



**mineral resources**

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EC30/5/1/3/3/2/1/0429EM  
12 May 2010

South African Heritage Resources Agency  
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6140

CaseID: 2468

ATTENTION: MR. T. LUNGILE

Sir

**CONSULTATION IN TERMS OF SECTION 40 OF THE MPRDA OF 2002: CONCRETE SAND (SILICA); BUILDING SAND (SILICA) AND FILLING SAND (SILICA) MINING ON REMAINDER OF PORTION 1 OF THE FARM DIE WOULD NO 500, DIVISION OF UITENHAGE, EASTERN CAPE**

1. The above refers.
2. Attached, a copy of the EMP received from Mr M Kallmeyer
3. Any written comments or requirements your department may have in this regard can be forwarded to this office no later than **10 July 2010**. Failure to do so, will lead to the assumption that your department has no objection(s) or comments with regard to the said documents. Comments may be submitted at your earliest convenience e.g. 30 days from the date hereof in order to reduce the turn around time for the application process.
4. Consultation in this regard has also been initiated with other relevant State Departments.
5. Please use the reference numbers as indicated in all future correspondence.
6. Your co-operation is appreciated.

Yours faithfully

REGIONAL MANAGER

EASTERN CAPE

429mp

**ENVIRONMENTAL MANAGEMENT PLAN:**

**APPLICATION FOR A MINING PERMIT  
W.R.T.  
THE REMAINDER OF PORTION 1  
OF THE  
FARM DIE WOOD NO. 500  
DIVISION OF UITENHAGE,  
EASTERN CAPE**

Report prepared for: Moritz Kallmeyer

Report dated: 11 May 2010

Report number: MP 1/2010

DME Reference Numbers:  
EC 30/5/1/3/2/0429 MP

REGIONAL MANAGER MINERALS AND ENERGY EASTERN CAPE REGION PRIVATE BAG / PRIVAATSAK X8076
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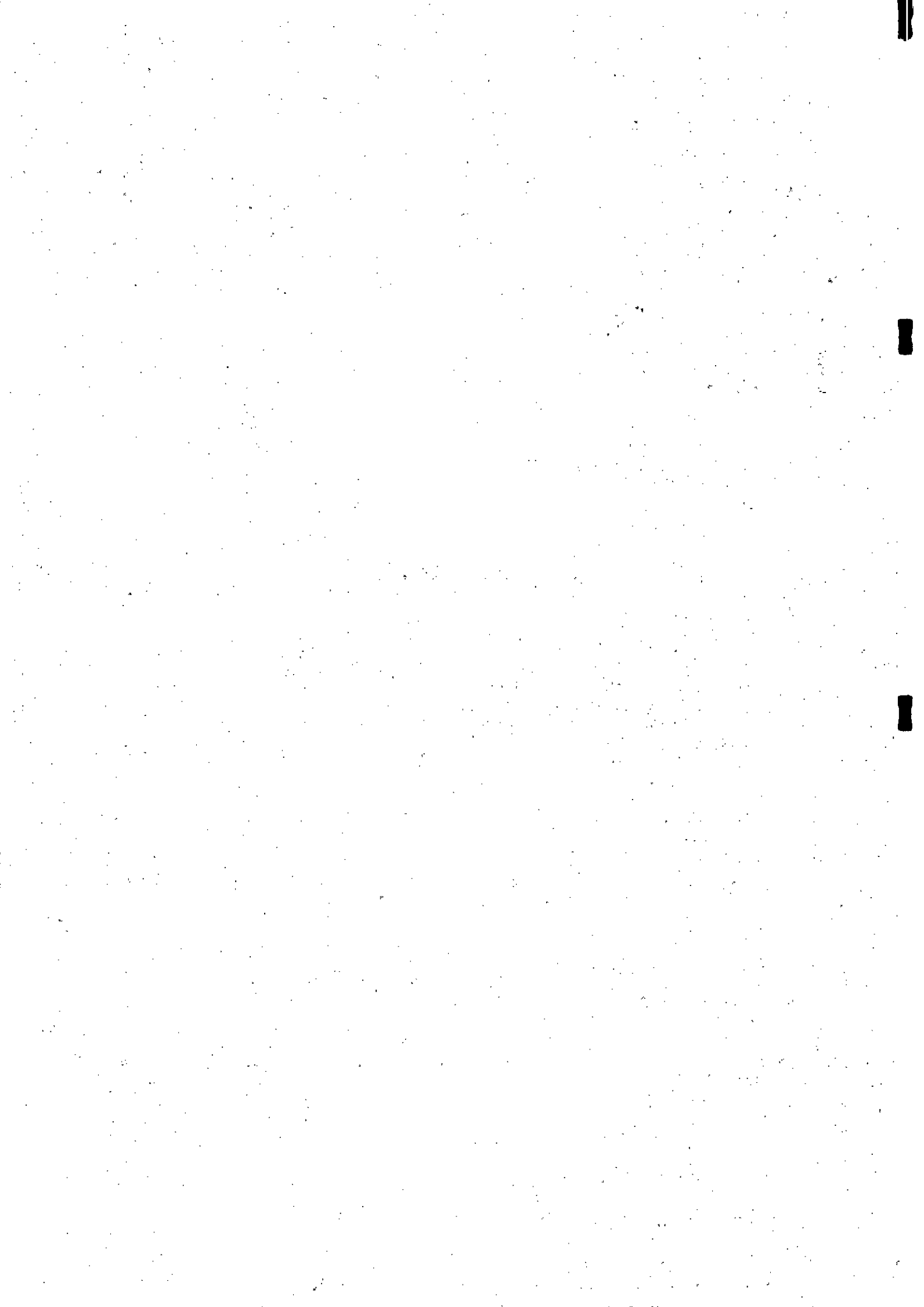
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## **1. INTRODUCTION**

During February 2010, Clean Stream Environmental Services on behalf of the applicant, Mr Moritz Kallmeyer, applied for a mining permit w.r.t. the Remainder of Portion 1 the farm Die Woud No 500, Division of Uitenhage, Eastern Cape. The project applicant intends to mine sand on the said property.

Two letters (dated: 11 March 2010; Ref: EC 30/5/1/3/2/0429MP; dated: 12 March 2010; Ref: EC 30/5/1/3/2/0429MP; Appendix 3) were received from the Department of Mineral Resources confirming that the application from Mr Moritz Kallmeyer for a mining permit in terms of Section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) had been accepted. It further detailed action to be taken.

A requirement of the mining permit application is the compilation of an Environmental Management Plan (EMP) for the proposed mining operation. In addition, the proposed activity was to be brought to the attention of the surrounding property owners and the general public.

This EMP was compiled in accordance with Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (referred to as the MPRDA). This report also provides an overview of the public participation process followed as well as the environmental management measures to be implemented for the proposed activity.



## 2. DETAILS OF THE PROJECT APPLICANT AND ENVIRONMENTAL CONSULTANT

### 2.1 Details of project applicant

<b>Name and address of project applicant:</b> Mr Moritz Kallmeyer P.O.Box 496 Jeffreys Bay Eastern Cape 6330	
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### 2.2 Details of environmental consultant

<b>Name and address of environmental consultant:</b> Clean Stream Environmental Services P.O. Box 947 Humansdorp 6300	
Contact persons:	Mr. T. Daines M. Sc Pr. Sci. Nat.; Mrs. A. Erasmus M. Sc Pr. Sci. Nat.
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### 3. DESCRIPTION OF THE PROPOSED MINING ACTIVITY

#### 3.1 Location of proposed mining area

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said site is located approximately 12 km from Thornhill, 60 km west of Port Elizabeth and 20km east of Jeffrey's Bay. Figure 1 provides an indication of the location of the said site.

Access to the site is gained via the R102 provincial road (located 1km north of the site) and the secondary tarred road leading to Gamtoos River Mouth (Figure 1). The N2 National Road is located approximately 2.5km north of the property (Figure 1).

The said property belongs to Lamer Jeffreys Akkommodasie (Proprietary) Limited and is 121.3169 hectares in extent. It has been leased to Mr. Moritz Kallmeyer (Jnr) (the applicant).

The proposed site lies within the Uitenhage Magisterial District and falls under the jurisdiction of the Cacadu District Municipality and the Kouga Municipality.

#### 3.2 Mineral deposit

The project applicant plans to operate a sand works. [CODE - Q:Code Type - QO Concrete sand (silica), Type QB - Building sand (silica) & Type QL - Filling sand (silica) property.

#### 3.3 Proposed mining area

Figure 1 provides an indication of the position of the proposed mining area in relation to the surrounding area. Figure 2 provides details of the proposed mining area that will be mined in two units.

The proposed mining area is 0.96448610 hectares in extent as indicated in Figure 2. The co-ordinates of the 0.96448610 hectare area are as follows:

COORDINATES (Figure 2)		
POINT A	Y -7239.830	X 3 755266.562
POINT B	Y -7271.767	X 3 755388.405
POINT C	Y -7180.508	X 3 755414.434
POINT D	Y -7180.508	X 3 755290.717
POINT E	Y -7239.830	X 3 755266.562

A surveyor will demarcate the above-mentioned points with beacons.

### **3.4 Estimated reserves of the mineral deposit and extent of the target area**

The said site is 0.96448610 ha in extent. The selected area for sand mining varies in depth, with an average depth of sand being 2.5 meters.

As a rough estimate the sand resource available on the 0.96448610 ha is approximately 25 000 cubic meters, which will be mined at the rate of 1000 cubic meters per month over the two year period that the mine will be in operation.

### **3.5 Planned life of mine**

The planned life of mine is approximately 24 months or 2 years.

### **3.6 Motivation for the project**

There is a good market for the sand in nearby Jeffreys Bay where there is a great demand for sand due to the extensive new developments taking place in these areas. There will be a continued and expanded market for sand with these continued developments in the area. Further, Mr. Moritz Kallmeyer will require sand when developing accommodation chalets on his property

### **3.7 Proposed mining method**

The sand will be mined by means of an open cast mining method. Being a sand mining operation, no blasting will take place. There will thus be no impact (vibration and shock) as a result of blasting. Sand will be extracted using a front end loader.

The 0.96448610 ha area will be divided into two blocks and will be mined in the following sequence: Block 1, then Block 2 (Figure 2).

The outer boundaries of the blocks should be trenched between the beacons (inserted by the surveyor) to ensure that the operator remains within the allocated area.

It is proposed that sand extraction should start in Block 1, which is the low lying toe area of the sand deposit. Sand will be removed in 10m to 15 m strips working across the slope. Block 1 has a very uneven surface profile and a low area follows the slope of the land.

To prevent erosion during heavy down pours and to keep the mining area from being flooded, a cut off drain should be constructed on the contour at the top of the slope to safely take runoff water away from the mining area.

When Block 2 is mined for sand the operation will commence along the boundary adjoining Block 1 (Figure 2). It will be excavated from the bottom of the block in 10 to 15 m strips towards the demarcated boundary DC of the block from the boundary demarcated AB (Figure 2).

After the construction of the cut off drains at top of Blocks 1 and 2 (Figure 2), the topsoil (approximately 25cm in depth) within a block will be removed and placed on the outside perimeter (either on the north or the south side of the block whichever is closest to the block being mined). This topsoil will be returned to the block from which it has been removed during the rehabilitation phase. The operator will be responsible to remove the topsoil and moving it to the dedicated topsoil stockpiles.

The sand will then be removed until the quality declines and contains too much clay i.e. an approximate depth of 2m. The removed sand will be stockpiled into different classes to meet the client's requirements. These stockpiles will initially be outside the demarcated mining block until space has been developed within the block for such stockpiles. From these stockpiles, the sand will be loaded onto trucks for transportation to the various clients.

Rehabilitation will take place on a continuous basis. As the area of sand is mined out the sides of the sand quarry will be sloped at an angle 1:3. The area will be fertilized and sown to annual and perennial summer grass species.

This sequence of development and rehabilitation will be applicable to the entire mining area.

### **3.8 Access to the proposed workings**

Access to the site is gained via the R102 provincial road (located 2 km north of the site) and the secondary tarred road leading to Gamtoos River Mouth. (Figure 1). The entrance to the property from the Gamtoos River road is at an existing, approved entrance to the property and will be used by all trucks collecting sand mined on the property.

The proposed mining area will be accessed utilising existing roads on the said property and new roads within the quarry will be established minimising prospects of erosion. At all times trucks must only use the established access roads.

### **3.9 Mining layout options/alternatives**

An alternative method of extracting the sand would be to remove sand in 10 to 15 m blocks up and down the slope that is from boundary line AB to CD (Figure 2).

This alternative mining procedure is not recommended since in Block 1 it would lead to erosion and flooding during the extraction of sand even if a cut off drain was installed at the top of the slope.

In Block 2, the slope is too great for safe working of machinery up and down the slope and secondly it would lead to accelerated erosion during heavy rain. The only safe method of extracting sand is across the slope as proposed in the mining plan to have the least effect on the environment and the on the mining operation.

### **3.10 Proposed processing method**

No washing of sand will take place on site and therefore there will be no mine residue dumps or mine waste present on site.

### **3.11 Associated infrastructure required**

No offices will be built on site. In addition, no vehicle maintenance yard or secured storage area will be provided at the proposed sand mining area. All vehicles will be repaired off site as the machinery is hired on a daily basis.

### **3.12 Waste generation and disposal**

#### **3.12.1 Mining waste generation and disposal**

No washing of sand will take place on site and therefore no mine waste will be generated.

#### **3.12.2 Processing/plant residue disposal**

No washing of sand will take place on site and therefore there will be no mine residue dumps present on site.

#### **3.12.3 Other solid waste**

##### **3.12.3.1 Industrial waste including hazardous waste**

No vehicles will be repaired within the proposed mining area. All vehicles will be repaired off site as the machinery is hired on a daily basis.

Equipment and machinery used in the mining operation will be adequately maintained so that during operations, oil diesel, fuel, hydraulic fluid spills will be prevented.

##### **3.12.3.2 Domestic waste**

A rubbish bin will be placed at the sand mining site for non degradable refuse such as glass bottles, plastic bags, etc. This drum will be emptied on a regular basis and disposed of at a recognised disposal facility. Bio-degradable refuse will be handled in a similar manner.

##### **3.12.3.3 Waste pollution and effluent management facilities**

There is no need for waste pollution and effluent management facilities.

### **3.13 Services required**

#### **3.13.1 Water**

The operator will obtain his water from the nearby homestead which is situated immediately above the mining area.

No washing of the sand will take place on site. Therefore, no water will be required for processing operations.

### 3.13.2 Sewage

A chemical toilet must be provided on site for the operator. This chemical toilet must be serviced on a regular basis. Under no circumstances will long drop toilets be utilised.

### 3.13.3 Electricity

No electricity is required for the proposed mining operation.

### 3.13.4 Storm water control measures

A storm water trench/cut off drain will be constructed across the slope at the head of the mining area (Figure 2) in order to direct runoff away from the proposed mining area and so prevent erosion and flooding of the mined area during heavy downpours.

After the construction of the cut off drains at top of Blocks 1 and 2 (Figure 2), the topsoil (approximately 25cm in depth) within a block will be removed and placed on the outside perimeter (either on the north or the south side of the block whichever is closest to the block being mined). This topsoil will be returned to the block from which it has been removed during the rehabilitation phase. The operator will be responsible to remove the topsoil and moving it to the dedicated topsoil stockpiles.

## 3.14 Socio-economic aspects of the proposed mining activity

### 3.14.1 Number of people to be employed

<b>Number of women</b>	0
<b>Number of men</b>	1 HDSA male (using TLB) – operator
<b>Total number</b>	1

It should be noted that only one person (front-end loader operator) will be on site daily. The front end loader with the operator will be hired to do the work.

People buying sand supply their own trucks. If transport is required to move sand, it is moved in leased trucks.

### 3.14.2 Work hours

The sand mining operation will be conducted during daylight hours (i.e. sunrise to sunset). Sand mining will normally take place 5 days per week depending on the weather conditions.

Site workers will work a normal 8 hour day shift.

## **4. DESCRIPTION OF THE PRE-MINING ENVIRONMENT**

### **4.1 Location of the mining site**

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said site is located approximately 12 km from Thornhill, 60 km west of Port Elizabeth and 20km east of Jeffrey's Bay. Figure 1 provides an indication of the location of the said site.

Access to the site is gained via the R102 provincial road (located 1km north of the site) and the secondary tarred road leading to Gamtoos River Mouth (Figure 1). The N2 National Road is located approximately 2.5km north of the property (Figure 1).

The said property belongs to Lamer Jeffreys Akkommodasie (Proprietary) Limited and is 121.3169 hectares in extent. It has been leased to Mr. Moritz Kallmeyer (Jnr) (the applicant).

The proposed site lies within the Uitenhage Magisterial District and falls under the jurisdiction of the Cacadu District Municipality and the Kouga Municipality.

### **4.2 Climate**

#### **4.2.1 Regional Climate**

According to the modified Köppen System, Port Elizabeth falls under the Subtropical climatic type (Cfb), which is characterised by average temperatures of between 10 to 22,2°C and at least 60mm of rain (all months).

This coastal zone experiences mild winters (with occasional frost) and warm summers. Windiness in this area reduces both heat and humidity in summer.

#### **4.2.2 Temperatures**

Table 1 provides an indication of the temperature and sunshine duration statistics for Port Elizabeth. For Port Elizabeth, the average daily minimum temperature is 12.17°C while the average daily maximum temperature is 22.26°C (Table 2).

For the Thornhill area, the daily temperatures range from 23°C in summer to 18°C in winter. During extreme climatic conditions, temperatures can go above 40°C in the summer months and drop to below 5°C in the winter months.

**Table 1: Temperature and Sunshine Duration Statistics for Port Elizabeth (adapted from Stone (1988) and the SA Weather Service)**

MONTH	TEMPERTURE (°C)				SUNSHINE DURATION	
	Average Daily Minimum	Average Daily Maximum	Highest recorded	Lowest recorded	Average Monthly (mean daily hours)	Average Annual (% of possible duration)
January	16,3	25,4	39	10	8,5	60
February	16,9	25,5	38	11	8,2	62
March	15,8	24,6	41	8	7,5	61
April	12,9	22,8	39	4	7,6	67
May	10,1	21,9	35	2	6,9	67
June	7,5	20,1	32	-1	6,9	69
July	7,3	19,5	33	-1	7,1	71
August	8,3	19,9	34	2	7,6	70
September	10,1	20,1	39	2	7,6	63
October	12,2	20,9	39	3	7,7	59
November	13,6	22,4	36	6	8,3	60
December	15,0	24,0	36	9	8,9	62
<b>Year</b>	<b>12,17</b>	<b>22,26</b>	<b>41</b>	<b>-1</b>	<b>7,73</b>	<b>64,25</b>

The highest recorded temperature was 41°C during the month of March and the lowest recorded temperature was -1°C during the months of June and July (Table 2).

#### 4.2.3 Rainfall

The Eastern Cape is largely a transition zone of climate types and the seasonality of rainfall is much less pronounced than in other parts of the country.

Rainfall is usually associated with the passage of both low pressure (cold fronts) and high pressure weather systems.

Winter maximum rainfall is experienced in Port Elizabeth, with a summer dry period. Port Elizabeth's winter rainfall maximum can be explained by its westerly position where it catches the tail end of the fronts that bring winter rain to the Western Cape (Stone, 1988).

Table 2 provides an indication of the rainfall statistics for Port Elizabeth. The mean annual rainfall for the Port Elizabeth area is 624 mm, which is fairly evenly distributed throughout the year. The wettest month is normally August with a rainfall figure of 64mm. The driest month is December with a rainfall figure of 34mm. Spring is the wettest period of the year.



**Table 2: Rainfall Statistics for Port Elizabeth (based on monthly averages for the 30-year period: 1961 – 1990)**

<b>PRECIPITATION</b>			
<b>Month</b>	<b>Average Monthly (mm)</b>	<b>Average Number of days with <math>\geq</math> 1mm</b>	<b>Highest 24 Hour Rainfall (mm)</b>
January	36	9	68
February	40	9	121
March	54	10	224
April	58	9	105
May	59	9	76
June	62	8	60
July	47	8	99
August	64	10	77
September	62	9	429
October	59	11	46
November	49	11	52
December	34	9	95
<b>Year</b>	<b>624 (total)</b>	<b>112 (total)</b>	<b>429</b>

The Thornhill area experiences an average annual rainfall of approximately 673mm with an average monthly rainfall of 68mm between April and September and 44 mm during the summer months.

#### **4.2.4 Mean annual evaporation**

The Mean Annual Evaporation value is considered to be between 1 550 and 1600 mm per annum.

#### **4.2.5 Prevailing wind direction**

The Eastern Cape is one of the windiest parts of southern Africa. Port Elizabeth carries the title of the windiest city in the Eastern Cape; although the statistics for East London shows it to have the lowest percentage of calms (7,5%). In Port Elizabeth, calm conditions are experienced for approximately 20% of the year.

This coastal town's wind is dominated by westerlies and south-westerlies during the winter months, associated with passing low pressure (cold front) systems. Wind speeds of 20 to 25 km/hr can then be encountered.

During the summer months, the easterly and south-easterly winds associated with high pressure systems dominate. North-easterly winds also occur during summer, and can reach speeds of up to 20 km/hr. Port Elizabeth's strong winds often cause natural dune thicket to be dwarfed by wind stress.

During the winter months, south-westerly and westerly winds associated with passing low pressure (cold fronts) systems are dominant. Average wind speeds range between 20 and 25 km per hour.

#### **4.2.6 Extreme weather conditions**

On rare occasions, really hot days with temperatures more than 40°C may occur but then only when 'Berg Wind' conditions are at their worst (i.e. usually in January and February; Kopke, 1988).

Port Elizabeth has a low frequency of hail days namely 0,4 days per year.

A peculiarity of the Eastern Cape is that of the Three-Day-Rain that usually occurs during the last week of August and the first week of March (Kopke, 1988). Three-Day-Rains are characterised by heavy rains over a period of a few days which can be caused either by an intense outbreak of polar air or by a high pressure system to the south of Port Elizabeth, feeding in cool moist air over the region. If this system coincides with a cut-off low over the interior, devastating floods can occur in the coastal areas.

### **4.3 Geology**

The proposed mining site is located within a stepped coastal plain on which the marine Alexandria Formation was deposited (during the Neogene times) as a thin unconformable veneer on a wave-cut platform (van der Merwe, 2004). The Alexandria Formation consists of calcareous sandstone, sandy limestone and conglomerate at the base. It is regarded as a littoral deposit.

The Alexandria Formation is overlain by partly consolidated dunes and coastal dunes where horizontal sedimentary beds are found (van der Merwe, 2004). These remnants of extensive dune fields are aligned at right angles to the prevailing south-west wind direction. This represents the Nanaga Formation which is of quaternary age.

The Nanaga Formation consists of yellowish, fine to medium grained, partly consolidated sand dunes, which are calcareous due to the presence of shell fragments. In terms of lithology, the Nanaga Formation can be described as aeolianite that accumulated as the coastline receded.

This deposit constitutes the mineral to be mined and is several meters thick. The influence of mudstones to the northwest could result in the sandy clay lenses at the bottom of this sand deposit to be prominent. This might pose a threat to soil stability through sheet wash during periods of high precipitation.

The proposed mining site is located just east of the Gamtoos fault. The said site is however, tectonically stable.

### **4.4 Topography**

The Thornhill area is characterised by a number of steps or platforms formed as a result of receding sea levels and the influence of the Gamtoos Fault (van der Merwe, 2004).

To the south of the proposed mining site, a rather flat coastal platform is present which is followed by a gentle inland rise resulting in a second platform where the proposed mining site is located (van der Merwe, 2004).

The Thornhill/Loerie escarpment is found further inland and is as a result of the Gamtoos Fault that caused a steep rise of the Alexandria Formation.

The proposed mining site is located at approximately 160 - 165 m above mean sea level (Figure 2) within an area of gentle undulating dunes. The

proposed mining area is undulating and runs down to flatter plains that are covered by coastal bush.

Figure 2 provides an indication of the contours of the proposed mining area and immediate surrounding area. In general, it slopes from AD towards BD. Surface runoff takes place in the same direction.

#### **4.5 Soils**

As indicated in Section 4.4, the proposed mining site is located within an area of gentle undulating, partly consolidated sand dunes.

The soil of the proposed mining area (Figure 2) falls into the Fernwood soil form. Here the top soil is approximately 25 cm in depth. The diagnostic depth is confined to 1200mm. The E-horizon only occurs at a depth of approximately 2 – 2.5m. Below this depth, the B-layer is classified as a soft plinthic with coarse sand with yellow mottling showing the presence of a fluctuating water table (this is due to water movement in the E-horizon). Extraction of sand will stop when this layer occurs as the clay content of the sand will be high making it an unsuitable material for sale as sand.

#### **4.6 Land use**

##### **4.6.1 Zoning of the site**

The Remainder of Portion 1 of the farm De Woud No 500 is currently zoned as agricultural and is used for both agricultural and game farming activities.

The proposed site lies within the Uitenhage Magisterial District and falls under the jurisdiction of the Cacadu District Municipality and the Kougha Municipality.

##### **4.6.2 Land ownership**

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said property belongs to Lamer Jeffreys Akkommodasie (Proprietary) Limited and is 121.3169 hectares in extent. It has been leased to Mr. Moritz Kallmeyer (Jnr) (the applicant). Permission has been granted by the land owner in terms of the proposed sand mining operation.

The proposed mining site is only 0.96448610 ha in extent. No previous sand mining has taken place on the property.

##### **4.6.3 Servitudes**

No servitudes exist over the proposed sand mining area

##### **4.6.4 Major existing infrastructure**

The proposed mining area is devoid of any structures. The area is fenced. The homesteads and workshop are situated to the north of the proposed sand mining area.

##### **4.6.5 Adjacent land use**

In general, the said property and adjacent properties are utilised for agricultural purposes (mainly beef production) and for chicken production.

#### **4.7 Natural vegetation**

According to the 'The vegetation of South Africa, Lesotho and Swaziland', the study area falls within the Albany Thicket bioregion, specifically the Albany Coastal Belt (veld type AT9) (Mucina & Rutherford, 2006). The vegetation type was previously referred to by Low and Rebelo (1998) as Coastal Forest and by Acocks (1953) as Alexandria Forest (2). Remnants of this vegetation type are present on properties adjacent to the proposed mining area.

The 0.96448610 ha area to be mined has been used for grazing is covered by pioneer grasses. *Cynodon dactylon* is the dominant grass cover. The other grasses found in the area are *Eragrostis* species, annual and perennial *Digitaria* species, and *Aristida spp.*

There are a few isolated bushes and trees on the site (e.g. *Acacia karroo*, *Acacia caffra*, *Maytenus heterophylla*, *Carissa bispinosa*), the site having been cleared of vegetation in the past to improve grazing for livestock. The vegetation of the area has also been heavily disturbed by dumping of bricks, construction waste, waste, etc.

No endangered species were found on the proposed mining area since the area was previously cultivated and therefore the natural vegetation was removed.

#### **4.8 Animal life**

As indicated in Section 4.7, the vegetation of the proposed mining area represents old homestead grazing camps which consist of pioneer grass species and isolated bushes and trees. The sand mining area is completely fenced by farm fencing.

Any natural animal habitats that could have been associated with the proposed mining area would have been impacted by the past farming activities.

It is likely that smaller animal species (e.g. rodents, scrub hare), birds, etc. could frequent the site. However, it is highly unlikely that large animal species would permanently inhabit the proposed mining area.

Small game (bushbuck, duiker, spring hare, vervet monkeys, tortoises) and birds have been noted in the surrounding area especially the bushed areas. Introduced game species roam on the flat plain lands.

#### **4.9 Surface water**

The proposed mining area is located within the Primary Drainage Area L and more specifically the Gamtoos River drainage area. No surface water environment (stream, river or wetland) is located within or close the proposed mining area.

In general, the surface water runoff would drain from AD towards BC (Figure 2) i.e. from the higher lying area towards the low lying area.

#### **4.10 Ground water**

No ponding of groundwater was noted within the proposed mining area. No wetland was noticed on site.

#### **4.11 Air quality**

In general, the air quality of the area is anticipated to be of good quality. Potential sources that might impact on the general air quality of the area include:

- Dust generation as a result of the use of the various gravel roads in the area;
- Dust generation as a result of the wind blowing across bared sand dunes in the proposed mining area.
- Dust generation as a result of surrounding agricultural activities.
- The activities associated with the nearby chicken farm.

#### **4.12 Noise**

The proposed mining area is located within a tranquil rural environment. Potential sources that might impact on the ambient noise level of the area include:

- Vehicles utilizing the nearby gravel and tarred roads in the area;
- Noise generated as a result of the surrounding agricultural activities (including the nearby chicken farm).

#### **4.13 Sensitive landscapes**

No sensitive landscapes (rivers, streams, wetlands, etc.) are present within the proposed mining area.

#### **4.14 Sites of archaeological and/or cultural interest**

Dr Johann Binneman and Ms Celeste Booth of the Department of Archaeology, Albany Museum, Grahamstown, carried out an archaeological heritage impact assessment of the proposed sand mining site. A copy of their report is provided in Appendix 4.

They issued a letter of recommendation in which the proposed mining of sand on Portion 1 (Lemoenfontein) of the farm Die Woud No.500 is exempted from a full Phase 1 Archaeological Heritage Impact Assessment. The proposed area for development is of low cultural sensitivity and is believed that it is unlikely that any archaeological heritage remains will be found on the property. The proposed development may proceed as planned.

#### **4.15 Visual aspects**

The proposed mining area is undulating and is located within an area of gentle undulating dunes. The proposed mining area slopes towards the flat plains that extend towards the coastal dunes and the sea. The proposed mining site is visible from the farmstead and associated buildings located on the said site.

The proposed mining site is situated at least 1 kilometre from the secondary tarred road leading to Gamtoos River Mouth (Figure 1). The mining site is not visible from the Gamtoos River road that passes the property

The proposed mining site is hardly visible from the adjacent properties located to the west, north, east and south of the said site. Trees and dense vegetation provide screening.

#### **4.16 Traffic**

The N2 National Road is located approximately 1.5km north of the property (Figure 1).

Access to the site is gained via the R102 provincial road (located 2km north of the site) and the secondary tarred road leading to Gamtoos River Mouth (Figure 1).

Entrance to the sand mine will be from the existing road leading from the Gamtoos River Mouth road that passes the property.

#### **4.17 Sense of place**

The proposed mining area is located within a tranquil rural environment, which is mostly used for agricultural purposes. It is not located within 1 kilometre of a residential area. The farmstead and associated buildings is located in close proximity to the proposed mining area.

#### **4.18 Interested and affected parties**

Section 5 should be consulted with regards to the various interested and affected parties who were consulted as part of this permit application process.

## **5. DESCRIPTION OF THE PUBLIC PARTICIPATION PROCESS**

### **5.1 Advertising of the project**

#### **5.1.1 Press advertising**

A block advert (150mm x 95mm), according to the Mineral and Petroleum Resources Development Act, 2004 (Act of 2004), was placed in the local newspaper, The Herald, on Thursday, 1 April 2010, giving notice that an application for a mining permit had been submitted to the Department of Mineral Resources. A copy of the advert is provided in Appendix 1. The Herald website ([www.theherald.co.za](http://www.theherald.co.za)) also featured the said notice.

Interested and affected parties were provided with a 30-day registration period as stated in the above-mentioned advertisement. I&APs thus have until 2 May 2010 to register and lodge their issues of concern and/or objections regarding the proposed activity.

#### **5.1.2 On-site advertising**

Notices according to the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) were placed:

- On-site, at entrance to Lemoenfontein Farm – size of notice 594mm x 841mm);
- On the notice board of the Humansdorp Public Library – size of notice (150mm x 95mm).

A copy of the said notice and photographs of the notice are provided in Appendix 1.

#### **5.1.3 Informing I&APs via the internet**

Interested and affected parties were also informed via the above-mentioned adverts and notices that a copy of the following documentation could be downloaded from the Clean Stream Environmental Services website ([www.cleanstreams.co.za](http://www.cleanstreams.co.za)):

- Notice of a mining permit application (1 page; Appendix 1);
- Map indicating the location of the site (Figure 1; Appendix 1);
- Comment sheet (Appendix 1).

This information will be made available on the website for the duration of the 30-day registration period.

A copy of the website print out is provided in Appendix 1.

#### **5.1.4 Feedback from the advertising process**

To date, no feedback with regards to the placed advertisement has been received.

### **5.2 Consultation with the landowner**

According to Windeed, the said property - Remainder of Portion 1 of the farm Die Woud NO. 500 - belongs to the company, Lamer Jeffreys Akkomodasie Pty Ltd.

The following documentation was hand delivered by the applicant to the Mr. M. Kallmeyer Snr., Senior Director of the said company.

Environmental Management Plan (EMP): Application for a mining permit w.r.t. the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage, Eastern Cape. (DME REF. NO.: EC 30/5/1/3/2/0429MP)

- Notice of a mining permit application (1 page);
- Map indicating the location of the site (Figure 1);
- Comment sheet.

A copy of this documentation is provided in Appendix 2.

The applicant, Mr. Moritz Kallmeyer Jnr., signed the register indicating that he had received the said documentation (Appendix 2) on behalf of the company.

Subsequently, a completed comment sheet (Appendix 2) was received from Mr. M. Kallmeyer Snr. indicating the following:

*'Moritz Kallmeyer as Senior Director of La-Mer Accommodation Pty Ltd and authorised to act on behalf of this company – per meeting of directors held at Jeffreys Bay on 31<sup>st</sup> March 2010 – La-Mer Accommodation Pty Ltd as registered owner of Die Woud No. 500, hereby consent to mining application submitted for the Remainder of Portion 1 of the farm Die Woud No. 500, Division Uitenhage'.*

Permission has therefore being granted for the proposed mining operation.

### **5.3 Consultation with adjacent landowners**

The adjacent landowners/users were identified in consultation with the project applicant, Mr. M. Kallmeyer Jnr. The adjacent land owners/users are:

- Mr. Pierre Cronje (on behalf of Crown Chickens Pty Ltd)
- Mr Leon Coetzer;
- Prof. Pieter van Niekerk;
- Mr. P.E. van Niekerk (documentation hand delivered on 31 March 2010; register signed by Mrs. Van Niekerk)

The above-mentioned were telephonically contacted on 31 March 2010 and informed of the said project.

The following documentation was subsequently emailed to the identified adjacent landowners/users in order to inform them of the proposed project:

- Notice of a mining permit application (1 page);
- Map indicating the location of the site (Figure 1);
- Comment sheet.

A copy of this documentation and the emails forwarded are provided in Appendix 2.

To date, no completed comment sheets (Appendix 2) were obtained from the landowners/users listed above.

### **5.4 Consultation with authorities**

The following authorities were also informed of the proposed project:

- Kouga Municipality (hand delivered, register signed by R. Kurat; Appendix 2);
- Department of Agriculture (DA) (hand delivered, register signed by Mr. F. Weitz);



Environmental Management Plan (EMP): Application for a mining permit w.r.t. the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage, Eastern Cape. (DME REF. NO.: EC 30/5/1/3/2/0429MP)

- Department of Water Affairs (DWA) (Email dated: 7 April 2010; Appendix 2);
- Department of Economic Development and Environmental Affairs (DEDEA) (Email dated: 7 April 2010; Appendix 2).

The following documentation was forwarded to these authorities in order to inform them of the proposed project:

- Notice of a mining permit application (1 page);
- Map indicating the location of the site (Figure 1);
- Comment sheet.

A copy of this documentation is provided in Appendix 2.

To date, no completed comment sheets (Appendix 2) were obtained from the said authorities.

### **5.5 Further consultation with I&APs and availability of the Environmental Management Plan (EMP)**

A copy of the Environmental Management Plan (EMP) will be made available at the Humansdorp Public Library, Humansdorp, for evaluation purposes. A period of 30-days will be provided for evaluation purposes. In addition, a copy of the EMP will be made available on the company website ([www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)).

The identified interested and affected parties will be informed by means of facsimile, e-mail or telephonically of the availability of the Environmental Management Plan on the said website and at the library.

A register will be kept of all comments received in terms of the evaluation of the EMP. These comments will be forwarded to the Department of Minerals and Energy for inclusion in their final decision regarding the approval of the mining right and the EMP.

#### **Approval of the mining right and the EMP**

The identified interested and affected parties will be informed by means of facsimile, e-mail or telephonically that the mining right and EMP have been approved or rejected.

A copy of the said approval will also be made available on the company website ([www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)) and I&APs will be informed accordingly.

## 6. ENVIRONMENTAL IMPACT DESCRIPTION AND EVALUATION

### 6.1 Evaluation of impacts

This section of the report describes how the potential impact of the proposed development on the environment was evaluated.

The impact of the mining operation was assessed in terms of the following development phases:

- **Construction/operational phase**
- **Decommissioning/closure phase**

The evaluation of impacts was conducted in terms of the following criteria:

- **Nature of impact**

- **Extent of impact**

Site	Effect limited to the site and its immediate surroundings
Local	Effect limited to within 3-5 km of the site
Regional	Effect will have an impact on a regional scale

- **Duration of impact**

Short	Effect lasts for a period 0 to 5 years
Medium	Effect continues for a period between 5 and 10 years
Long	Effect will cease after the operational life of the activity either because of natural process or by human intervention
Permanent	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient

- **Intensity of impact**

Low	The impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
Medium	Where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way
High	Where natural, cultural or social functions or processes are altered to the extent that it will temporarily or permanently cease

- **Probability**

Improbable	Less than 33% chance of occurrence
Probable	Between 33 and 66% chance of occurrence
Highly probable	Greater than 66% chance of occurrence
Definite	Will occur regardless of any prevention measures

• **Significance of impact**

Low	Where the impact will have a relatively small effect on the environment and will not have an influence on the decision
Medium	Where the impact can have an influence on the environment and the decision and should be mitigated
High	Where the impact definitely has an impact on the environment an the decision regardless of any possible mitigation

• **Status**

Positive	Impact will be beneficial to the environment
Negative	Impact will not be beneficial to the environment
Neutral	Positive and negative impact

• **Confidence**

Low	It is uncertain whether the impact will occur
Medium	It is likely that the impact will occur
High	It is relatively certain that the impact will occur

It must be noted that many of the potential negative consequences can be mitigated successfully. It will however, be necessary to make a thorough assessment of all possible impacts in order to ensure that environmental considerations are taken into account, in a balanced way, as far as possible, supporting the aim of creating a healthy and pleasant environment.

**6.2 Identification of potential impacts**

**6.2.1 Geology**

**Construction/operational phase:**

The impact on the geology of the site would be site specific and would result in the removal of sand over an area of 0.96448610 ha (Blocks 1 & 2; Figure 2). The sand extends down to a depth of approximately 2.5 metres. The impact on geology would therefore be permanent.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Permanent
<b>Intensity</b>	Low
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The stockpiling of top soil and sand would not impact on the geology of the site.

**PREDICTED IMPACT: NONE**

No further impact on the geology of the site will take place during the concurrent rehabilitation of the mining area (Blocks 1 & 2; Figure 2).

**PREDICTED IMPACT: NONE**

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. No new roads will be constructed and therefore no impact on the geology of the site will take place.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would not impact on the geology of the site.

**PREDICTED IMPACT: NONE**

**6.2.2 Topography**

**Construction/operational phase:**

The impact on the topography of the site would be site specific and would result in the removal of sand over an area of 0.96448610 ha (Blocks 1 & 2; Figure 2). The sand extends down to a depth of approximately 2.5 metres. The removal thereof would result in a void to a depth of 2.5 metres, which would affect the site drainage.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The concurrent rehabilitation of the rehabilitation of the mining area (Blocks 1 & 2; Figure 2) would have a positive impact on the topography and drainage of the site.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. No new roads will be constructed and therefore no new impact on the topography of the site will take place.

**PREDICTED IMPACT: NONE**



**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the topography and site drainage. However, a large shallow depression in the landscape will be present.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Neutral
<b>Confidence</b>	High

**6.2.3 Soils**

**Construction/operational phase:**

The mining operation would result in the removal of the topsoil and sand from an area of 0.96448610 ha which would impact on Fernwood soils. This would lead to changes in soil structure, soil nutrient status, soil compaction, etc. of the topsoil. This impact would continue through the operational phase of the mining operation.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The concurrent rehabilitation of the mining area (Blocks 1 & 2; Figure 2) would have a positive impact on the soil of the site in terms of soil compaction and soil nutrient status.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. No new roads will be constructed and therefore no new impact on the soil of the site will take place.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the soil of the site in terms of soil compaction and soil nutrient status.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

**6.2.4 Land use**

**Construction/operational phase:**

The mining operation would result in an area of 0.96448610 ha no longer being available for agricultural purposes (particularly for grazing purposes).

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The concurrent rehabilitation of the rehabilitation of the mining area (Blocks 1 & 2; Figure 2) would have a positive impact on the land use of the site since it would eventually be returned to natural veld.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. No new roads will be constructed and therefore no new impact on the land use of the site will take place.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the land use of the site. The rehabilitated area would be returned to natural veld for grazing purposes.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

**6.2.5 Natural vegetation/animal life**

**Construction/operational phase:**

The mining operation would result in the removal of an area of 0.9448610 ha of vegetation associated with old grazing lands and associated animal habitat.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Permanent
<b>Intensity</b>	High
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The stockpiling of top soil and sand will take place within the mined area and will therefore not impact on the natural vegetation and associated animal life.

**PREDICTED IMPACT: NONE**

The concurrent rehabilitation of the rehabilitation of the mining area (Blocks 1 & 2; Figure 2) would have a positive impact since the area would be returned to natural veld and would provide a possible habitat for animal species in the area.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High



Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. No new roads will be constructed and therefore no new impact on the natural vegetation and associated animal life will take place.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the natural vegetation and associated animal life of the site.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

**6.2.6 Surface water/sensitive landscapes**

**Construction/operational phase:**

The mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand would not impact directly on any surface water environments/sensitive landscapes since no surface water environments are present on site.

**PREDICTED IMPACT: NONE**

The mining operation would however, impact on the surface water runoff of an area of 0.96448610 due to the formation of a void.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

A storm water drain will be constructed at the top end of the mining area in order to divert the clean storm water around the mining area (prevent flooding of the mining area). Erosion control measures would have to be installed in order to prevent erosion of the storm water drain and the drainage area.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site



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<b>Duration</b>	Short
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Neutral
<b>Confidence</b>	High

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the site drainage.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Positive
<b>Confidence</b>	High

**6.2.7 Ground water**

**Construction/operational phase:**

The mining operation would result in the removal of sand from an area of 0.96448610 ha (Blocks 1 & 2; Figure 2) down to a depth of 2.5 meters. No ponding/seeping of groundwater was noted on site. Groundwater recharge or quality would not be impaired by the proposed mining operation.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The stockpiling of top soil and sand would not impact on the groundwater of the site.

**PREDICTED IMPACT: NONE**

The utilization of the road extending through the mining area will not impact on the groundwater of the site.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

The final rehabilitation of the mining area (Blocks 1 & 2; Figure 2) and the rehabilitation of the road extending through the mining area would have a positive impact on the groundwater recharge and therefore the groundwater of the site.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Low
<b>Probability</b>	Probable
<b>Significance</b>	Low
<b>Status</b>	Positive
<b>Confidence</b>	High

**6.2.8 Air quality**

**Construction/operational phase:**

The mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand could lead to dust generation that would impact on site workers and the immediate surrounding area (especially the nearby farmstead and associated buildings of the project applicant). This impact would depend on the season and the wind direction at that particular time.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Highly Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The utilization of the roads on site could also result in dust generation that would impact on the site workers and immediate surrounding area (especially the nearby farmstead and the associated building of the project applicant). This impact would depend on the season and the wind direction at that particular time.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Highly Probable
<b>Significance</b>	Medium
<b>Status</b>	Negative

<b>Confidence</b>	High
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**Decommissioning/closure phase:**

The rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area could result in dust generation that would impact on site workers and the surrounding vegetation due to the use of heavy machinery. This impact would depend on the season and the wind direction at that particular time. The rehabilitation of the mined area will have a positive impact on the visual aspect of the site.

<b>PREDICTED IMPACT</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Highly Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

**6.2.9 Noise**

**Construction/operational phase:**

The mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand will impact on the ambient noise of the site and the immediate surroundings (especially the nearby farmstead of the project applicant) due to the use of the front end loader.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Highly Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The concurrent rehabilitation of the mining area (Blocks 1 & 2; Figure 2) will impact on the ambient noise of the site and the immediate surroundings (especially the nearby homestead of the project applicant) due to the use of heavy machinery.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Neutral
<b>Confidence</b>	High

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. This would impact on the

ambient noise of the site and immediate surroundings (especially the nearby homestead of the project applicant).

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

**Decommissioning/closure phase:**

The rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area could result in noise generation as the result of the use of heavy machinery. This would impact on site workers and the immediate surrounding area (especially the nearby farmstead of the project applicant). This impact would depend on the season and the wind direction at that particular time.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Neutral
<b>Confidence</b>	High

**6.2.10 Sites of archaeological and/or cultural interest**

**Construction/operational phase:**

During the mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand, no sites of archaeological and/or cultural interest will be impacted upon.

**PREDICTED IMPACT: NONE**

The utilization of the road extending through the mining area will also not impact on any sites of archaeological and/or cultural interest.

**PREDICTED IMPACT: NONE**

**Decommissioning/closure phase:**

During the rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area, no sites of archaeological and/or cultural interest will be impacted upon.

**PREDICTED IMPACT: NONE**

### 6.2.11 Visual aspects

#### Construction/operational phase:

The mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand will impact on the visual aspect of the site and the immediate surroundings. These activities would only be visible from the nearby farmstead and associated buildings of the project applicant. It would not be visible from the provincial road or from any farmstead.

CONSTRUCTION/OPERATIONAL PHASE	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

The concurrent rehabilitation of the mining area (Blocks 1 & 2; Figure 2) will impact on the visual aspect of the site and the immediate surroundings. This rehabilitation would only be visible from the nearby farmstead and associated buildings of the project applicant. It would not be visible from the provincial road or from any farmstead. The rehabilitation of the mined area would have a positive impact on the visual aspect of the site.

CONSTRUCTION/OPERATIONAL PHASE	
<b>Extent</b>	Site
<b>Duration</b>	Long
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Neutral
<b>Confidence</b>	High

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. The presence of vehicles on these roads would impact on the visual aspect of the site and immediate surroundings (especially the nearby farmstead of the project applicant).

CONSTRUCTION/OPERATIONAL PHASE	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Definite
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	High

#### Decommissioning/closure phase:

The rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area will only be visible from the nearby farmstead and

associated buildings of the project applicant. It would not be visible from the provincial road or from any farmstead. The rehabilitation of the mined area would have a positive impact on the visual aspect of the site.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Medium
<b>Probability</b>	Definite
<b>Significance</b>	Medium
<b>Status</b>	Neutral
<b>Confidence</b>	High

### 6.2.12 Traffic

#### **Construction/operational phase:**

The mining of Blocks 1 & 2 (Figure 2) and the subsequent stockpiling of top soil and sand will not impact on any traffic or general road user since all activities will take place within the demarcated area.

**PREDICTED IMPACT: NONE**

The concurrent rehabilitation of the mining area (Blocks 1 & 2; Figure 2) will also not impact on any traffic or general road users since all activities will take place within the demarcated area.

**PREDICTED IMPACT: NONE**

Existing roads on the property will be utilised by the vehicles on site as well as trucks transporting sand to clients. Access to the site will be gained via the R102 provincial road (located 1km north of the site) and the secondary tarred road leading to Gamtoos River Mouth (Figure 1). There could thus be a small increase in traffic on the access road and the provincial road in terms of sand deliveries.

<b>CONSTRUCTION/OPERATIONAL PHASE</b>	
<b>Extent</b>	Site
<b>Duration</b>	Short
<b>Intensity</b>	Low
<b>Probability</b>	Probable
<b>Significance</b>	Low
<b>Status</b>	Negative
<b>Confidence</b>	Medium

#### **Decommissioning/closure phase:**

The rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area will not impact on any traffic or general road user since all rehabilitation activities will take place within the demarcated area.

**PREDICTED IMPACT: NONE**

### **6.2.13 Interested and affected parties/sense of place**

#### **Construction/operational phase:**

The proposed mining operation would impact directly on the land owner. However, the said area has been leased from the land owner for sand mining purposes. All mining activities (including rehabilitation) will take place within the leased demarcated area.

#### **PREDICTED IMPACT: NONE**

No direct impact on any interested and affected party is envisaged since all activities will be confined to the said mining site.

#### **PREDICTED IMPACT: NONE**

#### **Decommissioning/closure phase:**

The rehabilitation of Blocks 1 & 2 (Figure 2) and the road extending through the mining area will not impact on any other interested and affected party other than the project applicant. All rehabilitation activities will take place within the demarcated area.

#### **PREDICTED IMPACT: NONE**

### **6.3 Residual impacts after closure**

The following residual impacts after closure could take place:

- Wind erosion;
- Water erosion;
- Collapse of embankments and contours;
- Poor soil cover.

On identification, mitigation measures (Section 7) would have to be implemented in order to rectify the situation.

### **6.4 Cumulative impacts**

The mining of both Block 1 and Block 2 would result in a cumulative impact of approximately 0.96448610 hectares. However, these mined areas will be rehabilitated and returned to grazing. No other sand mining has taken place on the said site.

### **6.5 No project impacts**

If the 'no project option' in terms of the proposed mining operation was exercised, it would mean that a new mining area would have to be investigated, the potential impacts on the environment determined and the interested and affected parties consulted. The necessary permits would also have to be obtained for the proposed activity.

Mr Moritz Kallmeyer would thus not be able to deliver sand to his clients and would impact on his planned new business activity as well as the construction of proposed chalets on the said site.

## **6.6 Conclusion**

Only a small area (0.96448610 ha) will be impacted by the proposed sand mining operation.

Mitigation measures indicated in Section 7 would assist with reducing the potential impact of the proposed sand mining operation.



## **7. ENVIRONMENTAL MANAGEMENT PLAN**

### **7.1 Introduction**

This Environmental Management Plan contains guidelines, operating procedures and rehabilitation/pollution control requirements which will be binding on the holder of the mining permit after approval of the Environmental Management Plan. ***It is essential that this portion be carefully studied, understood, implemented and adhered to at all times.***

#### **Responsibility**

- The environment affected by the mining operation will be rehabilitated by the holder, as far as is practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development.
- The affected environment will be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.
- It is the responsibility of the holder of the mining permit to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of this EMP.

### **7.2 Geology**

As indicated in Section 6.3.1, the removal of sand from the 0.96448610 ha area would result in a permanent impact on the geology of the site.

*No mitigation measures are possible in order to reduce this impact other than implementing the proposed mine plan and mining within the said mining area (Blocks 1 to 2; Figure 2).*

### **7.3 Topography**

#### **Objectives:**

- *To reduce the potential impact of the proposed mining operation on the topography of the site and surroundings as far as possible.*

- |  |
|--|
| <ul style="list-style-type: none"><li>a) Before any mining takes place, the boundaries of the proposed mining area (Blocks 1 to 2; Figure 2) will be surveyed and pegged.</li><li>b) Within the proposed mining area (Figure 2) no dumping of any material during and after mining; trampling and urination by operator/contractors, or any other action that will degrade the mined must be allowed to take place</li><li>c) The operator/contractors will be informed of these rules and be made aware of penalties (fines to be paid) to be imposed due to infringements.</li></ul> |
|--|

- d) The outer boundaries of the blocks (Blocks 1 to 2; Figure 2) will be trenched between the beacons (inserted by the surveyor) to ensure that the operator remains within the allocated area.
- e) All mining activities associated with a particular block (Block 1 to 2; Figure 2) will be limited to the surveyed area.
- f) Sand extraction will start in Block 1 at the top of Block 1 (demarcated by the line marked AB in Figure 2). Sand will be removed in 10m to 15 m wide strips across the slope of the demarcated block (Figure 2).
- g) The maximum depth of the excavations will be 2.5m below ground level.
- h) The subsequent block (Blocks 2; Figure 2) will only be mined once the earthworks on the previous phase have been completed.
- i) After the first section (Block 1, Figure 2) has been mined out, it will be sloped at 18 degrees (1:3) and seeded to suitable grass species (see Section 8.2.2) to limit erosion and restore protective ground cover.
- j) Rehabilitation of the mining blocks will thus take place in the following sequence: Block 1, and then Block 2 (Figure 2) – and procedure as laid down in section 8.22 must be followed

#### 7.4 Soil

##### **Objectives:**

- *To reduce the potential impact of the proposed mining operation on the soil of the site and surroundings (in terms of soil quality, structure and erosion potential) as far as possible.*

- a) Before any mining takes place, the boundaries of the proposed mining area (Blocks 1 to 2; Figure 2) will be surveyed and pegged. The outer boundaries of the blocks (Blocks 1 to 2; Figure 2) will be trenched between the beacons (inserted by the surveyor) to ensure that the operator remains within the allocated area.
- b) No activities will be allowed within the adjacent areas (Figure 2). This includes dumping of any material during and after mining; trampling and urination by operator/contractors, etc.
- c) The operator/contractors will be informed of these rules and will be made aware of penalties (fines to be paid) to be imposed due to infringements.
- d) All mining activities associated with a particular block (Block 1 & 2; Figure 2) will be limited to the surveyed area.
- e) Sand extraction will start in Block 1 from the top of the block demarcated by the line AB and extraction will take place across the slope (Figure 2).
- f) Sand will be removed in 10m to 15 m wide strips across the slope of the demarcated block (Figure 2).

- g) The maximum depth of the excavations will be 2.5m below ground level.
- h) The topsoil layer of the areas to be developed will be removed and stockpiled in demarcated areas. The topsoil layer generally has a high organic content and carries the seed bank.
- i) Any stockpile, which is likely to remain for 3 months or more, must be vegetated (see grass mix provided in Section 8.2.2).
- j) Any sub-soil or rocks removed should also be stockpiled separately and be used during the rehabilitation phase (see Section 8.2.2).

- k) After the first section (Block 1, Figure 2) has been mined out, it will be sloped at 18 degrees (1:3) and seeded to suitable grass species (see Section 8.2.2) to limit erosion and restore protective ground cover.
- l) Rehabilitation of the mining blocks will thus take place in the following sequence: Block 1 and then Block 2 (Figure 2).
- m) Rehabilitation will follow the procedures indicated in Section 8.2.2.
- n) The road extending through the mining area will be rehabilitated as indicated in Section 8.2.3.

**Objective:**

- *To reduce potential soil pollution as a result of the mining activity taking place.*

- a) No washing of sand will take place on site and therefore no mine waste/mine residue dumps will be present on site.
- b) A rubbish bin will be placed at the sand mining site for non degradable refuse such as glass bottles, plastic bags, etc. This drum will be emptied on a regular basis and disposed of at a recognised disposal facility. Bio-degradable refuse will be handled in a similar manner.
- c) No dumping or burying of any kind of waste (domestic, general, building rubble, etc.) to take place on site or on the adjacent areas.
- d) Site workers must not be allowed to burn any waste on site.
- e) A chemical toilet will be provided on site for use by the operator/site workers. The chemical toilet will be serviced on a regular basis. No long drop toilets to be allowed on site.
- f) No vehicles will be repaired within the proposed mining area. All vehicles will be repaired off site at workshop on the farm.
- g) Equipment and machinery used in the mining operation will be adequately maintained so that during operations, oil diesel, fuel, hydraulic fluid spills will be prevented.
- h) No used oils or lubricants to be stored or buried on site.
- i) No diesel tank for refuelling of the front end loader may be installed on site without the necessary permission.
- j) All hydrocarbon spills (oil, grease, diesel, petrol, etc.) should be cleaned with the use of suitable absorbent materials such as drizit. Appropriate soil remediation measures should be implemented where soil has been contaminated with oil.
- k) The operator/site workers should be educated with regards to the said waste management system and the importance thereof.

## 7.5 Natural vegetation/animal life

**Objective:**

- *To reduce the potential impact of the proposed mining operation on the vegetation of the site and surroundings as far as possible.*

- a) Before any mining takes place, the boundaries of the proposed mining area (Blocks 1 & 2; Figure 2) will be surveyed and pegged.
- b) The outer boundaries of the blocks (Blocks 1 & 2; Figure 2) will be trenched between the beacons (inserted by the surveyor) to ensure that the operator remains within the allocated area.
- c) All mining activities associated with a particular block (Block 1 to 2; Figure 2) will be limited to the surveyed area.

- d) The subsequent block (Block 2; Figure 2) will only be mined once the earthworks on the previous phase have been completed.
- e) The operator/site workers will be informed that only official roads may be used. No off-road driving will be permitted.
- f) The operator/site workers will be informed that no poaching/trapping of animals will be allowed on site or on adjacent properties. The overall site should be inspected on a regular basis to ensure that no snaring of animals is taking place.
- g) The operator/site workers will be informed that no fires will be permitted on site or adjacent to the site in order to prepare food, etc.
- h) The operator/site workers will not be allowed to burn any waste on site.
- i) No unnecessary removal of trees or other vegetation will take place outside of the demarcated mining area.
- j) Collecting of wood and/or indigenous plants will be prohibited.
- k) Dust suppression will be practiced in order to prevent air-borne deposition on the surrounding natural vegetation and possibly the animals.
- l) The sand mining operation will be conducted during daylight hours (i.e. sunrise to sunset).
- m) The waste management system as indicated in Section 7.4 must be implemented in order to prevent any impact on the natural vegetation and animal life on site and the surrounding area.
- n) Regular site inspections should be conducted to identify any declared weeds or invader plants. If identified, the plants should be eradicated using the appropriate methods. The regulations in terms of the Conservation of Agricultural Resources Act, 1983, with regards to declared weeds and plants must be noted.

**Objectives:**

- *To rehabilitate disturbed areas in order to establish a proper vegetation cover in order to stabilize the soil and drainage patterns;*
  - *To improve the visual and aesthetic acceptability of the disturbed area;*
  - *To prevent and control the growth of declared weeds and/or invader plants.*
- a) After the first section (Block 1, Figure 2) has been mined out, it will be sloped at 18 degrees (1:3) and seeded to suitable grass species (see Section 8.2.2) to limit erosion and restore protective ground cover.
  - b) Rehabilitation of the mining blocks will thus take place in the following sequence: Block 1, and then Block 2 (Figure 2).
  - c) Rehabilitation will follow the procedures indicated in Section 8.2.2.
  - d) The road extending through the mining area will be rehabilitated as indicated in Section 8.2.3.
  - e) The regulations in terms of the Conservation of Agricultural Resources Act, 1983 with regards to declared weeds and plants will be noted and complied with.
  - f) Regular site inspections will be conducted to identify any declared weeds and/or invader plants. If identified, the plants will be eradicated using appropriate methods.
  - g) Rehabilitation activities will be closely monitored and supervised by the independent Environmental Control Officer (ECO) in conjunction with a qualified specialist.

*Please note: Mitigation measures proposed with regards to surface and groundwater would also result in the protection of natural vegetation and animal life.*

## **7.6 Surface water/sensitive landscapes**

### **Objective:**

- *To reduce the potential impact of the proposed mining operation on the surface water run-off on the surrounding area.*

- a) Before any mining takes place, the boundaries of the proposed mining area (Blocks 1 & 2; Figure 2) will be surveyed and pegged.
- b) The outer boundaries of the blocks (Blocks 1 & 2; Figure 2) will be trenched between the beacons (inserted by the surveyor) to ensure that the operator remains within the allocated area.
- c) All mining activities associated with a particular block (Block 1 to 2; Figure 2) will be limited to the surveyed area.
- d) No activities will be allowed within the adjacent areas. This includes dumping of any material during and after mining; trampling and urination by operator/contractors, etc.
- e) A storm water drain will be constructed across the slope at the top end of the blocks 1 and 2. The top of the block is demarcated by the line AB (Figure 2). This drain is to direct runoff away from the proposed mining area and so prevent erosion and flooding of the mined area during heavy downpours.
- f) The top soil removed will be stored in a bund wall on the high ground side of the mining area within the boundaries of the mining area as indicated in Figure 2. The topsoil will be utilized in the rehabilitation of the sand pits.
- g) The subsequent block (Block 2; Figure 2) will only be mined once the earthworks on the previous phase have been completed.
- h) Appropriate soil conservation measures will be provided in order to prevent soil erosion and loss of topsoil.
- i) The storm water management measures will be inspected on a regular basis in order to ensure that the structures are functional and not causing soil erosion.
- j) If soil erosion is noted, appropriate remediation measures should be implemented.

## **7.7 Groundwater**

### **Objective:**

- *To reduce the potential impact on the groundwater associated with the site.*

Mitigation measures indicated in Section 7.4 (Soil) and Section 7.5 (Surface Water) should be implemented in order to prevent any impact on the groundwater of the site.

## **7.8 Air Quality**

### **Objective:**

- *To ensure that the mining operation has the least possible impact on air quality of the site and immediate surroundings (and therefore the interested and affected parties).*

- a) In order to reduce the potential for dust generation due to mining activities, the area to be cleared of vegetation should be limited (especially during the windy months).
- b) All mining activities associated with a particular block (Block 1 or 2; Figure 2) will be limited to the surveyed area.
- c) Block 2 will only be mined once the earthworks on the previous block have been completed.
- d) Dust suppression measures (e.g. use of water tanker or water sprays) should be implemented during very dry and windy periods.
- e) Top soil stockpiles remaining in place for longer than 3 months should be seeded and fertilized. The piles should also be wetted regularly until vegetation starts to grow and the soil surface forms a crust.
- f) Top soil must not be handled during periods of high winds.
- g) Sand stockpiles must be kept as small as possible and well within the excavations to reduce wind erosion.
- h) Disturbed areas should be re-vegetated as soon as climatic conditions permit and when necessary, areas generating excessive dust must be watered down.
- i) Chicken manure must not be stockpiled on site in large quantities or for long periods. Chicken manure should be worked into soil as soon as possible.
- j) Application of chicken manure in a fine form must be avoided.
- k) Vehicular movement and speed within the mining area will be limited to a minimum to reduce dust generation on the roads: Hauling speed will be limited to below 20km/h.
- l) The gravel access roads and haul roads should be provided with red gravel or crushed stone topping that does not encourage dust generation.
- m) The operator/site workers will be informed that only official roads may be used. No off-road driving will be permitted.
- n) Vehicles must be properly maintained to reduce smoke emissions.
- o) The operator/site workers must not be allowed to make open fires or burn any waste on site.
- p) The waste management system as indicated in Section 7.4 must be implemented.
- q) The chemical toilet must be serviced on a regular basis in order to prevent odours.

## **7.9 Noise**

### **Objective:**

- *To ensure that the mining operation has an impact of low significance on the operator and noise levels of the surrounding area (and therefore the interested and affected parties).*

- a) All machinery (including vehicles) used during the mining operation should be properly muffled and maintained so as to reduce noise generation to a minimum.
- b) Working procedures should be structured so as to avoid the unnecessary generation of noise.

- c) Hooting, shouting and the use of exhaust brakes should be avoided.
- d) The necessary protective gear must be worn by the operator/site workers at all times.
- e) The sand mining operation will be conducted during daylight hours (i.e. sunrise to sunset) or 07h00 to 17h00.
- f) No mining activities will take place over weekends (i.e. Saturdays and Sundays) or on public holidays.
- g) The operator/site workers will not reside on site.
- h) Blasting will not be required as part of the mining operation.

### 7.10 Sites Of Archaeological And/Or Cultural Interest

**Objective:**

- *To prevent any impact on archaeological remains that may be excavated during the mining operation.*

- a) If any archaeological remains (including burial remains) are exposed during excavation and earthworks, the construction must be terminated immediately and the South African Heritage Resources Agency (SAHRA; Mrs Mary Leslie, Tel: 021 - 462 4502), Heritage Eastern Cape (Ms Africa Maxongo, Tel: 043 - 722 1934) and the Department of Economic Development and Environmental Affairs (DEDEA) informed of the finding.
- b) The excavated remains should not be disturbed or removed.
- c) The said site must then be inspected by a professional archaeologist.
- d) In this regard, the applicant must take note of the requirements in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999).

### 7.11 Visual Aspects

**Objective:**

- *To limit the potential visual impact as a result of the mining operation on the surrounding interested and affected parties.*

- a) All activities are to be limited to the said site.
- b) The operator/site workers must ensure that the site is kept neat and tidy at all times.
- c) Proper waste management measures must be implemented for the site (see Section 7.4 of this report).
- d) Appropriate dust control measures must be implemented during the mining operation (see Section 7.8 of this report)
- e) The operator/site workers must comply with this Environmental Management Plan (EMP).

### 7.12 Traffic

**Objective:**

- *To reduce the potential impact on the land owner and the general road user as a result of the mining operation and the subsequent transportation of the sand.*

- a) In order to gain access to the mining site or exit the mining site, the operator/site workers/contractors will use the existing road extending from the Gamtoos Mouth Road.
- b) No sand/gravel may be deposited on the tarred Gamtoos Mouth Road that could impact on the safety of the general road user.
- c) The operator/site workers will be informed that only official roads may be used. No off-road driving will be permitted.
- d) Vehicular movement and speed within the mining area will be limited to a minimum to reduce dust generation on the roads. Hauling speed will be limited to below 20km/h.
- e) The operator/site workers/contractors will at all times obey the rules of the road. No speeding will be allowed.
- f) The operator/site workers/contractors will at all times use roadworthy vehicles.
- g) Trucks will not be overloaded.

### 7.13 Interested and affected parties

**Objective:**

- *To minimize the impact of the proposed mining operation on the land owner and the adjacent land owners and therefore the adjacent land use and sense of place.*

- a) All mining activities will take place within the demarcated mining area (Blocks 1 to 2; Figure 2) in order to reduce the footprint of the mining operation and avoid impact on the activities of the surrounding interested and affected parties.
- b) No activities will be allowed to spill over onto adjacent properties.
- c) The waste management system indicated in Section 7.4 will be implemented.
- d) Appropriate notification signs must be erected warning contractors/site workers that they are entering a mining area.
- e) The mitigation measures indicated in this Environmental Management Plan (EMP) will be implemented by the operator/site workers/contractors.
- f) The operator/site workers will undergo an Environmental Awareness Training prior to commencing with work on site. A copy of the proposed Environmental Awareness Plan is provided in Appendix 5.
- g) The sand mining operation will be conducted during daylight hours (i.e. sunrise to sunset) or 07h00 to 17h00.
- h) No mining activities will take place over weekends (i.e. Saturdays and Sundays) or on public holidays.
- i) The operator/site workers will not reside on site.
- j) No squatting by informal settlers will be allowed on site.

**Objective:**

- *To ensure that the operator/site workers are not impacted upon in terms of the mining operation being performed.*

- a) The mining operation must comply with the Mine Health and Safety Act, 1996 (Act 29 of 1996) at all times.
- b) Appropriate notification signs must be erected warning contractors/site workers that they are entering a mining area.



- c) The operator/site workers/contractors must to be instructed to bring potable water to site on a daily basis.
- d) The required protective clothing and equipment must be supplied to the operator/site workers/contractors in order to reduce the potential impact on these workers.
- e) It must be ensured that the operator of the front-end loader or any other specialist equipment is properly trained by auditing the training certificates before any job commences.

**Objective:**

- *To ensure good relations with all interested and affected parties by creating open channels of communication to address matters of concern that may arise.*

- a) Communication between the permit holder, operator/contractors, the land owner and the various interested and affected parties will be established and maintained.
- b) Details with regards to the procedures to be followed by I&APs in terms of reporting complaints/concerns, emergency situations, etc. will be documented and made available to the I&APs. In this way, two-way communication between I&APs, the contractors and the permit holder can be formalized.
- c) In order to provide feedback with regards to complaints/concerns received, a complaints register will be kept.
- d) The complaints register will record the following: Date when complaint/concern was received; Name of person to whom the complaint/concern was reported; Nature of the complaint/concern reported; the way in which the complaint/concern was addressed (date to be included).
- e) Any complaint received from the public must be attended to as soon as possible. Feedback with regards to how the said complaint was addressed must be provided to the complainant and recorded in the complaints register.
- f) Any complaints regarding the said mining operation will be brought to the attention of the Department of Minerals and Energy (DME) within 24 hours after receiving the complaint.
- g) The complaints register will be kept up to date for inspection by members of the Department of Minerals and Energy (DME).

## **8. REHABILITATION**

### **8.1 Introduction**

Section 44 of the MPRDA requires that all infrastructure, equipment, plant, temporary housing and other items used during the mining period be removed from the site and these disturbed areas rehabilitated. In addition, areas mined must also be rehabilitated after mining has ceased.

Final rehabilitation will be completed within a period specified by the Regional Manager.

### **8.2 Areas to be rehabilitated**

It should be noted that no office, construction camp or any other infrastructure will be constructed at the proposed mining area.

Rehabilitation of the following would have to take place:

- The mining area (Blocks 1 & 2; Figure 2);
- The road extending through the mining area.

The existing road extending from the Gamtoos Mouth Road onto site will be left for use by the land owner.

#### **8.2.1 Proposed end land use**

The proposed mining area (Blocks 1 & 2 ; Figure 2) and the road extending through the mining area will be returned to natural veld to be used for grazing purposes. This is in line with the current use of the proposed mining area.

#### **8.2.2 The mining area (Blocks 1 & 2; Figure 2)**

The mining of Blocks 1 & 2 (Figure 2) would result in an area of 0.96448610 hectares requiring rehabilitation. It should be noted that the road extending through the mining area would be rehabilitated as part of Block 1 & Block 2.

After the first section (Block 1, Figure 2) has been mined out, it will be sloped at 18 degrees (1:3) and seeded to suitable grass species to limit erosion and restore protective ground cover.

Rehabilitation of the mining blocks will thus take place in the following sequence: Block 1 and Block 2 (Figure 2).

The following will be adhered to:

- Rocks and coarse material removed from the excavation (if any) will be replaced into the excavation.
- Once the excavation has been refilled with overburden, rocks and coarse natural materials and profiled (sloped at 18 degrees (1:3)) with acceptable contours and erosion control measures, the top soil previously stored will be returned to its original depth over the area.
- A soil sample will be taken and analysed in order to determine the status of the soil and the need for a fertiliser.

- Chicken manure could be added at a rate of 3 – 4 tons per ha or a top dressing of mixed fertiliser (such as 2-3-4) could be applied in order to improve the organic matter and improve the grass sward.
- Seeding would coincide with the first rains and is thus dependent on rainfall.
- The top soiled area can then be seeded using the following seed mixture (March – July): 3-5kg/ha *Chloris gayana*; 3-5kg/ha *Cynodon dactylon*; 3-5kg/ha *Eragrostis curvula*; 2 kg/ha; Rye grass; 15kg/ha Barley. Spring/summer period (September – March): 3-5kg/ha *Chloris gayana* (Rhodes grass); 3 – 5kg/ha *Cynodon dactylon*; 15 kg/ha *Eragrostis tef* (Tef).
- Once rehabilitation has taken place, no grazing will be allowed. It must be ensured that the rehabilitated area is properly fenced in order to prevent grazing.
- Photographs of the Block 1,& 2 (Figure 2) mining areas, before and during the mining operation and after rehabilitation, will be taken at selected fixed points and kept on record for the information of the Regional Manager.
- Regular site inspections should be conducted to identify any declared weeds or invader plants. If identified, the plants should be eradicated using the appropriate methods. The regulations in terms of the Conservation of Agricultural Resources Act, 1983, with regards to declared weeds and plants must be noted.
- If dubbeltjie (*Emmex australis*) invades the floor of the excavated areas, it should be eradicated using 2-4-D amine after which top soil should be spread over the area.
- Measures must be put in place to prevent and control veld fires.

It should be noted that waste will not be permitted to be deposited in the excavations. Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognised landfill facility. It will not be permitted to be buried or burned on the site.

### **8.2.3 Rehabilitation of road**

- Imported road construction materials which may hamper regrowth of vegetation will be removed and disposed of in an approved manner prior to rehabilitation.
- The road will be ripped or ploughed to increase the aeration and water penetrating.
- If necessary, the ripped road area will be appropriately fertilised (based on a soil analysis) to ensure the regrowth of vegetation.
- Chicken manure (3 – 4 tons per ha) could be used as a top dressing
- The following seed mixture will be used as from March - October: 3-5kg/ha *Chloris gayana*; 3-5kg/ha *Cynodon dactylon*; 3-5kg/ha *Eragrostis curvula*; 2 kg/ha Rye grass; 15kg/ha Barley.
- Regular site inspections should be conducted to identify any declared weeds or invader plants. If identified, the plants should be eradicated using the appropriate methods. The regulations in terms of the Conservation of Agricultural Resources Act, 1983, with regards to declared weeds and plants must be noted.
- If dubbeltjie (*Emmex australis*) invades the area, it should be eradicated using 2-4-D amine after which top soil should be spread over the area.

### **8.3 Maintenance (aftercare) programme**

A two year maintenance (aftercare) programme will be required in order to ensure that two years after final rehabilitation the rehabilitated area will represent a fully developed grazing unit.

The maintenance/aftercare programme would involve:

- Maintenance of the rehabilitated land and storm water trench until such time as it can be proven that a steady state has been achieved.
- Ensuring that the rehabilitated area is fenced in order to prevent grazing and trampling of the newly rehabilitated surfaces. This will assist in reducing potential erosion.
- Periodic visits (quarterly) to the rehabilitated area after decommissioning in order to determine the status thereof.
- Implementation of correctional measures if required.

## **9. MONITORING AND REPORTING**

According to Regulation 55 promulgated in terms of the MPRDA, the holder of the mining permit will:

- Conduct monitoring on a continuous basis;
- Conduct performance assessment of the environmental management plan as required;
- Compile and submit a performance assessment to the Minister to demonstrate adherence to this environmental management plan.

### **9.1 Inspections and reporting**

This would involve:

- Regular monitoring of all the environmental management measures and components to ensure that the provisions of this EMP are adhered to.
- Identification of non-compliance and the implementation of recommendations regarding the rectification thereof.
- Ongoing regular reporting of the progress regarding the implementation of this EMP.

#### **9.1.1 Immediate reporting**

The following must be reported immediately (i.e. within 24 hours):

- Any complaints received to be immediately reported to the permit holder and recorded in the complaints register;
- Any recorded complaint to be investigated and addressed (if possible);
- Any emergency or unforeseen impact to be reported as soon as possible.
- Any accidental release of pollutants or possible polluting substances to be reported immediately to the Regional Director of the Department of Minerals and Energy and the Department of Water Affairs and Forestry.

A record of incidents reported in this manner must be kept.

#### **9.1.2 Monthly reporting**

The quantity of sand mined on a monthly basis must be recorded and kept on file.

Any complaints received must be recorded in the complaints register. The way in which these complaints were addressed and feedback provided to the complainant must be indicated in the complaints register.

#### **9.1.3 Quarterly inspections and reporting**

A responsible person (independent Environmental Control Officer (ECO)) should be appointed, in writing, to monitor all environmental aspects relating to the mining operation on a quarterly basis and thus ensure compliance with the EMP.

In addition, the independent Environmental Control Officer (ECO) must ensure that the following information is recorded:

- Quantities sand mined on a monthly basis;
- The percentage of disturbed area rehabilitated (rehabilitation figures);
- Complaints in the complaints register as well as the way in which these complaints were addressed and feedback provided to the complainant.

Photographs of the Block 1& 2 (Figure 2) mining areas should be taken at selected fixed points and kept on record for the information of the Regional Manager as well as included in the quarterly reports.

The independent ECO must compile a report confirming compliance with various points identified in the environmental management plan. In addition, the ECO must indicate any possible non-compliances and recommendations regarding the rectification thereof.

## **9.2 Compliance reporting/submission of information**

### **9.2.1 Quarterly submissions**

The following information to be submitted to the Department of Minerals and Energy on a quarterly (3-monthly) basis:

- Quantities sand mined;
- The percentage of disturbed area rehabilitated (rehabilitation figures);
- A report confirming compliance with various points identified in the environmental management plan as well as the identification of possible non-compliance and recommendations regarding the rectification thereof.
- Copy of complaints register.
- Record of any incidents reported.

### **9.2.2 Annual submissions**

The following information should be submitted to the Department of Minerals and Energy on an annual basis and should form part of the annual performance assessment (see Section 9.3):

- An updated mine plan indicating the actual progress with the mining of the area and the rehabilitation thereof;
- Quantities sand mined;
- The percentage of disturbed area rehabilitated (rehabilitation figures);
- A report confirming compliance with various points identified in the environmental management plan as well as the identification of possible non-compliance and recommendations regarding the rectification thereof.
- Copy of the complaints register.
- Record of any incidents reported.

### **9.3 Monitoring and performance assessments of the environmental management plan**

The performance assessment reporting for this proposed mining operation will be on an annual basis (i.e. from the date of approval of this EMP). *This is due to the fact that the proposed mining operation has a lifespan of approximately 24 months (i.e. 2 years).*

The performance assessment report will contain the following information (as a minimum):

- information regarding the period that applies to the performance assessment;
- the scope of the assessment;
- the procedure used for the assessment;
- the interpreted information gained from monitoring the approved environmental management programme or plan;
- the evaluation criteria used during the assessment;
- the results of the assessment; and
- recommendations on how and when deficiencies that are identified and/or aspects of non-compliance will be rectified

The holder of the mining permit will appoint an independent qualified person(s) to conduct the performance assessment and compile the performance assessment report provided that no such appointment shall relieve the holder of the responsibilities in terms of these regulations.

Subject to section 30(2) of the Act, the performance assessment report submitted by the holder shall be made available by the Minister to any person on request.

If upon consideration by the Minister, the performance assessment executed by the holder is not satisfactory or the report submitted by the holder is found to be unacceptable, the holder must-

- repeat the whole or relevant parts of the performance assessment and revise and resubmit the report; and/or
- submit relevant supporting information; and/or
- appoint an independent competent person(s) to conduct the whole or part of the performance assessment and to compile the report.

If a reasonable assessment indicates that the performance assessment cannot be executed satisfactorily by the holder or a competent person(s) appointed by the holder, the Minister may appoint an independent performance assessment person(s) to conduct such performance assessment. Such appointment and execution shall be for the cost of the holder.

## **10. CLOSURE**

Regulations 56 to 62 outline the entire process of mine closure. In terms of Section 37 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), the holder of a permit is liable for any and all environmental damage or degradation emanating from his operation, until a closure certificate is issued in terms of Section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

### **10.1 Closure objectives**

The proposed end land use will be to return the mined area to natural veld to be used for grazing purposes. This is in line with the current use of the site.

Two years after final rehabilitation, the rehabilitated area to represent a fully developed grazing unit that can once again be utilised by the land owner.

The main closure objectives will thus include:

- Blocks 1 & 2 (Figure 2) to be restored, as closely as possible, to its original state. This will also be applicable to the road extending through the mining area
- The mined area to be top soiled, shaped and revegetated in order to create a stable, fertile soil layer that is erosion free and protected by a proper vegetation cover.
- The rehabilitated area to blend in with the surrounding site and the adjacent rehabilitated area.
- The rehabilitated area to be a natural extension of the adjacent rehabilitated area.
- The rehabilitated area to be protected by a proper vegetation cover to prevent any impact in terms of dust.
- The drainage of the rehabilitated area to be adequate with no ponding taking place.
- The rehabilitated area to be erosion free.
- The rehabilitated area to be free of alien plants and weeds.
- The mined/affected areas to be made safe for man and animal.
- All stockpiles to be removed.
- All infrastructure (e.g. chemical toilet, rubbish bin, etc.) to be removed.
- All waste (including rubbish bin) to be removed.

After closure, any gate or fence erected by the holder which is not required by the landowner/tenant will be removed and the situation restored to the pre-mining situation.



## **10.2 Application for a closure certificate**

When the holder of the mining right intends to apply for a closure certificate, the following documentation will be completed and submitted to the Department of Minerals and Energy:

- The official Application for Closure Certificate (Form P) of the Department of Minerals and Energy;
- A closure plan contemplated in Regulation 62;
- An environmental risk report contemplated in Regulation 60;
- A final performance assessment report contemplated in Regulation 55(9);
- A completed application form contemplated in Regulation 58(1) to transfer environmental liabilities and responsibilities, if the transfer of such liabilities has been applied for.

### **10.2.1 Closure plan**

The holder of the mining permit will compile a closure plan in accordance with Regulation 62. The closure plan will thus contain the following information:

- (a) a description of the closure objectives and how these relate to the mine operation and its environmental and social setting;
- (b) a plan contemplated in Regulation 2(2), coordinated according to generally accepted standards, showing the land or area under closure;
- (c) a summary of the regulatory requirements and conditions for closure negotiated and documented in the environmental management programme or plan;
- (d) a summary of the results of the environmental risk report and details of identified residual and latent impacts;
- (e) a summary of the results of progressive rehabilitation undertaken;
- (f) a description of the methods to decommission each prospecting or mining component and the mitigation or management strategy proposed to avoid, minimize and manage residual or latent impacts;
- (g) details of any long-term management and maintenance expected;
- (h) details of financial provision for monitoring, maintenance and post closure management, if required;
- (i) a plan or sketch at an appropriate scale describing the final land use proposal and arrangements for the site;
- (j) a record of interested and affected persons consulted; and
- (k) technical appendices, if any.

### **10.2.2 Environmental risk report**

When the holder of the mining permit intends closing down his operation, an environmental risk report will accompany the application for closure. The requirements of such a risk report is contained in Regulation 60 of the Regulations promulgated in terms of the Act and is quoted below:

*"An application for a closure certificate must be accompanied by an environmental risk report which must include-*

- (a) *the undertaking of a screening level environmental risk assessment where-*
  - (i) *all possible environmental risks are identified, including those which appear to be insignificant;*
  - (ii) *the process is based on the input from existing data;*
  - (iii) *the issues that are considered are qualitatively ranked as –*
    - (aa) *a potential significant risk; and/or*
    - (bb) *a uncertain risk; and/or*
    - (cc) *an insignificant risk.*
- (b) *the undertaking of a second level risk assessment on issues classified as potential significant risks where-*
  - (i) *appropriate sampling, data collection and monitoring be carried out;*
  - (ii) *more realistic assumptions and actual measurements be made; and*
  - (iii) *a more quantitative risk assessment is undertaken, again classifying issues as posing a potential significant risk or insignificant risk.*
- (c) *assessing whether issues classified as posing potential significant risks are acceptable without further mitigation;*
- (d) *issues classified as uncertain risks be re-evaluated and re-classified as either posing potential significant risks or insignificant risks;*
- (e) *documenting the status of insignificant risks and agree with interested and affected persons;*
- (f) *identifying alternative risk prevention or management strategies for potential significant risks which have been identified, quantified and qualified in the second level risk assessment;*
- (g) *agreeing on management measures to be implemented for the potential significant risks which must include-*
  - (i) *a description of the management measures to be applied;*
  - (ii) *a predicted long-term result of the applied management measures;*
  - (iii) *the residual and latent impact after successful implementation of the management measures;*
  - (iv) *time frames and schedule for the implementation of the management measures;*
  - (v) *responsibilities for implementation and long-term maintenance of the management measures;*
  - (vi) *financial provision for long-term maintenance; and*
  - (vii) *monitoring programmes to be implemented."*

### **10.2.3 Final performance assessment report**

When the holder of the mining permit intends closing such operation, a final performance assessment shall be conducted and a report submitted to the Minister to ensure that -

- the requirements of the relevant legislation have been complied with;
- the closure objectives as described in the environmental management plan have been met; and
- all residual environmental impacts resulting from the holder's operations have been identified and the risks of latent impacts which may occur have been identified, quantified and arrangements for the management thereof have been assessed.

The final performance assessment report contemplated in Regulation 55(9) will accompany the application for a closure certificate in terms of the Act.

The performance assessment report will contain the following information (as a minimum):

- information regarding the period that applies to the performance assessment;
- the scope of the assessment;
- the procedure used for the assessment;
- the interpreted information gained from monitoring the approved environmental management programme or plan;
- the evaluation criteria used during the assessment;
- the results of the assessment; and
- recommendations on how and when deficiencies that are identified and/or aspects of non-compliance will be rectified

The holder of the mining permit will appoint an independent qualified person(s) to conduct the performance assessment and compile the performance assessment report provided that no such appointment shall relieve the holder of the responsibilities in terms of these regulations.

#### **10.2.4 Transfer of environmental liabilities to a competent person**

The mining permit holder must note that should the holder wish to transfer any environmental liabilities and responsibilities to another person or persons the following will pertain:

- (1) An application to transfer environmental liabilities to a competent person in terms of section 48) of the Act, must be completed on Form O as set out in Annexure 1 to the Regulations and be lodged to the Minister for consideration.
- (2) The holder of a mining permit may transfer liabilities and responsibilities as identified in the environmental management plan and the required closure plan to a competent person as contemplated in Regulation 58.
- (3) When considering the transfer of environmental liabilities and responsibilities in terms of section 48) of the Act, the Minister must consult with any State department which administers any law relating to matters affecting the environment.
- (4) No transfer of environmental liabilities and responsibilities to a competent person may be made unless the Chief Inspector of Mines and the Department of Water Affairs and Forestry have confirmed in writing that the person to whom the liabilities and responsibilities is transferred to, have the necessary qualifications pertaining to health and safety and management of potential pollution of water resources.

## 11. FINANCIAL PROVISION

### 11.1 Features/structures to be rehabilitated

It should be noted that no office, construction camp or any other infrastructure will be constructed at the proposed mining area.

Rehabilitation of the following would have to take place:

- The mining area (Blocks 1 to 2; Figure 2);
- The road extending through the mining area.

The existing road extending from the Gamtoos Mouth Road onto site will be left for use by the land owner.

### 11.2 Financial provision for features/structures to be rehabilitated

The mining of Blocks 1 & 2 (Figure 2) would result in an area of 0.96448610 hectares requiring rehabilitation. It should be noted that the road extending through the mining area would be rehabilitated as part of Block 1 and Block 2.

The following table provides an indication of the estimated cost with regards to the rehabilitation of a one (1) hectare area.

ITEM	REHABILITATION COST (excl. VAT)	
	1 HECTARE	
Sloping the mined area: 8 hrs @ R325/hr (includes diesel and operator)	R 2 600.00	
Levelling the floor: 4 hrs @ R325/hr (includes diesel and operator)	R 1 300.00	
Spreading top soil and incorporating chicken manure: 4 hrs @ R500/hr (includes diesel and operator)	R 2 000.00	
Cost of chicken manure: 3 tons @ R400/ton	R 1 200.00	
Cost of seed mixture	R 1 070.00	
Spreading of seed and rolling	R 200.00	
<b>TOTAL COST</b>	<b>R 8 370.00</b>	
<b>VAT</b>	<b>R 1 171.80</b>	
<b>TOTAL COST (INCL. VAT)</b>	<b>R 9 541.80</b>	

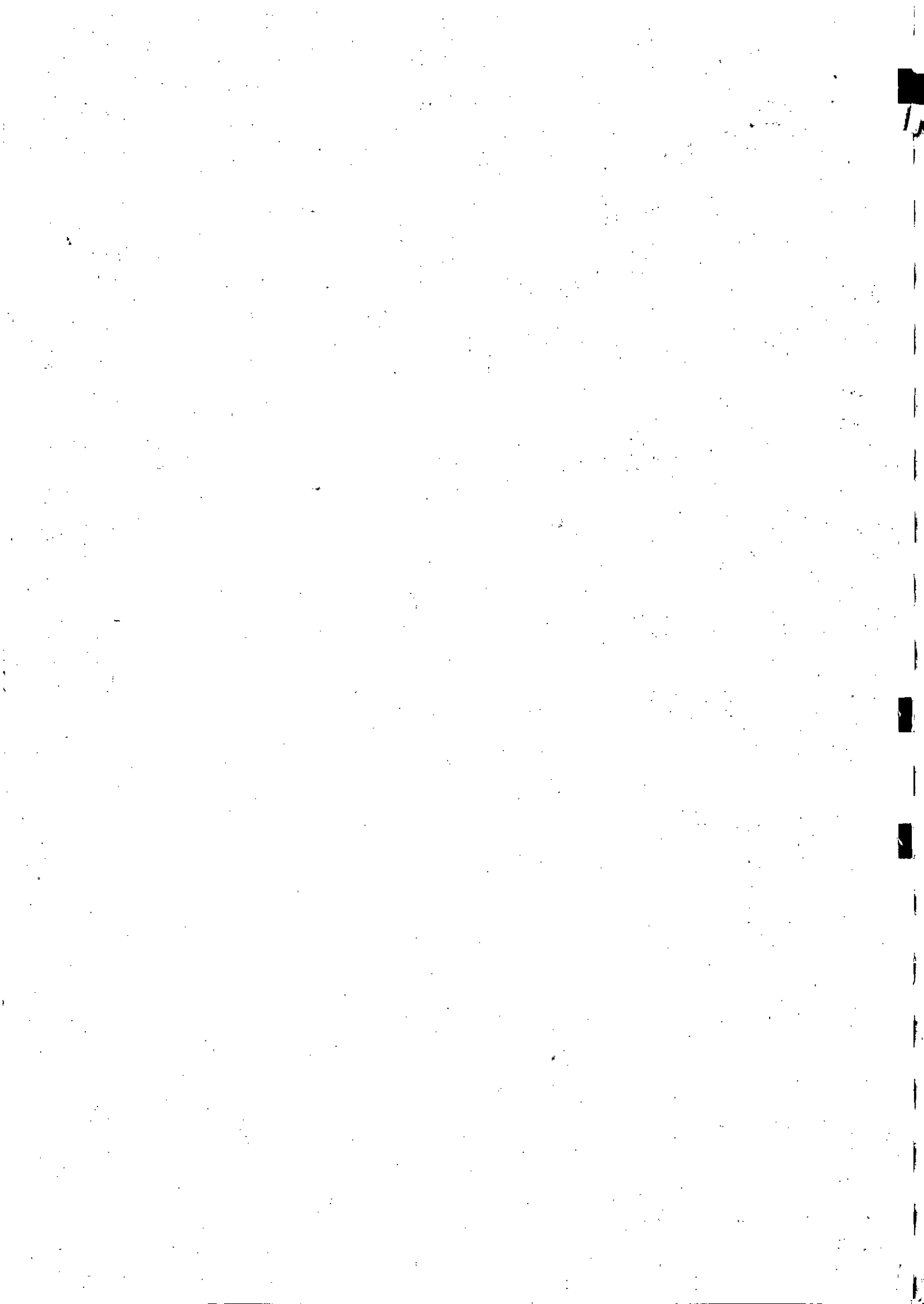
Environmental Management Plan (EMP): Application for a mining permit w.r.t. the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage, Eastern Cape. (DME REF. NO.: EC 30/5/1/3/2/0429MP)

ITEM	ADMINISTRATIVE COST (excl. VAT)	
	1 HECTARE	
Advertising tender	R 3 000.00	
Performance assessment report	R10 000.00	
Closure report	R10 000.00	
<b>TOTAL COST</b>	<b>R23 000.00</b>	
<b>VAT</b>	<b>R 3 220.00</b>	
<b>TOTAL COST (INCL. VAT)</b>	<b>R26 220.00</b>	

ITEM	OVERALL COST (excl. VAT)	
	1 HECTARE	
Rehabilitation cost	R 8 370.00	
Administrative cost	R 23 000.00	
<b>TOTAL COST</b>	<b>R31 370.00</b>	
<b>VAT</b>	<b>R 4 391.80</b>	
<b>TOTAL COST (INCL. VAT)</b>	<b>R35 761.80</b>	

### 11.3 Method of financial provision

A bank guarantee will be provided by the holder of the mining permit once the Department of Minerals and Energy has indicated what financial provision must be provided.



## **12. ADDITIONAL REQUIREMENTS BY THE DEPARTMENT OF MINERALS AND ENERGY**

This section outlines the specific additional requirements that may be set for the operation by the Regional Manager. Additional requirements will only have been set if the Regional Manager is of the opinion that there are specific impacts on the environment which will not be adequately mitigated by the provisions set within the standard version of the Environmental Management Plan. These requirements form part of the Environmental Management Plan and all elements and instructions contained herein must be complied with by the applicant.

### **LIST OF FIGURES:**

- Figure 1: Location of site
- Figure 2a: Plan showing proposed mining site
- Figure 2b: Schematic mine plan



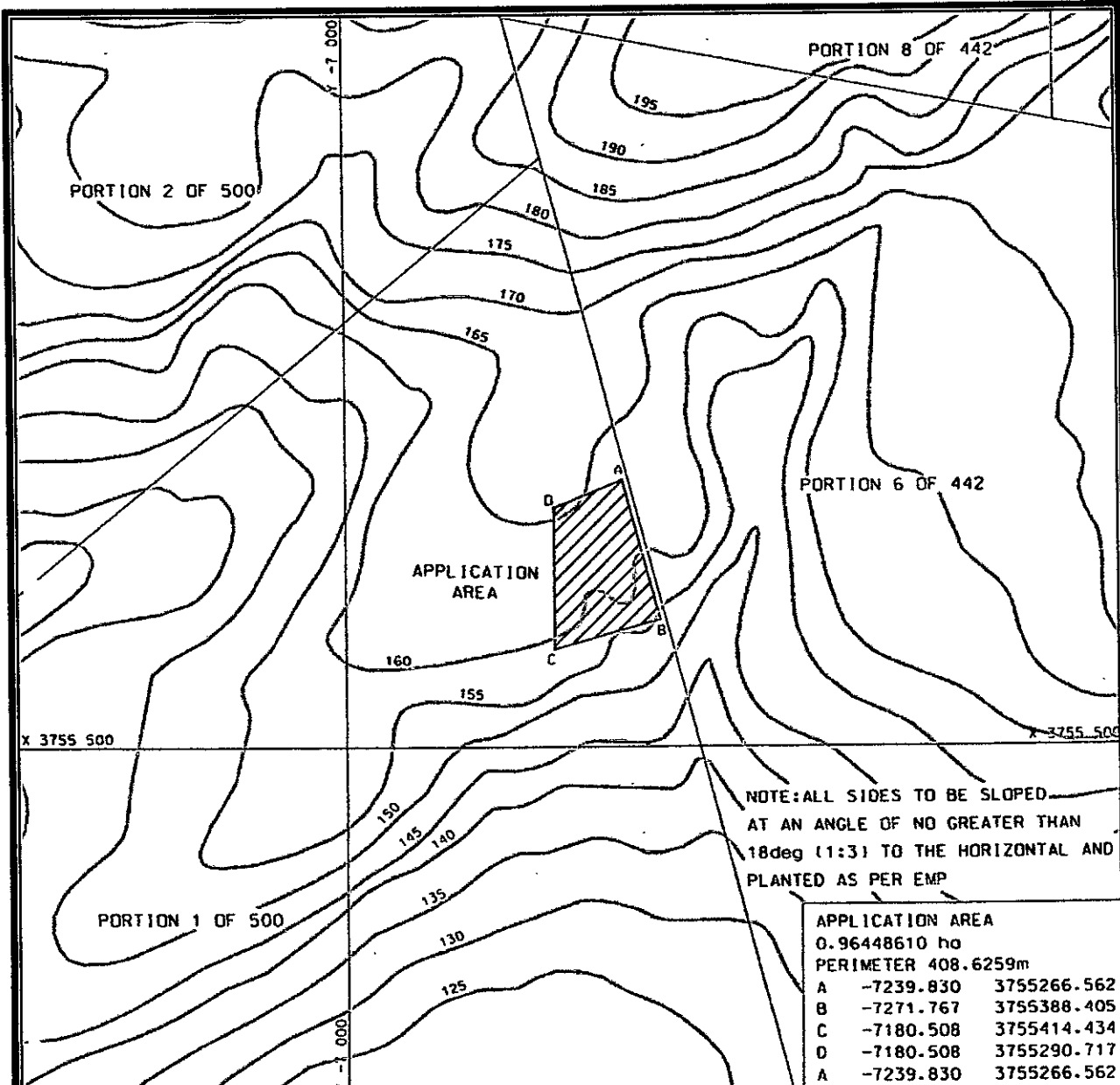


**Figure 1**

**Location of site**

(taken from 1: 50 000 3325CC - not to scale )



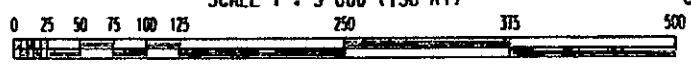


APPLICATION AREA	
0.96448610 ha	
PERIMETER 408.6259m	
A	-7239.830 3755266.562
B	-7271.767 3755388.405
C	-7180.508 3755414.434
D	-7180.508 3755290.717
A	-7239.830 3755266.562



**LEMOENFONTEIN TRUST**  
 SITUATED ON PORTION 1 OF THE FARM DIE WOUDE NO.500 REGISTRATION DEVISION OF UITENHAGE  
 Kouga Local Municipality  
**PLAN SHOWING PROPOSED MINING SITE**  
 SURVEY SYSTEM R.S.A. WGS84 LO 25 DEGREE SQUARE 3325  
 SCALE 1 : 5 000 (ISO A4)

BENCHMARK  
 TRIG 149 (GROOTE RUG A)  
 ELEVATION : + 289.7m A.M.S.L  
 CO-ORDINATES : Y -6136.38  
 X + 3752768.81



SURVEYOR \_\_\_\_\_  
 DATE \_\_\_\_\_  
 APPLICANT \_\_\_\_\_  
 DATE \_\_\_\_\_

SURVEY SYSTEM : WG 25  
 Y + 0.000  
 X + 0.000  
 PLAN NO. LT1CSH

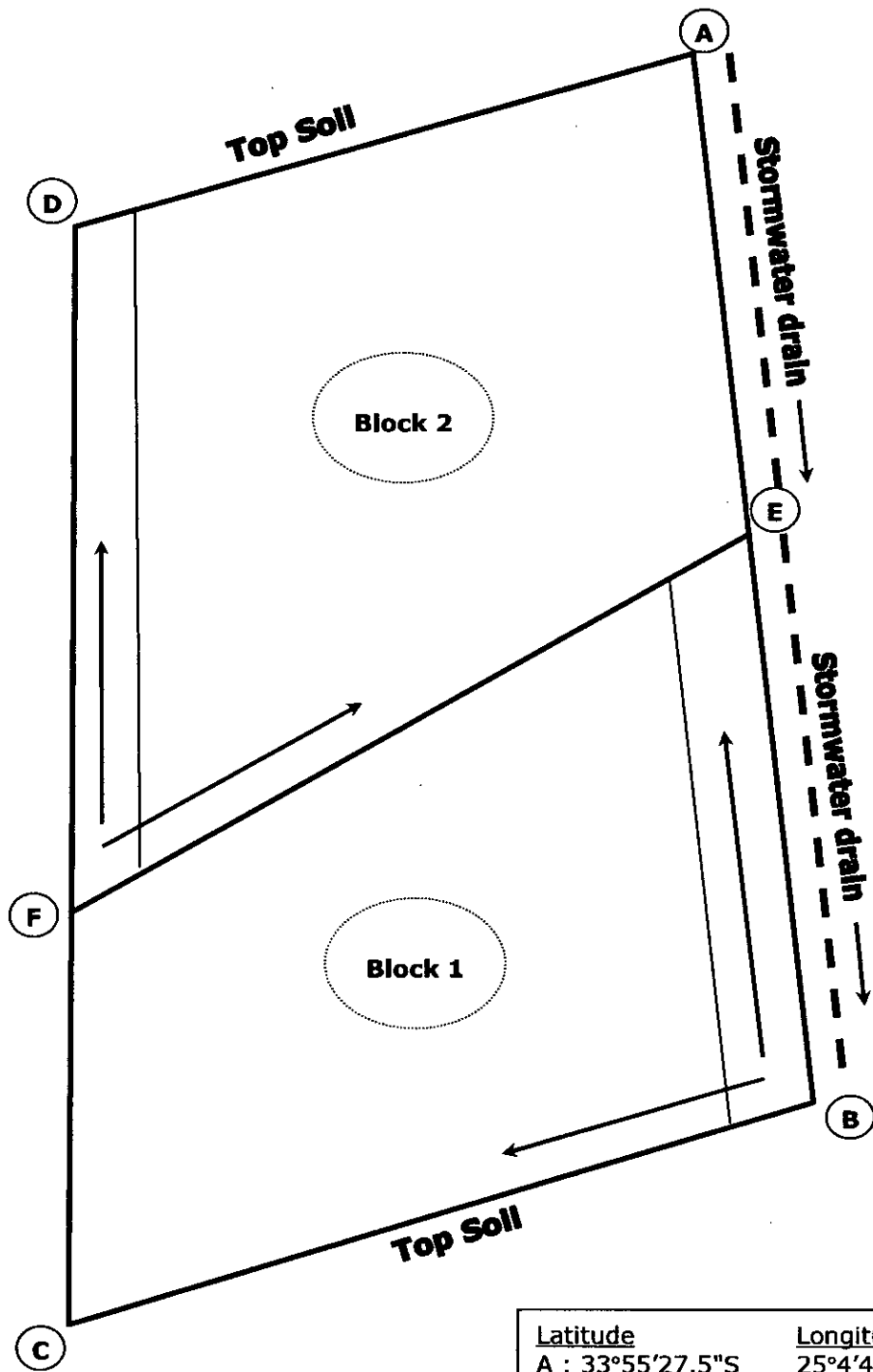


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 Cell: (079) 025 3400  
 E-Mail: info@wgsts.co.za

PO Box 3485  
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 6330

62 Bullshrub Crescent  
 Jeffrey's Bay  
 Eastern Cape

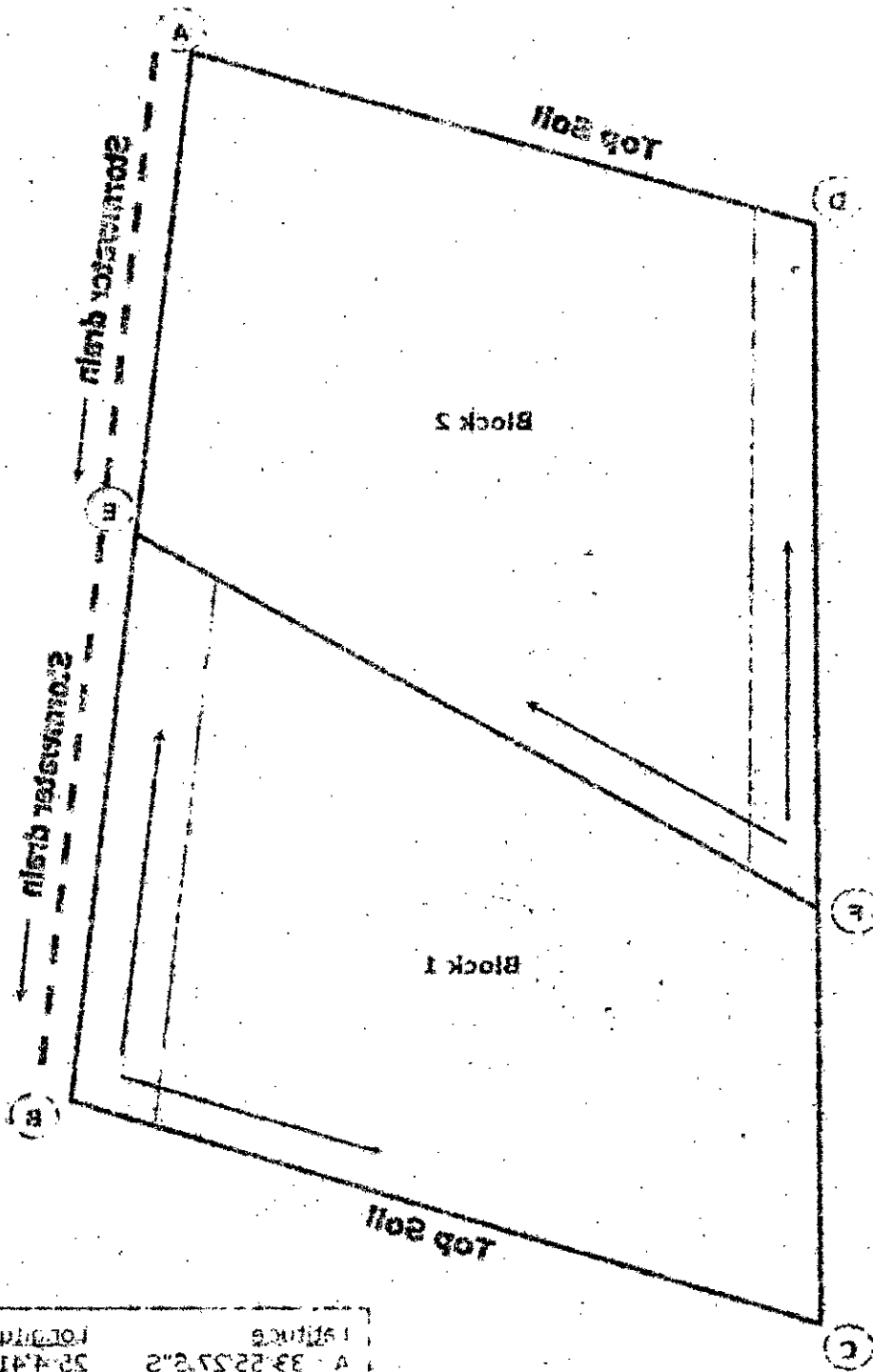
**Figure 2a: Plan showing proposed mining site**  
 (taken from WGSTS, 2010)



<u>Latitude</u>	<u>Longitude</u>
A : 33°55'27.5"S	25°4'41.9"E
B : 33°55'31.4"S	25°4'43.1"E
C : 33°55'32.3"S	25°4'39.6"E
D : 33°55'28.2"S	25°4'39.6"E

Figure 2b: Schematic mine plan





Point	Coordinates	Point	Coordinates
A	33-22-57.2 N	2	33-22-58.2 S
B	43-22-31.4 E	C	73-22-03.3 S
C	43-22-11.1 E	D	43-22-09.8 E
D	43-22-09.8 E	E	43-22-09.8 E
E	43-22-09.8 E	F	43-22-09.8 E
F	43-22-09.8 E		

Figure 2b: Schematic mine plan

## **APPENDIX 1:**

### **ADVERTISING OF THE PROJECT**

- ❖ Copy of the advertisement placed in The Herald, Thursday, 1 April 2010.
- ❖ Copy of the on-site notice.
- ❖ Photographs of the on-site notice.
- ❖ Copy of documentation made available on the website:
  - Notice of a mining permit application (1 page);
  - Map indicating the location of the site (Figure 1);
  - Comment sheet.
- ❖ Copy of website ([www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)) printout.

Buildings, large  
lands, now available.  
600. 083-295-3693.

**7151**  
Friday Accommodation

**JEFFREY'S BAY:** Sleep  
6. Easter weekend, R1 900.  
3-600-7788 Sugan

**MODERN self-catering,**  
rep. 5, Cape Road, from  
R300 per day. 084-679-  
9931 or 084-588-6821

**SUNDAYS RIVER:**  
Pateron Park Resort.  
Fishing, Boating, Camp-  
ing, Canoe's for hire.  
Trampolines, Swimming  
Pool. Perfect for a day visit  
relaxing weekend.  
Phone (041) 468-0040.

**8**  
PROPERTY

**8010**  
Flats for Sale

**SYDENHAM:** R350 000  
2 bedrooms. 083-658-  
1163 or 078-281-5405

**8020**  
Downhouses for Sale

**MELROSE LOFT:** Loft  
for sale. End unit with  
garden, braai area and  
Trellisdoor. Price R410 000.  
Contact 083-704-4561 to  
view

**8050**  
Houses for Sale

**CLEARY ESTATE:**  
R480 000 negotiable. 083-  
658-1163 or 078-281-5405

**MALABAR MEWS:** 3  
Bed, 2 bath, R420 000  
neg. Call 072-361-9830.

**8080**  
Plots for Sale

2 adjacent plots for sale  
in Willow Road, Fairview,  
500sqm each at R255 000  
per plot. Call 084-216-  
2025.

**MALABAR:** Plot in Zin-  
nia Crescent with beautiful  
views. R235 000. 072-436-  
5960

**8161**  
Business Premises To Let

**NORTH END.**  
R2 500. May 1. Close to  
Pier 14. Plus/ minus  
100m<sup>2</sup>. Call 581-5382.

**Bowman**  
PROPERTY GROUP

Best selection of  
Warehouses, Offices  
Shops. All sizes  
Manios 082-444-8118  
Janis 083-659-2659.

**GOVAN MBEKI - Retail**  
shop in prime position next  
to Standard Bank, North  
End, immediate occupa-  
tion. R5 931.42 p.m. Phone  
(041) 484-1848.

**KORSTEN:** Off Stan-  
ford / Kempston Rd's.  
400m<sup>2</sup> warehouse / work-  
shop plus office.  
3 Phase electricity. R9 700  
pm. Phone: 083-565-5365

**MIKE BOSCH**  
PROPERTIES

**PATERSON ROAD BEST POSITION**  
1 300m<sup>2</sup> undercover  
6 000m<sup>2</sup> paved yard  
Phone  
082-550-1180  
082-776-3313

**US COMMERCIAL**

Phone (041) 373-4367  
**WAREHOUSING:** 500m<sup>2</sup>,  
600m<sup>2</sup>, 1500m<sup>2</sup>, 2000m<sup>2</sup>,  
2600m<sup>2</sup>, 3580m<sup>2</sup>, 4000m<sup>2</sup>,  
18 000m<sup>2</sup> up to 30 000m<sup>2</sup>  
**OFFICES:** 130m<sup>2</sup>, 200m<sup>2</sup>,  
400m<sup>2</sup>, 640m<sup>2</sup>, 2100m<sup>2</sup>  
**RETAIL:** 150m<sup>2</sup>, 200m<sup>2</sup>,  
400m<sup>2</sup>, 570m<sup>2</sup>, 650m<sup>2</sup>  
Various Properties For Sale  
Mark: 082-698-1019  
Craig: 082-448-2318

**SIDWELL:** Off Sutton  
Road. 150m<sup>2</sup> offices/  
workshops/ stores. 85m<sup>2</sup>  
Mezzanine floors. 3-phase.  
R5 500. 083-650-3408.

**BMI**  
BRUCE McWILLIAMS  
INDUSTRIES (PTY) LTD  
2000/177686/3

We have the following  
premises available  
\* Cape Road  
- Offices 60m<sup>2</sup> and  
170m<sup>2</sup>  
\* Deal Party  
- 3 300m<sup>2</sup> yard with  
150m<sup>2</sup> offices and  
540m<sup>2</sup> workshop  
1 890m<sup>2</sup> BMI Park  
Workshop/  
Warehouse  
\* Karsten  
- 650m<sup>2</sup> Workshop/  
Warehouse 1000m<sup>2</sup>  
Workshop/  
Warehouse  
\* Retail  
- Shops in 17th Quarter  
and Stanford Quarter  
\* North End  
- 5 800m<sup>2</sup> sub-divisible  
multi-level  
- 600m<sup>2</sup> and 770m<sup>2</sup>  
Pateron Road  
\* Strandale  
- 1 200m<sup>2</sup> Workshop/  
Warehouse

**For details phone**  
**(041) 396-1400**

**9**  
MOTORING

**9070**  
Used Car Sales

1990 Bantam with can-  
opy R7 900 neg. Call 083-  
293-1679.

2003 Mitsubishi Colt  
Club Cab 4x4; Metallic  
Dark Blue/Purple; Extreme  
chrome. package; CD  
Radio; Alcon; Diff lock;  
Rubberized bed liner and  
cover; Serviced by agents;  
full service history; Price  
R104 900. 083-574-4255.

2005 Polo 1.6i Hatch  
Back, R85 995. Gerrit 076-  
810-1234.

Business? Contact us now!  
Pter 072-650-4813  
Call (041) 373-4367.

**SHOP/ Supermarket.**  
R200 000. Excellent Posi-  
tion. Stock incl. Sulene  
083-658-2078.

**SILK flower and gift**  
shop for sale. Pier 14,  
R200 000. (041) 484-7186  
or 076-163-4936

**WELL KNOWN coffee**  
shop for sale. Call 083-  
200-1113

**11**  
LEGALS

**11010**  
Legals

Company: **EQUISALE 69**  
/a- EXPRESS OPTICAL  
SERVICES CC. (IN LIQ-  
UIDATION). Registration  
number: CK  
2005/086403/23  
Master's Ref: S103/2009

**SECOND MEET-  
ING OF CREDI-  
TORS**

Notice is hereby given  
that the Second Meeting of  
Creditors in the above  
estate will be held before  
the Master of the High  
Court, Port Elizabeth on  
Wednesday 21 April 2010  
at 14h00.

The purpose of the meet-  
ing is as follows:-

- (a) Proof of claims  
against the Company;
- (b) Submission of the  
Liquidator's Report as to  
the affairs and conditions  
of the Company;
- (c) Adoption of the Reso-  
lutions relating to the  
further administration of  
the Company.

**H MARITZ &  
L LIMBADA**  
Joint Liquidators  
c/o Klerck & Martz  
Trustees CC

PO Box 7615  
Newton Park  
Port Elizabeth  
6055

Company: **PHAITO CA-  
TERING SERVICES CC**  
/a **MIKE'S KITCHEN (IN**  
**LIQUIDATION)**. Registra-  
tion number: CK  
2006/177686/3  
Master's Ref: S86/2009

**SECOND MEET-  
ING OF CREDI-  
TORS**

Notice is hereby given  
that the Second Meeting of  
Creditors in the above  
estate will be held before  
the Master of the High  
Court, Port Elizabeth on  
Wednesday 21 April 2010  
at 14h00.

The purpose of the meet-  
ing is as follows:-

- (a) Proof of claims  
against the Company;
- (b) Submission of the  
Liquidator's Report as to  
the affairs and conditions  
of the Company;
- (c) the adoption of the  
Resolutions relating to the  
further administration of  
the Company.

**M MARITZ &  
L LIMBADA**  
Joint Liquidators  
c/o Klerck & Martz  
Trustees CC

PO Box 7615  
Newton Park

PO Box 27796  
Greenacres  
6057  
Phone: (041) 395-8446  
Ref: Mr O Spruyt/b/  
L07175

**NOTICE OF A  
MINING PERMIT  
APPLICATION**

Notice is herewith given  
in terms of Section 27 of  
the Mineral and Petroleum  
Resources (Act 28 of  
2002), 2002, of the follow-  
ing application for a mining  
permit and the preparation  
of the required Environ-  
mental Management Plan:  
Description of the activi-  
ty:

The applicant has ap-  
plied for a mining permit in  
order to mine sand on the  
Remainder of Portion 1 of  
the farm Die Woud-No.  
500, Division of Uitenhage.

Location of the activity:  
The proposed sand min-  
ing operation will be lo-  
cated on the Remainder of  
Portion 1 of the farm Die  
Woud No. 500. The said  
site is located approxi-  
mately 10 km from Thorn-  
hill. Access to the site is  
gained from the secondary  
tarred road leading to  
Gamtoos River Mouth.

Extent (area) of the de-  
velopment:

The proposed sand min-  
ing operation will cover an  
area of not greater than 1.5  
hectares.

Name of proponent:  
Moritz Kallmeyer  
Date of this notice:  
1 April 2010

Reference numbers as-  
signed by the Department  
of Mineral Resources:  
EC 30/5/13/2/0429 MP;  
Documentation regarding  
this application can be  
downloaded from the  
website:  
[www.cleanstreams.co.za](http://www.cleanstreams.co.za)  
(see New projects).

It would be appreciated if  
you could forward any  
comments, concerns  
and/or objections with  
regards to the proposed  
sand mining application by  
no later than 2 May 2010.

Name of consultant:  
Clean Stream Environ-  
mental Services  
PO Box 947  
Humansdorp  
6300  
Phone/fax: (042) 951-  
1284

E-mail:  
edaines@telkomsa.net  
Contact person: Tom  
Daines

**11020**  
Official & Tenders

**TRANSNET LTD**  
UITENHAGE CENTRE

**TENDER NO.**  
**UTH03C3202**

To Hard Chrome and  
Grind Piston Rod for Key-  
stone Drawager for Trans-  
net Rail Engineering Uiten-  
hage.

Cost of Tender: R150  
non refundable.  
Tender issue date:  
April 1, 2010  
Closing date:  
April 20, 2010.

Tender documents to be  
collected at Procurement  
Office Transnet Rail Engi-  
neering, Cuyler Manor,  
Uitenhage. Phone No.  
(041) 994-2347.

**MAUNDAY THURSDAY**  
APRIL 1, 2010  
19h00 Solemn Liturgy,  
Foot washing Vigil  
to midnight  
**GOOD FRIDAY**  
APRIL 2, 2010  
11h00 Good Friday Liturgy  
**HOLY SATURDAY**  
APRIL 3, 2010  
19h00 Paschal Liturgy  
**EASTER DAY**  
APRIL 4, 2010  
08h00 Mass  
09h30 Sung High Mass  
with Procession

**18210**  
Catholic

**CATHOLIC CHURCH**  
St Augustines Cathedral  
2 Prospect Hill  
Phone (041) 585-2161  
**EASTER TRIDUUM**  
**THURSDAY**  
APRIL 1

19.00 Mass of the Lords  
Supper  
**GOOD FRIDAY**  
APRIL 2

15:00 The Passion of our  
Lord Jesus Christ  
**HOLY SATURDAY**  
APRIL 3

19.00 Easter Vigil and  
Mass of the Resurrection  
**EASTER SUNDAY**  
APRIL 4

09:30 Mass

**11030**  
Estate Notices

In the Estate of the late **ALFRED**  
**ILLENBERGER**, date of birth  
20 October 1925, identity no  
251020-0505-08-6, of 8 Willet  
Place, Fernglen, Port Eliza-  
beth, date of death 11 June  
2009

Estate no. 4484/200  
The First and Final Liqui-  
dation and Distribution Account  
in the above Estate will be for  
inspection at the office of the  
Master of the High Court, Port  
Elizabeth for a period of twenty-  
one (21) days from the date of  
publication hereof.

**PKF (PE) INC**  
PO Box 7606  
Newton Park  
Port Elizabeth  
6055  
Phone (041) 398-5600

In the Estate of the late **ANNE**  
**RUTH HACKNEY**, identity no  
311027-0007-08-5, who nor-  
mally resided at Erf 295, Sub  
4 Farms, Uitenhage situated  
at Longwood No. 295, Porti-  
on 4 and who passed away on  
23 February 2010 at  
Uitenhage.

Estate no. 1885/2010

Notice is hereby given that all  
Creditors and Debtors of the  
above Estate are to lodge their  
claims and to pay their debts  
with the executor, the details of  
which appear hereunder, within  
30 days from date of publication  
of this Notice.

**ARTHUR JAMES HACKNEY**  
c/o Ilona Verwey Attorneys  
14A Shirley Street  
Newton Park  
Port Elizabeth

**Standard**

In the Estate of the late  
**MARGARETHA JOHANA**  
**MARIA FOSS**,  
identity no 351111-0003-  
08-7, date of birth 11  
November 1935, date of  
death 8 January 2010, of  
39 Upper Kings Close,  
Brookeshill,  
Summerstrand.  
Estate no. 1679/2010

**Standard**

In the Estate of the late  
**MARGARET SALMOND**,  
date of birth 21 July  
1943, identity no  
430721-0092-18-0, of 14  
Glendale Avenue,  
Fernglen, Port Elizabeth,  
6045, date of death 12  
September 2009.  
Estate no. 1388/2010

All persons having claims  
against the above men-  
tioned Estate must lodge  
their claims with the  
Executor concerned within  
30 days from date of pub-  
lication hereof.

**SANLAM TRUST**  
PO Box 27428  
Port Elizabeth  
6057  
Ref: TM/ar

Creditors and Debtors in  
the above estate are here-  
by requested to file their  
claims with and pay their  
debts to the undersigned  
within 30 days from the  
date of publication hereof.

Notice herewith to all  
debtors and creditors to  
lodge their claims with the  
undersigned within 30  
days from 1 April 2010.  
**ABSA TRUST LIMITED**  
Reg. no. 1915/004665/06  
Private Bag 60571  
Greenacres  
6045  
Phone (041) 395-5717  
Ref: Mornay Human

**Sanlam**  
Trust

In the Estate of the late  
**MARGARET SALMOND**,  
date of birth 21 July  
1943, identity no  
430721-0092-18-0, of 14  
Glendale Avenue,  
Fernglen, Port Elizabeth,  
6045, date of death 12  
September 2009.  
Estate no. 1388/2010

All persons having claims  
against the above men-  
tioned Estate must lodge  
their claims with the  
Executor concerned within  
30 days from date of pub-  
lication hereof.

**SANLAM TRUST**  
PO Box 27428  
Port Elizabeth  
6057  
Ref: TM/ar

**Standard**

In the Estate of the late  
**Esme Joan Barry**, identity  
no 400831-0076-08-7,  
date of birth 31 August  
1940, date of death 29  
August 2009, and  
s/spouse **BRUCE DER-  
RICK BARRY**, identity no  
411117-5104-08-3, of 12  
Hanekom Avenue,  
Fairbridge Heights,  
Uitenhage, 6230.  
Estate no. 1876/2010

Creditors and Debtors in  
the above Estate are here-  
by required to file their  
claims with and pay their  
debts to the undersigned  
within 30 days from the  
date of publication hereof.  
Dated at Port Elizabeth this  
23rd day of March 2010.

**EXECUTORS AND  
TRUSTEES LTD**  
PO Box 27560  
Greenacres  
6057  
Ref: nb

**ABSA**  
Trust

In the Estate of the late  
**MARIAMMA PAKKIREE**,  
identity no 510828-0075-  
08-2, of 15 Euphorbia  
Street, Malabar, 6020,  
surviving spouse **PERU-  
MAL PAKKIREE**, identity  
no 390320-5057-08-8  
Estate no. 721/2010

Notice is hereby given  
that the First and Final  
Liquidation and Distribution  
account will be for inspec-  
tion at the Master of the  
Supreme Court Port  
Elizabeth, for a period of 21  
days from 1 April 2010.

**ABSA TRUST LIMITED**  
Reg. no. 1915/004665/06  
Private Bag 60571  
Greenacres  
6045  
Phone (041) 395-5714  
Ref: Simone Jonkers

**Standard**

In the Estate of the late  
**MARGARETHA JOHANA**  
**MARIA FOSS**,  
identity no 351111-0003-  
08-7, date of birth 11  
November 1935, date of  
death 8 January 2010, of  
39 Upper Kings Close,  
Brookeshill,  
Summerstrand.  
Estate no. 1679/2010

**Standard**

Creditors and Debtors in  
the above estate are here-  
by requested to file their  
claims with and pay their  
debts to the undersigned  
within 30 days from the  
date of publication hereof.

**Standard**

**Standard**

**Standard**

**Standard**

## NOTICE OF A MINING PERMIT APPLICATION

Notice is herewith given in terms of Section 27 of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002), 2002, of the following application for a mining permit and the preparation of the required Environmental Management Plan:

**Description of the activity:**

The applicant has applied for a mining permit in order to mine sand on the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage

**Location of the activity:**

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said site is located approximately 10 km from Thornhill. Access to the site is gained from the secondary tarred road leading to Gamtoos River Mouth.

**Extent (area) of the development:**

The proposed sand mining operation will cover an area of not greater than 1.5 hectares

**Name of proponent:**  
Moritz Kallmeyer

**Date of this notice:**  
1 April 2010

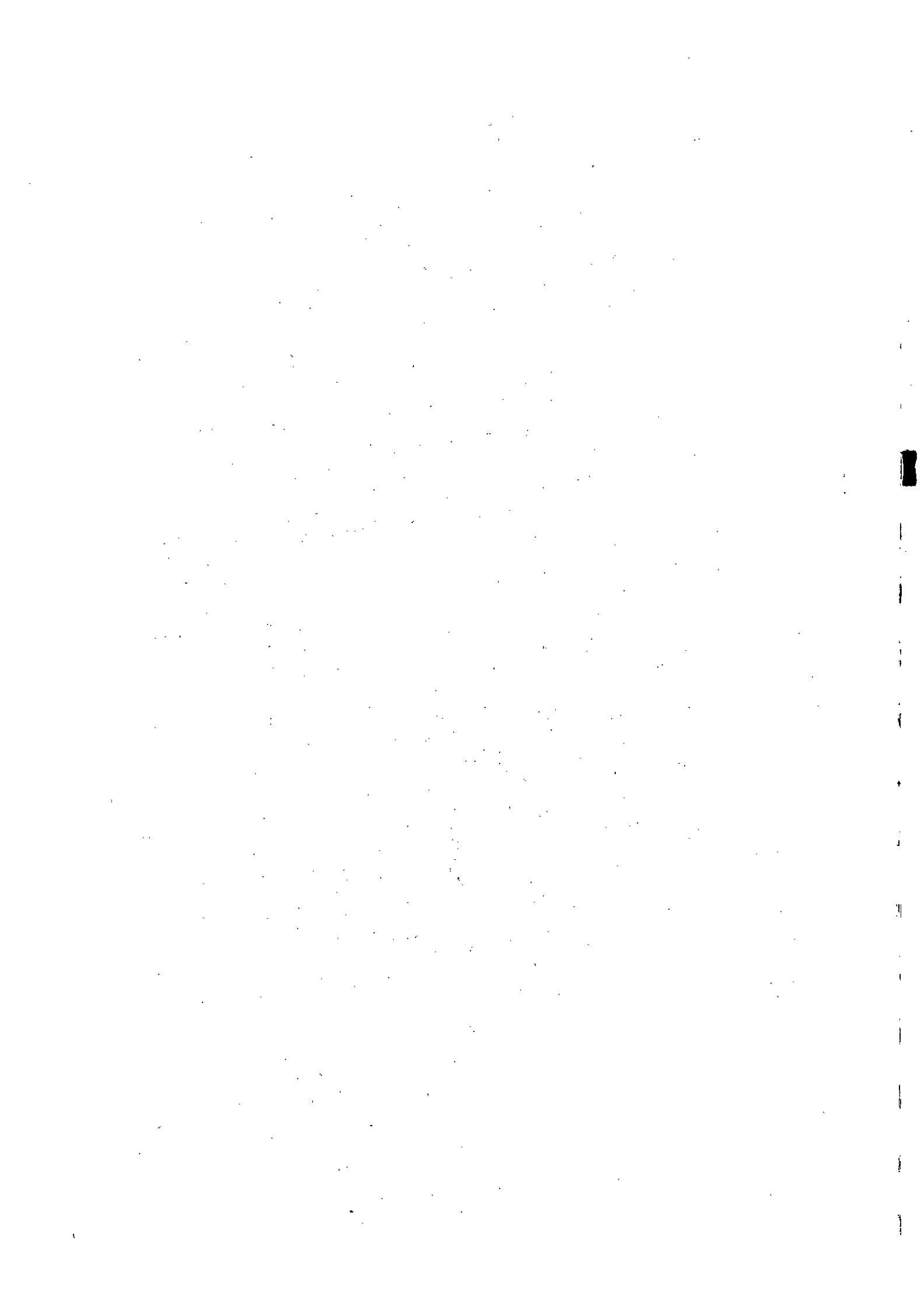
**Reference numbers assigned by the Department of Mineral Resources:**  
EC 30/5/1/3/2/0429 MP

Documentation regarding this application can be downloaded from the website: [www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za) (see New projects).

*It would be appreciated if you could forward any comments, concerns and/or objections with regards to the proposed sand mining application by no later than 2 May 2010.*

**Name of consultant:**  
Clean Stream Environmental Services  
P.O. Box 947  
Humansdorp, 6300  
Tel/fax: 0422 - 951284  
E-mail: [tdaines@telkomsa.net](mailto:tdaines@telkomsa.net)  
Contact person: Tom Daines







## NOTICE OF A MINING PERMIT APPLICATION

Notice is herewith given in terms of Section 27 of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002), 2002, of the following application for a mining permit and the preparation of the required Environmental Management Plan:

**Description of the activity:**

The applicant has applied for a mining permit in order to mine sand on the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage, Eastern Cape

**Location of the activity:**

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said site is located approximately 10 km from Thornhill. Access to the site is gained from the secondary tarred road leading to Gamtoos River Mouth.

**Extent (area) of the development:**

The proposed sand mining operation will cover an area of not greater than 1.5 hectares.

**Name of proponent:**

Moritz Kallmeyer

**Date of this notice:**

1 April 2010

**Reference numbers assigned by the Department of Mineral Resources:**

EC 30/5/1/3/2/0429 MP

Documentation regarding this application can be downloaded from the website: [www.cleanstreams.co.za](http://www.cleanstreams.co.za) (see New projects).

***It would be appreciated if you could forward any comments, concerns and/or objections with regards to the proposed sand mining application by no later than 2 May 2010.***

**Name of consultant:**

Clean Stream Environmental Services  
P.O. Box 947  
Humansdorp, 6300  
Tel/fax: 0422 - 951284  
E-mail: [tdaines@telkomsa.net](mailto:tdaines@telkomsa.net)  
Contact person: Tom Daines





**Figure 1**

**Location of site**

(taken from 1: 50 000 3325CC - not to scale )



**APPLICATION FOR A MINING PERMIT W.R.T.  
THE REMAINDER OF PORTION 1 OF THE  
FARM DIE WOOD NO. 500, DIVISION OF UITENHAGE.**

*Reference number assigned by the Department of Mineral Resources:  
EC 30/5/1/3/2/0429 MP*

It would be appreciated if you could indicate on this form whether you have any comments with regards to the proposed mining permit application.

<b>NAME:</b>	<b>TEL:</b>
<b>SURNAME:</b>	<b>FAX:</b>
<b>POSTAL ADDRESS:</b>	<b>CELL:</b>
	<b>E-MAIL:</b>
<b>PHYSICAL ADDRESS:</b>	
<b>PREFERRED LANGUAGE:</b>	

Do you wish to remain on the mailing list?

<b>YES</b>	<b>NO</b>
------------	-----------

Do you have any comments and/or suggestions regarding the proposed project?

<b>YES</b>	<b>NO</b>
------------	-----------

<b>If Yes, please indicate what your comments/suggestions are:</b>

.....  
**Signed**

.....  
**Date**

**NOTE:**

Please forward the completed form to Clean Stream Environmental Services.



Clean Stream Environmental Services  
P.O. Box 947  
Humansdorp  
Tel/fax: 0422 - 951 284  
Contact person: Tom Daines  
e-mail: tdaines@telkomsa.net

## **APPENDIX 2:**

### **CORRESPONDENCE WITH INTERESTED AND AFFECTED PARTIES**

- ❖ Example of the Background Information Document (BID) including:
  - Notice of a mining permit application (1 page);
  - Map indicating the location of the site (Figure 1);
  - Comment sheet.
- ❖ A copy of the register signed by the landowners acknowledging receipt of documentation.
- ❖ Completed comment sheet (dated: 31 March 2010) from Mr. M. Kallmeyer Snr (Senior Director: La-Mer Accommodation Pty Ltd.).
- ❖ Email to Mr. Leon Coetzer (adjacent landowner) (dated: 6 April 2010) regarding the proposed mining permit application.
- ❖ Email to Prof. Pieter van Niekerk (adjacent landowner) (dated: 6 April 2010) regarding the proposed mining permit application.
- ❖ Email to Mr. Pierre Cronje (adjacent landowner) (dated: 7 April 2010) regarding the proposed mining permit application.
- ❖ Email to Mr. P. Retief (Department of Water Affairs) (dated: 7 April 2010) regarding the proposed mining permit.
- ❖ Email to Mr. A. Struwig and Ms. N. Gerber (Department of Economic Development and Environmental Affairs) (dated: 7 April 2010) regarding the proposed mining permit.

## **NOTICE OF A MINING PERMIT APPLICATION**

Notice is herewith given in terms of Section 27 of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002), 2002, of the following **application for a mining permit and the preparation of the required Environmental Management Plan:**

### **Description of the activity:**

The applicant has applied for a mining permit in order to mine sand on the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage.

### **Location of the activity:**

The proposed sand mining operation will be located on the Remainder of Portion 1 of the farm Die Woud No. 500. The said site is located approximately 10 km from Thornhill. Access to the site is gained from the secondary tarred road leading to Gamtoos River Mouth.

### **Extent (area) of the development:**

The proposed sand mining operation will cover an area of not greater than 1.5 hectares.

### **Name of proponent:**

Moritz Kallmeyer

### **Date of this notice:**

1 April 2010

### **Reference numbers assigned by the Department of Mineral Resources:**

**EC 30/5/1/3/2/0429 MP**

Documentation regarding this application can be downloaded from the website: [www.cleanstreams.co.za](http://www.cleanstreams.co.za) (see New projects).

***It would be appreciated if you could forward any comments, concerns and/or objections with regards to the proposed sand mining application by no later than 2 May 2010.***

### **Name of consultant:**

Clean Stream Environmental Services

P.O. Box 947

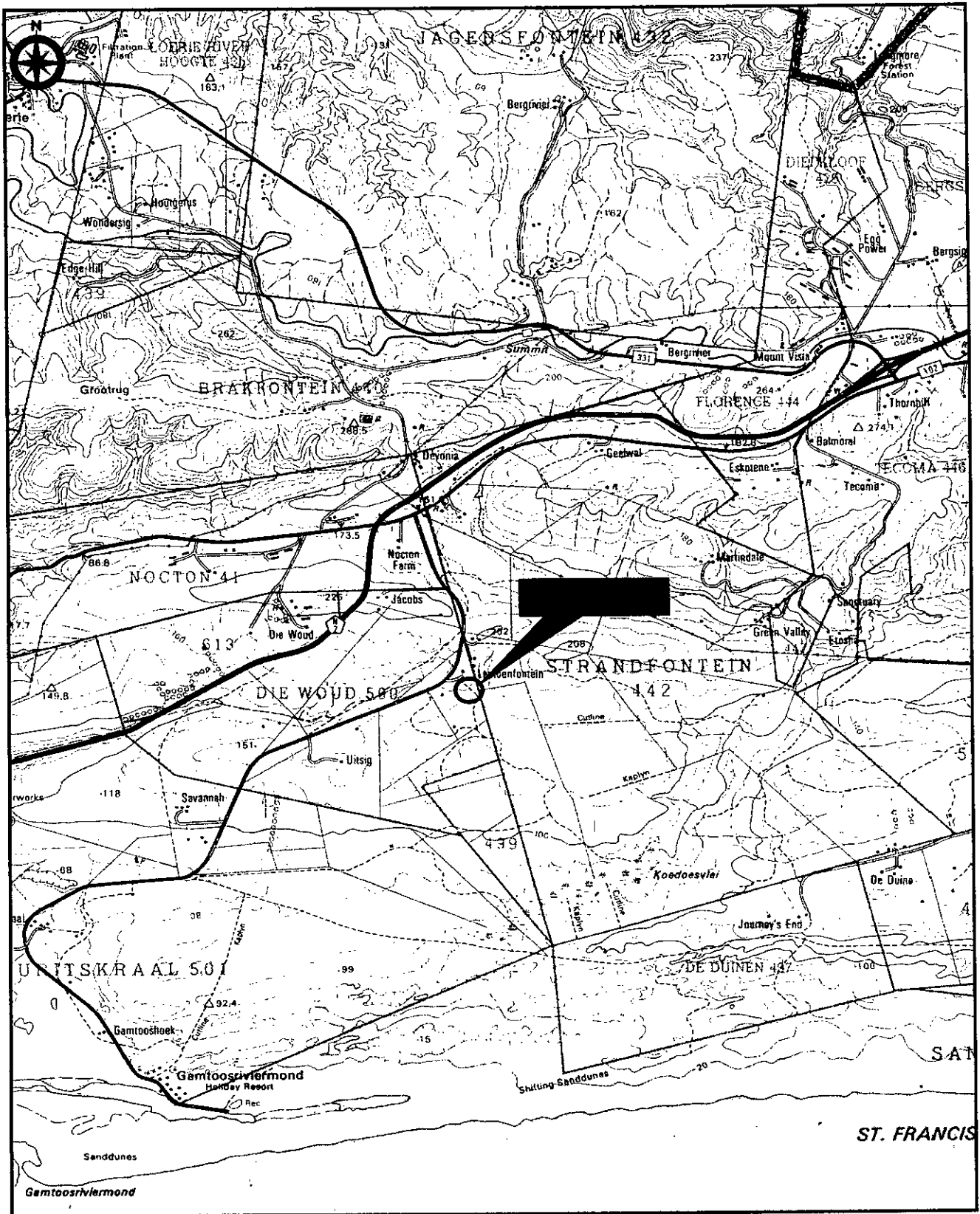
Humansdorp, 6300

Tel/fax: 0422 - 951284

E-mail: [tdaines@telkomsa.net](mailto:tdaines@telkomsa.net)

Contact person: Tom Daines





**Figure 1**

**Location of site**

(taken from 1: 50 000 3325CC - not to scale)



**APPLICATION FOR A MINING PERMIT W.R.T.  
THE REMAINDER OF PORTION 1 OF THE  
FARM DIE WOOD NO. 500, DIVISION OF UITENHAGE.**

*Reference number assigned by the Department of Mineral Resources:  
EC 30/5/1/3/2/0429 MP*

It would be appreciated if you could indicate on this form whether you have any comments with regards to the proposed mining permit application.

<b>NAME:</b>	<b>TEL:</b>
<b>SURNAME:</b>	<b>FAX:</b>
<b>POSTAL ADDRESS:</b>	<b>CELL:</b>
	<b>E-MAIL:</b>
<b>PHYSICAL ADDRESS:</b>	
<b>PREFERRED LANGUAGE:</b>	

Do you wish to remain on the mailing list?

<b>YES</b>	<b>NO</b>
------------	-----------

Do you have any comments and/or suggestions regarding the proposed project?

<b>YES</b>	<b>NO</b>
------------	-----------

<b>If Yes, please indicate what your comments/suggestions are:</b>

.....  
**Signed**

.....  
**Date**

**NOTE:**

Please forward the completed form to Clean Stream Environmental Services.

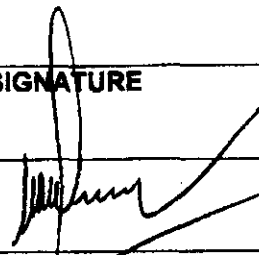

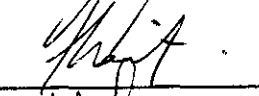
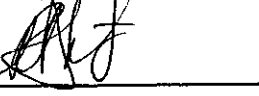


Clean Stream Environmental Services  
P.O. Box 947  
Humansdorp  
Tel/fax: 0422 – 951 284  
Contact person: Tom Daines  
e-mail: tdaines@telkomsa.net

**ACKNOWLEDGMENT OF RECEIPT: NOTICE OF A MINING PERMIT APPLICATION W.R.T. THE REMAINDER OF PORTION 1 OF THE FARM DIE WOOD NO. 500, DIVISION OF UITENHAGE (DMR REF. NO.: EC 30/5/1/3/2/0429 MP)**

I hereby acknowledge that I received the following documentation with regards to the above-mentioned project:

- > Notice of a mining permit application (1 page).
- > Map indicating the location of the site (Figure 1).
- > Comment sheet.

NAME	PHYSICAL ADDRESS (NAME OF FARM)	POSTAL ADDRESS	TELEPHONE NUMBERS	FAX NUMBERS	SIGNATURE
Mareitz Kallmeyer	Lemoenfontein farm	Po Box 496 J. Bay 6330	082 7706 386	002 2932 684	
ON BEHALF OF THE TRUST.	Strandfontein Farm	P.O. Box 25			
F. WEITZ.	↙ Du Plessis St. 12 HUMANSDORP	P.O. Box 39 HUMANSDORP	042-2910 596	042-2910 596	
RUNEELYN KURAT	33 DA GRAMA ROAD	Po Box 21	042 2002 282	042 2931114	



**APPLICATION FOR A MINING PERMIT W.R.T.  
THE REMAINDER OF PORTION 1 OF THE  
FARM DIE WOUD NO. 500, DIVISION OF UITENHAGE.**

*Reference number assigned by the Department of Mineral Resources:  
EC 30/5/1/3/2/0429 MP*

It would be appreciated if you could indicate on this form whether you have any comments with regards to the proposed mining permit application.

<b>NAME:</b> MORITZ	<b>TEL:</b>
<b>SURNAME:</b> KALLMEYER	<b>FAX:</b>
<b>POSTAL ADDRESS:</b> P.O.Box 496	<b>CELL:</b>
JEFFREYS BAY 6330	<b>E-MAIL:</b>
<b>PHYSICAL ADDRESS:</b>	
<b>PREFERRED LANGUAGE:</b>	

Do you wish to remain on the mailing list?  YES  NO

Do you have any comments and/or suggestions regarding the proposed project?  YES  NO

**If Yes, please indicate what your comments/suggestions are:**

MORITZ KALLMEYER as SENIOR DIRECTOR OF LA-MER ACCOMMODATION PTY LTD AND AUTHORISED TO ACT ON BEHALF OF THIS COMPANY - PER MEETING OF DIRECTORS HELD AT JEFFREYS BAY ON 31<sup>ST</sup> MARCH 2010 - LA-MER ACCOM. PTY LTD AS REGISTERED OWNER OF DIE WOUD NO 500, HEREBY CONSENT TO MINING APPLICATION SUBMITTED FOR THE REMAINDER OF PORTION 1 OF THE FARM - DIE WOUD - NO 500 DIVISION OF UITENHAGE.

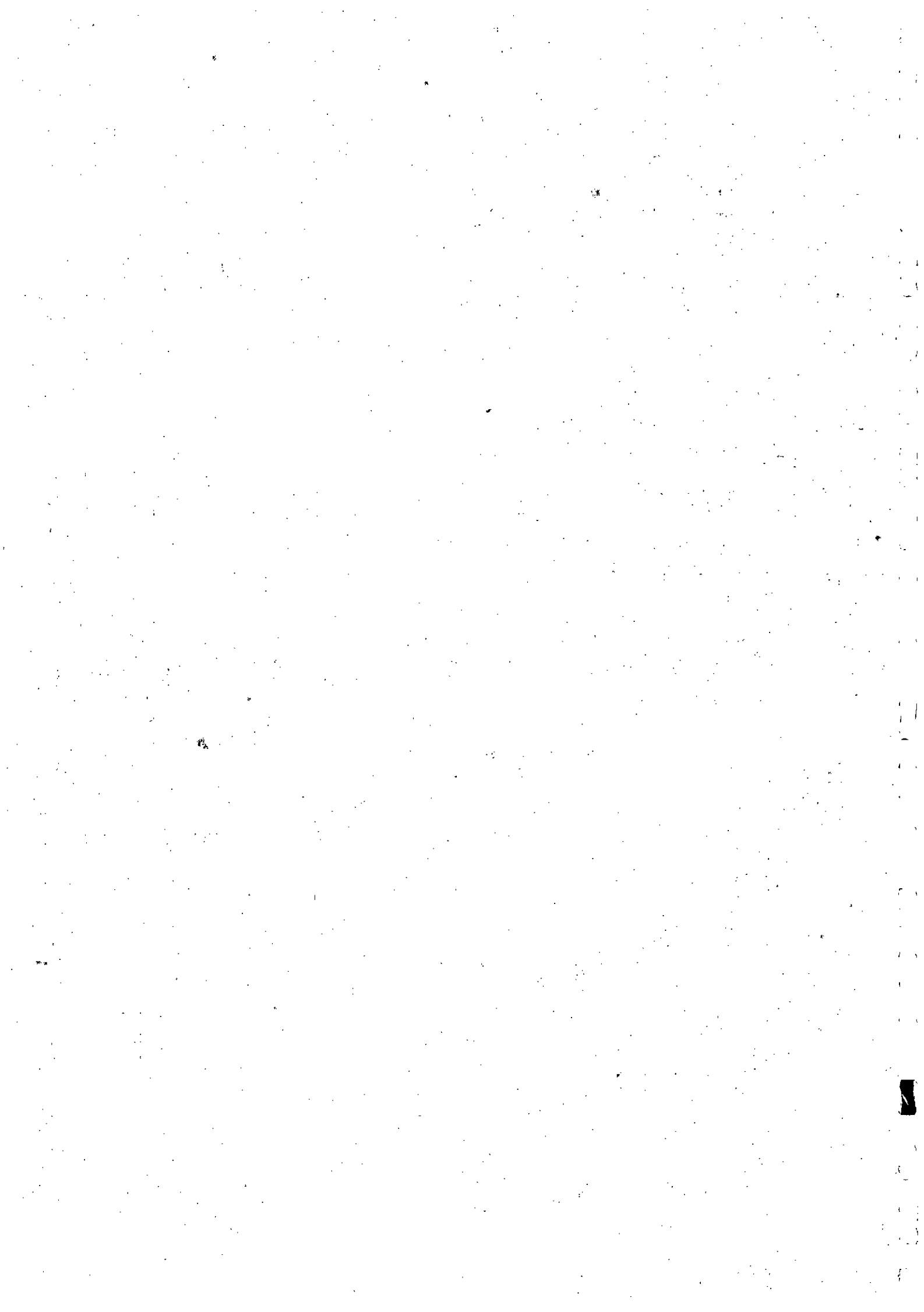
.....  
  
**Signed**

..... 31<sup>ST</sup> MARCH 2010 .....

**NOTE:** Please forward the completed form to Clean Stream Environmental Services.



Clean Stream Environmental Services  
P.O. Box 947  
Humansdorp  
Tel/fax: 0422 - 951 284  
Contact person: Tom Daines  
e-mail: tdaines@telkomsa.net



**adie erasmus**

---

**From:** "Adie Erasmus" <adie@cleanstreamsa.co.za>  
**To:** "Leon Coetzer (Kallmeyer Application)" <coetzer@gicon.co.za>  
**Cc:** "Tom Daines" <tdaines@telkomsa.net>  
**Sent:** 06 April 2010 11:09 AM  
**Attach:** Comment sheet - Die Woud.pdf; Figure 1 - Die Woud.pdf; Notice - Die Woud.pdf  
**Subject:** MINING PERMIT APPLICATION: REMAINDER OF PORTION 1 DIE WOULD 500 (DMR REF NO. EC 30/5/1/3/2/0429MP)

Mr Coetzer

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOULD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)**

My telephonic conversation (Wednesday, 31 March 2010) with your wife with regards to the above-mentioned application has reference.

Please find attached the following documentation:

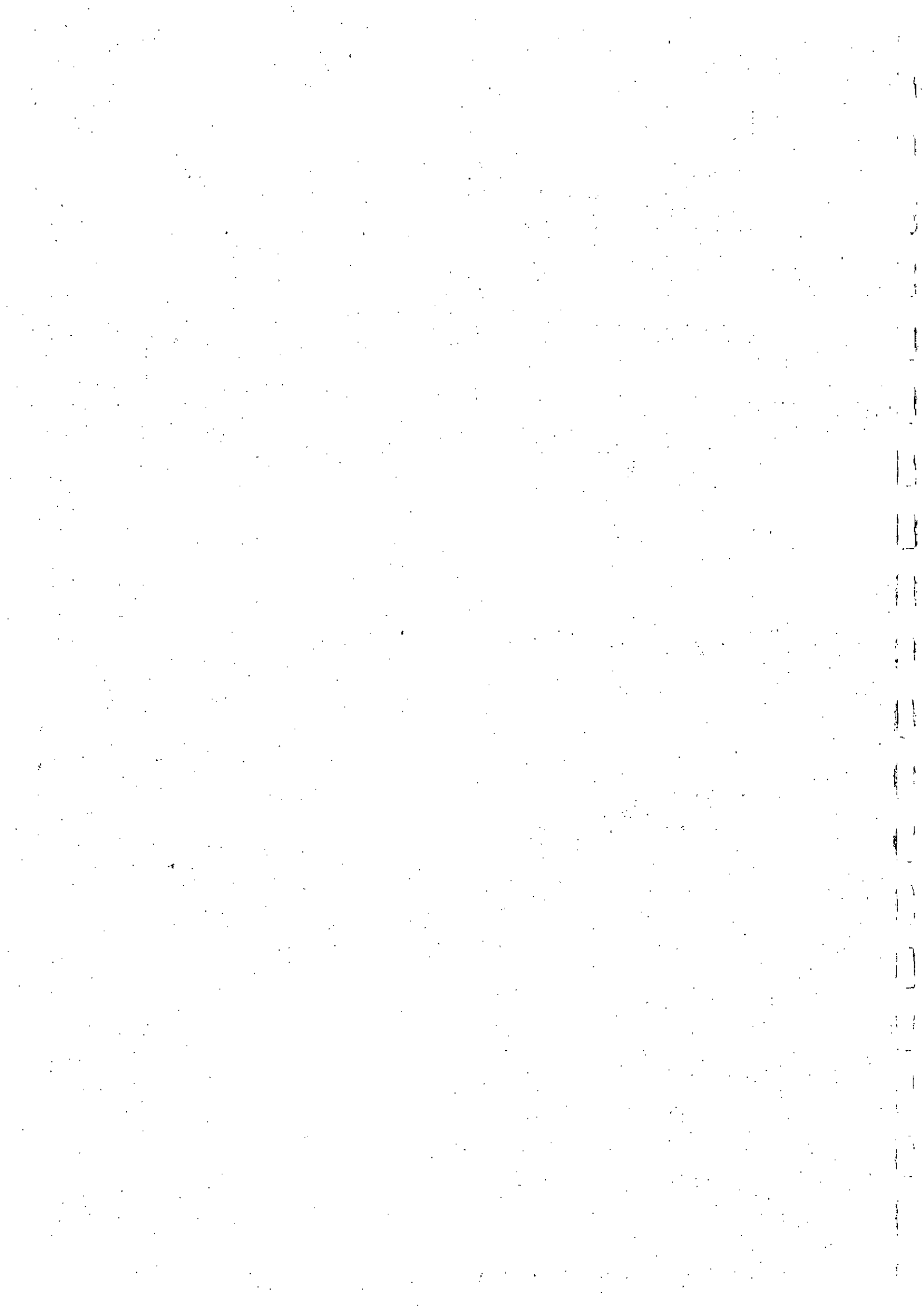
- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: adie@cleanstreamsa.co.za  
www.cleanstreamsa.co.za

2010/04/06



**adie erasmus**

---

**From:** "Adie Erasmus" <adie@cleanstreamsa.co.za>  
**To:** "van Niekerk, Pieter (Prof) (Summerstrand Campus North)"  
<Pieter.vanNiekerk@nmmu.ac.za>  
**Sent:** 08 April 2010 02:09 PM  
**Subject:** Re: NOTICE OF MINING PERMIT APPLICATION. REMAINDER OF PORTION 1 OF DIE WOULD 500 (DMR REF NO.: EC 30/5/1/3/2/0429MP)

Baie dankie vir die terugvoer.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: adie@cleanstreamsa.co.za  
www.cleanstreamsa.co.za

----- Original Message -----

**From:** van Niekerk, Pieter (Prof) (Summerstrand Campus North)  
**To:** 'Adie Erasmus'  
**Sent:** Thursday, April 08, 2010 10:41 AM  
**Subject:** RE: NOTICE OF MINING PERMIT APPLICATION. REMAINDER OF PORTION 1 OF DIE WOULD 500 (DMR REF NO.: EC 30/5/1/3/2/0429MP)

Goeiedag

Ek bevestig dat ek u skrywe ontvang het. Indien ek kommentaar het sal ek dit in die volgende week aanstuur. Ek het Mnr Theo van Niekerk se grond gekoop – hy is oordele.

Groete

**From:** Adie Erasmus [mailto:adie@cleanstreamsa.co.za]  
**Sent:** 06 April 2010 11:07 AM  
**To:** van Niekerk, Pieter (Prof) (Summerstrand Campus North)  
**Cc:** Tom Daines  
**Subject:** NOTICE OF MINING PERMIT APPLICATION: REMAINDER OF PORTION 1 OF DIE WOULD 500 (DMR REF. NO.: EC 30/5/1/3/2/0429MP)  
**Importance:** High

Mr van Niekerk

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOULD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)**

Our telephonic conversation of Wednesday, 31 March 2010, with regards to the above-mentioned application has reference.

Please find attached the following documentation:

- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

2010:04:09

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

*P.S.: We are also trying to get hold of Mr. Theo van Niekerk who owns property in this area. Do you by any chance have contact details for Mr. Theo van Niekerk?*

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: [adie@cleanstreamsa.co.za](mailto:adie@cleanstreamsa.co.za)  
[www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)

NOTE: Please note that this eMail and the contents thereof is subject to the standard ITAT's eMail regulations which may be found at <http://www.irs.gov/irb/2002-46/revproc/20024601a.html>.

2010-04-09

adie erasmus

**From:** "Adie Erasmus" <adie@cleanstreamsa.co.za>  
**To:** "Pierre Cronje (Kallmeyer application)" <pcronje@sovfoods.co.za>  
**Sent:** 07 April 2010 01:37 PM  
**Attach:** Comment sheet - Die Woud.pdf; Figure 1 - Die Woud.pdf; Notice - Die Woud.pdf  
**Subject:** Fw: MINING PERMIT APPLICATION REMAINDER OF PORTION 1 DIE WOULD 500 (DMR REF NO.: EC 30/5/1/3/2/0429MP)

Mr Cronje

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOULD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)**

Our telephonic conversation of Thursday, 1 April 2010, with regards to the above-mentioned application has reference.

Please find attached the following documentation:

- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Withbank  
035  
Tel/Fax: 015 - 6975021  
Cell: 0832718260  
Email: adie@cleanstreamsa.co.za  
www.cleanstreamsa.co.za

----- Original Message -----

**From:** Adie Erasmus  
**To:** Pierre Cronje (Kallmeyer Application);  
**Cc:** Tom Daines  
**Sent:** Tuesday, April 06, 2010 11:23 AM  
**Subject:** MINING PERMIT APPLICATION REMAINDER OF PORTION 1 DIE WOULD 500 (DMR REF NO.: EC 30/5/1/3/2/0429MP)

Mr Cronje

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOULD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)**

Our telephonic conversation of Thursday, 1 April 2010, with regards to the above-mentioned application has reference.

Please find attached the following documentation:

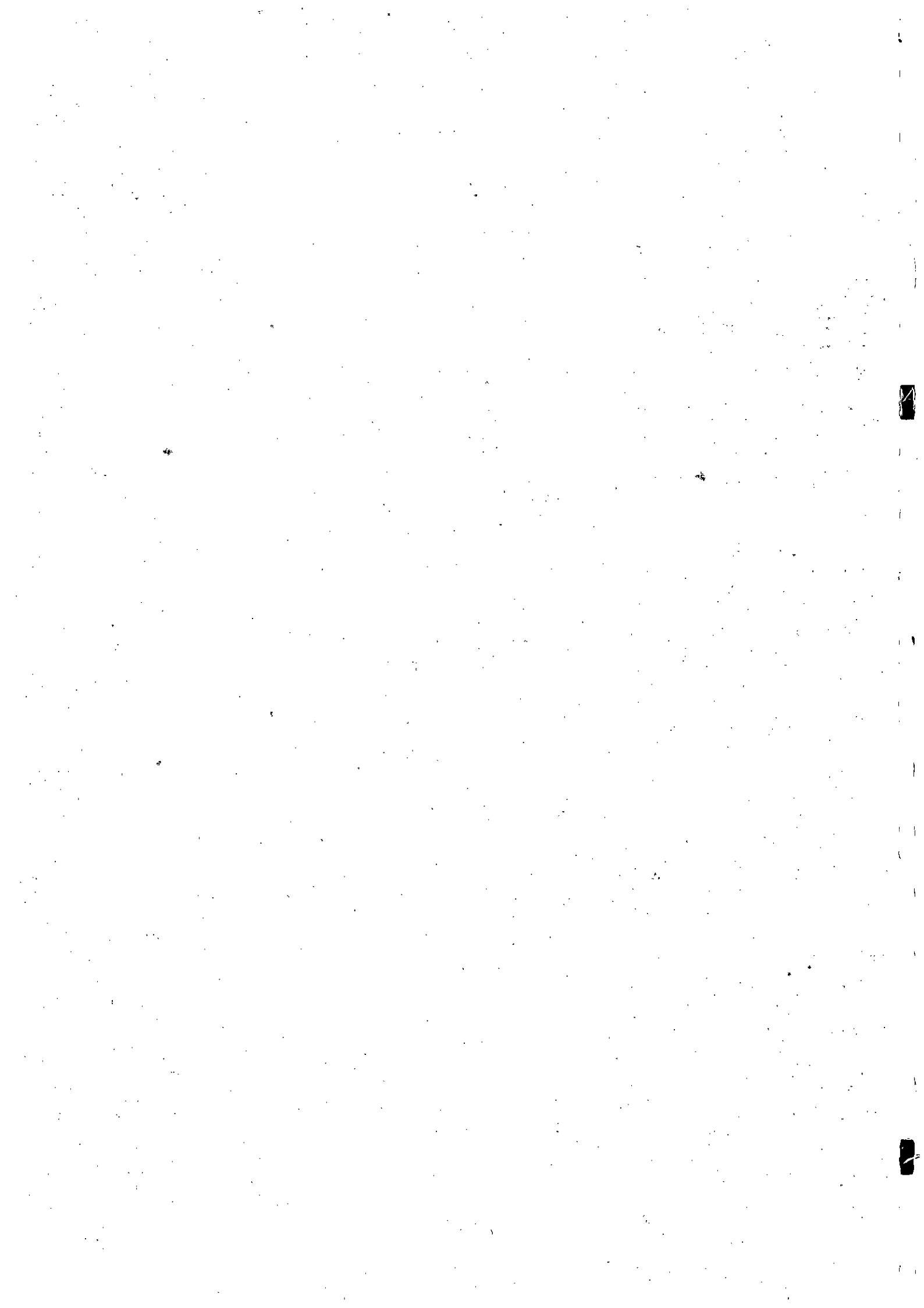
- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: [adie@cleanstreamsa.co.za](mailto:adie@cleanstreamsa.co.za)  
[www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)





**adie erasmus**

**From:** "Adie Erasmus" <adie@cleanstreamsa.co.za>  
**To:** "Pieter Retief" <retiefp@dwaf.gov.za>  
**Cc:** "Tom Daines" <tdaines@telkomsa.net>  
**Sent:** 07 April 2010 04:06 PM  
**Attach:** Notice - Die Woud.pdf, Figure 1 - Die Woud.pdf, Comment sheet - Die Woud.pdf  
**Subject:** NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOOD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)

Mr Retief (Department of Water Affairs)

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF THE FARM DIE WOOD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC 30/5/1/3/2/0429 MP)**

Please find attached the following documentation with regards to the above-mentioned application:

- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: adie@cleanstreamsa.co.za  
www.cleanstreamsa.co.za

**adie erasmus**

---

**From:** "Adie Erasmus" <adie@cleanstreams.co.za>  
**To:** "Nicole Gerber" <Nicole.Gerber@deaet.ecape.gov.za> "Andries Struwig"  
<Andries.Struwig@deaet.ecape.gov.za>  
**Cc:** "Tom Daines" <tdaines@telkomsa.net>  
**Sent:** 07 April 2010 04:12 PM  
**Attach:** Notice - Die Woud.pdf, Figure 1 - Die Woud.pdf, Comment sheet - Die Woud.pdf  
**Subject:** NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF  
THE FARM DIE WOOD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC  
30/5/1/3/2/0429 MP)

Mr Struwig/Ms. Gerber (Department of Economic Development and Environmental Affairs)

**NOTICE OF A MINING PERMIT APPLICATION WRT THE REMAINDER OF PORTION 1 OF  
THE FARM DIE WOOD NO. 500, DIVISION UITENHAGE (DMR REF NO.: EC  
30/5/1/3/2/0429 MP)**

Please find attached the following documentation with regards to the above-mentioned application:

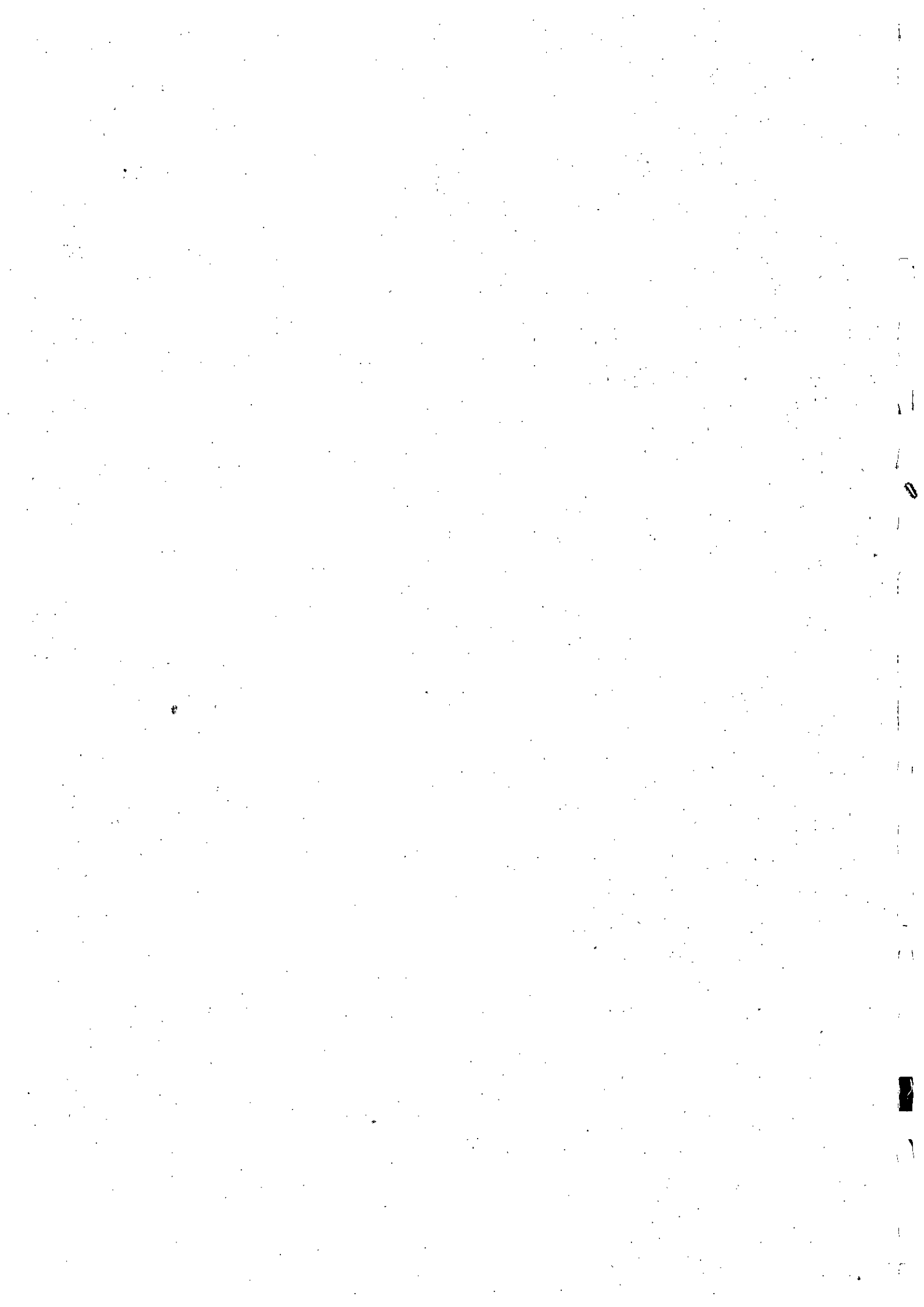
- \* A notice regarding the application;
- \* Figure 1: Locality map;
- \* Comment sheet.

It would be appreciated if you could indicate if you have any issues of concern with regards to the proposed project.

Regards

Adie Erasmus Pr. Sci. Nat.  
Clean Stream Environmental Services: Coalfields cc  
P.O. Box 647  
Witbank  
1035  
Tel/fax: 013 - 6975021  
Cell: 0832718260  
Email: adie@cleanstreams.co.za  
www.cleanstreams.co.za

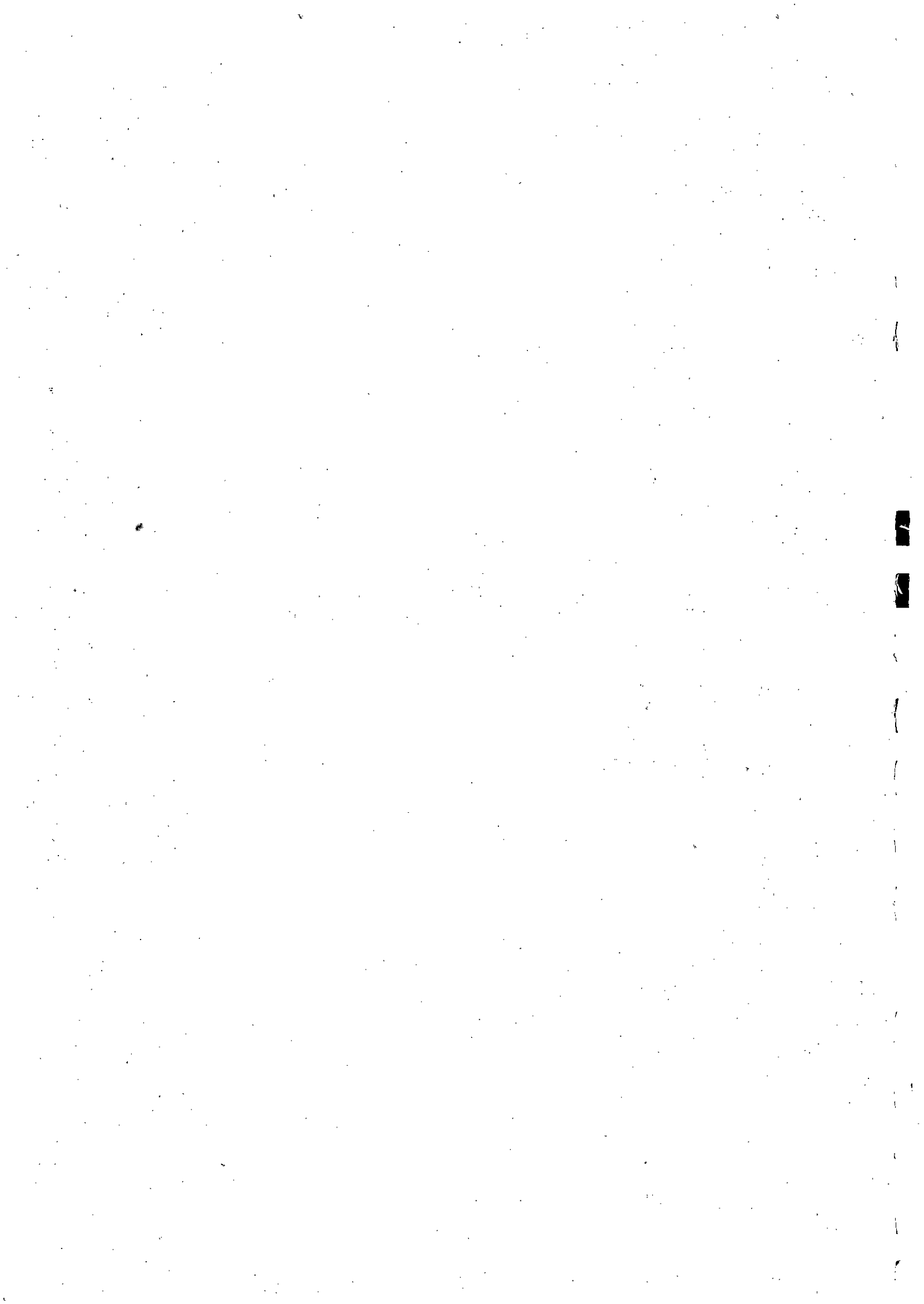
2010/04/07



### **APPENDIX 3:**

## **CORRESPONDENCE WITH THE DEPARTMENT OF MINERAL RESOURCES**

- ❖ Letter from the Department of Mineral Resources (dated: 11 March 2010; Ref: EC 30/5/1/3/2/0429 MP) with regards to the application for a new mining permit.
- ❖ Letter from the Department of Mineral Resources (dated: 12 March 2010; Ref: EC 30/5/1/3/2/0429 MP) with regards to the acceptance of an application for a mining permit.





**the dme**

Department:  
Minerals and Energy  
**REPUBLIC OF SOUTH AFRICA**

Enquiries: S van den Berg  
E-mail: Samuel.vandenberg@dme.gov.za

12  
241

DME 12

Private Bag X6376, Port Elizabeth, 6000  
Tel. (041) 396 3900 Fax: (041) 396 3945  
Cnr. Diaz and Mount Road  
Mount Croix  
Port Elizabeth, 6001

Reference:  
Date:

EC 30/5/13/2/0429 MP  
12 March 2010

**PER REGISTERED MAIL**

Mr M Kallmeyer  
P O Box 496  
Jeffrey's Bay  
6330

Sir

**APPLICATION FOR A MINING PERMIT IN TERMS OF SECTION 27 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) (MPRDA): CONCRETE SAND (SILICA); BUILDING SAND (SILICA) AND FILLING SAND (SILICA) MINING ON REMAINDER OF PORTION 1 OF THE FARM DIE WOUDE NO. 500, DIVISION OF UITENHAGE, EASTERN CAPE.**

I refer to the above matter and I confirm that your application for a mining permit in terms of Section 27 of the MPRDA has been accepted.

In terms of Section 27(5) of the MPRDA you are therefore required:

- (a) to notify in writing and consult with the landowner or lawful occupier and any other affected party (proof of notification must be submitted to this office **on or before 11 April 2010**);
- (b) to submit the result of such consultation (original minutes and attendance register – see enclosed template – of the consultation meeting) to this office **on or before 11 April 2010** (i.e. within 30 days of this notice); and
- (c) to submit an Environmental Management Plan (EMP), in sevenfold, **on or before 11 May 2010** (i.e. within 60 days of this notice);

Please note that the required EMP may be submitted at your earliest convenience e.g. 30 days from the date hereof in order to reduce the turn around time for the application process.

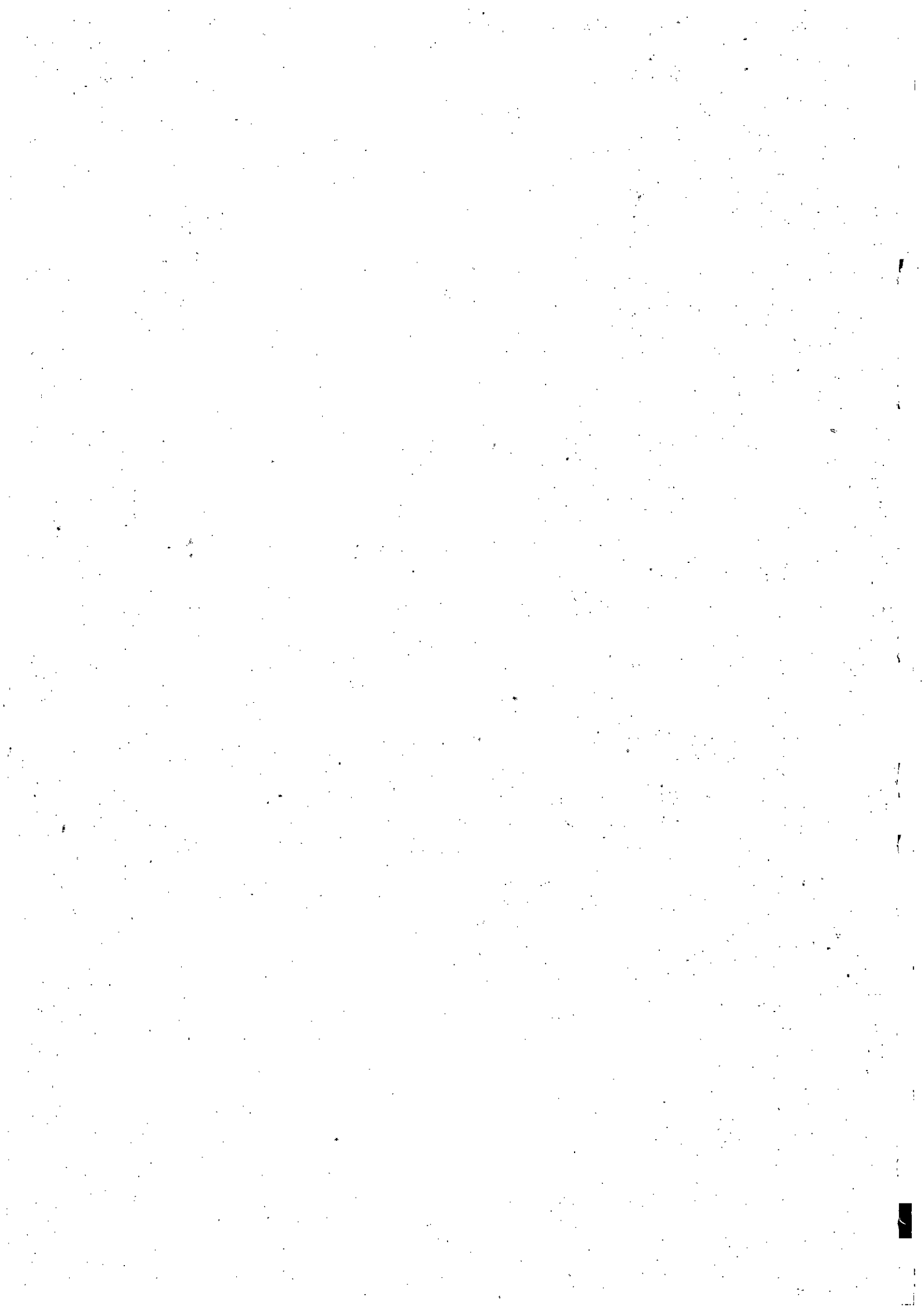
Where State Land is affected by the application, community consultation should be done, and a community resolution should be obtained in conjunction with the Departments of Land Affairs and Traditional Affairs. (See the enclosed list for the relevant contact details.)

Kindly be advised that this notice of acceptance must not be construed as the approval of the Mining Permit, since the process of approval or refusal that will commence on the date of acceptance, must run its course.

Yours faithfully

*[Handwritten signature]*

7 REGIONAL MANAGER  
EASTERN CAPE  
S.2let.MP.429.Kallmeyer let acc







**mineral resources**  
Department:  
Mineral Resources  
REPUBLIC OF SOUTH AFRICA

Private Bag X5076, Port Elizabeth, 6000  
Tel: (041) 396 3900  
Chr. Diaz and Mount Roads  
Mount Crox  
Port Elizabeth, 6001

Enquiries: S. Lurwengu  
E-mail: Styanda.lurwenga@dme.gov.za

Reference:  
Date:

EC 30/5/1/3/2/0429 MP  
11 March 2010

**PER REGISTERED MAIL**

**MORITZ KALLMEYER**  
Attention: Moritz Kallmeyer  
P. O Box 496  
Jeffreys Bay  
South Africa  
6330


Dear Mr. Moritz Kallmeyer

**Re: Mineral Resource Management System (MRMS) report on spatial extent of area, as per new Mining Permit application ref. D/2010/03/09/001; EC30/5/1/3/2/0429 MP (MORITZ KALLMEYER)**

Attached please find your Mineral Resource Management System (MRMS) report concerning the above. Please check the information contained in this report with regards to the contact details and spatial extent of your new mining permit application. The mining area has been plotted as per spatial data provided and is currently in LO Coordinate Format (as submitted). This document serves to confirm that the information received and processed by the Department of Mineral Resources is true and correct. If there are any errors, please contact us as soon as possible, and we will make the necessary changes. If you are satisfied that the information is correct, please sign and return the report to this office for filing.

If you have any further queries, please do not hesitate to contact us. Your assistance and co-operation is very much appreciated. Thanks.

Yours sincerely

  
REGIONAL MANAGER  
EASTERN CAPE

## **APPENDIX 4:**

### **HERITAGE IMPACT ASSESSMENT**

- Binneman, J. and C. Booth. 2009. A letter of recommendation (with conditions) for the exemption of a full Phase 1 archaeological heritage impact assessment for the proposed sand mine on Portion 1 (Lemoenfontein) of the farm Die Woud No. 500, District of Humansdorp, Eastern Cape Province. Report prepared by: Dr. Johan Binneman and Ms. Celeste Booth, Department of Archaeology, Albany Museum, Grahamstown. Report dated: October 2009.

**A LETTER OF RECOMMENDATION (WITH CONDITIONS) FOR THE EXEMPTION OF A  
FULL PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE  
PROPOSED SAND MINE ON PORTION 1 (LEMOENFONTEIN) OF THE FARM DIE  
WOUDE NO. 500, DISTRICT OF HUMANSDORP, EASTERN CAPE PROVINCE**

**Prepared for:** Clean Stream Environmental Services: Coalfields cc  
Contact person: Adie Erasmus  
P.O. Box 647  
Witbank  
1035  
Tel/Fax.: 013-6975921  
Cell: 0832718260  
Email: [adie@cleanstreams.co.za](mailto:adie@cleanstreams.co.za)  
[www.cleanstreams.co.za](http://www.cleanstreams.co.za)

**Compiled by:** Dr Johan Binneman and Ms Celeste Booth  
Department of Archaeology  
Albany Museum  
Grahamstown  
6139  
Tel.: 046 6222312  
Fax.: 046 6222398  
Email: [j.binneman@ru.ac.za](mailto:j.binneman@ru.ac.za) / [celeste.booth@ru.ac.za](mailto:celeste.booth@ru.ac.za)

**Date:** October 2009

**A LETTER OF RECOMMENDATION (WITH CONDITIONS) FOR THE EXEMPTION OF A FULL PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED SAND MINE ON PORTION 1 (LEMOENFONTEIN) OF THE FARM DIE WOUDE NO. 500, THORNHILL, DISTRICT OF HUMANSDORP, EASTERN CAPE PROVINCE**

**PROJECT INFORMATION**

**Registration No.:**

**The type of development**

The proposed development is for the mining of sand. The total mining area will initially cover an area of 0.96ha.

**The Developer**

Kalmeyer Family Trust

**The Consultant**

Clean Stream Environmental Services: Coalfields cc

Contact person: Adie Erasmus

P.O. Box 647

Witbank

1035

Tel/Fax.: 013-6975921

Cell: 0832718260

Email: [adie@cleanstreamsa.co.za](mailto:adie@cleanstreamsa.co.za)

[www.cleanstreamsa.co.za](http://www.cleanstreamsa.co.za)

## Terms of reference

The original proposal was to conduct a Phase 1 Archaeological Heritage Impact Assessment (AHIA) for the proposed mining of sand portion 1 (Lemoenfontein) of the Farm Die Woud No. 500, Thornhill, District of Humansdorp, Eastern Cape Province; to describe and evaluate the importance of possible archaeological heritage sites, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

## DESCRIPTION OF THE PROPERTY

Map: 1:50 000 - 3325CC Lorie

### Location data

The proposed mining of sand on portion 1 (Lemoenfontein) of the Farm Die Woud No. 500, Thornhill, District of Humansdorp, Eastern Cape Province is located between 5 and 6 kilometres from the coast and therefore falls outside the maximum distance of 5 km where archaeological coastal shell middens are usually located. (see Maps 1 and 2). The following GPS readings were taken, using a Garmin Plus II, indicate the most northern and southern extent of the proposed area to be mined: 33.55.485 S; 25.04.670 E and 33.55.531 S; 25.04.670 E.

## ARCHAEOLOGICAL INVESTIGATION

### Methodology

The investigation was conducted on foot by two people. The area surveyed is situated on an elevated hill with a gentle southerly gradient, south-east of the adjacent homestead area, and overlooking the coastal dunes and ocean (Figs 1-2). The area comprises mainly of recent Holocene sand dunes with a thin layer of grass overlying most of the sand dunes. Some of the sand dunes towards the south of the area are exposed and have no vegetation cover (Figs. 3-4). A few low shrubs occur within the area and planted trees border the area proposed for the sand mining. The proposed area has been heavily disturbed as it was previously used as a rubbish dump area (Fig. 5-6).



Fig. 1. View from the bottom of the gradient and thin grass cover overlying the sand dunes.



Fig. 2. View overlooking coastal dunes and ocean.



Fig. 3. Exposed sand dune area (central).



Fig. 4. Exposed sand dune area (south).



Fig. 5. View of rubbish scattered over the area and a heap of bricks.



Fig. 6. Area has been heavily disturbed by dumping and construction.

A relatively large unifacially flaked quartzite stone (GPS: 33.55.469 S; 25.04.695 E) was documented near the most northern extent of the proposed area. The flaked stone was not found in its primary context and may have been brought into the area by recent dumping activities (Fig. 7).

A quartzite stone core (GPS: 33.55.506 S; 25.04.702 E) was also documented closer towards the southernmost extent of the proposed area in between the exposed sand dune area. As with the previous artefact documented this core may also be out of primary context (Fig. 8).

Owing to the severely disturbed context of the proposed area for mining, it is highly unlikely that *in situ* archaeological remains and features will be found.

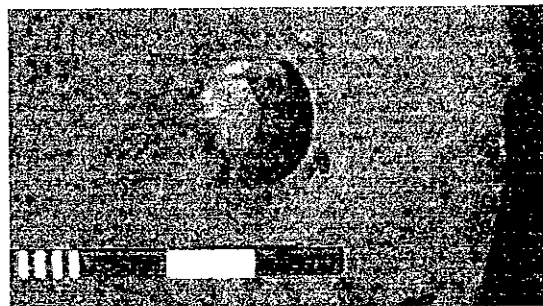
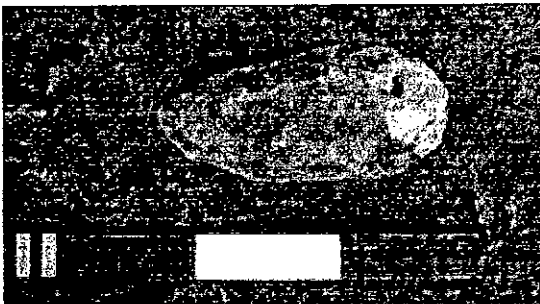


Fig. 7. Unifacially flaked quartzite stone artefact. Fig. 8. Quartzite core stone artefact.

## Conditions

Although it is unlikely that any archaeological heritage remains of any value will be found *in situ* or of any contextual value, there is always a possibility that human remains and/or other archaeological and historical material may be uncovered during the development. Such material must be reported to the nearest museum, archaeologist or to the South African Heritage Resources Agency (SAHRA) if exposed, so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix A for a list of possible archaeological sites that maybe found in the area).

## Letter of recommendation

It is recommended that the proposed mining of sand on portion 1 (Lemoenfontein) of the Farm Die Woud, No. 500 is exempted from a full Phase 1 Archaeological Heritage Impact Assessment. The proposed area for development is of low cultural sensitivity and it is believed that it is unlikely that any archaeological heritage remains will be found on the property. The proposed development may proceed as planned.

**Note:** This letter of recommendation **only** exempts the proposed development from a full Phase 1 Archaeological Heritage Impact Assessment, but **not** for other heritage impact assessments. It must also be clear that this letter of recommendation for exemption of a full Phase 1 archaeological heritage impact assessment will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

The National Heritage Resources Act (Act No. 25 of 1999, section 35) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, ~~that~~ is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

## GENERAL REMARKS AND CONDITIONS

It must be emphasised that this letter of recommendation for exemption of a full Phase 1 archaeological heritage impact assessment is based on the visibility of archaeological sites/material and may not therefore, reflect the true state of affairs. Sites and material may be covered by soil and vegetation and will only be located once this has been removed. In the unlikely event of such finds being uncovered, (during any phase of construction work), archaeologists must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed (see attached list of possible archaeological sites and material). The *onus* is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Act No. 25 of 1999.

## **APPENDIX A: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL: guidelines and procedures for developers**

### **1. Shell middens**

Shell middens can be defined as an accumulation of marine shell deposited by human agents rather than the result of marine activity. The shells are concentrated in a specific locality above the high-water mark and frequently contain stone tools, pottery and bone remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m<sup>2</sup> in extent, should be reported to an archaeologist.

### **2. Human Skeletal material**

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

### **3. Fossil bone**

Any concentrations of bones, whether fossilized or not, should be reported.

### **4. Stone artefacts**

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.

### **5. Stone features and platforms**

They come in different forms and sizes, but are easy to identify. The most common are an accumulation of roughly circular fire cracked stones tightly spaced and filled in with charcoal and marine shell. They are usually 1-2 metres in diameter and may represent cooking platform for shell fish. Others may resemble circular single row cobble stone markers. These are different sizes and may be the remains of wind breaks or cooking shelters.

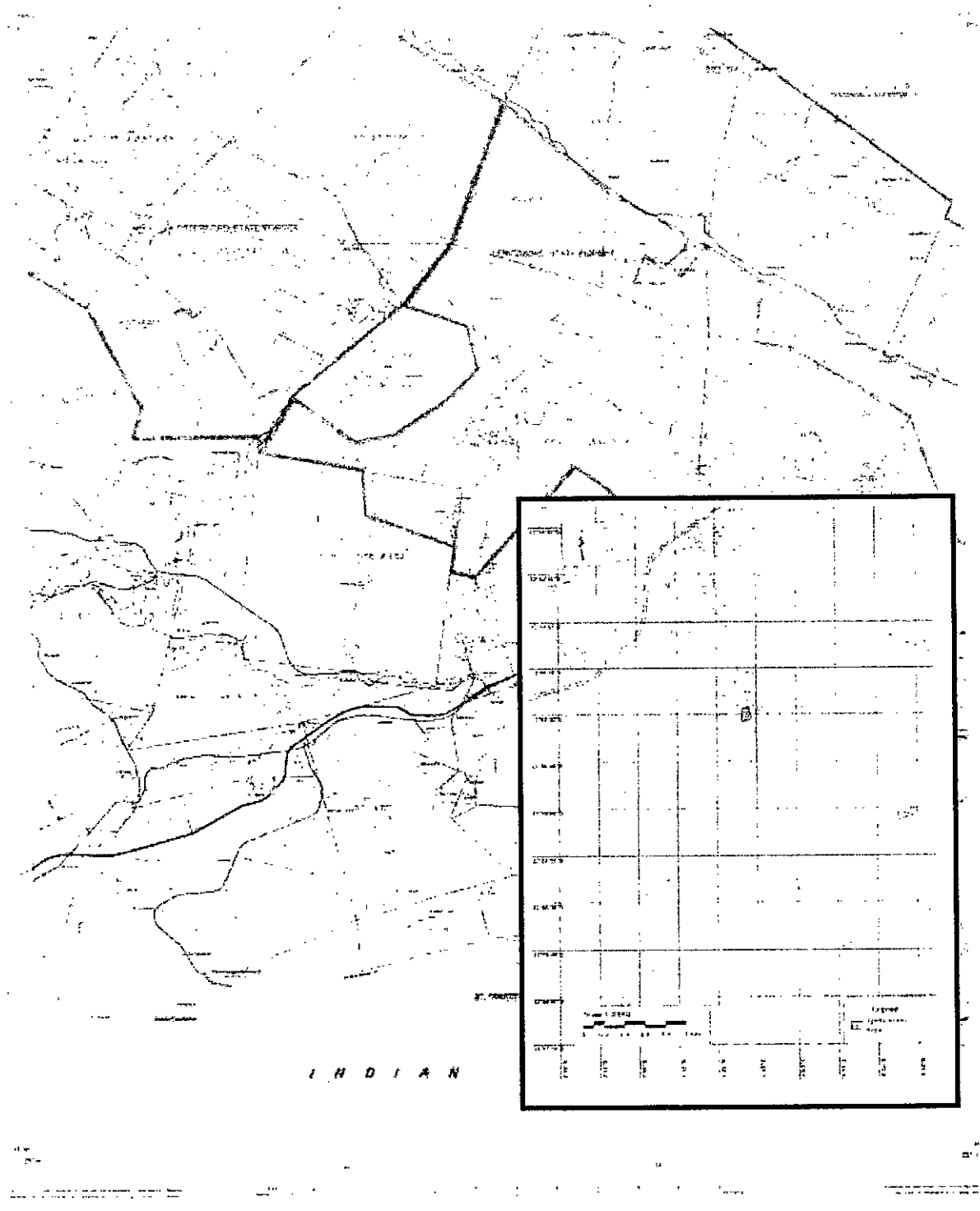
### **6. Historical artefacts or features**

These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.



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Map 1. Indicating the proposed sand mining area (Insert map courtesy of Cleanstream Environmental Services, Coalfields cc).



Map. 2. Aerial view of the position of the proposed sand mining area.

Environmental Management Plan (EMP): Application for a mining permit w.r.t. the Remainder of Portion 1 of the farm Die Woud No. 500, Division of Uitenhage, Eastern Cape. (DME REF. NO.: EC30/5/1/3/2/0429MP)

**APPENDIX 5:**  
**ENVIRONMENTAL AWARENESS PLAN**



## **ENVIRONMENTAL AWARENESS PLAN**

### **1. Introduction**

In accordance with Regulation 51 of the Mineral and Petroleum Resources Development Act of 2002, an environmental management programme contemplated in section 39(1) of the Act must include an environmental awareness plan contemplated in section 39(3) of the Act (i.e. Regulation 51(b)(vi).

According to Section 39(3)(c) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 Of 2002), *'an applicant who prepares an environmental management programme or environmental management plan must develop an environmental awareness plan describing the manner in which the applicant intends to inform his or her employees of any environmental risks which may result from their work and the manner in which the risks must be dealt with in order to avoid pollution or the degradation of the environment'*.

Mr. Moritz Kallmeyer must therefore develop and implement an Environmental Awareness Plan (EAP) as part of their Environmental Management Plan.

### **2. Objective of an EAP**

In terms of Section 39(3)(c) of the Mineral and Petroleum Resources Development Act, 2002 (Act, 28 of 2002), the objectives of an Environmental Awareness Plan (EMP) should be to inform employees of:

- any environmental risks which may result from their work;
- the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment.

Mr. Moritz Kallmeyer must ensure that these environmental awareness objectives are met.

### **3. Implementation of an EAP**

Section 6 of the Environmental Management Plan detailed the potential impacts/risks as a result of the proposed sand mining operation on the Remainder of Portion 1 of the farm Die Woud No. 500.

Section 7 of the Environmental Management Plan detailed the mitigation measures to be implemented during the various phases of the sand mining operation as part of the overall environmental management of the said site. The implementation of these mitigation measures would result in the reduction of the potential impact/risks/pollution as a result of the proposed sand mining operation.

It is thus important that the operators and/or contractors on site are made aware of the potential impacts/risks and understand the importance of implementing the said mitigation measures. This information must thus be communicated to the operators and/or contractors through the Environmental Awareness Plan.

It is recommended that an Environmental Awareness Plan be implemented in the following way:

- Initial education of site operators;
- Education of site operators/contractors/visitors to the site on a daily basis through the provision of a notice board indicating the do's and don'ts.
- Education of site operators through monthly site inspections.

### **3.1 Initial education of site operators**

Mr. Moritz Kallmeyer must ensure that all new operators on site are briefed regarding the potential impacts/risks before commencing with work on site. This initial education of the site operators must take place on site in order for management to indicate the relevant features and measures to be implemented, i.e. the mitigation measures indicated in the Environmental Management Plan must be communicated to the site operators.

The following should be communicated by Mr. Moritz Kallmeyer with regards to the sand mining operation:

- The mining operation must comply with the Mine Health and Safety Act, 1996 (Act 29 of 1996) at all times.
- The mine plan to be provided and explained to the operator.
- Operator to be informed that all mining activities to take place within the demarcated mining area.
- The demarcated boundaries of the mining area to be indicated to the operator on site.
- Operators/ contractors to be informed that they do not enter surrounding areas adjacent to the sand mine. The operator/contractors to be informed of penalties (fines to be paid) to be imposed due to infringements. This includes dumping waste such as bottles plastic etc and urinating in these areas
- All mining activities associated with a particular block (Block 1 & 2) to be limited to the demarcated block.
- Sand extraction to start in Block 1 starting from upper boundary.
- Sand to be removed in 10m to 15 m wide strips across the length of the demarcated block.
- The maximum depth of the excavations to be 2.5m below ground level.
- After the first section (Block 1) has been mined out, the area to be sloped at 18 degrees (1:3) and seeded to suitable grass species to limit erosion and restore protective ground cover.
- The other block (Block 2) is only to be mined once the earthworks on the previous phase have been completed.
- Rehabilitation of the mining blocks to take place in the following order: Block 1 then Block 2.
- No washing of sand to take place on site.

In addition, the operator must be informed of the following:

- Operators to bring potable water to site on a daily basis.
- The required protective clothing and equipment must worn by the operator/site workers/contractors.
- The sand mining operation to be conducted during daylight hours (i.e. sunrise to sunset) or 07h00 to 17h00.
- No mining activities to take place over weekends (i.e. Saturdays and Sundays) or on public holidays.
- The operator/site workers will not reside on site.
- No squatting by informal settlers to be allowed on site.
- In order to gain access to the mining site or exit the mining site, the operator/site workers/contractors to use the existing road extending from the Gamtoos Mouth Road.
- No sand/gravel to be deposited on the tarred Gamtoos Mouth Road that could impact on the safety of the general road user.
- Only official roads may be used. No off-road driving will be permitted.
- The operator/site workers/contractors will at all times obey the rules of the road. No speeding will be allowed.
- The operator/site workers/contractors will at all times use roadworthy vehicles.
- Trucks not to be overloaded.

Mr. Moritz Kallmeyer must also inform the operators of the following waste management measures:

- A rubbish bin is placed at the sand mining site for non degradable refuse such as glass bottles, plastic bags, etc. This drum will be emptied on a regular basis and disposed of at a recognised disposal facility. Bio-degradable refuse will be handled in a similar manner.
- No dumping or burying of any kind of waste (domestic, general, building rubble, etc.) to take place on site or on the adjacent areas.
- Site workers not to burn any waste on site.
- A chemical toilet will be provided on site for use by the operator/site workers. The chemical toilet will be serviced on a regular basis. No long drop toilets to be allowed on site.
- No vehicles will be repaired within the proposed mining area. All vehicles will be repaired off site as the machinery is hired on a daily basis.
- Equipment and machinery used in the mining operation will be adequately maintained so that during operations, oil diesel, fuel, hydraulic fluid spills will be prevented.
- No used oils or lubricants to be stored or buried on site.
- No diesel tank for refuelling of the front end loader may be installed on site without the necessary permission.
- All hydrocarbon spills (oil, grease, diesel, petrol, etc.) should be cleaned with the use of suitable absorbent materials such as drizit. Appropriate soil remediation measures should be implemented where soil has been contaminated with oil.

The operator must be informed that should he/she come across any shell middens or piles of stones/bones or skeletal remains, he/she must stop work immediately and report the find to Mr. Moritz Kallmeyer. Management will immediately inform the South African Heritage Resources Agency (SAHRA; Mrs Mary Leslie, Tel: 021 - 462 4502), Heritage Eastern Cape (Ms Africa

Maxongo, Tel: 043 - 722 1934) and the Department of Economic Development and Environmental Affairs (DEDEA) of the finding.

### **3.2 Educating operators/contractors/visitors to site on a daily basis**

At the entrance to the sand mining operation, a notice board should be erected informing operators, contractors and/or visitors to the site of the following:

- That they are entering a mining area and they will be required to adhere to the Mine Health and Safety Act, 1996 (Act 29 of 1996) at all times.
- All visitors to the said site are to report to the operator present on site and state the nature of their visit.
- Remember to wear the necessary protective gear at all times.
- Work hours: 07h00 to 17h00 Mondays to Fridays.
- No mining activities over weekends (i.e. Saturdays and Sundays) or on public holidays.
- Operators/site workers are not to reside on site.
- Speed limit on site 20km/h.
- Only official roads on site to be used. No off-road driving permitted.
- Be aware of the presence of animals and farm workers.
- All rubbish/waste to be placed in the rubbish bin provided. No dumping, burying or burning of waste to take place.
- Chemical toilet to be used. No long drops allowed.
- No vehicles to be repaired on site.
- No used oils or lubricants to be buried on site.
- No hunting allowed.
- No plant collecting allowed.
- No collection of firewood allowed.
- No open fires allowed.

This notice board will on a daily basis remind operators/contractors/visitors to site of the basic rules of the mining site and inform them of the 'DO'S' and 'DON'TS'. At regular intervals, management should have one-on-one discussions with drivers to discuss the list of rules on the notice board to ascertain if they understand the various DO's and DON'TS listed on the notice board.

In addition, to the above-mentioned a map of the said site should be provided indicating:

- the said mining area;
- the area being rehabilitated;
- the official roads to be used by operators/contractors/site visitors.

### **3.3 Education through regular site inspections**

Mr. Moritz Kallmeyer should conduct regular inspections of the mining site with the operator to check on conditions at the site. It is during these times that training should be given to ensure that the mitigation measures are being implemented and that the environment is carefully looked after at the mining site.

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**UNDERTAKING BY THE APPLICANT**

.....  
.....

the undersigned and duly authorised thereto by .....

Company/Close Corporation/Municipality (*Delete that which is not applicable*)

hereby duly undertake to implement all aspects contained in the EMP and accept full responsibility therefore.

Signed at Jeffreys Bay this 10<sup>th</sup> day of May 2010

Signature of applicant

**WITNESSES:**

1. [Signature]  
2. \_\_\_\_\_

**APPROVAL BY THE DEPARTMENT OF MINERALS AND ENERGY**

Approved in terms of the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

Signed at..... this..... day of..... 20.....

**REGIONAL MANAGER  
EASTERN CAPE**