will refer to information presented in both the Referral and SER when making its decision on whether or not to approve the proposal.

<sup>4</sup> Potentially significant impacts are defined under section 11 of the *EP Act* an impact of major consequence having regard to the context and intensity of the impact; and the sensitivity, value and quality of the environment impacted on and the duration, magnitude and geographic extent of the impact

A draft Water Management Plan is provided as Appendix C of the SER. The plan details the monitoring activities that will be undertaken to ensure early detection of impacts to riparian vegetation health, which include monitoring groundwater levels in bores, installation of a flow gauge to monitor surface water discharges to downstream watercourses and an annual riparian vegetation monitoring program. Subject to effective implementation of these commitments, it is likely that the NT EPA's objective for Terrestrial Ecosystems will be met by the proposal.

## Terrestrial environmental quality

The NT EPA's objective for Terrestrial Environmental Quality is to:

*Protect the quality and integrity of land and soils so that environmental values are supported and maintained.*

Terrestrial Environmental Quality impacts are addressed in Section 8 of the SER. The assessment focussed the potential for generation of Acid Rock Drainage (ARD) and associated impacts to soil and water quality. Impacts associated with erosion and soil contamination from storage and handling of hydrocarbons and other chemicals were considered but can be avoided or mitigated using routine management measures and are therefore unlikely to cause significant impacts.

Geochemical testing results for the waste rock and ore are provided in Appendix H of the SER. The result indicate there is potential for metalliferous drainage to occur from ore stockpiles and WRD's; however, further testing is required to determine if this is likely to happen given the short four-year life of mine. Acid drainage is unlikely due to the very limited volumes of PAF material and there is a high level of confidence in this prediction. The test results available to date, combined with the plan to backfill all WRD material to the underground mine and box cut, suggest a low risk of widespread and/or long-term impacts associated with metalliferous drainage.

Long-term kinetic testing has commenced to gather additional information about whether metalliferous is likely to be produced from the WRD's during the short life of mine or in the event of unforeseen closure resulting in WRD remaining on the surface for a longer period than anticipated, and/or post-closure once the WRD materials are backfilled. If metalliferous drainage occurs and is not effectively controlled, elevated concentrations of metals/metalloids, primarily Al and As, but also Co, Cr, Cu, U and Zn, could be released to groundwater through seepage beneath the WRD's and surface waters surrounding the mine site. This risk will be mitigated by implementing design and operational controls around waste rock placement and storage. Subject to effective implementation of these controls, it is likely that the NT EPA's objective for Terrestrial Environmental Quality will be met and impacts to the Inland Water Quality factor will be avoided.

## Hydrological processes

The NT EPA's objective for Hydrological Processes is to:

*Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.*

Hydrological processes impacts were addressed in Section 9 of the SER. The EIA process identified and assessed the following potential impacts to hydrological flow regimes of surface water and groundwater:

- Alteration of surface water flows into receiving environment from surface water diversion and extraction
- Drawdown of groundwater in the underlying aquifers from dewatering of the underground workings.

Wet season surface water flows will be reduced in the ephemeral drainage line downstream of the mine and Observation Hill Dam when the mine is operational. The watercourse flows into the Charlotte River approximately 2.5 km downstream of the proposed mine site, where it contributes a small portion of the river flows. The SER presents the results of hydrological modelling undertaken to assess the reduction of flows. The modelling indicates that wet season flows at the Charlotte River outlet to Bynoe Harbour could be reduced by 12.6% in November and 9.6% in December (prior to the dam filling and spilling), with a reduction

of around 3% on average over the remaining wet season months. The percentage reduction across the wet season months does not exceed the threshold established in the *Territory Water Allocation Planning Framework*, which requires that extraction for consumptive uses will not exceed the threshold level equivalent to 20 per cent of flow at any time in any part of a river.

Drawdown of groundwater will occur as the mine is dewatered during operations. The SER presents the results of groundwater modelling undertaken to assess the scale and duration of drawdown impacts. The modelling indicates that for the BP33 life of mine to around three years post-closure, there will be some impact to groundwater levels and availability within a 2 km zone of influence around the mine site. Once mining ceases, the water table surface is predicted to recover to pre-mining levels within three years. The maximum extent of the drawdown cone extends outside of the ML and below ephemeral drainage lines to the east and south and therefore could impact riparian vegetation. No impacts are predicted to existing groundwater users - the nearest of which is over 4 km from the site.

The findings of the EIA process indicate the modelled reduction in surface water discharges and groundwater drawdown are unlikely to affect other water users, land uses or amenity, but could affect riparian vegetation health, which was considered under the Terrestrial Ecosystems factor. Stakeholder engagement has indicated that water resources are highly valued by the local community and so ensuring the protection of water resources will be important to Core achieving their Social Licence to Operate and meeting the objectives for the Community and Economy factor.

The draft Water Management Plan provided as Appendix C of the SER includes measures to minimise and monitor water use, monitoring of groundwater levels and riparian vegetation health. Subject to effective implementation of the plan, it is likely that the NT EPA's objective for Hydrological Processes will be met by the proposal, and the potential for impacts to the Terrestrial Ecosystems and Community and Economy factors will be minimised.

## Inland water environmental quality

The NT EPA's objective for this environmental factor is to:

*Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.*

Inland Water Environmental Quality impacts are addressed in Section 10 of the SER. The EIA process identified and assessed the following potential impacts to surface water and groundwater quality:

- Elevated turbidity in surface water courses downstream due to releases and discharges.
- Elevated metals concentrations in groundwater caused by seepage from WRD, ROM pad and/or underground mine post-closure
- Elevated metals and phosphorous in surface water from controlled discharge of surplus water

The findings of the EIA process indicate that the proposal will have short-term and localised impacts to surface water and groundwater quality and as a result are unlikely to affect ecological health, other water users, land uses or amenity. Discharges of mine-affected water to the watercourse east of the mine site will occur only during the wet season, and only when flows are sufficient to dilute the water to achieve SSGV's. The site water balance demonstrates it is feasible to manage the majority of surplus water by transfer to Grants open pit void and land irrigation, which pose a much lower risk of impacts than direct discharge to watercourses. While there is some uncertainty about the potential for metalliferous drainage to occur during mining or post-closure<sup>5</sup>, volumes of seepage entering the groundwater system are expected to be low because the WRD's and ROM pad designs incorporate low permeability base layers. Impacts to water quality are expected to be confined to within the ML boundary.

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<sup>5</sup> Long-term kinetic testing is currently underway to provide additional information.

Short-term exceedances of water quality SSGV's can be expected, especially of turbidity criteria. Adopting the *Best Practice Erosion and Sediment Control Guidelines* is expected to ensure these events are isolated. The surface water monitoring program provides for early detection of contaminants in water storages or sediment basins prior to discharge, and the Grants open pit and irrigation areas can be used for disposal of excess water that does not meet SSGV's for direct release. A Waste Discharge Licence (WDL) will be required, which will allow the adequacy of the site water management system to be independently verified by regulators, and conditions of the licence are expected to provide for protection of downstream surface water quality.

The draft Water Management Plan provided as Appendix C of the SER includes an extensive monitoring program and adaptive management processes, that will minimise impacts to water quality. Subject to effective implementation of the plan, it is likely that the NT EPA's objective for Inland Water Environmental Quality will be met by the proposal, and the potential for impacts to the Terrestrial Ecosystems and Community and Economy factors will also be minimised.

## Communities and economy

The NT EPA's objective for Communities and Economy is to:

*Enhance communities and the economy for the welfare, amenity and benefit of current and future generations of Territorians.*

Community and economy impacts are addressed in Section 11 of the SER. The assessment was informed by the Social Impact Assessment (SIA) report provided as Appendix J to the SER. The SIA identified and assessed opportunities and impacts.

The key opportunities considered in the assessment focus on economic opportunities, and these are:

- Boost to the regional economy through employment
- Enhanced opportunities for local Aboriginal people for jobs and training
- Boost to the regional economy through local procurement
- Local communities benefit through sponsorship and local support.

Key potential impacts raised by community/stakeholders and assessed as part of the SIA are listed below:

- Higher level of road trauma as a result of mine traffic
- Reduced sense of safety and wellbeing due to mine traffic sharing roads with local traffic
- Amenity impacts due to road train movements for seven years
- Increased anxiety due to perceptions about the project's water use
- Concerns about legacy mines and the impact on the environment
- Cumulative impacts of multiple projects in the region (particularly increased traffic).

The findings of the SIA process indicate that social and economic impacts and benefits associated with the proposal will occur across the Greater Darwin region, with communities on the Cox Peninsula most directly affected and also having the greatest opportunity to benefit from increased local employment, economic activity and community sponsorship. Local communities will notice increased heavy vehicle traffic on the Cox Peninsula Road for an extended period, which could lead to accidents and inconvenience to road users. People are also likely to notice increased activity at local shops and hospitality venues associated with the presence of mine workers, which will provide economic benefits but could also lead to inconvenience and tensions. Local people have generally expressed support for the proposal and a strong interest in training, employment, supply and contracting opportunities; however, some community members also raised concerns about the social and environmental impacts that could occur. The level of community acceptance of the mine is likely to be strongly influenced by Core's achievement of environmental protection outcomes and realisation of the opportunities that the community is seeking.

A Social Impact Management Plan (SIMP) is provided as Appendix E of the SER. The SIMP outlines Core's commitments to manage, mitigate or enhance the negative impacts and positive impacts identified as part of the SIA. Commitments made to stakeholders and the community are also provided. Effective implementation

of the SIMP, environmental protection commitments made in the SER and ongoing stakeholder engagement, is likely to ensure that the NT EPA's objective for the Community and Economy factor are met.

## Compliance with the Environment Protection Act 2019

Section 12 of the SER provides details of how Core has complied with the requirements of the *EP Act* in relation to the following principles of environmental protection and management:

- Application of the environmental decision-making hierarchy
- Application of the waste management hierarchy
- Taking into account the principles of ecosystem-based management
- Taking into account the impacts of a changing climate
- Consideration of the potential for less environmentally damaging alternative approaches, methodologies or technologies
- Consideration of the potential to enhance or restore environmental quality through restoration or rehabilitation is identified and provide for to the extent practicable.

## Outcomes of the EIA process

Through the EIA process undertaken for the BP33 Underground Mine proposal Core has provided information and consulted with affected communities (including Aboriginal people and organisations) and has considered and applied the principles of environmental protection and management provided in Part 2 of the *EP Act*. Environmental impacts have been predicted and assessed based on the best available evidence provided by technical studies undertaken by suitably qualified professionals. Where there is uncertainty in relation to the likelihood or severity of impacts, which is mainly in relation to groundwater drawdown impacts and the potential for metalliferous drainage from the WRD's, these have been acknowledged and further testing, monitoring and adaptive management measures have been provided in the draft Water Management Plan to ensure that serious or irreversible damage does not occur. A SIMP has been provided to ensure that social and economic opportunities are maximised, and social impacts are avoided or mitigated, and this plan will play a key role in Core achieving and maintaining its Social Licence to Operate. The outcomes of the EIA process indicate that the proposal can be implemented without unacceptable environmental or social impacts and the NT EPA's environmental objectives for each factor assessed in this SER are likely to be met.

