I.N.K Enviro Consultants

SCOPING (INCLUDING IMPACT ASSESSMENT) REPORT

GALORE TRADING'S PROPOSED EXPLORATION ACTIVITIES ON EPL 8727, LOCATED APPROXIMATELY 30 KM SOUTH OF OTAVI, OTJOZONDJUPA REGION, NAMIBIA

AUGUST 2022

DOCUMENT CONTROL	
REPORT TITLE	GALORE TRADING'S PROPOSED EXPLORATION ACTIVITIES ON EPL 8727, LOCATED APPROXIMATELY 30 KM SOUTH OF OTAVI, OTJOZONDJUPA REGION, NAMIBIA
PROJECT NO.	EGI02
CONSULTANT	I.N.K ENVIRO CONSULTANTS CC
CLIENT	GALORE TRADING CC
DATE	AUGUST 2022
CURRENT REVISION	FINAL REPORT
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CONSULTANT'S EXPERTISE

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by Galore Trading cc to undertake the environmental impact assessment process.

Immanuel N. Katali, the EIA Lead Practitioner holds a B.Arts (Honors) in Geography, Environmental Studies and Sociology and has over six years of relevant experience in conducting/managing Environmental Impact Assessments (EIAs), Socio-Economic Impact Assessments (SIA) and compiling Environmental Management Plans (EMPs) in Namibia. Immanuel is certified as an environmental practitioner under the Environmental Assessment Professionals Association of Namibia (EAPAN).

DECLARATION OF INDEPENDENCE AND DISCLAIMER

The consultant herewith declare that this report represents an independent, objective assessment of the environmental impacts associated with the activities of the proposed exploration activities on the request of Galore.

I.N.K has prepared this report based on an agreed scope of work and acts in all professional matters as an independent environmental consultant to Galore and exercises all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession.

The information, statements and commentary contained in this Report have been prepared by I.N.K from information provided by Galore and from discussions held with stakeholders. I.N.K does not express an opinion as to the accuracy or completeness of the information provided, the assumptions made by the party that provided the information or any conclusions reached. I.N.K has based this Report on information received or obtained, on the basis that such information is accurate and, where it is represented to I.N.K as such, complete.

I.N.K is not responsible and will not be liable to any other person or organisation for or in relation to any matter dealt within this report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in this report (including without limitation matters arising from any negligent act or omission of I.N.K or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in this report). This report must not be altered or added to without the prior written consent of I.N.K.

EXECUTIVE SUMMARY

Galore Trading cc (Galore) has successfully obtained Exclusive Prospecting Licence (EPL) 4827, located approximately 30 km south of Otavi, Otjozondjupa Region. EPL 8727 is approximately 11 492 Hectares (ha) in size. The EPL is located on the eastern boundary of the existing B2Gold Mine (Figure 1). Galore is planning exploration activities on the EPL for Dimension Stone, Base and Rare Metals, Industrial minerals and Precious Stones. Preliminary activities such as geophysics, mapping, scouting exercises, soil sampling, as well as future drilling activities are planned for the area.

The Ministry of Mines and Energy (MME), Directorate of Mines undertakes to exploit the country's mineral resources in a manner which integrates mining into the various economic sectors for socio-economic development of the country. In order to achieving this mandate MME partners with various companies who place a leading role in the implementation of the mining activities. MME has therefore partnered with Galore Trading cc represented to conduct exploration activities on EPL 8727.

Galore is planning exploration activities on the EPL. Preliminary activities such as geophysics, mapping, scouting exercises, soil sampling, as well as future drilling activities are planned for the area.

All issues that have been raised to date by authorities and I&APs have been recorded as part of the Scoping Report. Below is a summary of the key issues raised:

- Noise
- Safety and Security

The potential impacts are assessed further in section 8 of this report.

The proposed exploration activities will include:

- Geological Mapping: Review of geological maps of the area and on-site ground traverses and observations. Small samples of rock may be collected for further analysis.
- Ground and Airborne Geophysical Surveys: The collection of information of the substrata, by air or ground, through sensors such as radar, magnetic and electromagnetic to detect any mineralisation in the area.
- Drilling and Excavation: Certain areas will be drilled and excavated to collect sample blocks for analysis. A small area of land will be cleared on which to set up the excavation.

It is I.N.K's opinion that the environmental aspects and potential impacts relating to the proposed exploration activities have been successfully identified.

The assessment found that the proposed project present the potential for minimal additional risks and related impacts in the mitigated scenario. With regards to air quality; and third parties safety, without mitigation in place, the impacts related to people is likely to result in unacceptable impacts. With mitigation measures in place, the impacts reduce significantly.

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1 INTRODUCTION

1.1 Background

Galore Trading cc (Galore) has successfully obtained Exclusive Prospecting Licence (EPL) 4827, located approximately 30 km south of Otavi, Otjozondjupa Region. EPL 8727 is approximately 11 492 Hectares (ha) in size. The EPL is located on the eastern boundary of the existing B2Gold Mine (Figure 1). Galore is planning exploration activities on the EPL for Dimension Stone, Base and Rare Metals, Industrial minerals and Precious Stones. Preliminary activities such as geophysics, mapping, scouting exercises, soil sampling, as well as future drilling activities are planned for the area.

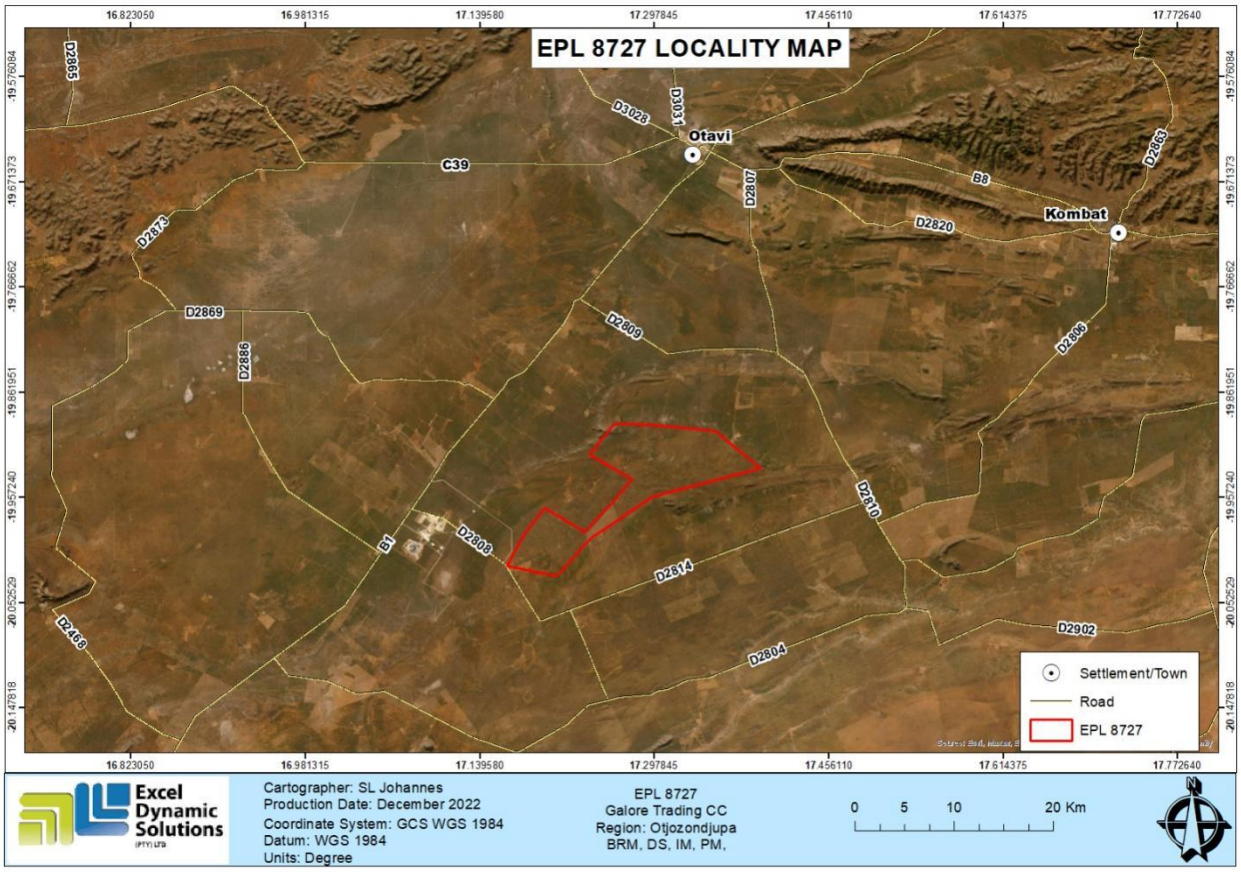

Figure 1: Locality Map for EPL 8727

Prior to the implementation of the project, environmental clearance is required from the Ministry of Environment, Forestry and Tourism (MEFT): Department Environmental Affairs (DEA) on the basis of an approved EIA process, in terms of the Environmental Management Act, 2007 (No. 7 of 2007).

I.N.K Enviro Consultants cc, an independent firm of environmental consultants based in Namibia, has been appointed by Galore Trading cc to undertake and manage the EIA process.

1.2 Motivation (Need and Desirability)

The Ministry of Mines and Energy (MME), Directorate of Mines undertakes to exploit the country's mineral resources in a manner which integrates mining into the various economic sectors for socio-

economic development of the country. In order to achieving this mandate MME partners with various companies who place a leading role in the implementation of the mining activities. MME has therefore partnered with Galore Trading cc represented to conduct exploration activities on EPL 8727.

Galore is planning exploration activities on the EPL. Preliminary activities such as geophysics, mapping, scouting exercises, soil sampling, as well as future drilling activities are planned for the area.

1.3 Introduction to the Environmental Impact Assessment

Environmental Impact Assessments are regulated by the Ministry of Environment, Forestry and Tourism (MEFT) in terms of the Environmental Management Act, 7 of 2007. This Act was gazetted on 27 December 2007 (Government Gazette No. 3966) and enacted on 6 February 2012. The Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Government Gazette No. 4878) were promulgated on 6 February 2012.

Prior to the commencement of the proposed exploration, an environmental clearance is required from the Ministry of Environment, Forestry and Tourism (MEFT): Department Environmental Affairs (DEA) on the basis of an approved EIA process.

This EIA process is conducted in terms of the Environmental Management Act, 7 of 2007 and the above mentioned EIA regulations. This process includes: a screening phase and a scoping phase, which will include an impact assessment and an Environmental Management Plan (EMP) for EPL 8727.

This report is the Scoping Report, with assessment included. The main purpose of this report is to provide information relating to the proposed activities and to indicate which environmental aspects and potential impacts have been identified during the Screening and Scoping phases. This report consists of information obtained from site observations, and the results of stakeholder consultation. The potential impacts of the proposed activities (and associated ancillary infrastructure) could therefore be assessed, and the assessment is also included in this report.

It is thought that this Scoping Report (including an assessment of impacts), together with the attached revised EMP, will provide sufficient information for the MEFT to make an informed decision regarding the proposed project, and whether an environmental clearance certificate can be issued or not.

1.4 EIA Process

The EIA Scoping process and corresponding activities are outlined in Table 1

Table 1: EIA Process

Objectives	Corresponding activities
Project initiation and Screening phase	
• Initiate the screening process • Initiate the environmental impact assessment process.	• Site Visit • Identify Key Stakeholders • Early identification of environmental aspects and potential impacts associated with the proposed project.
EIA Phase with combined Scoping and Assessment	

- Notify the decision-making authority of the proposed project
- Identify interested and/or affected parties (I&APs) and involve them in the scoping process through information sharing.
- Identify potential environmental issues associated with the proposed project.
- Consider alternatives.
- Identify any fatal flaws.
- Determine the terms of reference for additional assessment work.
- Provide a detailed description of the potentially affected environment.
- Assessment of potential environmental impacts.
- Design requirements and management and mitigation measures.
- Receive feedback on application.
- Notify government authorities and I&APs of the project and EIA process (telephone calls, e-mails, faxes, newspaper advertisements and site notices).
- Conduct Public Participation Process
- Investigations by technical project team.
- Compilation of draft scoping (combined assessment) and EMP reports.
- Distribute draft scoping (combined assessment) and EMP reports to authorities and I&APs for review.
- Forward the final scoping (combined assessment) and EMP reports and I&APs comments to MET for review.
- MEFT review and Record of Decision.

1.5 EIA Team

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by Galore Trading cc to undertake the environmental impact assessment and related processes.

Immanuel N. Katali, the EIA project manager and lead practitioner holds a B.Arts (Honours) Degree in Geography, Environmental Studies and Sociology and has over seven years of relevant experience in conducting/managing EIAs, compiling EMPs and Socio-Economic Studies. Immanuel is certified as an environmental practitioner under the Environmental Assessment Professionals Association of Namibia (EAPAN).

2 SCOPING METHODOLOGY

2.1 Information collection

I.N.K used various information sources to identify and assess the issues associated with the proposed project. These include:

- Site visits by I.N.K;
- Consultation with Project Technical Team (Galore) and relevant information shared by Galore;
- Consultation with MEFT via online application system;
- Consultation with I&APs,
- Google Earth; and
- Internet sources.

2.2 Scoping Report

The main purpose of this Scoping Report is to indicate which environmental aspects relating to the proposed project might have an impact on the environment, to assess them and to provide management and mitigation measures to avoid or minimise these impacts.

Table 2 outlines the Scoping Report requirements as set out in Section 8 of the Environmental Impact Assessment Regulations that were promulgated in February 2012 in terms of the Environmental Management Act, 7 of 2007.

Table 2: Scoping report Requirements stipulated in the EIA regulations

Requirements for a Scoping Report in terms of the February 2012 regulations	Reference in report
(a) the curriculum vitae of the EAPs who prepared the report;	Section 1.4.2 and
(b) a description of the proposed activity;	Section 4
(c) a description of the site on which the activity is to be undertaken and the location of the activity on the site;	Sections 4 & 6
(d) a description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed listed activity;	Sections 6, 7
(e) an identification of laws and guidelines that have been considered in the preparation of the Scoping Report;	Section 3
(f) details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including - (i) the steps that were taken to notify potentially interested and affected parties of the proposed application; (ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given; (iii) a list of all persons, organisations and organs of state that were	Sections 2.3, 2.4, 2.5

registered in terms of regulation 22 as interested and affected parties in relation to the application; and (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;	
(g) a description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity;	Sections 1.3 and 5
(h) a description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the proposed listed activity;	Sections 7
(i) terms of reference for the detailed assessment; and	Section 7
(j) a management plan, which includes - (i) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure; (ii) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and (iii) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation remedy the cause of pollution or degradation and migration of pollutants.	Separate Document

2.3 Public Participation Process

The public participation process for the proposed project is conducted to ensure that all persons and/or organisations that may be affected by, or interested in the proposed project, were informed of the project and could register their views and concerns. By consulting with relevant authorities and I&APs, the range of environmental issues to be considered in this Scoping Report (including the assessment of impacts) has been given specific context and focus.

Included below is a summary of the I&APs consulted, the process that was followed and the issues that were identified.

2.4 EPL 8727 I&APs

The following table (Table 3) provides a list of persons, group of persons or organisations that were informed about the project and were requested to register as I&APs should they be interested and/or affected.

Table 3: Stakeholders

IAP Grouping	Organisation
Government Ministries	▪ Ministry of Environment and Tourism (MET); • Department of Environmental Affairs (DEA);
Residents/Farms	• Namibia National Farmers Union Farms nearest and within to EPL 8727:
Media	Newspaper adverts: Die Republikein and The Namibian Sun (17 and 30 May)
Other interested and affected parties	Any other people with an interest in the proposed project or who may be affected by the proposed project.

2.5 Steps in the consultation process

Table 4 sets out the steps that were followed as part of the consultation process:

Table 4: Consultation process with I&APs and Authorities

TASK	DESCRIPTION
Notification - regulatory authorities and IAPs	
Notification to MEFT	I.N.K submitted the Application Form to MEFT.
IAP identification	A stakeholder database was developed for the proposed project and EIA process. Additional I&APs were updated during the EIA process as required.
Distribution of background information document (BID)	BIDs were made available to all I&APs on the project's stakeholder database and were available during consultations. Copies of the BID were available on request to I.N.K. The purpose of the BID was to inform I&APs and authorities about the proposed project, the EIA process, possible environmental impacts and means of providing input into the EIA process. Attached to the BID was a registration and response form, which provided I&APs with an opportunity to submit their names, contact

TASK	DESCRIPTION
	details and comments on the project.
Newspaper Advertisements	Block advertisements were placed as follows: ▪ Die Republikein (17 May and 30 May 2022) ▪ The Namibian Sun (17 May and 30 May 2022)
Submission of comments	
Consultations	Several consultations were made with I&APs, particularly the farmers.

2.6 Summary of issues raised

All issues that have been raised to date by authorities and I&APs have been recorded as part of the Scoping Report. Below is a summary of the key issues raised:

- Noise
- Safety and Security

The potential impacts are assessed further in section 8 of this report.

3 ENVIRONMENTAL LAWS AND POLICIES

The Republic of Namibia has five tiers of law and a number of policies relevant to environmental assessment and protection, which includes:

- The Constitution.
- Statutory law.
- Common law.
- Customary law.
- International law.

Relevant policies currently in force include:

- The EIA Policy (1995).
- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation (1994).
- The National Climate Change Policy of Namibia (September 2010).
- Minerals Policy of Namibia (2004).
- Policy for the Conservation of Biotic Diversity and Habitat Protection (1994).
- Policy for Prospecting and Mining in Protected Areas and National Monuments (1999).

As the main source of legislation, the Constitution of the Republic of Namibia (1990) makes provision for the creation and enforcement of applicable legislation. In this context and in accordance with its constitution, Namibia has passed numerous laws intended to protect the natural environment and mitigate against adverse environmental impacts.

The EIA Policy (1995) is enforced through the Environmental Management Act, 7 of 2007 and the EIA Regulations of 6 January 2012 (EIA Regulations). In terms of this legal framework certain identified activities may not commence without an environmental clearance issued by MEFT (see section 1.4.1).

The Minerals Policy of Namibia (2004) sets out guiding principles for the development of the mining sector while at the same time operating within environmentally acceptable limits. To this end, one of the objectives of the Policy is listed as ensuring compliance with national environmental policy and other relevant policies to develop a sustainable mining industry. The Policy commits MME to ensuring that the development of the mining industry proceeds on an environmentally sustainable basis, that mineral development in proclaimed protected areas commences only when rehabilitation is guaranteed, investigating the establishment of financial mechanisms for environmental rehabilitation and aftercare in other areas, and to developing national waste management standards and guidelines in consultation with the mining industry.

In Namibia all mineral rights are vested in the State and are regulated by the Minerals (Prospecting and Mining) Act, 1992 (No. 33 of 1992). This Act provides for the reconnaissance, prospecting and mining for minerals in Namibia, as well as the disposal thereof. In terms of Section 3 of this Act, a licence is required from the MME before any reconnaissance, prospecting or mining operations can be undertaken.

The management and regulation of mining activities falls within the jurisdiction of the Ministry of Mines and Energy (MME), with environmental regulations guided and implemented by the Department of Environmental Affairs (DEA) within the Ministry of Environment, Forestry and Tourism (MEFT). The section below summarised the various applicable laws and policies, international treaties and protocols.

3.1 National Policies and Plans

Namibia's policies provide the framework to the applicable legislation. Whilst policies do not often carry the same legal recognition as official statutes, policies are used in providing support to legal interpretation. Relevant policies and plans currently in force include:

- The EIA Policy (1995).
- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental
- Conservation (1995).
- White Paper on the Energy Policy, 1998.
- Namibia Vision 2030.
- National Development Plan, 201/2018 – 2021/2022, guided by Vision 2030.
- Policy for the Conservation of Biotic Diversity and Habitat Protection, 1994.
- Policy for Prospecting and Mining in Protected Areas and National Monuments, 1999.
- Minerals Policy of Namibia (2004).
- Namibia's Second National Biodiversity Strategy and Action Plan (2013-2022).
- SADC Environmental Policy and Regulatory Framework for Mining (2001).
- SADC: Protocol on Mining.
- SADC: Protocol on Energy.
- National Environmental Health Policy (2002).
- National Waste Management Policy (2010).
- The National Climate Change Policy of Namibia (September 2010).
- New Equitable Economic Empowerment Framework Policy, 2011.
- National Rangeland Management Policy and Strategy of 2012
- National Agriculture Policy (2015).
- The National Policy on Prospecting and Mining in Protected Areas (2018).

3.2 Summary of Applicable Namibian legislation and standards

In the context of the proposed exploration activities, the following legislation is applicable:

- The Public Health Act 36 of 1919.
- Water Act, 1956 (No. 54 of 1956), as amended.
- Explosive Act No. 26 of 1956.
- National Monuments Act 28 of 1969.
- Soil Conservation Act 76 of 1969.
- Hazardous Substance Ordinance, No. 14 of 1974

- Nature Conservation Ordinance 14 of 1975.
- Atmospheric Pollution Prevention Ordinance 11 of 1976.
- The Constitution of the Republic of Namibia of 1990.
- Petroleum Products and Energy Act, No. 13 of 1990.
- Nature Conservation General Amendment Act 1990.
- Foreign Investment Act No. 27 of 1990.
- The Minerals (Prospecting and Mining) Act 33 of 1992.
- The Regional Councils Act No. 22 of 1992.
- Nature Conservation Amendment Act 5.
- Namibian Water Corporation Act, No. 12 of 1997.
- Road Traffic and Transport Act, 1999 (No. 22 of 1999).
- The Forestry Act 12 of 2001.
- Inland Fisheries Resources Act 1 of 2003.
- Pollution Control and Waste Management Bill (3rd Draft September 2003).
- National Heritage Act 27 of 2004.
- Atomic Energy and Radiation Protection Act, Act No. 5 of 2005 and Radiation Protection and Waste Disposal Regulations (Regulations, 2011) under this Act.
- Labour Act, 2007 (No. 11 of 2007).
- Electricity Act No.4 of 2007.
- Environmental Management, Act 7 of 2007.
- Regulations promulgated in terms of the Environmental Management, Act 7 of 2007.
- Minerals (Prospecting and Mining) Amendment Act, 8 of 2008.
- Water Resources Management Act 11 of 2013.
- Public and Environmental Health Act No.

3.3 Applicable Listed activities

The EIA Regulations promulgated in terms of the Environmental Management Act, identify certain activities which could have a substantially detrimental effect on the environment. These listed activities require environmental clearance from MEFT prior to commencing. The following activities identified in the regulations apply to the proposed Project:

Table 5: Listed Activity - EPL 8727

Listed Activity
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, conservation

4 DESCRIPTION OF THE PROPOSED EXPLORATION ACTIVITIES

Galore proposes to undertake exploration activities on EPL 8727 for dimension stone and industrial mineral.

4.1 Exploration Activities

The proposed exploration activities will include:

- Geological Mapping: Review of geological maps of the area and on-site ground traverses and observations. Small samples of rock may be collected for further analysis.
- Ground and Airborne Geophysical Surveys: The collection of information of the substrata, by air or ground, through sensors such as radar, magnetic and electromagnetic to detect any mineralisation in the area.
- Drilling and Excavation: Certain areas will be drilled and excavated to collect sample blocks for analysis. A small area of land will be cleared on which to set up the excavation.

4.2 Machinery/Vehicles

The following machinery/vehicles will be utilized in the drilling program per site area:

- (2) excavators.
- Diamond wire saw
- Support Trucks (Front and Wheel Loaders)
- Drill rig
- 4x4 Vehicles

4.3 Employment

It is anticipated that the following personnel will be employed to carry out the above-mentioned activities:

- Geologist
- GeoTechnisian
- Drill/Excavation Crew
- Semi-skilled/un-skilled workers

4.4 Access Routes

Existing access routes/roads will be used during the exploration activities, as far as possible. However, there may be a need for the creation of new routes to specific exploration sites, in liaison with farm owners.

4.5 Staff/Employment and Accommodation

Staff will be accommodated in Otavi and Otjiwarongo Town.

4.6 Exploration Timeline

The exploration period of the proposed EPL is anticipated to take approximately 6 months.

5 PROJECT ALTERNATIVES

Due to the nature and the scale of the proposed project, limited alternative options exist as described below.

5.1 The “no-go” option

Even though the proposed exploration may result in potential (additional) negative environmental and social impacts which are discussed in detail in Sections 7 & 8 of this report, it can be concluded that proceeding with this proposed exploration will have benefits at the local, regional and national scale, which will result in significant positive social and economic impacts such as employment, investment and procurement of goods and services.

6 DESCRIPTION OF THE CURRENT ENVIRONMENT

6.1 Climate

Rainfall

Rainfall events are limited to the summer months, mainly between December and March to approximately 350 – 450 mm of rain per year with a variation coefficient of approximately 30%. Evaporation is approximately 2,000 mm per year.

Temperature and Wind

The average maximum temperatures range from 32 – 34°C, while minimum temperatures are around 4 – 6°C. The dominant wind direction is from the east and south-west, with average speeds of around 15 km per hour (Mendelsohn et al., 2002).

6.2 Flora

The site is encroached by bush, dominated by *Acacia mellifera* subsp. detinens; Other woody species observed in the footprint were: *Grewia flava, A. erioloba, A. tortilis, Dichrostachys cinerea, Lonchocarpus nelsii;* − The site has been subjected to grazing in a well-managed manner and the basal cover was good for the area at 4%; − The dominant grass specie was *Stipagrostis uniplumis* with a number of *Anthephora pubescens* found, indicating fairly good condition of the veld

6.3 Fauna

Mammals

Mammal richness for the region is high with 92 species possibly occurring, but the many livestock and game farms in the region and their fences inhibit the movement of large mammals. Five of the mammal species are in the IUCN's Vulnerable or Near-threatened categories and four are considered Vulnerable or Near-threatened in Namibia (Cheetah, Brown Hyena, Pangolin, African Wild Cat). An additional ten species, mainly rodents and bats, are possibly of conservation interest but not enough data is available to categorise them. No Namibian endemic or near-endemic mammal species are present in the region.

Birds

According to SABAP 2, 301 bird species were identified in the area. The area and surrounding habitat types provide highly suitable habitat for 156 and moderately suitable habitat for 48 bird species. At the international scale, three species are considered Vulnerable, seven species Near-threatened and one species (White-headed Vulture) Critically endangered. However, more of the 301 recorded species are considered endangered on the national scale (SLR, 2018).

Table 6: International and national conservation status of bird species

Categories	International (IUCN) Red Data List	Namibian Red Data List
Near-threatened	7	8
Vulnerable	3	5

Endangered	-	12
Critically endangered	1	3

Reptiles

The distribution ranges of 80 reptile species overlap with the project site, with habitat suitability being high or medium for 51 of these species. This is relatively high species diversity.

Only ten of the species expected to occur on the site have been assessed for international conservation status by the IUCN and they are considered to be of Least Concern. On the national level, two species are considered Vulnerable, three species Endangered and five are Data Deficient but probably Rare (SLR, 2018).

Amphibians

Distribution ranges indicate that fourteen amphibian species could possibly occur in the area, with medium or high habitat suitability for nine of these. No endemic species are expected to occur. In the Namibian context it is medium-ranking amphibian diversity and the presence of most of the species are dependent on seasonally available open water (SLR, 2018).

No signs of large vertebrates were detected in the open woodland vegetation type associated with the proposed silica sand pit. This could be attributed to a recent fire covering a large part of the site. However, 34 bird species were identified during the short field investigation (SLR, 2018).

6.4 Heritage and Archaeology

A review of the National Heritage Council database and the National Information Service of Namibia was conducted, and no known heritage sites were identified within the proposed project area. If any historical importance sites or around the project area are encountered during project activities beyond the initial target area, the same will be reported to the Monument's Council in Windhoek, and the site will be left untouched.

In the event that archaeological resources are discovered, a chance find emergency procedure will be implemented which includes the following:

- All work at the find will be stopped to prevent damage;
- An appropriate heritage specialist will be appointed to assess the find and related impacts;
- Permitting applications will be made to the necessary authorities, if required.

In the event that any graves are discovered during the exploration activities, these will be avoided and preserved as a first priority. If damage is unavoidable, prior to damaging or destroying any identified graves, permission for the exhumation and relocation of graves must be obtained from the relevant descendants (if known) and the relevant local and regional authorities.

6.5 Topography and drainage

The steep east-west ridge rises some 500m above the surrounding plains which are fairly flat. The surface drainage (as shown on a 1: 50,000 topographical map) is typical of drainage in limestone or karst areas in that watercourses from the ridge end abruptly on the plains as the water seeps into the ground.

The overall drainage pattern is then northward and then westward. However there is little surface water flow on the plains for the reason mentioned above.

6.6 Hydrogeology

Folding of the strata also resulted in associated joints and fractures which are important for the hydrogeological character of the area. Groundwater flow in the area takes place mainly along fractures and contact zones within hard rock formations.

Water quality in the area is generally good. Groundwater in the study area flows in a north-westerly direction as inferred from historical groundwater data. Groundwater in the area is already extensively utilised with more than 500 known boreholes in a 50km radius. Existing boreholes in the area are drilled to less than 50m deep and yield around 5m3 /day.

6.7 Soils

The soil appears to be sandy, ranging in colour from pale brown and grey with broken calcrete pieces in it, to fine red sand – apparently of aeoloian origins. The stunted vegetation on the plains suggests that the soil is not very deep, or possibly the presence of a calcrete or shale layer may limit rooting depth. Approaching the ridge to the south of the site, however the talus slopes have deeper soil which supports large trees. Typical in this semi-arid climate the organic content of soils is usually low, with poorly developed topsoil or “A-horizon”. The topsoil is likely to be better developed in the more densely vegetated woodlands near the base of the hills.

6.8 Air Quality

The project area spans across a semi-arid area. The current dry weather conditions, as well as the areas being grazed exposes the soils to winds and generating a relatively dusty environment. Furthermore, the few roads/tracks in the area are all gravel (except for the B1 and the access road to the existing B2Gold Mine) and any traffic will generate dust. However, the population and activity in the area is very low.

The current mining activities of B2Gold generate some dust. However, no dust monitoring is currently taking place and therefore emissions listed above cannot be quantified.

6.9 Visual

The area surrounding the proposed project area is currently used for farming activities and industry (i.e. the B2Gold Mine). The area has no unique scenic features, however the B1 road is frequently used by tourists traveling between Windhoek and the north of Namibia as well as Etosha. The landscape character of the area is therefore regarded as low to moderate.

6.10 Noise

The ambient noise level around the proposed project areas is expected to be of a typical rural environment. Existing noise sources include:

- Mining activities on the B2Gold Mine.

6.11 Land-Use

The majority of land in the Region is used for cattle rearing activities. The land use in the area also includes other livestock farming (i.e. goats). The EPL 8727 is located on farm land that is relatively natural (undisturbed) used for grazing.

7 IDENTIFICATION AND DESCRIPTION OF POTENTIAL ENVIRONMENTAL IMPACTS

7.1 Aspect and Impact identification

Table 6 provides a summary of all the operational activities/facilities and the potential impacts associated with the exploration activities on EPL 8727.

The relevance of the potential impacts ("screening") are also presented in the tables below to determine if certain aspects need to be assessed in further detail (Section 8 of this report). Because of the existing baseline information obtained from the various studies conducted in the past; the detailed history of Environmental Applications; potential impacts of a similar nature has been assessed as part of this EIA process. Also, the relevant management and mitigation measures, to minimise or prevent the potential impacts, will be provided in Section 8 of this report.

Table 7: environmental aspects and Potential impacts

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
Exploration Activities	Clearing of vegetation and soil stripping (earthmoving equipment)	Potential impact on biodiversity (physical impacts and general disturbance) • Loss of habitat • Loss of biodiversity	The potential impacts relating to the physical destruction and disturbance of biodiversity is assessed as having a high significance (without mitigation) reducing to high-medium (with mitigation). Taking the above into consideration, the potential physical impacts on biodiversity have been assessed (refer to Section 8). The related management and mitigation measures are stipulated in the EMP.	**R01**
		Potential impact on archaeological sites • Destruction and loss of archaeological material	No visible archaeological artefacts or heritage sites were noted in the vicinity of the proposed areas by I.N.K and Archaeology Specialist during the site visits.	**R02**
	Exploration and drilling/excavation	Impact on groundwater water quality	The proposed project poses the risk of contamination of water resources, mainly through accidental spills of hydrocarbons etc. However, due to the scale of the project, there is a low risk of big hydrocarbon spillages. The potential impacts relating to groundwater contamination were assessed as having a low significance both with and without mitigation. The potential impacts on groundwater have been assessed as part of this EIA. Refer to Section 8 for the assessment of the potential impacts relating to surface water and groundwater. The related management and mitigation measures as presented in the EMP.	**R03**
	Drilling, blasting,	Increase in dust	Even though the anticipated air quality impacts are expected to be less	**R04**

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
	loading and vehicle movement causing dust	levels/health impacts • Nuisance / Air pollution • Increased risk of respiratory diseases	significant during the exploration project, the potential impacts of dust generation have been assessed as part of this EIA. Refer to Section 8 for the assessment of the potential impacts relating to air quality. The related management and mitigation measures are stipulated in the updated EMP.	
	Drilling, blasting, and other mining activities causing noise	Increase in disturbing noise levels (nuisance) • Noise pollution • Increased risk of damage to property	Even though the anticipated noise related impacts are expected to be less significant during the exploration project, the potential impacts of noise generation have been assessed as part of this EIA. Refer to Section 8 for the assessment of the potential impacts relating to noise. The related management and mitigation measures are stipulated in the updated EMP.	**R05**
	Blasting hazards	Increase in ground vibrations and fly rock have the potential to damage structures and property. • Risk of damage to surrounding structures • fly rock can be released over a	Given the significantly small scope and scale of the exploration project, this issue will not be further assessed in this report.	**R06**

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
		distance and can be harmful to people and animals/risk of accidents		
	Dust and other air emissions	Increase in dust levels (nuisance & health impacts)	Refer to reference R05 (similar comments apply).	**R07**
	Movement of haul trucks on roads	3rd party safety • Increased risk of accidents	Given the significantly small scope and scale of the exploration, this issue will not be further assessed in this report.	**R08**
	Oil and diesel spillages from earth moving equipment	• Contamination of surface water and groundwater resources • Soil pollution	The potential for hydrocarbon spillages from earthmoving equipment (also during the refuelling of machinery and equipment) is always a possibility. Hydrocarbon spillages have the potential to cause an impact on soil and even groundwater. Even though the proposed "mini mining" project is small in scale and in scope (with assumed lower impacts), the potential pollution related impacts on soil, surface water and groundwater have been assessed as part of this EIA. Refer to Section 8 for the assessment of these potential impacts. The related	**R09**

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
			management and mitigation measures are stipulated in the updated EMP	
	Clearing of bush and soil stripping (earthmoving equipment)	Potential impact on biodiversity (physical impacts and general disturbance)	Refer to reference R01 (similar comments apply).	**R10**
		Potential impact on archaeological sites	Refer to reference R02 (similar comments apply).	**R11**
	Noise	Increase in disturbing noise levels (nuisance)	Refer to reference R05 (similar comments apply).	**R12**
	Surface Water	Contamination of surface water resources	Refer to reference R03 (similar comments apply).	**R13**
	Groundwater	Contamination of groundwater resources (via contaminated soils/surface water).	Refer to reference R03 (similar comments apply).	**R14**
		Reduction of groundwater levels due to borehole abstraction	Given the nature of the exploration project, the potential impacts of dewatering have been re-assessed as part of this EIA. Refer to Section 8 for the assessment of the potential impacts relating to groundwater levels. The related management and mitigation measures are stipulated in the updated EMP.	**R15**
	Visual	Increased visual impact	Given that the proposed exploration project is smaller in scale and in scope (with assumed lower visual impacts), the potential visual impacts have been assessed as part of this EIA. Refer to Section 8 for the assessment of these	**R16**

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
		• Loss of aesthetics	potential impacts. The related management and mitigation measures are stipulated in the updated EMP.	
	Soils	General disturbance and pollution of soils	Refer to reference R10 (similar comments apply).	**R17**
	Biodiversity	General disturbance of biodiversity	Refer to reference R01 (similar comments apply).	**R18**
		Destruction of biodiversity		
Transport, storage and handling of hydrocarbons, exploration material, mineralised waste etc.	Increase in vehicular movement	Increased traffic impacts on the roads	Refer to reference R08 (similar comments apply).	**R19**
	Potential spillage/leakage of hydrocarbons etc.	Pollution of surface water resources, groundwater resources and soil contamination	Refer to reference R04 (similar comments apply).	**R20**
General activities, offices and buildings, ablution facilities, domestic waste generation	Waste disposal	Emissions to land, impact on biodiversity, environmental degradation and nuisance impacts	Due to the scope and scale of the proposed exploration project, the type and volumes of non-mineralised waste will be minimal. The operational workforce at the site will be approximately 10 people and therefore overall waste generation is expected to be limited. The recyclable portion of general waste (including scrap metal, wood, paper, plastic, glass and cans) will likely be separated at source and will be removed from site to appropriate recycling facilities. Endeavours will be made to return e-waste and chemical containers to the suppliers. The waste will be periodically covered to prevent windblown litter and scavengers.	**R21**

ACTIVITY/FACILITY RELATING TO OPERATIONAL PHASE	ASPECT	POTENTIAL ENVIRONMENTAL IMPACT	RELEVANCE (SCREENING) OF POTENTIAL IMPACT	Ref
			This issue will therefore not be further assessed .	
General operations, employment and resource management	Economic impacts	Impacts on local economy, informal settlements, • Increased employment opportunities • Opportunity for skills transfers • increased demand for basic infrastructure,.	The significance of the socio-economic impacts is assessed. Even though the proposed explorationnproject is small in scale and in scope (with assumed low impacts), the potential socio-economic impacts (positive and negative) have been assessed as part of this EIA. Refer to Section 8 for the assessment of these potential impacts. The related management and mitigation measures are stipulated in the updated EMP	
	In-migration and community health /safety and security			
	Impacts on neighbouring communities	Noise, air emissions, community health/safety and security etc.		**R22**

With reference to Table 6 above, the following issues were identified as requiring assessment.

- Physical impacts on biodiversity due to bush clearing activities;
- Third party (and animals) safety:
- Air quality impacts (dust).
- Noise and vibrations

Refer to Section 8 of this Scoping Report for an assessment of the above mentioned issues.

8 ENVIRONMENTAL IMPACT ASSESSMENT

Table 7 shows the methodology used to conduct the qualitative assessment. Both the criteria used to assess the impacts and the method of determining the significance of the impacts is outlined. This method complies with the Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Government Gazette No. 4878) EIA regulations. Part A provides the approach for determining impact consequence (combining severity, spatial scale and duration) and impact significance (the overall rating of the impact). Impact consequence and significance are determined from Part B and C. The interpretation of the impact significance is given in Part D. Both mitigated and unmitigated scenarios are considered for each impact.

Table 8: Assessment Methodology and Criteria

PART A: DEFINITION AND CRITERIA		
Definition of SIGNIFICANCE		**Significance = consequence x probability**
Definition of CONSEQUENCE		**Consequence is a function of severity, spatial extent and duration**
Criteria for ranking of the SEVERITY/NATURE of environmental impacts	**H**	Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action. Irreplaceable loss of resources.
	M	Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints. Noticeable loss of resources.
	L	Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints. Limited loss of resources.
	L+	Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	M+	Moderate improvement. Will be within or better than the recommended level. No observed reaction.
	H+	Substantial improvement. Will be within or better than the recommended level. Favourable publicity.
Criteria for ranking the DURATION of impacts	**L**	Quickly reversible. Less than the project life. Short term
	M	Reversible over time. Life of the project. Medium term
	H	Permanent. Beyond closure. Long term.
Criteria for ranking the SPATIAL SCALE of impacts	**L**	Localised - Within the site boundary.
	M	Fairly widespread – Beyond the site boundary. Within 20 km of the site boundary.
	H	Widespread – Far beyond site boundary. Regional/ national

PART B: DETERMINING CONSEQUENCE					
			SEVERITY = L		
DURATION	Long term	**H**	**Medium**	**Medium**	**Medium**
	Medium term	**M**	**Low**	**Low**	**Medium**
	Short term	**L**	**Low**	**Low**	**Medium**
			SEVERITY = M		
DURATION	Long term	**H**	**Medium**	**High**	**High**
	Medium term	**M**	**Medium**	**Medium**	**High**
	Short term	**L**	**Low**	**Medium**	**Medium**
			SEVERITY = H		
DURATION	Long term	**H**	**High**	**High**	**High**
	Medium term	**M**	**Medium**	**Medium**	**High**
	Short term	**L**	**Medium**	**Medium**	**High**
			L	**M**	**H**
			Localised Within site boundary Site	Fairly widespread Beyond site boundary Local	Widespread Far beyond site boundary Regional/ national
			SPATIAL SCALE		

PART C: DETERMINING SIGNIFICANCE					
PROBABILITY	Definite/ Continuous	**H**	**Medium**	**Medium**	**High**

(of exposure to impacts)	Possible/ frequent	**M**	Medium	Medium	High
	Unlikely/ seldom	**L**	**Low**	**Low**	Medium
			L	**M**	**H**
			CONSEQUENCE		

PART D: INTERPRETATION OF SIGNIFICANCE	
Significance	**Decision guideline**
High	It would influence the decision regardless of any possible mitigation.
Medium	It should have an influence on the decision unless it is mitigated.
Low	It will not have an influence on the decision.

8.1 Biodiversity

The section assesses the physical impacts on biodiversity associated with the proposed exploration.

Issue: physical impacts on biodiversity

Introduction

The bush clearing activities associated with the proposed exploration has the potential to impact on biodiversity in the broadest sense. In this regard, the discussion relates to the physical destruction of specific biodiversity areas, of linkages between biodiversity areas and of related species which are considered to be significant because of their status, and/or the role that they play in the ecosystem.

Assessment of impact

Severity

In the unmitigated scenario, the clearing of the bush as well as other project related activities will result in the following impacts:

- Loss of habitats;
- Loss of shelter for smaller vertebrates, especially reptiles;
- Direct impacts to birds through removal of nest sites in plants and on the ground;
- Destruction of plants, including some of conservation concern;
- Animal mortality resulting from vehicles and machinery strikes as well as through clearing of land (i.e. slow moving animals and dormant invertebrates);
- Vehicle tracks damage the soil and inhibit root growth.
- Impacts on topsoil (i.e. damage / loss of topsoil).

In the unmitigated scenario, the severity is expected to be medium. With the implementation of mitigation measures, the severity can be reduced to low.

Duration

In the unmitigated scenario the loss of biodiversity and related functionality and subsequent colonisation of alien/invasive species is long term and will continue after the life of the operation. This is a high duration. In the mitigated scenario, the duration reduces to medium.

Spatial scale

Biodiversity processes are not confined to the project area. Due to ecosystem linkages and movement of animals, the loss of biodiversity has a medium rating.

Consequence

In the unmitigated scenario, the consequence is high. With mitigation, the consequence is low.

Probability

In the unmitigated scenario, the probability of the impact occurring is high. With the implementation of mitigation measures, the probability reduces to low.

Significance

The significance of this potential impact is medium in the unmitigated scenario and low in the mitigated scenario.

Tabulated summary of the assessed impact – physical destruction of biodiversity

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability of Occurrence	Significance
Unmitigated	**M**	**H**	**M**	**H**	**M**	**M**
Mitigated	**L**	**M**	**M**	**L**	**L**	**L**

Mitigation measures

The following actions are relevant:

- Keep footprint of project as small as possible and enforce the operational boundaries through highly visible signs and regulatory mechanisms such as fines or similar;
- Raise awareness through awareness campaigns and training of key staff;
- Once exploration is completed, replace topsoil on affected areas according to a comprehensive restoration plan;
- Compile and implement an alien invasive management plan to prevent colonisation of disturbed areas by invader species;

8.2 Third Parties' (and animals) safety

ISSUE: Dangerous excavations

Introduction

Dangerous excavations and infrastructure include all structures into or off which third parties and animals can fall and be harmed.

Assessment of impact

Severity

In the unmitigated scenario, dangerous excavations include the exploration activities. This infrastructure presents a potential risk of injury and/or death to both animals and third parties. This is a potential high severity. In the mitigated scenario the severity reduces to low as access control will be implemented at the exploration sites to prevent and/or mitigate impacts.

Duration

In the context of this assessment, death or permanent injury is considered a long term, permanent impact. This is a high duration.

Spatial scale

Direct impacts associated with dangerous excavations will be located within the site boundary, with or without mitigation. The potential indirect impacts could extend beyond the site boundary to the families/communities to which the injured people and/or animals belong. This is a medium spatial scale.

Consequence

The consequence is high in both the unmitigated and mitigated scenarios.

Probability

In the unmitigated scenario, without management interventions, the probability of the impact occurring is expected to be medium due to the remoteness of the site. The mitigation measures focus on limiting access to third parties and animals which reduces the probability of the impact occurring to low.

Significance

In the unmitigated scenario, the significance of this potential impact is high. With the implementation of mitigation measures, the significance of this potential impact is medium because the probability of the potential impact occurring is reduced.

Tabulated summary of the assessed impact – dangerous excavations

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability of Occurrence	Significance
Unmitigated	**H**	**H**	**M**	**H**	**M**	**H**
Mitigated	**L**	**H**	**M**	**H**	**L**	**M**

Mitigation measures

The following actions are relevant:

- The operational area will be fenced along the perimeter in order to control access by third parties and wildlife. The entrance gate will be staffed while mining activities are underway. During times when mining is not taking place, the entrance gate will be locked.

8.3 Air Pollution

ISSUE: Air pollution

Introduction

The activities associated with the exploration have the potential to cause additional dust related impacts, particularly the access / haul road associated with the proposed exploration where receptors reside within the zone of impact.

Assessment of impact

Severity

The main source of nuisance dust associated with the proposed expansion is the access / haul road for the materials.

In the unmitigated scenario, where the residents of the homestead and cattle post remain in their current lodgings; and the (original) "proposed route" is followed for hauling of the limestone, the severity of this impact is high.

In the mitigated scenario the severity reduces to low as an alternative route further away from the households (more than 1 km) will be followed (or third parties are relocated) and additional dust mitigation measures will be applied.

Duration

In both the unmitigated and mitigated scenarios, if human health impacts occur, these are potentially medium to long term in nature. This is a medium to high duration. Dust fallout impacts are of medium (nuisance) duration.

Spatial scale

Cumulative air quality impacts are expected to be limited to the site boundary (i.e. the proposed ML area). This is a low spatial scale.

Consequence

In the unmitigated scenario, the consequence is medium to high. With the implementation of mitigation measures, the consequence reduces to low as the severity is reduced.

Probability

The health and nuisance impact probability is linked to the probability of ambient concentrations exceeding acceptable limits at third party receptors. Given that acceptable limits relating to specifically nuisance impacts will most likely be exceeded in the unmitigated scenario, the probability is high. Given the small scale and limited duration of the exploration activities, the likelihood of health related impacts are possible in the unmitigated scenario. With mitigation the probability reduces to low.

Significance

In the unmitigated scenario, the significance of the potential impact is medium high. In the mitigated scenario, the significance reduces to low.

Tabulated summary of the assessed air quality impacts – dust fallout

Mitigation	Severity	Duration	Spatial Scale	Consequence	Probability of Occurrence	Significance
Unmitigated	**H**	**M-H**	**L**	**M-H**	**H**	**M-H**
Mitigated	**L**	**M**	**L**	**L**	**L**	**L**

Mitigation measures

The following mitigation measures are recommended:

- Dust suppression on haul roads though the spraying of water.
- Monitoring the fallout dust at the closets sensitive receptor (i.e. above mentioned farm house) during the (and after) the mining activities to determine if there is an increase in ambient fallout dust levels.

8.4 Socio-economic environment

Socio-Economic Benefits

Introduction

The project has the potential to create socio-economic benefits through employment creation and economic contributions. The benefits include employment opportunities, skills and development training and indirect capital injection into businesses in Otavi and Otjiwarongo and overall Otjozondjupa Region.

The project has potential to create employment, particularly for unskilled and semi-skilled labour.

Due to the fact that social impacts cannot be assessed in isolation, the assessments presented below are cumulative.

Severity

The proposed project will contribute to the economy in the following positive ways:

Direct benefits include the sales of services provided by the operations; direct number of persons employed and their wages and salaries, taxes paid, and profits earned.

The provision of products and services to the project in order to produce, as well as the inputs purchased by the upstream supply chain will provide indirect economic benefits.

The spending of salaries and wages of construction workers and farm employees/contractors and of input providers on consumer goods will provide induced benefits. If these products and services are produced locally there will be greater economic impact, hence “Buy Namibian”. The economic spin-offs from the project’s construction and operations will provide income to the employees, their immediate household members and to others living elsewhere in Namibia who depends on cash remittances.

Impact on Government revenue

The project will be responsible for corporate tax, sales tax and import duties. Some additional revenue will be gathered from the personal income tax of direct employees, their municipal rates, and VAT on goods and services they purchase, similarly for other employees in the supply chain of goods and services.

Duration

In the normal course, the direct positive economic impacts associated with the project will occur for the life of operations. After decommissioning and closure there will be limited opportunities through aftercare and monitoring activities. The project would have contributed to the establishment of a critical economic mass and hence the benefits of wealth creation and a better skilled workforce are expected to continue beyond the life of operations.

Quantitatively assessing the post closure impacts is not possible at this stage as there are a number of important unknown factors such as the general state of the future economy (local, national and world-wide) and the future state of the energy and other industrial sectors.

Skills development of local people would be for the long-term, and therefore, the duration of the positive impacts is **high.**

Scale

In both the unmitigated and mitigated scenarios, the impact will be experienced both in the region and throughout Namibia. The spatial scale is widespread beyond the project site and is therefore classified as high.

The severity and scale would therefore be **high**.

Consequence

The consequence of these potential positive impacts is **high**.

Probability

The probability of the positive impacts is considered **high**.

Significance

The significance of the positive impacts is **high**, particularly if local people are employed.

Summary of cumulative Positive Impacts on Socio-Economic Environment

MITIGATION	SEVERITY	DURATION	SPATIAL SCALE	CONSEQUENCE	PROBABILITY OF OCCURRENCE	SIGNIFICANCE
Unmitigated	H	H	H	H	H	H+
Mitigated	H	H	H	H	H	H+

Mitigation Measures

The following key measures for increasing the potential positive impacts should be implemented:

- Local people be preferentially selected to encourage social growth and development in the region, town and Namibia as a country; and

- Management is urged to begin local selection and provide technical training as soon as possible to enable local people to compete for the lower skilled jobs and upskill themselves in anticipation of the proposed project.

Issue: Negative Impacts on the Socio-economic Environment

Introduction

Although the project may benefit the socio-economic environment, the project may also draw people to the town (in-migration), which may place pressure on existing services and opportunities and may create health and safety issues, such as housing, health, sanitation and educational facilities. The influx of people may also result in an increase in negative social behaviours including an increase in the crime rate. It may also lead to increase in the spread of diseases.

Severity

The project is likely to stimulate a considerable influx of job-seekers. In-migration usually leads to an increased incidence of social ills including alcoholism, drug abuse, prostitution, gambling and criminality. Alcohol abuse is part of the accepted social norm in Namibia and is often stimulated by cash earnings which increase the likelihood of domestic violence (usually against women and children), unprotected sex and the spread of HIV. The influx of job seekers may increase over-crowding which increases the spread of TB.

Most of the seasonal workforce is unlikely to bring their families for a short-term contract. Management must therefore encourage local employment. There will be an increased demand on existing government infrastructure, in particular housing and medical facilities as a result of the project.

In the unmitigated scenario, the inward migration issue is predicted to have a cumulative **medium** severity. In the mitigated scenario, the inward migration severity may reduce to **low**.

Duration

In the normal course, these social impacts associated with the project will occur for the life of the operations. However, issues associated with inward migration can become self-feeding and are likely to extend for a much longer period.

The negative impacts, if not kept in check and mitigated, will be **medium**. If mitigated in conjunction with the Otavi Town Council, the impacts could be reduced to **low**.

Scale

In both the unmitigated and mitigated scenarios, the impacts of inward migration and pressure on Government services will be felt mainly in the region. The spatial scale is therefore **medium** but can be reduced to **low** through mitigation.

Consequence

The consequence of the negative impacts will be **medium** but if mitigated, then **low**.

Probability

The probability of the negative impacts is considered **medium** if unmitigated, and **medium** to **low** if mitigated.

Significance

The probability of the negative impacts is considered **medium** but if mitigated, the impacts are considered to be **medium to low**.

Summary of cumulative negative Impacts on Socio-Economic Environment

MITIGATION	SEVERITY	DURATION	SPATIAL SCALE	CONSEQUENCE	PROBABILITY OF OCCURRENCE	SIGNIFICANCE
Unmitigated	M	M	M	M	M	M
Mitigated	L	L	L	L	M-L	M-L

Mitigation Measures

The following key mitigation measures are recommended:

- Local people be preferentially selected to encourage social growth and development in the region and Namibia as a country;
- Management should work closely with the Otavi Town to manage in-migration, and the effects thereof;
- Management is urged to begin local selection and provide technical training as soon as possible to enable local people to compete for the lower skilled jobs and allow potential candidates to upskill themselves.

9 CONCLUSION AND WAY FORWARD

It is I.N.K's opinion that the environmental aspects and potential impacts relating to the proposed exploration activities have been successfully identified.

The assessment found that the proposed project present the potential for minimal additional risks and related impacts in the mitigated scenario. With regards to air quality; and third parties safety, without mitigation in place, the impacts related to people is likely to result in unacceptable impacts. With mitigation measures in place, the impacts reduce significantly.

10 REFERENCES

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