

BACKGROUND INFORMATION DOCUMENT FOR THE PROPOSED ESTABLISHMENT AND OPERATION OF A LITHIUM PROCESSING PLANT ON MINING CLAIM 73418, DAURES CONSTITUENCY, ERONGO REGION

1.Introduction

Proponent: Long Fire Investment (Pty) Ltd

Date: 27 April 2023

1.1 Project Description

Long Fire Investment (Pty) Ltd (hereinafter referred to as the proponent), undertakes to construct and operate a lithium processing plant in Erongo Region on mining claim 73418. The processing plant is aimed at producing a concentrate of Lithium.

Project location: The processing plant will be located in Erongo Region, approximately 50 km SW of Uis settlement, Dâures constituency, via C35 and D2342 from Uis in western central Namibia. The processing plant will be situated within mining claim 73418. The project area covers state land gazetted as the Tsiseb Conservancy. The GPS coordinates of the processing plant are -21.473897° , 14.534153° . The lithium ore to be sourced from mining claims 73409 – 73418 and other mining claims proximal to the project.



2. Purpose of this Background Information Document (BID)

The Background Information Document (BID) is aimed at:

- Providing stakeholders / I&APs with information regarding the proposed project;
- Notifying all interested and affected parties (I&APs) about the Environmental Impact Assessment (EIA) being undertaken and give an overview of the project's proposed activities;
- Seeking input from interested and affected parties (I & APs) through public participation invitations;
- Providing all I&APs with an opportunity to comment on the proposed project and associated process, including biophysical and socio-economic aspects, as well as any other issues of concern;
- Affording stakeholders, I&APs an opportunity to register and submit any comments, questions or issues pertaining to the proposed project;
- Ensuring that at all potential impacts on the Environment are taken into consideration;
- Obtaining information that may influence the design of the project.

3. Description of the Project

- Location: on mining claim 73418 (GPS coordinates of the proposed location: - 21.473897°, 14.534153°)
- Capacity: the plant will process 1 million tons of ore per year
- The project has a service life of 15 years
- The mineral to be processed is spodumene
- Final product will be a lithium concentrate with a grade: of 5%
- Water will be sourced from the desalination plant at Henties bay, Uis settlement as well as boreholes that will be drilled. approximately 8000m³ will be

required per day (domestic consumption included).

- The power source will be will diesel generators

The source of lithium

- Lithium to be sourced from mining claims 73409 – 73418

3.1 Processing plant facility design

The facility will include

- Raw ore storage yard, crushing and screening,
- Crushing product storage yard,
- Heavy medium separation,
- Product storage yard,
- Weighbridge sites
- Crusher site, conveyor belts areas,
- Supporting production auxiliary facilities such as:
 - ✓ laboratories,
 - ✓ machine repair rooms,
 - ✓ diesel generator rooms,
 - ✓ water intake pump rooms and
 - ✓ living camps.

The construction of the facility will take roughly 18 months to complete.

3.2 Processing method:

Processing process will include:

- Crushing of ore
- Grinding to 0.5-8mm
- Classification
- Heavy medium separation (HMS) to produce a concentrate
- Re-crushing & re-separation of middlings
- Magnetic separation
- Fine ore flotation
- Fine ore dehydration

Recovery rate will be up to 58%.

4. Envisaged life of operation

The construction phase to last 15 to 18 months and the processing plant's operation phase is expected to last for 15 years (longer if ore supply is sustainable)

5. Steps in the EIA process

Screening Process

- EIA project initiation.
- Notify MEFT: DEA.
- Site visit and identify environmental issues.
- Identify key stakeholders

Environmental assessment process

- Identifying risks, mitigation measures
- Preparing the draft Environmental Scoping Report and Environmental management plan
- Preparing the final Environmental Scoping
- Report and Submitting to MEFT for public review
- Awaiting decision from Authorities
- Communicate decision to interested and affected parties

6. Identified Potential Impacts

The main potential impacts and opportunities that have been identified for this proposed project are as follows:

Positive impacts

- Creates employment opportunities
- Contribution to National and regional economic development
- Contribution to taxes and royalties
- Technological skill and knowledge transfer
- Increased support for local businesses through the procurement of locally available goods and services, entrepreneurial opportunities,

Negative impacts

Potential environmental issues associated with the proposed lithium processing include:

- Biodiversity: habitat disturbance and general disturbance of flora and fauna.
- Visual impacts (loss of existing land cover and changes in landscape views resulting from infrastructure establishment, waste rock dumps and tailing dumps),
- Waste management: The solid waste generated by this project mainly includes heavy medium separation tailings, magnetic water, mineral processing wastewater, domestic sewage mainly sewage from living area and waste engine oil generated by the machine repair workshop.
- Air quality: Dust and exhaust gas generated from unloading points of crushing and screening workshops, crushed product storage yards, powder ore storage yards, and tailings storage yards, heavy duty vehicle movement, raw ore, waste gas of mineral processing process

- Noise pollution: production equipment such as crushers, heavy duty vehicles and vibrating screens for mineral processing generate noise pollution, which can disturb wildlife and local communities, affecting their quality of life.
- Groundwater and potable water usage: Over-extraction of groundwater can lead to depletion of aquifers, which can have long-term consequences on the environment, including reduced water availability for ecosystems, resulting in changes to biodiversity and ecosystem functioning. Potential ground water and surface water contamination from hydrocarbon spillages.
- Archaeology impacts: possible loss or impacts of archaeological resources.
- Land use conflict between mining and tourism.
- Socio-economic: Potential impact on current land use activities; nuisance-related disturbance created by noise;
- Occupational and community health and safety risks/hazards
- Vehicular traffic safety

7. Mitigation measures for potential Environmental impacts

The potential impacts will be assessed and where necessary measures will be put in place to ensure that they are minimized / avoided, where possible. Environmental protection budget forms part of the investment.

Envisaged pollution mitigation measures:

- Exhaust gas & dust: Dust from the raw material transportation process will be controlled by spraying and watering on road; Waste gas from crushing and

screening of the processing plant is treated by dry fog and dust suppression measures. As such dust will have little impact on the environment.

- Solid waste (tailings will be dumped at the tailing site after dehydration – the tailings will be dry with controlled moisture of 20%)
- Waste engine oil which is a hazardous waste, will be stored and disposed of at designated town council disposal sites. Therefore, the solid waste generated by this project will have little impact on the environment after proper treatment and disposal.
- Waste liquid (thickener overflow water, dense separation overflow water, and filter press water & magnetic tail water will be collected and pumped back to the concentrator for reuse), 86% of water passing through the plant will be recycled water.
- Sewage water will be treated and used on roads to suppress dust and irrigating the premises
- Mineral processing wastewater is reused in production without discharge. Therefore, the project's wastewater has little impact on the environment.
- Noise (use of low-noise equipment, basic vibration reduction, high-noise equipment for ore processing should be installed indoors, machine room sound insulation and sound absorption measures will be put in place)
- Archaeology (there are no artefacts within the project area, NHC report was completed),

Adopting a series of environmental protection measures, the pollution discharge and environmental impact of the project can be

controlled to within the allowable range of local environmental functions

8. Description of the receiving environment

8.1 local geology

The Project area is located within the Northern Zone (NZ) of the Damara orogenic belt, which is geologically characterized by rocks of Nosib and Swakop Groups mainly. The Swakop Groups meta-sediments have been intruded by a series of syn-, late-syn- and post-tectonic granite and pegmatite bodies. Sand, gravel and calcrete of quaternary age extensively cover portions of the project area and the surrounding.

8.2 Biodiversity

Flora

Vegetation in the study area is diverse and dominated by dwarf shrubs or “Karoo bushes” and annual grass species. The landscape is more barren and rocky with scanty vegetation, it includes a number of species endemic to the central Namib as well as various protected species such as *Gomphocarpus fruticosus* (milkweed), *Zygophyllum simplex* (simple *Zygophyllum*), *Zygophyllum stapffii* (dollar-bush), *Arthroa leubnitziae* (pencil bush), *Monechma cleomoides* (Namib perdebos) and *Kleinia longiflora* (sjambok bush).

Larger drainage lines are vegetated with *Acacia erioloba*, *A. karroo*, *Tamarix usneoides*,

Euclea pseudebenus, *Rhus lancea*, succulent shrubs such as *Euphorbia gregaria*, *Euphorbia guerichiana*, *Ficus cordata*, *Ficus ilicina* and others.

Fauna

The project area is located within Tsiseb Conservancy which is home to some wildlife as well as domestic animals. Mammal wildlife species which are likely to occur within the project area: giraffes (*Giraffa camelopardalis*), zebras (*Equus quagga*), steenboks (*Raphicerus campestris*), ostriches (*Struthio camelus*), gemsboks (*Oryx gazelle*), Springbok (*Antidorcas marsupialis*) and kudus (*Tragelaphus strepsiceros*) among others.

9. Legal requirements

The proposed mineral processing activities fall under the activities that are listed in the Environmental Management Act, 2007 (Act No. 7 of 2007) and EIA Regulations (2012). These activities cannot be undertaken without an Environmental Clearance Certificate (ECC). It is in compliance with this piece of legislation that this study is being undertaken.

10. Registration of all interested and affected parties and submission of comments:

In accordance with Namibia's Environmental Management Act (No. 7 of 2007) and EIA regulations (GN 30 of 6 February 2012), all interested and affected parties (I&APs) are invited to register and submit comments, concerns or questions in writing via **email:** southerngeo13@gmail.com on or before Saturday **09 August 2023**.

Registration and comments:

**PROPOSED ESTABLISHMENT AND OPERATION OF A LITHIUM PROCESSING PLANT
ON MINING CLAIM 73418, DAURES CONSTITUENCY, ERONGO REGION.**

I hereby wish to register as an Interested and Affected Party (I&AP) in respect of the undergoing environmental scoping assessment on proposed project.

Participant name:	Organization/affiliation:
Position:	Email:
Contact number:	Postal Address:
My questions, comments, issues or concerns on this project are...	

I Nghiishiti
P O Box 616, Oshakati
Contact Number: +264 85 785 5538
Email: southerngeo13@gmail.com

Signature: _____

Date: _____

Please return this completed document (with all requested details)