

## **INTRODUCTION**

Mr. Daniel Stephanus Malan, the owner of EPL 6072, hereinafter referred to as the Proponent intends to apply for an Environmental Clearance Certificate (ECC) to commence with mineral verification exploration activities on EPL 6072 formerly known as EPL 3877, overlapping the Khomas and Hardap regions, Namibia. See Figure 1.

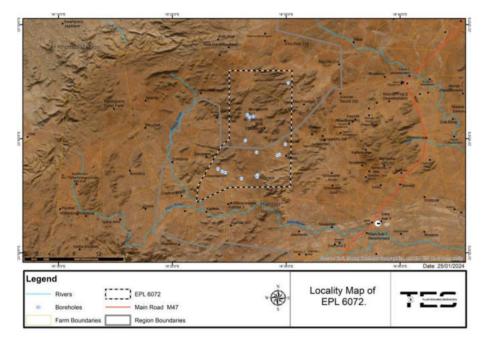


Figure 1 - The locality map of EPL 6072

The Proponent intends to explore for base (copper) and precious (gold) metals on EPL 6072. The EPL is situated approximately 94 km southwest of Rehoboth.

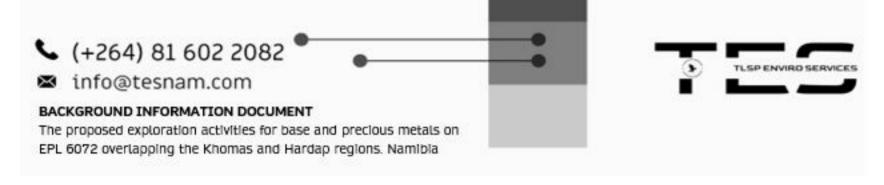
TLSP Enviro Services (T.E.S) was appointed to conduct the environmental clearance certificate application process on their behalf. As part of the process, T.E.S has commenced with stakeholder communication about the plans designed by the Proponent on EPL 6072. The necessary specialist studies required to assess the project comprehensively will also be managed by T.E.S.

## Exploration Background on EPL 6072

The tenement (EPL 6072) overlaps part of the Kalahari Copper Belt, a copper province that extends from south-west Namibia to north-east Botswana and hosts several copper mines and important deposits such as Oamites, Klein Aub and Swartmodder. Historical reports from exploration on Farm Witkrans point to mineralizations of copper, gold, silver, lead, and barite which have been exploited on a small scale (GeoExperts, 2013). It is against this backdrop that the Proponent will continue professional exploration activities on the tenement to verify the mineral occurrences as contained in historical exploration reports developed for the tenement.

Exploration activities envisioned for the Project are:

- Soil sampling;
- Seismic surveys,
- Bulk sampling; and
- Drilling



#### Access to FPL 6072

The EPL can be reached via the well-maintained gravel road C24 from Rehoboth toward the village of Kobos. From Kobos a 30 km stretch of farm road heads in a south westerly direction through a number of private farms toward the EPL. The Proponent intends to maintain the existing farm road toward the EPL for the benefit of the farming community in the area.

## THE PROPOSED PROJECT PLAN

## Exploration methodology proposed

In parallel to mapping, sampling, and surveying, trenching on already known mineralised outcrops is proposed to continue and bulk samples taken for ore treatment tests. Once the surficial extension of base metals mineralization is confirmed, a regime of shallow drilling should commence per target area (to be determined). It is proposed to use mainly R/C drilling to delineate shape and size of the exploration targets and to add a few diamond-drilled holes (core drilling) for mineral identification (GeoExperts, 2013).

# Water and electricity requirements

Exploration activities require a supply of water which will either be brought to the site or abstracted from existing or new boreholes. The required volume of water needed will depend on the exploration program. Water needs in the initial phases of mineral exploration will be minimal, limited to human consumption and ablution facilities. If diamond drilling is required to test a target, then larger volumes will be required.

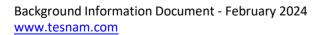
Should the Proponent find good groundwater during the exploration activity, a borehole may be used as a water source. Permission must be sought from the rightful landowners and the necessary abstraction permit to be attained from the Directorate of Water Affairs (DWA). Alternatively, if there are existing boreholes in the vicinity, they could be utilized with the landowner's permission and necessary permits / agreements in place. Only sustainable yields may be abstracted.

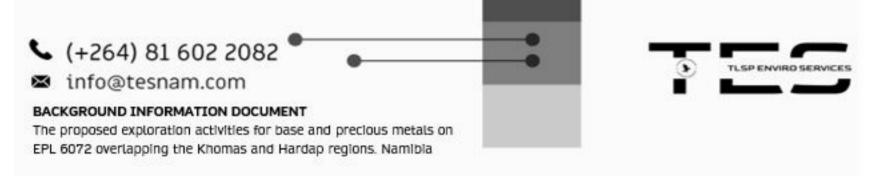
The Proponent will evaluate what electrical supplies are readily available to the Project. A diesel-powered generator may be used in remote locations for short-term work as needed for exploration equipment and lighting for the Project (drill site and camp site). All the necessary permits should be in place to store bulk diesel on site. Alternatively, the use of solar power could be an option to be considered at a later stage in a semi-permanent camp and long-term work.

#### **Equipment requirements**

Exploration equipment requirements include:

- A 4x4 double cab pick-up, to help with people transport, logistics and getting material to site.
- 6 x B40 dumpers;
- 2 x 966 front-end loaders;
- 3 x 40-ton excavators;
- 2 x TLB's.
- 1 x drill rig;
- 1 x D6 Dozer; and
- 4 x Dump trucks





## THE ENVIRONMENTAL ASSESSMENT PROCESS

The assessment is triggered by the following listed activities contained within the Regulations of the EMA of 2012.

## 3. Mining and Quarrying Activities

- (3.1) The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.
- (3.2) Other forms of mining or extraction of any natural resources whether regulated by law or not.
- (3.3) Resource extraction, manipulation,...and related activities.

# 1. Energy Generation, Transmission, and storage activities

(a) The generation of electricity.

# 2. Waste management, treatment, handing and disposal activities

- (2.1) The construction of facilities for waste sites, treatment of waste and disposal of waste.
- (2.2) Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976

## 4. Forestry activities

(4) The clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity that requires authorisation in terms of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.

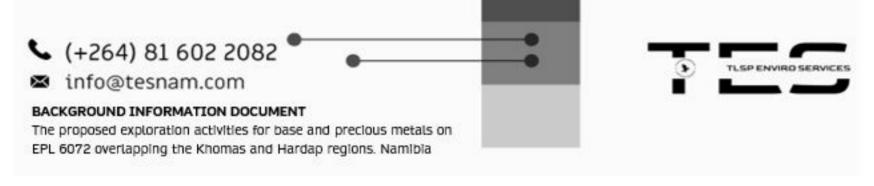
#### 8. Water Resource developments

- (8.1) The abstraction of ground or surface water for industrial orcommercial purposes.
- (8.5) The construction of dams, reservoirs, levees, and weirs.
- (8.6) The construction of industrial and domestic wastewater treatmentplants and related pipeline systems.
- (8.8) The construction and other activities in water courses within floodlines.

# 9. Hazardous substance treatment, handling, and storage

(9.2) Any process or activity which requires a permit, licence or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.

The scope of the assessment for the ECC application will focus on the EPL licence area, the immediate surroundings and the access road to determine the potential impacts the proposed exploration activities may have on the biophysical and social environments potentially affected by the Project. The assessment will therefore aim to develop suitable and implementable mitigation measures



contained within an environmental management plan by the Proponent for the duration of the ECC licence period.

## **ENVIRONMENTAL BASELINE MONITORING**

## Ambient air quality monitoring

Baseline dust deposition monitoring will be commissioned to determine baseline ambient air quality levels pre-exploration and during exploration. The monthly results will be used to develop a long-term air quality trend of the Project's activities on ambient air quality within and outside the EPL.

The three main purposes of a fallout dust monitoring programme are:

- To meet legislative requirements;
- To indicate long term trends; and
- To generate or maintain awareness of dust generating activities on site.

The evaluation criteria used is captured in Table 1 below.

Table 1 - Evaluation Criteria for dust fallout control

Restriction areas	Dust fall rate (D) mg/m2/day (30 day average)	Comment	Permitted frequency of exceeding dust fall rate
Residential	D < 600	Permissible for	2 within a year,
		residential and	not sequential
		light commercial	months

Non-	600 < D < 1200	Permissible f	or	2 within a year,
Residential		heavy commercia	al	not sequential
		and industrial		months
		and muustriai		IIIOIILIIS

The monthly average dust fallout concentrations for heavy commercial and industrial areas below 1200mg/m2 /day "are permissible". For residential areas, and interchangeably used for rural areas the monthly average dust fallout concentrations not exceeding 600mg/m2 /day "are permissible".

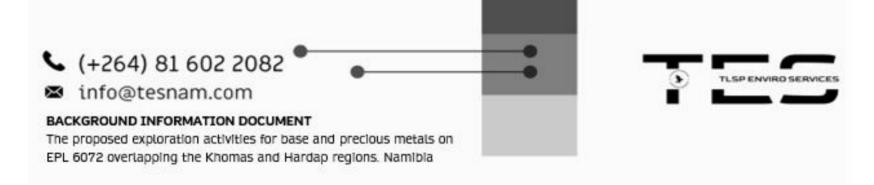
#### **Groundwater resource monitoring**

Once the aquifer dynamics are determined and the sustainable yields per borehole calculated in comparison to project requirements, the groundwater levels will be monitored on a monthly basis. Water quality sampling and testing campaigns will be run on a quarterly basis and the results recorded and submitted to the Directorate of Water Affairs.

# Specialist studies required for the project include:

- Biodiversity study of the general area across the EPL
- Heritage and archaeological study
- Groundwater Study
- Traffic impact study





## THE ENVIRONMENTAL APPROVAL PROCESS

The assessment process as depicted in Figure 2 is an accurate representation of the pathway adopted by the government of the Republic of Namibia as contained in the Environmental Management Act (EMA) of 2007. The Act's implementation strategy is contained in the Regulations of the EMA of 2012.

## POTENTIAL ENVIRONMENTAL IMPACTS ANTICIPATED

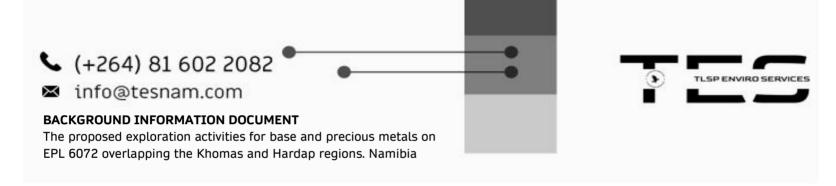
The following list of impacts is anticipated to be created by the project as its physical elements interact with natural aspects. These are:

- Groundwater and surface water impacts:
  - Water quality (potential pollution to ground and surface water sources)
  - Sustainable groundwater supply (sustainable yield exceedance)
- Biodiversity impacts
  - o Fauna disturbance (human-wildlife conflict)
  - o Flora disturbance and pollution
  - Habitat fragmentation
  - Soil pollution
- Air quality impacts
- Heritage and cultural impacts
- Socio-economic impacts
  - Traffic impact on access roads
  - Macro and micro economic impacts

Proposal Identificatio Screening EIA Requiered No EIA Current stage of the environmental examination ElA process: Development of a \*Public involvement Scoping Assessment Report. Impact analysis \*Public involvement typically Mitigation occurs at these point, it may and impact also occur at any other stage managment of the EIA Process EIA Report Review \*Public involvement Resubmit Decision-making Information from this process Not approved Approved contributes to effective future EIA Implementation

Figure 2 - The assessment process.

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These impacts are not exhaustive and may be added towards as the scope and consequent assessment process evolves. The full list of impactswill be detailed in the scoping report.

## **PUBLIC PARTICIPATION PROCESS**

Public participation is the cornerstone of the Environmental Impact Assessment process. During the public participation process, I&AP's will be given the opportunity to comment on the findings of the reports, during the specified comment periods.

The public is notified through:

- Newspaper advertisement;
- Public site notices;
- Phone calls/WhatsApp / Text messages;
- Emails;
- Registered Post Mails;
- Face to Face public meetings, and
- Notification through government/regional and local organizations.

I&AP's are hereby invited to comment on environmental, social, and economic issues relating to the proposed project. The inputs from a broad variety of stakeholders will complement the assessment process.

# THE IMPACT ASSESSMENT METHODOLOGY

Identify the project's potential impacts:

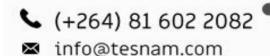
- Conduct a site visit and review project plans to identify potential impacts.
- Consult with stakeholders, including community members, government agencies, and NGOs, to identify concerns and issues (where applicable).
- Review relevant regulations and guidelines to identify potential impacts.

### **Categorize impacts:**

- Categorize impacts based on their environmental, social, and economic dimensions.
- Identify whether each impact is direct or indirect, and primary or secondary.
- Consider the scale of each impact, including the size, intensity, and duration.

## **Evaluate the significance of impacts:**

- Assess the significance of each impact based on its overall scoreor ranking.
- Determine whether each impact is significant or not, based on a predetermined threshold or criteria.
- Consider the potential for cumulative impacts (where applicable),
  which may be significant, even if individual impacts are not.



#### **BACKGROUND INFORMATION DOCUMENT**

The proposed exploration activities for base and precious metals on EPL 6072 overlapping the Khomas and Hardap regions. Namibia



## Mitigate impacts:

- Develop a plan to mitigate or reduce significant impacts, including measures to prevent or minimize negative impacts and enhance positive impacts.
- The Proponent (where applicable) should consider alternative project designs or locations that could reduce impacts.

# Assess the significance of each impact using a standardized methodology:

To ensure uniformity, the assessment of potential impacts will be addressed in a standard manner so that a wide range of impacts are comparable. Each impact identified will be assessed in terms of probability (likelihood of occurring), extent (spatial scale), intensity (severity) and duration (temporal scale). To enable a scientific approach to the determination of the impact significance (importance), a numerical value will be linked to each rating scale. The sum of the numerical values will define the significance. The following criteria will be applied to the impact assessment for the EIA/EMP.

Table 2 - Significance rating table scales definitions

Criteria	Description
Nature	Reviews the type of effect that the proposed activity will

Criteria	Description
	have on the relevant component of the environment andincludes "what will be affected and how?"
Extent	Geographic area. Indicates whether the impact will be within a limited area (on site where construction is to takeplace); local (limited to within 25km of the area); regional (limited to ~200km radius); national (limited to the coastline of Namibia); or international (extending beyond Namibia's boarders).
Duration	Whether the impact will be temporary (during construction only), short term (1-5 years), medium term (5-10 years), long term (longer than 10 years, but will cease after operation)or permanent.
Intensity	Establishes whether the magnitude of the impact is destructive or innocuous and whether or not it exceeds set standards, and is described as none (no impact); low (where natural/ social environmental functions and processes are negligibly affected); medium (where the environment continues to function but in a noticeably modified manner); or high (where environmental functions and processes are altered such that they temporarily or permanently cease and/or exceed legal standards/requirements).
Probability	Considers the likelihood of the impact occurring and is



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Criteria	Description
	described as uncertain, improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of prevention measures).
Significance	Significance is given before and after mitigation. Low if theimpact will not have an influence on the decision or require to be significantly accommodated in the project design, Medium if the impact could have an influence on the environment which will require modification of the project design or alternative mitigation (the road realignment route can be used, but with deviations or mitigation). High where it could have a "no-go" implication regardless of any possible mitigation (an alternative route should be used).
Status of the impact	A statement of whether the impact is positive (a benefit), negative (a cost), or neutral. Indicate in each case who is likely to benefit and who is likely to bear the costs of eachimpact.
Degree of confidence in predictions	Is based on the availability of specialist knowledge andother information.



## Mitigation measures:

There are three different types of controls (Figure 8) available to deal with the effects of residual impacts experienced on any project, and the aim is to lessen the significance value of these residual impacts to a lower and acceptable tier, in order to make them generally more manageable and environmentally friendly. Specifically designed mitigation measures per impact identified in this assessment are contained within the environmental management plan (EMP) that will be compiled.

Various Mitigation types employed in the assessment are illustrated in Figure 3 and described below.

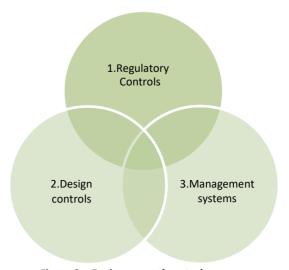
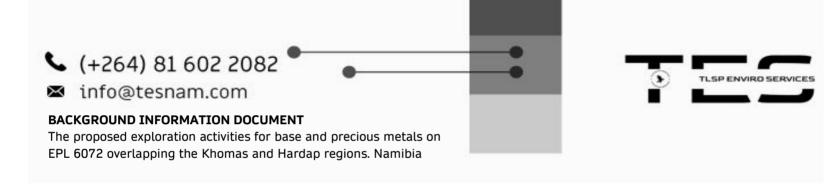


Figure 3 - Environmental control measures



- 1. Governmental or legal policies and agreements to control emissions, pollution, or natural resource usage.
- 2. Redesigning of project systems or products to minimise environmental impacts.
- 3. Ensuring environmental considerations are incorporated into all aspects of project management.

## **C**ONCLUSION

The environmental clearance certificate application process will be conducted using the legislative pathway as described in this document, whilst the assessment will be conducted using the methodology as explained within this report as well. The draft assessment report will be circulated to all registered stakeholders for input and review once completed, before finalsubmission to the government.

Should you wish to register as an I&AP have any comments and input, kindly forward them to the below contact details:

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