

# Application for a Mining Permit Section 27 of the MPRDA (2002)

POTION 318 OF THE FARM MOOIPLAATS 368-JR

BACKGROUND INFORMATION DOCUMENT

Mr Pieter Pretorius

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# BACKGROUND INFORMATION DOCUMENT

## TABLE OF CONTENTS

### Contents

1	Introduction .....	2
2	Applicant.....	3
2.1	<i>Name and address</i> .....	3
2.2	<i>Life of the mine</i> .....	3
3	Existing Status of the environment prior to mining.....	3
3.1	<i>Current land use</i> .....	3
3.2	<i>Geology</i> .....	4
3.3	<i>Topography:</i> .....	4
3.4	<i>Soil conditions</i> .....	4
3.5	<i>Water Resources:</i> .....	4
3.6	<i>Flora:</i> .....	4
3.7	<i>Fauna</i> .....	4
4	The environment likely to be affected by the mining activities .....	4
4.1	<i>Climatic conditions</i> .....	4
4.2	<i>Current land use</i> .....	5
4.3	<i>Hydrology</i> .....	5
	4.3.1 Surface water.....	5
	4.3.2 Groundwater .....	5
	4.3.3 Water quality.....	5
4.4	<i>Vegetation &amp; Fauna</i> .....	5
4.5	<i>Socio-economic structure</i> .....	5
5	The mining process.....	5
5.1	<i>Mining method</i> .....	5
5.2	<i>Mine design map</i> .....	6
6	An assessment of the environment likely to be affected by mining as land use.....	7

# INTERESTED AND AFFECTED PARTY CONSULTATION REPORT

## 1 Introduction

The applicant, Mr Pieter Pretorius, is in the process of constructing an irrigation dam on his property, Portion 318 of the farm Mooiplaats 368-JR. In the excavation of the dam, sand will be removed and used for the construction of paving blocks. If sand is removed and sold, a mining right has to be in place.

Mr Pretorius is applying for a Mining Permit in terms of the Minerals and Petroleum Resources Development Act (MPRDA); to undertake the mining. The condition of a Mining Permit is a limit of 5 hectares and a 2 year period renewable for a maximum of 5 years.

The proposed mine is located approximately 5 km to the east of Mamelodi in the Tshwane Metropolitan Municipality. Existing infrastructure on the property is a farm dwelling with sheds and other farm buildings. There is no infrastructure on the area where mining is proposed. The mine can be put in production immediately after the permit has been approved.

The primary aim of the mining permit is to construct a dam to contain stormwater to be used for irrigation purposes. The construction of the dam is not a listed activity in terms of the National Environmental Management Act (NEMA); but applications of Mining Permits are. Application will therefore also be in terms of NEMA.

This Background Information Document (BID) serves the purpose of providing IAP's with the information that will allow them to participate in the EIA and meaningfully provide comments and concerns that will be incorporated into the EIA and Environmental Management Plan. Approximately 5 hectares will be required for mining.

FIGURE 1: LOCALITY PLAN



## 2 Applicant

### 2.1 Name and address

Mr Pieter Pretorius  
PO Box 566  
Silverton  
0127

Tel: +27128021209

### 2.2 Life of the mine

5 years, maximum.

## 3 Existing Status of the environment prior to mining

### 3.1 Current land use

The property is used for agricultural purposes with irrigation. There is a previous excavation that is to be expanded to form a dam that will be used to contain stormwater. The water will be used for irrigation purposes.

The current owner commenced with excavations for the dam in 2013. He has since realised that there is a market for sand and fill material. Excavations have stopped and will commence once the mining permit is in place.

Figure 1 Landuse



### 3.2 Geology

The geology of the property consists of the following:

ITEM	DETAIL
Type of mineral	Mining area: Diabase, syenite and pyroxenite (dolerite) and shale.
Depth of the mineral below surface	0 to more than 10 metres

### 3.3 Topography

The mining area is geomorphologically on a terrace the edge of which slopes towards the south west. There are no water courses or defined drainage lines.

### 3.4 Soil conditions

According to the 1: 250 000 Land Type Series and Memoir, (2526, Rustenburg and 2528 Pretoria) one soil type namely Mispah, mapping unit vsMs4RdHu3. The soil is shallow and rocky. The limiting factor as far as agricultural use is concerned is the shallow soil and rock outcrops. The soils agricultural potential is classified as 'Low to None'.

### 3.5 Water Resources

The proposed area falls within the Pienaars River catchment in the Tshwane Municipal region, Gauteng Province. There are no water courses close to the proposed mine.

According to the Johannesburg 1:500 000 Geohydrological map (2000), the underlain aquifer comprises of weathered shales, brecciated or jointed zones and especially the contact zones between intrusive diabase sheets and the shale. The current owner has previously unsuccessfully attempted to sink boreholes in two positions on the property and was consequently advised that any further attempts would be fruitless.

No water is used during the mining process.

### 3.6 Flora

The vegetation is described by Mucina and Rutherford as Marikana Thornveld. It is a rather open savanna dominated by Common hook-thorn; *Acacia caffra*. The dominant grass is *Cymbopogon plurinodis* and *Themeda triandra*. There are scattered clumps often associated with termitaria and is dominated by deurmekaarbos and soetdoring.

### 3.7 Fauna

Only small mammals in limited numbers were encountered due to the farming and mining activities in the area.

## 4 The environment likely to be affected by the mining activities

### 4.1 Climatic conditions

Dust pollution will be from trucks moving in the mining area. This may impact on surrounding property owners. During the winter months when dust tends to be more problematical, the prevailing wind direction is from the north to west.

The expected rate of mining is 6,000m<sup>3</sup> per quarter. This equates to about 2,000m<sup>3</sup> per month, or about 100m<sup>3</sup> per day resulting in only 6 daily trips per truck on average. As there will be no need to speed up the rate of mining, the amount of dust that will be generated on a daily basis is quite low. Remedial measures will nevertheless have to be implemented to reduce the potential impact.

Exhaust fumes emitted from vehicles on the road and earth movement equipment within the mining area may potentially influence surrounding land users in a similar way to that caused by the public road passing the mine. Once again, remedial measures will have to be implemented to reduce the potential impact.

## 4.2 Current land use

No agricultural related activities are conducted on the land due to the non-viability thereof. Mining will continue for up to 5 years followed by a period during which final earthworks will take place to form the dam.

## 4.3 Hydrology

### 4.3.1 Surface water

The stormwater flow over the property is currently diverted into a pond in the basin of the excavation. This water is not suitable for human use and will be used for dust suppression.

### 4.3.2 Groundwater

Groundwater is not be used during mining.

### 4.3.3 Water quality

The proposed mining activities will have no impact on water quality.

## 4.4 Vegetation & Fauna

The land is poorly vegetated in its natural state and natural vegetation has already been affected by earthworks. There is a clump of trees in the mining area; which will be retained.

## 4.5 Socio-economic structure

Existing staff will be used to carry out mining activities and as such only one or two elementary job opportunities will be created by the mine. The impact on the socio-economic structure relates mainly to the contribution of the mine towards community development in general.

Post mining the dam will make irrigation water available for agricultural purposes. New job opportunities will then be generated.

# 5 The mining process

## 5.1 Mining method

Mining will consist of the removal of the sand and gravel; the sloping of the side walls and the creation of new levels/ terraces; the return or importing of either topsoil or re-usable earth; followed by the seeding and maintenance of the finished area.

Mining depth will be determined by the nature of the deposits and will adhere to the earthworks plan. The end result will be aesthetically pleasing with final levels flowing into the surrounding landscape.



The only infrastructure required is a shed that is used for the storage of reports and for shelter of staff; and toilet facilities. The existing access road and tracks will be used. Only one excavator will be used to excavate and stockpile or load product and when sufficient loose material has been generated, the excavator will be withdrawn. Between periods of excavation a wheel loader will be brought as required to load material from the stockpile onto trucks.

Staff will not be required or allowed to overnight on the property. Machines and equipment will be kept at the sheds on the farm' which also has facilities for servicing. No oils, fuel or other substances that could result in pollution will be kept in the mining area.

The planned mining rate is for approximately 6,000m<sup>3</sup> per quarter. Theoretically, this equates to 2,000m<sup>3</sup> per month, or 90m<sup>3</sup> per day, or 5 truckloads per day. In practice it could result in two/ three days' activity per week at a slight increase in intensity while on other days no activities will be carried out.

Activities shall take place between 07h00 and 16h00 during week days and to 15h00 on some Saturdays. No work shall take place on Sundays.

## 5.2 Mine design map

The existing mine will be expanded to the west and south. The existing and final mine is indicated below:

Figure 2 Mine Plan



## 6 An assessment of the environment likely to be affected by mining as land use

Mining is normally done in phases. The first is the construction phase to establish the infrastructure and is used to identify impacts/aspects. In this instance no construction will take place. The second phase, i.e. the operational phase refers to implementation; which includes the extension of the mining area, creating a working bench and the mining of the deposits. The third is the rehabilitation phase.

Mining activities	CONSTRUCTION PHASE. No construction required	* Excavation	* Energy Use.	* Offices and Control.	IMPLEMENTATION PHASES.	PHASE-1 EXPOSING SOIL	* Removal of Topsoil	* Mining and stockpiling soil & gravel	* Loading and transporting soil	REHABILITATION.	* Covering of exposed area with topsoil	* Applying fertilizer.	* Seed and maintenance
<b>IMPACTS</b>													
<b>Land Disturbance.</b>													
*Soil Loss.		0	0	0			I	I	0		0	0	0
*Compaction.		0	0	0			0	s	0		0	0	0
*Instability of slopes.		0	0	0			I	I	0		0	0	0
*Soil contamination due to accidental spills		0	0	0			s	s	s		s	s	0
<b>Air Quality.</b>													
*Increased Ambient Particulates.		0	0	0							s	0	0
*Air Pollution-Exhaust Gases.		0	0	0			s	s	s		s	0	0
*Energy Use.		0	0	0			0	0	0		0	0	0
<b>Hydrology.</b>													
*Alteration or modification of hydrological regimes.		0	0	0			I	s	0		s	0	0
*Surface water flow alteration		0	0	0			I	0	0		0	0	0
*Ground water contamination thru spills		0	0	0			s	s	s		s	0	0
*Overuse of water.		0	0	0			0	0	0		0	0	0
*Increased Nutrient Concentrations.		0	0	0			0	0	0		0	s	0
<b>Ecology and biodiversity.</b>													
*Loss of natural habitats and biodiversity.		0	0	0			I	0	0		0	0	0
*Loss of rare and endangered species.		0	0	0			0	0	0		0	0	0
*Effects on riverine ecology.		0	0	0			0	0	0		0	0	0
*Impacts due to emissions or effluents.		0	0	0			0	0	0		0	0	0
<b>Socio-Economic and Cultural Impacts.</b>													
*Sensitive areas-Graves, historical sites. There are no sensitive areas on site.		0	0	0			0	0	0		0	0	0
*Infrastructure-Pipelines, sewage, roads, railway and power-line.		0	0	0			0	0	0		0	0	0
*Land use- Grazing, game farming		0	0	0			s	0	0		0	0	0
*Public safety		0	0	0			s	s	s		s	0	0
*Occupational health and safety.		0	0	0			I	I	I		I	0	0
*Visual effects.		0	0	0			I	I	0		0	0	0
*Noise and vibrations issues.		0	0	0			I	I	I		I	0	0
* Increased potential for respiratory disorders.		0	0	0			I	I	I		I	0	0
<b>Resources.</b>													
*Agricultural Land Loss.		0	0	0			s	0	0		0	0	0

I; Large impact

s: Moderate to small impact

0: No impact / not applicable



# COMMENT SHEET

DECLARATION PERTAINING TO PROPOSED MINING PERMIT APPLICATION ON PORTION 318 OF THE FARM MOOIPLAATS 36&-JR.

I, the undersigned,.....  
ID number ....., in my capacity as (mark please)

Land owner	
Neighbour	
IAP	
Other	

Hereby acknowledge the receipt of the Stakeholder Consultation documents explaining the process of the proposed mining operation and the possible impacts.

I wish to raise the following issues at this stage and/or propose the following amendments to the BID.

.....

.....

.....

.....

.....

I also wish to make the applicant aware of the following cultural heritage resources on my property:

.....

.....

.....

.....

I further reserve the right to raise additional issues or concerns within the next 30 days so that these may be included in the Environmental Management Plan (A copy of this form is to be faxed to 012 346-6447 or E-Mailed to [index@iafrica.com](mailto:index@iafrica.com) ) Telephone number for clarification or additional information: 012 346-5307, 012 345-6447 or 082-553-3787.

I sign the declaration in my capacity as .....

Yours faithfully,

Date ..... Signature .....

Contact number:..... E-Mail .....