
Environmental Scoping Report for the Proposed Exploration and Quarry Activities



at

Romeo Nel Farming

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LIST OF ACRONYMS

NDP:	National Development Plan
EIA:	Environmental Impact Assessment
EMP:	Environmental Management Plan
EMA:	Environmental Management Act

1. INTRODUCTION AND BACKGROUND

1.1 Background

EnviroSolutions has been appointed by The Proponent, Mr. Romeo Nel, to undertake an Environmental Impact Assessment and complete an Environmental Management Plan for the exploration and quarry project located in the Proponent's Farm, located near Schlip in the Hardap Region.

This is in line with the requirements of the Environmental Management Act (EMA, 2007) and the Environmental Assessment Guidelines as per Government Gazette, 06 February 2012. The Proponent intends to mine natural occurring stones and cut the stones to be used as building material or floor tiles. The proposed stone processing activity will provide raw material for building and activities in the area of Schlip.

1.2 Purpose of the Scoping report

The scoping report provides all the relevant information that is necessary for a proper understanding of the nature of issues identified during the scoping process including;

- Detailed description of the project and reasonable alternatives identified
- Description of the area/property on which the project is to be undertaken
- Description of the environment that will be affected by the project activities
- The manner in which physical, biological, social, economic and cultural aspects will be affected by the project
- Description of proposed mitigation measures for the identified potential impacts

1.3 Scope of the study

An environment baseline assessment was conducted in the project area. From the baseline assessment and consultation with neighboring farm owners, there were no critical issues identified to require specialist studies. The only detailed study was a vegetation mapping to identify the abundance of protected species. This was done as a joint assessment between the consultants and in consultation with the Ministry of Agriculture.

Neighboring farm owners were informed of the intended development by means notices that were placed on farm gates. An Environmental Management Plan with mitigatory measures to minimize the impact on the environment has also been completed as part of the application for an Environmental Clearance Certificate.

1.4 The Project Site

The project area is located South of Rehoboth near south of Schlip and is best appreciated in the figures below:

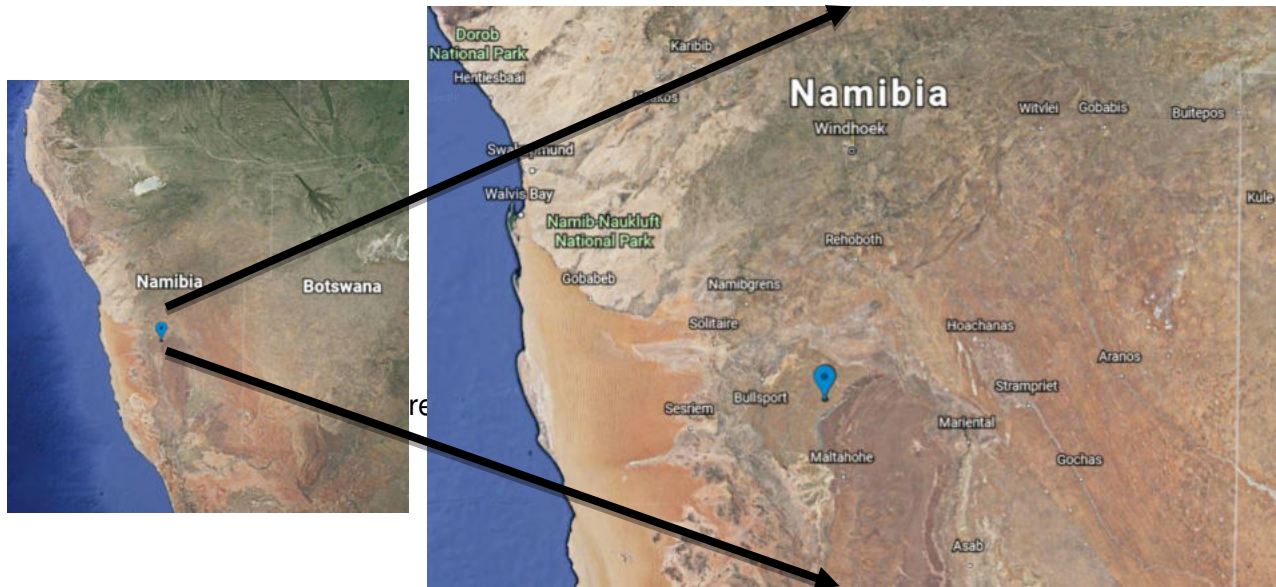


Figure 1: Location of the Farm

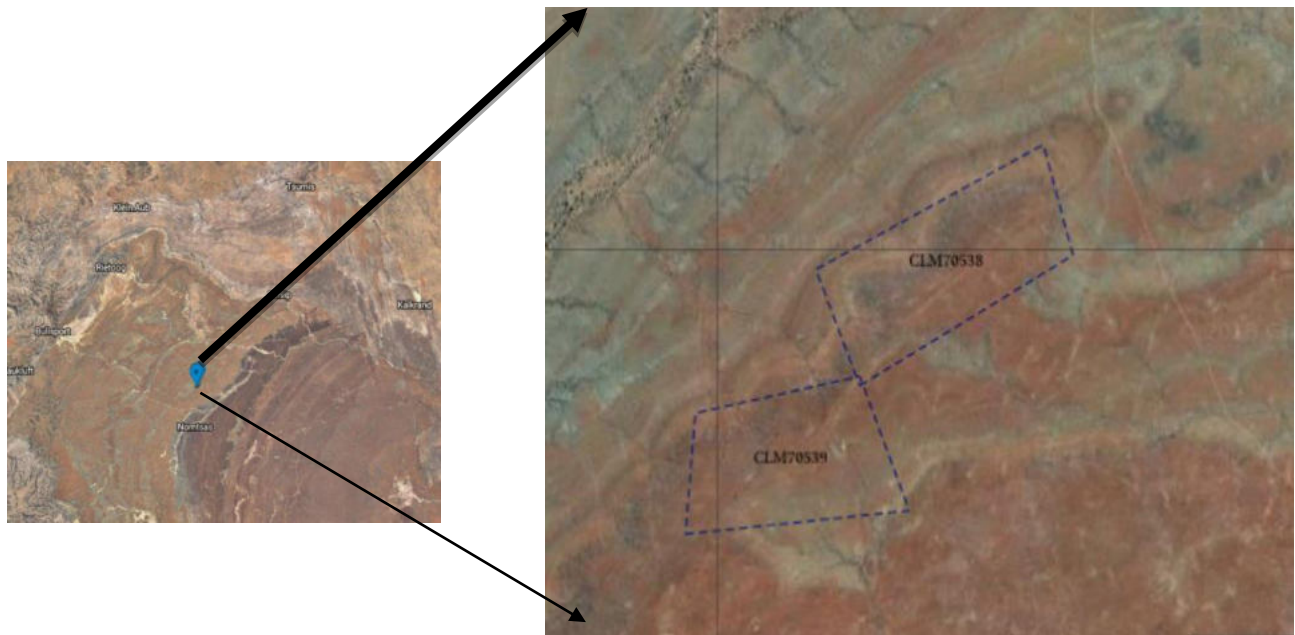


Figure: Location of the Stone Quarry Area on the Farm

2. PROJECT DESCRIPTION

2.1 The need for the Project

The proposed project will be an important supplier of alternative building material, i.e. stones bricks and floor tiles in the Hardap Region. This project would also ensure that building material is available to the local community. It is necessary to have projects of this nature to sustain construction projects as well as household requirement in the area considering that the only source of bricks and tiles are from Rehoboth, Mariental and Windhoek.

Most importantly the project will contribute to employment creation through direct and indirect opportunities. In addition, the project will also contribute to the local economy through infrastructure and skills development.

2.2 Project Activities

Stones will be sourced from the outcrop deposits by means of manual digging using picks and shovels. No blasting or drilling activities will be required, because the quality of the stones could be sacrificed if other techniques are used. The stones slabs will be uncovered in layers of about 0.5 meters depth, and it is expected that the final depth of the pits that will be about 3 meters.

The figure below is an indication of the methods that will be used:



The stones will be sorted, polished and cut into different sizes by means of a generator-operated cutting machine. It is estimated that about 100 **tons** of polished stones will be produced per month. It is anticipated that project will run for about 10 years at the planned production volume. An area of about 2ha will be affected during the expected lifetime of the operations.

The project will employ about 10 workers on permanent basis and several other workers on short term contract basis. The proposed working schedules will be shifts of 8 hours per day.

Employees will only be sourced from within Namibia and all permanent personnel will be provided with accommodation on the farm. No night shift activities will be conducted.

2.3 Project infrastructure

It is planned to construct temporary structures that will be used for the following:

- Storage area for equipment and tools
- Ventilated pit latrine toilet facilities and,
- Workers quarters

Water Supply: The water supply at the site will be sourced from a nearby borehole, which is currently not in use. The water supply will be primarily used for human consumption since the manual labor operational process does not require water. Ventilated Pit latrines will be used for toilet facilities.

Electricity Supply: A Portable diesel generator will be used for electricity supply. Alternative energy sources like gas and solar will also be used to at the accommodation facilities for the workers.

Equipment: 2 light vehicles and 1 truck will be used onsite and fuel will be stored in two 210-liter containers. Shovel and Picks will be used by the workers to uncover and remove the layers of stone slabs.

Operational Process: All stones will be loaded on a Pick-up truck and moved to the Stone Sorting Area that will be located close to the pits. A stone cutting machine will be located at the sorting area. Stones will be cut into the required sizes and polished. All processed materials (stones) will be transported to Rehoboth or Mariental. Customers will also be able to collect their stones at the site using 4 wheels drive pick-ups and/or 5-ton trucks.

Access to the site will be limited to the existing gravel roads or tracks to the farm. However, accessibility becomes difficult during rainy seasons thus the access road is crossing over the river stream which often receives heavy flows during good rains. Alternative access routes to the site will not be considered since these type of delays are normally temporary.

2.4 Technology and Process Description

The project is a surface quarry and does not involve any blasting or drilling as materials are excavated manually and then manually loaded onto pick-ups or a 5-ton truck. The material is then sorted and cut into different sizes. Shallow pits will be created as a result of digging; this will require refilling with rejected material, i.e. waste material is used to refill the open pits.

The envisaged activities are expected to cause dust generation, but this will be limited since manual excavation methods will be used.

Generally, there will be no waste to be generated from the process. There only waste materials will be a silt and fine stones which will be thrown back in the pit. Moreover, these waste materials are not mixed with any toxic and thus pose no threats to the environment.

3. LEGISLATIVE REQUIREMENTS

In order to pursue a state of sustainability the project will take cognizance of relevant legislations, policies and guidelines. This also serves to inform the project developer of the requirements and expectations laid out in terms of these instruments which need to be fulfilled before the commencement of the proposed project. The relevant legal frameworks are as follows;

3.1 Environmental Management Act 7 of 2007

The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to establish the Sustainable Development Advisory Council; to provide for the appointment of the Environmental Commission and environmental officers; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concerns about the proposed project.

3.2 Environmental Impact Assessment Policy

Namibia's Environmental (Impact) Assessment Policy for Sustainable Development and Environment Conservation was approved by Cabinet in 1995. This policy requires that all policies, programmes and projects, as listed in the policy, whether they are initiated by the government or private sector, should be subject to an Environmental Impact Assessment (EIA). The Government of Namibia recognizes that EIAs are key tools to further the implementation of a sound environmental policy which strives to achieve Integrated Environmental Management (IEM). The purpose of the Policy is seen as informing decision makers and promoting accountability, ensuring that alternatives and environmental costs and benefits are considered, promoting the 'user pays' principle, and promoting sustainable development.

3.3 Water Resources Management Act 2004

This act provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. In addition, the Act clearly gives provision that pertains with license or permit that is required for abstracting and using water as well as for discharge of effluent. The effluent of human waste under this framework is the main focus; hence mobile toilets are earmarked to be used to avoid any seepage into existing water courses, infiltration into soil and etc.

3.4 Forest Act, 12 of 2001

Deforestation of natural forests has important implications for *soil erosion, biodiversity loss and global warming*. This Act requires that tree species and any vegetation within 100m from a watercourse may not be removed without a permit (S22 (1)). It also prohibits the removal of and transport of various protected plant species. The Act further requires any project activity that will result in clearance of certain Forests to obtain a Forest Permit beforehand.

3.5 National Development Plans

The National Development Plan No.4 stated that any development project must aim to promote the protection of biodiversity, the maintenance of essential ecological processes, life-support systems, and the establishment of sound environmental management systems for the benefit of Namibia'. The Environment sub-sector of NDP3 has identified four goals which the proposed mine should consider in order offsetting negative impacts:

Goal 1: Improved condition of natural resources and biodiversity throughout Namibia's different vegetation and habitats.

Goal 2: Improved living conditions in both rural and urban areas due to sound environmental management.

Goal 3: A strong climate-change strategy in place with Namibia prepared for managing the predicted impacts, especially those that affect the Namibians living in rural areas.

Goal 4: An enabling environment to foster environmental sustainability is created, including investments in necessary human resources development.

3.6 National Heritage Act 27 of 2004

The Act provides provisions for the protection and conservation of places and objects of national heritage significance, and to register to places and objects under that framework. The project will ensure that should any archaeological objects defined in the Act found in the course of its operations, it will be communicated to the custodian ministry immediately.

4. ASSESSMENT PROCEDURES

The following procedures were used to collect baseline data, assess project impacts on the environment and local community and propose mitigation measures.

4.1 Baseline Assessments

Baseline data were collected by means of direct observation from the sites as well as from secondary data, i.e. existing document relevant to the site such as socio-economic reports, and surveys.

4.1.1 Site Visits

The initial site visit was conducted in June this year and several site visits were done in August. Data that were collected from site visits includes, flora and fauna of the sites, information regarding settlements, access to the site etc.

4.1.2 Review of previous studies

The following secondary sources were reviewed;

- Relevant legal frameworks, i.e. Acts, Policy and Guidelines
- Previous studies in the area (i.e. soil and vegetation studies)

4.2 Stakeholder Participation process

4.2.1 Identification of Interested and Affected Parties and stakeholders

The envisaged project was introduced to all neighboring farm owners, The Ministry of mines and Energy and the Ministry of Environment and Tourism. The aim of these consultations was to ensure that all relevant Government ministries, regional and traditional authorities, are aware of the development,

5. ENVIRONMENTAL AND SOCIO-ECONOMIC DESCRIPTION

5.1 Climate, Vegetation

The Farm is in the central southern part of Namibia. This project area is flanked by three biomes: The Succulent Karoo to the south, the Desert to the west, and the arid Kalahari to the east,

5.1.1 Climate

The climate of this area is essentially continental and is little affected by the ameliorating influences of the Atlantic Ocean. It is an arid biome and most of the rivers are no perennial. Historically, most rain falls in late summer (December to April). The low rainfall is unreliable (coefficient of variation of annual rainfall up to 40%) and droughts are unpredictable and sometimes prolonged. Rainfall quantity and reliability increase towards the east, and this is one of the key reasons why the Proponent intends to diversify and consider the stone quarry as an alternative means of income generation.

Rain is brought by unpredictable late summer thunderstorms and occasional inland intrusions of winter high-pressure systems from the west, whereas convectional thunderstorms and southerly movement

5.1.2 Vegetation

The project site is dominated by low (dwarf) shrubs (generally less than 1 m tall) intermixed with grasses, succulents, geophytes and annual forbs. Small trees occur only along most drainage lines on the farm or on the rocky outcrops.

The farm has a relatively low vegetation diversity, and during the site visit it was observed that the area received very little rainfall.

Natural disturbance factors that influence vegetation dynamics are mainly linked to human actions and farming methods. The Proponent keeps a limited number of livestock to preserve the natural vegetation and ensure the vegetation diversity is not significantly disturbed.

5.1.3 Surface and Ground Water

No surface water was observed on the farm and one well has been sunken near the Farmhouse. This well is primarily used for providing water to the livestock.

5.1.4 Economy and Development

The surroundings areas of the project area is relatively under-developed and the locals mainly practice livestock farming. The main source of energy for domestic use is wood or charcoal. The main household income is derived from farming or from wages and salaries that is obtained by farm owners that work in urban centers. Other income also comes from cash remittances, small business or non-farming, and pensions.

Much of the employment and economic activity in the region thus relies on farming and this contribute substantially to the local economy. Tourism is also an important flourishing sector in the region, with innovative community and business partnerships evolving. The region has abundant of great assists which attract more tourists to the region.

The Proponent intend to introduce a stone quarry and polishing, as an alternative economic activity in this region. This will potentially provide new employment opportunities and decrease the dependence on livestock farming.

6. Potential Social and Environmental Impacts

Within the accepted broad definition of the term “environment” that applies to Environmental Impact Assessments, it is required to assess potential socio-economic impacts as part of this assessment. The significance of the impact and the resulting management priority arising from the occurrence of an aspect is a function of the two factors described below:

1) Likelihood of the impact:

An environmental aspect is considered to be the “trigger mechanism” that will result in the occurrence of the environmental impact or consequence. The potential significance of the impact is therefore a function of the likelihood that the impact will occur. (Note: The assessment of likelihood is specific to the occurrence of the aspect and not the activity). The likelihood of an impact is related to the level of control associated with the activity under normal and abnormal conditions and the potential for accidents to happen. A rating is allocated to each impact according to the following table:

Likelihood	Highly likely	3
	Could Occur	2
	impossible	1

2) Consequence of the impact:

If the impact has taken place, the consequences of the impact is assessed. The effect of pollution to the environment and the business are considered when determining the consequences. A score is allocated to each impact according to the following table:

Consequence	Severe effect	3
	Medium effect	2
	Minor effect	1

Overall Impact Rating:

The likelihood and the consequence scores are then multiplied to allocate an overall rating.

High	7 to 9
Medium	4 to 6
Low	1 to 3

6.1 SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MEASURES

Activity	Impact Description	Significance Before Mitigation	Mitigatory Measure	Significance After Mitigation
Digging of pits and trenches with and Picks and Shovels to uncover Stone Slabs	Dust could be generated when pits are dug, and stones are uncovered during operations.	Medium	Manual digging will generate limited dust. Any other activities that can generate dust should be limited when excessive winds are blowing. Since the project site is on private land and in an isolated area, nuisance will only be experienced by the farm occupants. Workers should be provided with Personal Protective Equipment and dust masks to limit personal exposure to dust.	Low
	Vegetation Clearance and Habitat destruction. This may result in the disturbance of biodiversity by changing the natural habitans of local flora and fauna	Medium	Only rocky outcrops will be targeted where limited vegetation occurs. The disturbance to natural habitats and other ecological hotspots at the site will be avoided. The removal of protected species will be permitted. Preserving the natural vegetation on the site is important to ensure grazing areas for the animals are preserved as far as possible.	Low
	Soil Erosion. Project activities may increase the vulnerability of soil to erosion by means of water or wind	Medium	Unused rocks and topsoil will be used to filling pits and trenches to avoid deep open trenches. Apply some mulching on the soil to avoid wind erosion.	Medium

Activity	Impact Description	Significance Before Mitigation	Mitigatory Measure	Significance After Mitigation
Waste management	Solid Waste It is also expected that extra solid waste i.e. plastic, bottles etc will be generated at the site.	Medium	All solid waste should be kept in container with lids. Solid waste should be removed from site regularly	Low
	Ablution facilities for construction workers: Incorrect ablution facilities for employees during operations will result in unhygienic conditions at the project site.	High	Ventilated pit latrines and a septic tanks sewer system will be utilized. The waste from ablution facilities should be removed from site on a regular basis. The number of people on the project site will primarily consist of the workers.	Low
Vehicle Traffic	Noise and Dust from operations vehicles: Excessive noise can be generated by vehicles.	Medium	The digging and loading activities will take place on private land. Activities will not be visible to neighbors and the likelihood that noise can be a disturbance is low since manual digging will be done by the workers. It is expected that work hours will only be during the day. Vehicles should be kept in a good mechanical condition to prevent excessive noise from vehicles.	Low
	Increased Traffic Volumes. It is envisaged to sell stone slabs to potential new customers that may cause an increased in traffic volumes to the farm.	Medium	Traffic flow will primarily be on the property of the Proponent. Existing tracks on the farm will be used that is directly connected to a National C-Route.	Low
Water Use	Access to water. Access to water is primarily from boreholes on the farm.	Low	The digging and trenching activities will not require any water. Water will be primarily for human consumption. The cutting and polishing of stones will require limited water with the anticipated volumes of stones that will be processed. Since the operational process is very labour intensive it is not expected to impact the current water supply from the existing boreholes.	Low
Socio Economic Opportunity	Employment creation. The project will result in 10 new job opportunities. Accommodation will be provided on the farm for employees.	Low	People from the local communities, e.g. Schlip, will be considered for employment opportunities.	Low

7. CONCLUSION AND RECOMEDATIONS

This document highlighted the potential environmental impacts for the envisaged project. Provided that the mitigatory measures as listed are applied and adhered to, as independent consultants, the project can be implemented successfully.

- Mitigatory measures should be implemented to protect and conserve as much of the areas on the farm that will not be used as part of this project.
- Well established trees should not be removed.
- Nuisance dust and noise may be generated. There are however no sensitive noise receptors near the project area, and the affected party will mainly be the farm owner. It would however be good practice to limit activities to daylight hours.
- The area that is earmarked for this development is environmentally not regarded as a sensitive area and no Red Data species are known to occur on the project site. This should however be continuously monitored during the digging and vegetation clearing process.
- There will be loss of vegetation and biodiversity with the establishment of this project, but it is limited to the claims only.
- The envisaged project will potentially create job opportunities for about 10 people.

It is therefore recommended that the project be considered for approval.



.....
Mr. Julian Van Wyk
EnviroSolutions

Reviewed by:



.....
Mr. Alan Jenneker

8. APPENDICES

8.1 Appendix A: Invitation for Stakeholder Comments

- This was posted at the surrounding farm entrances, as well as the project site farm gates

8.3 Attachments:

The following documents has been attached

- a). Claim details: Ministry of Mines and Energy
- b). Letter of Consent from Ministry of Mines
- c). Proof of Payment – Revenue Stamps
- d) Communication with Ministry of Mines regarding claim amendments