

Case ID: 1766



mineral resources

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

Private Bag X 9467, Polokwane, 0700.
101 Dorp Street, Polokwane, 0699
Tel no: (015) 287 4700; Fax no: (015) 287 4729

Directorate Minerals Regulations: Limpopo Region

Enquiries: M.D. Mudau
E-mail address: Daisy.Mudau@dmr.gov.za
Reference nr: LP30/5/1/3/3/2/1(1557) EM

REGISTERED MAIL

**The Manager:
The Provision- SAHRA Limpopo
P. O. Box 137
Polokwane
0700**

Attention: Mr. Donald Lithole/ Victor Mathivha

CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) FOR THE APPROVAL OF AN ENVIRONMENTAL MANAGEMENT PLAN FOR MINING PERMIT IN RESPECT OF THE FARM ONVERWACHT 914 LS, SITUATED IN THE MAGISTERIAL DISTRICT OF POLOKWANE, LIMPOPO REGION.

APPLICANT: HJC OLIVIER BELEGGINGS BK TRADING AS HJC PLANT.

Attached herewith, please find a copy of an EMP received from the above-mentioned applicant, for your comments.

It would be appreciated if you could forward any comments or requirements your Department may have in the case in hand to this office and to the applicant within 30 days as from **06 June 2011 to 06 July 2011**, failure of which will lead to the assumption that your Department has no objection(s) or comments with regard to this application and this Department will in that instance proceed with the finalisation thereof.

Your co-operation will be appreciated.

A handwritten signature in black ink, appearing to read 'M.D. Mudau', written over a horizontal line.

**THE REGIONAL MANAGER
LIMPOPO REGION – POLOKWANE
06 JUNE 2011**

File number:.....

DEPARTMENT OF MINERALS AND ENERGY

ENVIRONMENTAL MANAGEMENT PLAN

Submitted in support of application for a prospecting right or mining permit.
Section 39 and Regulation 52 of the Minerals and Petroleum Resources Development Act,
2002 (Act 28 of 2002)



Application for a:

Prospecting Right	
Mining Permit	✓

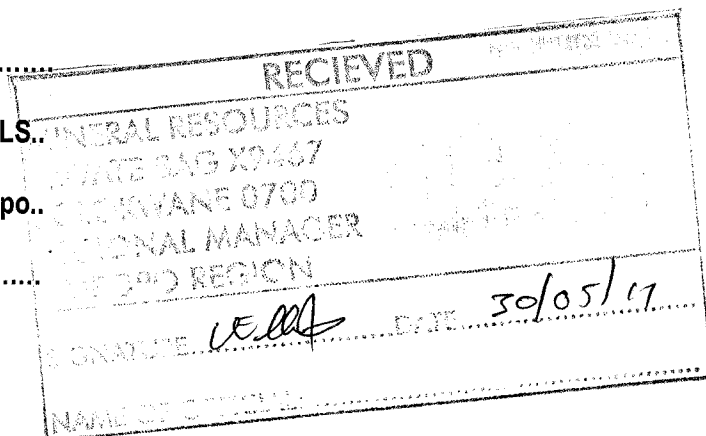
Applicant:.....HJC Plant.....

Farm:.....Onverwacht 914 LS.....

District:.....Capricorn Limpopo.....

Mineral:Gravel.....

Date:30 May 2011.....



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A.1 INTRODUCTION

This document aims to provide a simplified national standard for applicants for prospecting rights and mining permits to comply with the relevant legislation and environmental regulations as apply to their respective applications in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)(MPRDA).

Applicants in this sector of the mining industry typically disturb smaller surface areas of land, whether drilling boreholes, small trenches, or mining on a small area, less than 1,5 hectares of land, under a mining permit as contemplated in Section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

A.2 SCOPE

This document is intended for use by applicants for mining permits and prospecting rights. Typically, operations in this sector of the mining industry:

- Use little or no chemicals to extract mineral from ore,
- Work on portions of land of 1,5 hectares in size or smaller,
- Disturb the topography of an area somewhat but have no significant impact on the geology

A.3 PURPOSE

This document aims to :

- Provide a national standard for the submission of Environmental Management Plans for the types of applications mentioned above.
- Ensure compliance with Regulation 52 of the MPRDA.
- Assist applicants by providing the information that the Department of Minerals and Energy (DME) requires in a simple language and in a structured, prescribed format, as contemplated in Regulation 52 (2) of the (MPRDA).
- Assist regional offices of the DME to obtain enough information about a proposed prospecting/ reconnaissance or mining permit operation to assess the possible environmental impacts from that operation and to determine corrective action even before such right is granted and the operation commences.

This document aims both to provide the DME regional offices with enough information about applicants for mining permits and applicants with guidance on environmental management matters pertaining to the mitigation of environmental impacts arising from their operations. Given this dual focus and the generic nature of the document, it might not be sufficient for all types of operations under various circumstances. The document may therefore be altered or added to as the particular circumstances of the application in question may require.

A.4 USE OF THE DOCUMENT:

This document is designed for use by non-professionals and newcomers to the environmental management industry and it incorporates a *very simple* Environmental Impact Assessment (EIA). The

EIA is contained in Section C of this document and was designed specifically with the target sectors of the mining industry (described in A.2 above) in mind.

The aim is ultimately to (a) gather information from applicants themselves; (b) to assess the impact of the operation based on that information and then (c) to guide the applicant to mitigate environmental impacts to limit damage to the environment.

Section B of the document gathers demographic information about the applicant. Section C gathers the information that will be used in the Environmental Impact Assessment. The applicant must complete the relevant sections of this document, but the regional office of the DME will do the scoring of these for the impact assessment rating in Section D.

Section F (the Environmental Management Plan) of the document is prescriptive and gives guidance to the miner or prospector on how to limit the damage of the operation on the environment. This part may be added to by the regional manager, who has the prerogative to decide whether this Environmental Management Plan will adequately address the environmental impacts expected from the operation or whether additional requirements for proper environmental management need to be set. Where these additional requirements are set, they will appear in Section G of this document. The Environmental Management Plan (Section F) of the document is legally binding once approved and, in the undertaking contained in Section H, the applicant effectively agrees to implement all the measures outlined in this Environmental Management Plan.

A.5 LEGISLATION/ REGULATIONS

The relevant sections of Mineral and Petroleum Resources Development Act and its supporting Regulations are *summarised below* for the information of applicants. The onus is on the applicant to familiarise him/herself with the provisions of the full version of the Mineral and Petroleum Resources Development Act and its Regulations.

Section of Act	Legislated Activity/ Instruction/ Responsibility or failure to comply	Penalty in terms of Section 99
5(4)	No person may prospect, mine, or undertake reconnaissance operations or any other activity without an approved EMP, right, permit or permission or without notifying land owner	R 100 000 or two years imprisonment or both
19	Holder of a Prospecting right must: lodge right with Mining Titles Office within 30 days; commence with prospecting within 120 days, comply with terms and conditions of prospecting right, continuously and actively conduct prospecting operations; comply with requirements of approved EMP, pay prospecting fees and royalties	R 100 000 or two years imprisonment or both
20(2)	Holder of prospecting right must obtain Minister's permission to remove any mineral or bulk samples	R 100 000 or two years imprisonment or both
Section of Act	Legislated Activity/ Instruction/ Responsibility or failure to comply	Penalty in terms of Section 99
26(3)	A person who intends to beneficiate any mineral mined in SA outside the borders of SA may only do so after notifying the Minister in writing and after consultation with the Minister.	R 500 000 for each day of contravention
28	Holder of a mining right or permit must keep records of operations	R 100 000 or two years

	and financial records AND must submit to the DG: monthly returns, annual financial report and a report detailing compliance with social & labour plan and charter	imprisonment or both
29	Minister may direct owner of land or holder/applicant of permit/right to submit data or information	R 10 000
38(1)(c)	Holder of permission/permit/right MUST manage environmental impacts according to EMP and as ongoing part of the operations	R 500 000 or ten years imprisonment or both.
42(1)	Residue stockpiles must be managed in prescribed manner on a site demarcated in the EMP	A fine or imprisonment of up to six months or both
42(2)	No person may temporarily or permanently deposit residue on any other site than that demarcated and indicated in the EMP	A fine or imprisonment of up to six months or both
44	When any permit/right/permission lapses, the holder may not remove or demolish buildings, which may not be demolished in terms of any other law, which has been identified by the Minister or which is to be retained by agreement with the landowner.	Penalty that may be imposed by Magistrate's Court for similar offence
92	Authorised persons may enter mining sites and require holder of permit to produce documents/ reports/ or any material deemed necessary for inspection	Penalty as may be imposed for perjury
94	No person may obstruct or hinder an authorised person in the performance of their duties or powers under the Act.	Penalty as may be imposed for perjury
95	Holder of a permit/right may not subject employees to occupational detriment on account of employee disclosing evidence or information to authorised person (official)	Penalty as may be imposed for perjury
All sections	Inaccurate, incorrect or misleading information	A fine or imprisonment of up to six months or both
All sections	Failure to comply with any directive, notice, suspension, order, instruction, or condition issued	A fine or imprisonment of up to six months or both

A.6 OTHER RELEVANT LEGISLATION

Compliance with the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) and its Regulations does not necessarily guarantee that the applicant is in compliance with other Regulations and legislation. Other legislation that may be immediately applicable includes, but are not limited to:

- National Monuments Act, 1969 (Act 28 of 1969).
- National Parks Act, 1976 (Act 57 of 1976)
- Environmental Conservation Act, 1989 (Act 73 of 1989)
- National Environmental Management Act, 1998 (Act No. 107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act, 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

A.7 WORD DEFINITIONS

In this document, unless otherwise indicated, the following words will have the meanings as indicated here:

Act (The Act)	Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
Borehole	A hole drilled for the purposes of prospecting i.e. extracting a sample of soil or rock chips by pneumatic, reverse air circulation percussion drilling, or any other type of probe entering the surface of the soil.
CARA	The Conservation of Agricultural Resources Act
EIA	An Environmental Impact Assessment as contemplated in Section 38(1) (b) of the Act
EMP	an Environmental Management Plan as contemplated in Section 39 of the Act
Fauna	All living biological creatures, usually capable of motion, including insects and predominantly of protein-based consistency.
Flora	All living plants, grasses, shrubs, trees, etc., usually incapable of easy natural motion and capable of photosynthesis.
Fence	A physical barrier in the form of posts and barbed wire and/or "Silex" or any other concrete construction, ("palisade"- type fencing included), constructed with the purpose of keeping humans and animals within or out of defined boundaries.
House	any residential dwelling of any type, style or description that is used as a residence by any human being
NDA	National Department of Agriculture
NWA	National Water Act, Act 36 of 1998
Pit	Any open excavation
"Porrel"	The term used for the sludge created at alluvial diamond diggings where the alluvial gravels are washed and the diamonds separated in a water-and-sand medium.
Topsoil	The layer of soil covering the earth which- <ul style="list-style-type: none"> (a) provides a suitable environment for the germination of seed; (b) allows the penetration of water; (c) is a source of micro-organisms, plant nutrients and in some cases seed; and (d) is not of a depth of more than 0,5 metres or such depth as the Minister may prescribe for a specific prospecting or exploration area or mining area.
Trench	A type of excavation usually made by digging in a line towards a mechanical excavator and not pivoting the boom – a large, U-shaped hole in the ground, with vertical sides and about 6 – 8 metres in length. Also a prospecting trench.
Vegetation	Any and all forms of plants, see also Fauna
DWAF	The Department of Water Affairs and Forestry – both national office and their various regional offices, which are divided across the country on the basis of water catchment areas.
MPRDA	the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
EMPlan	An Environmental Management Plan as contemplated in Regulation 52 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) – this document.

B. BIOGRAPHIC DETAILS OF THE APPLICANT:

B 1.1 Full name (and surname) of person or company applying for permit or right	<i>HJC Plant</i>
B 1.2 ID number of person or company/ CC registration number	<i>97/57761/23</i>

B 1.3 Postal address	<i>PO Box 4040</i>
	<i>Polokwane</i>
	<i>0700</i>
B 1.4 Physical/ residential address	<i>Onverwacht 914 LS</i>
	<i>Portion 21</i>
	<i>Polokwane</i>
B 1.5 Applicant's telephone number	<i>015-263 6657</i>
B 1.6 Applicant's cellular phone number	<i>082 443 1870</i>
B 1.7 Alternative contact's name	<i>Jurie Olivier</i>
B 1.8 Alternative contact's telephone/cell phone numbers	<i>015-263 6657</i>
	<i>082 468 0444</i>
B 2.1 Full name of the property on which mining/ prospecting operations will be conducted	<i>Onverwacht 914 LS</i>
B 2.2 Name of the subdivision	<i>Portion 21</i>
B 2.3 Approximate center of mining/prospecting area:	
Longitude	o min sec East 29 33 58.1
Latitude	o min sec South 23 49 18.2
B 2.4 Magisterial district	<i>Polokwane</i>
B 2.5 Name of the registered owner of the property	<i>Olivier Eiendomme Trust</i>
B 2.6 His/her Telephone number	<i>015-263 6657</i>
B 2.7 His/ her Postal address	<i>PO Box 1911</i>
	<i>Polokwane</i>
	<i>0700</i>
B 2.8 Current uses of surrounding areas	<i>Cattle farming and croplands</i>

C 1.6 Are there any <i>protected areas</i> (game parks/nature reserves, monuments, etc) close to the proposed operation?	Yes		4
	No	✓	0
C 1.7 What mineral are you going to prospect or mine for? <i>Gravel for road construction</i>			
C 1.8 Describe the type of equipment that will be used: <i>Grader, Excavator and tipper trucks</i>			
C.2 HOW WILL THE PROPOSED OPERATION IMPACT ON THE NATURAL ENVIRONMENT? (REGULATION 52(2)(b))			
ENVIRONMENTAL ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 2.1 What will the ultimate depth of the proposed prospecting/mining operations be?	0 – 5m	✓	2
	6 – 10m		4
	10 – 25m		8
	25m +		10
C 2.2 How large will the <i>total</i> area of all excavations be?			1.499 ha
C 2.3 How large will each excavation be before it is filled up?	<10 X 10m		2
The excavation will be in the order of 105 x 105 m before it is filled up	<20 X 20m		4
	>20 X 20m	✓	8
C 2.4 How many <i>prospecting</i> boreholes or trenches will there be?			
N/A			

	VALUE	TICK	OFFICE USE
C 2.5 Will employees prepare food on the site and collect firewood?	Yes		4
	No	✓	0
C 2.6 Will water be extracted from a river, stream, dam or pan for use by the proposed operation?	Yes		4
	No	✓	2
C 2.7 If so, what is the name of this water body?	N/A		
C 2.8 If water will not be extracted from an open surface source, where will it be obtained?			
<i>Operation does not need any water</i>			
	VALUE	TICK	OFFICE USE
C 2.9 How much water per day will the <i>mineral processing</i> operation require?	1000 – 10 000 Liters		2
N/A	20 000 – 40 000 L		3
	40 000 – 60 000 L		5
	60 000 – 100 000L		8
	More		10
C 2.10 How far is the proposed operation from open water (dam, river, pan, lake)?	0 – 15m		8
The nearest open water is 1000 m from the operation	16 – 30m		6
	31 – 60m		4
	More than 60 metres	✓	2
C 2.11 What is the estimate depth of the water table/ borehole?		50	metres
C 2.12 How much water per day will the proposed operation utilize <i>for employees</i> ?		20	Liters
C 2.13 What toilet facilities will be made available to workers?	None		8
	Pit latrine (longdrop)		4
	Chemical toilet	✓	2
C 2.14 Would it be necessary to construct roads to access the proposed operations?	Yes		4
	No	✓	0

	VALUE	TICK	OFFICE USE
C 2.15 How long will these access road(s) be (from a public road to the proposed operations)	0 – 0,5 km		4
N/A	0,6 – 1,5 km		2
	1,6 – 3 km		4
C 2.16 Will trees be uprooted to construct these access road(s)?	Yes		4
N/A	No		0
C 2.17 Will any foreign material, like crushed stone, limestone, or any material other than the naturally occurring topsoil be placed on the road surface?	Yes		4
N/A	No		0
C.3 TIME FACTOR			
C 3.1 For what time period will prospecting/mining operations be conducted on this particular site?	0 – 6 months		2
	6 – 12 months		4
	12 – 18 months		6
	18 – 24 months	✓	8
	>24 months		10
C.4 HOW WILL THE PROPOSED OPERATION IMPACT ON THE SOCIO-ECONOMIC ENVIRONMENT? (REGULATION 52(2)(b))			
ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 4.1 How many people will be employed?	• 12		
C 4.2 How many men?	• 10		
C 4.3 How many women?	• 2		
C 4.4 Where will employees be obtained? (Own or employed from local communities?)	Own	✓	2
	Local		4
C 4.5 How many hours per day will employees work?	Sunrise → Sunset	✓	4
	Less		2
	More		8
	VALUE	TICK	OFFICE

			USE
C 4.6 Will operations be conducted within 1 kilometer from a residential area	Yes		6
Only farm houses in area	No	✓	1
C 4.7 How far will the proposed operation be from the nearest fence/windmill/house/dam/built structure?	0 – 50 metres		8
Will be in the order of 300 m from own house and pump	51 – 100 metres		4
	150 or more metres	✓	2
C.5 HOW WILL THE PROPOSED OPERATION IMPACT ON THE CULTURAL HERITAGE OF THE SURROUNDING ENVIRONMENT? REGULATION 52(2)(b)			
ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 5.1 Are there any graveyards or old houses or sites of historic significance within 1 kilometer of the area?	Yes	✓	8
Described in the heritage report-Attached	No		0

C.6 SPECIFIC REGULATORY REQUIREMENTS

<p>C.6.1 Air quality Management and Control (Regulation 64) Describe how the operation will impact on the quality of the air, taking into account predominant wind direction and other affected parties in the downwind zone: <i>The operation will produce dust, but less than normal agricultural cropland operations</i></p>
<p>C.6.2 Fire Prevention (Regulation 65) Applicants for permits, rights or permissions involving coal or bituminous rock must:</p> <ul style="list-style-type: none"> • Indicate on a plan where the coal or rock discard dump will be located <i>(If applied for a permit to mine or prospect for coal or bituminous rock, indicate the exact location of the discard dump on the plan and write "EMPlan C6.2" next to it)</i>
N/A
<p>C.6.3 Noise control (Regulation 66) Indicate how much noise the operation will generate, and how it will impact on the surrounding environment, who might be influenced by noise from your operation. <i>Noise generated will be less than neighbouring cropland and farming operations. Noise generation will only be between sunrise and sunset. Surrounding neighbours will not be negatively influenced by the noise</i></p>
<p>C.6.4 Blasting, vibration and shock (Regulation 67) Please indicate whether any blasting operations will be conducted.</p>

Blasting: Yes ████	How often? Blasting will not be more than once or twice a week
<i>Blasting will most probably be conducted later in the operation. A professional team will be contracted to do the blasting</i>	
C.6.5 Disposal of waste material (Regulation 69)	
<i>Indicate on your plan</i> where waste will be dumped in relation to the beneficiation works/ washing pans Also indicate below how domestic waste material will be managed.	
<i>No waste will be dumped. No domestic waste will be dumped on site. Will be taken away by contractor to waste site</i>	
C.6.6 Soil pollution and erosion control (Regulation 70)	
6.6.1 Indicate how topsoil will be handled on the area.	
<i>Topsoil will be removed with the material (gravel). New topsoil from building sites will be trucked to this site and used to fill up the excavations for rehabilitation. Enough material to rehabilitate this site is available..</i>	
6.6.2 Describe how spills of oil, grease, diesel, acid or hydraulic fluid will be dealt with.	
<i>Spills of this nature will be cleaned up and the polluted soil will be taken away for rehabilitation</i>	
6.6.3 Briefly describe the storage facilities available for the above fluids:	
<i>Above fluids will be locked up in secure stores on the farm</i>	

<p>C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))</p>	<p>Example: Section C 6.4 Blasting. I have identified that the people living on the neighbouring property are sensitive to loud noises as they have children that must study during the afternoons</p>
<p>C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left? (Regulation 57(2)(c))</p>	<p>Example: I will mitigate the impact of my blasting operations on the Interested Parties by limiting blasting operations to school hours, when no one in the affected area is at home.</p>
<p>1 Section C.6.1 Air quality : People are sensitive to excessive dust generation.</p>	<p>1 I will limit the impact of the dust generated during my operations keeping speeds of the trucks removing the gravel low so that less dust will be generated. If the roads still produce excessive dust, the roads will be dampened to mitigate this impact.</p>
<p>Section C.6.3 Noise : I have identified that the people living on the neighbouring property are sensitive to loud noises as they have children that must study during the afternoons</p>	<p>2 I will mitigate the impact of my mining operations (noise) on the Interested Parties by limiting mining operations to daylight hours, when most sensitive people in the affected area is not at home.</p>
<p>Section C.6.4 Blasting: I have identified that blasting would probably be necessary during the operation. Neighbouring farm owners and livestock may be sensitive to the vibration and noise from blasting</p>	<p>I will calculate the charge size and blast regime to optimize required excavation and fragmentation and thus keep air blast and ground vibration levels below pre-determined acceptable values. I will monitor blast, ground vibration and human response to ensure that accepted levels are in fact acceptable and are being adhered to, and to modify the blasting design as required. I will pre-notify affected persons (neighbours) of the intention to blast and the time of blast, preferably at the same time of day to remove the element of surprise. I will ensure there is correct stemming of blast holes. I will regularly monitor the exposed livestock to ascertain if there are any adverse reactions</p>
<p>4</p>	<p>4</p>
<p>5</p>	<p>5</p>
<p>c</p>	<p>c</p>
<p></p>	<p></p>

C.7 Financial provision: (Regulation 54)

The amount that is necessary for the rehabilitation of damage caused by the operation, both sudden closure during the normal operation of the project and at final, planned closure **will be estimated by the regional office of the DME**, based on the information supplied in this document. This amount will reflect how much it will cost the Department to rehabilitate the area disturbed in case of liquidation or abscondence.

Enter the amount of financial provision required here: R15 000

What method will be used to furnish DME with this financial provision?

Cash deposit	
Bank guarantee	✓
Trust Fund	
Other: (specify) (Note: other methods must be approved by the Minister)	

The standard formats for each of these types of guarantees are available from your regional office of the DME.

C.8.1 Monitoring and performance assessment.

Regulation 55 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) clearly describes the process and procedure as well as requirements for monitoring and auditing of the performance of this plan to adequately address environmental impacts from the operation. The following information must be provided:

C.8.2 Please describe how the adequacy of this programme will be assessed and how any inadequacies will be addressed. (Regulations 55(1) and 52(2)(e))

Example: I will, on a bi-monthly basis, check every aspect of my operation against the prescriptions given in Section F of this document and, if I find that certain aspects are not addressed or impacts on the environment are not mitigated properly, I will rectify the identified inadequacies immediately.

I will, on a bi-monthly basis, check every aspect of my operation against the prescriptions given in Section F of this document and, if I find that certain aspects are not addressed or impacts on the environment are not mitigated properly, I will rectify the identified inadequacies immediately. Aspects which will receive specific attention are:

- * *Layout plans of the mining area*
- * *Waste handling*
- * *Spill incidents*
- * *Sanitation*
- * *Erosion control*
- * *Air quality*
- * *Noise*

Rehabilitation when it becomes applicable.

C.9 Closure and Environmental objectives: (Regulation 52(2)(f))

Clearly state the intended end use for the area prospected/mined after closing of operations

Intended use of the area after closing of the area mined will be grazing

C.9.1 Describe, in brief terms, what the environment will look like after a closure certificate has been obtained.
<i>The excavations will be filled up with topsoil derived from building sites where this soil has to be removed. The area will be revegetated to a grazing capability equal to or better than current capability</i>

Note: The proposed end-state of your area must be consulted with interested and affected parties in terms of Regulation 52(2)(g). Details of the acceptability of the end-state must appear in the section below.

C 10 CLOSURE

Regulations 56 to 62 outline the entire process of mine closure, and these are copied in Section F of this document, both as a guide to applicants on the process to be followed for mine closure, and also to address the legal responsibility of the applicant with regard to the proper closure of his operation. 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/her 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).

C.11 Public Participation: (Regulation 52(2)(g))

In terms of the above regulation consultation with interested and affected person or persons must take place prior to the approval of the environmental management plan. This regulation is quoted below for ease of reference.

"a record of the public participation undertaken and the results thereof"

C 11.1 Any comments lodged by an interested and affected person or persons in terms of section 10(1)(b) of the Act, must be in writing and addressed to the relevant Regional Manager.

C 11.2 Any objections lodged by an interested and affected person or persons against the application for a right or permit in terms of the Act, must set out clearly and concisely the facts upon which it is based and must be addressed to the relevant Regional Manager in writing.

C 11.3 The Regional Manager must make known by way of publication in a local newspaper or at the office of the Regional Manager, that an application for a right or permit in terms of the Act has been received.

In the table below, please list the names of people or organisations likely to be influenced by the proposed operations (these might include neighbours, other water users, etc.) Kindly indicate how these

people were consulted (eg. By letter or by phone) *and provide proof* of that consultation. What were the main concerns/ objections raised by the interested and affected parties to the proposed operation?

Name of Interested/ affected party	Contact details: Address & telephone number	How did consultation take place?	What were his/her main concern about the operation?
1 Z.J Olivier	082 674 4093	Personal Visit	None
2 B H Bester	082 316 9072	Personal Visit	None
3 B Oosthuizen	082 375 7548	Personal Visit	None
4 A de Wet	082 893 4698	Personal Visit	None
5 H.P. Jannasch	083 419 0909	Personal Visit	None

D SCORING OF EIA- FOR OFFICIAL USE ONLY

Instructions for officials:

In this table, complete the totals of each section indicated below and do the calculation. **Remember to first add all the values of sections C 1,2,4 and 5 and then to multiply it by the time factor in Section C 3**

Note that the value for the time factor element of the impact rating appears in Section C3. This is the total amount of time that the operation is expected to impact on the environment and all other factors are MULTIPLIED by this value. Compare the score (Impact rating) with the table below to help you make a decision on the total impact of the operation and also on the sufficiency of this programme to address all expected impacts from the operation on the environment.

D 1.1 CALCULATION TABLE

Section C 1 Total	+	Section C 2 Total	+	Section C 4 Total	+	Section C 5 Total	=	<u>Subtotal</u>	X	Time Factor Section C 3	=	Score (Impact rating)
	+		+		+		=		X		=	

D 1.2 IMPACT RATING SCALE

SCORE ATTAINED	IMPACT RATING	REMARKS
46 - 300	Low	No additional objectives needed - this programme is sufficient
301 - 800	Medium	Some specific additional objectives to address focal areas of concern may be set.
801 - 1160	High	Major revision of Environmental Management Plan for adequacy and full revision of objectives.

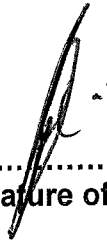
Additional Objectives:

Based on the information provided by the applicant and the regional office's assessment thereof, combined with the interpretation of the scoring and impact rating attained for the particular operation above, the Regional Manager of the regional office of the DME may now determine additional objectives /requirements for the mine owner/manager to comply with. *These measures will be specific and will address specific issues of concern that are not adequately covered in the standard version of this document.* These requirements are not listed here, but are specified under Section G of this document, so as to form part of the legally binding part of this Environmental Management Plan.

E UNDERTAKING:

I,**J.C. Olivier**....., the applicant for a ...**mining** permit/ right hereby declare that the above information is true, complete and correct. I undertake to implement the measures as described in Sections F and G hereof. I understand that this undertaking is legally binding and that failure to give effect hereto will render me liable for prosecution in terms of Section 98 (b) and 99 (1)(g) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). I am also aware that the Regional Manager may, at any time but after consultation with me, make such changes to this plan as he/she may deem necessary.

Signed on this ...30thday of **May** 2011...at.. **Polokwane**.....(Place)


.....
Signature of applicant

F. ENVIRONMENTAL MANAGEMENT PLAN:

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/prospecting permission/ reconnaissance permission after approval of the Environmental Management Plan. It is essential that this portion be carefully studied, understood, implemented and adhered to at all times.

F 1 GENERAL REQUIREMENTS

F 1.1 MAPPING AND SETTING OUT

F 1.1.1 LAYOUT PLAN

- A copy of the layout plan as provided for in Regulation 2.2 must be available at the prospecting/mining site for scrutiny when required.
- The plan must be updated on a regular basis with regard to the actual progress of the establishment of surface infrastructure, mining operations and rehabilitation (a copy of the updated plan shall be forwarded to the Regional Manager on a regular basis).
- A final layout plan must be submitted at closure of the mine or when operations have ceased.

NOTE: Regulation 2.2 of the regulations promulgated in terms of the Act requires:

"An application contemplated in sub-regulation (1) must be accompanied by a plan that must contain –

- (a) the co-ordinates of the land or area applied for;*
- (b) the north point;*
- (c) the scale to which the plan has been drawn;*
- (d) the name, number and location of the land or area covered by the application; and*
- (e) in relation to farm boundaries and surveyed points-

 - (i) the size and shape of the proposed area;*
 - (ii) the boundaries of the land or area comprising the subject of the application concerned;*
 - (iii) the layout of the proposed reconnaissance, prospecting, exploration, mining or production operations;*
 - (iv) surface structures and servitudes;*
 - (v) the topography of the land or area; "**

F 1.1.2 DEMARCATING THE MINING/ PROSPECTING AREA

- The mining/ prospecting area must be clearly demarcated by means of beacons at its corners, and along its boundaries if there is no visibility between the corner beacons.
- Permanent beacons as indicated on the layout plan or as prescribed by the Regional Manager must be firmly erected and maintained in their correct position throughout the life of the operation.
- Mining/ prospecting and resultant operations shall only take place within this demarcated area.

F 1.1.3 DEMARCATING THE RIVER CHANNEL AND RIVERINE ENVIRONMENT

The following is applicable if operations are conducted within the riverine environment (See F 3.2):

- Beacons as indicated on the layout plan or as prescribed by the Regional Manager must be erected and maintained in their correct position throughout the life of the operation.
- These beacons must be of a permanent nature during the operations and must not be easily removable, especially those in a river channel. The beacons must, however, be removed at the end of the operations.
- The mining of and prospecting for any mineral shall only take place within this demarcated mining area.
- If riverine vegetation is present in the form of reeds or wetland vegetation, the presence of these areas must be entered in Part C 1.45 of the EMPlan and indicated on the layout plan.
- The holder of the mining permit/ prospecting right will also be required to permanently demarcate the areas as specified in F 1.1.2.

F 1.2 RESTRICTIONS ON MINING/ PROSPECTING

- On assessment of the application, the Regional Manager may prohibit the conducting of mining or prospecting operations in vegetated areas or over portions of these areas
- In the case of areas that are excluded from mining or prospecting, no operations shall be conducted within 5 m of these areas.

F 1.3 RESPONSIBILITY

- The environment affected by the mining/ prospecting operations shall 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 shall 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/ prospecting right 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.
- If operations are to be conducted in an area that has already been disturbed, the holder must reach specific agreement with the Regional Manager concerning the responsibilities imposed upon himself/herself pertaining to the rehabilitation of the area and the pollution control measures to be implemented.

F 2 INFRASTRUCTURAL REQUIREMENTS

F 2.1 TOPSOIL

- Topsoil shall be removed from all areas where physical disturbance of the surface will occur.
- All available topsoil shall be removed after consultation with the Regional Manager prior to the commencement of any operations.

- The topsoil removed, shall be stored in a bund wall on the high ground side of the mining/prospecting area outside the 1:50 flood level within the boundaries of the mining area/ prospecting.
- Topsoil shall be kept separate from overburden and shall not be used for building or maintenance of access roads.
- The topsoil stored in the bund wall shall be adequately protected from being blown away or being eroded.

F 2.2 ACCESS TO THE SITE

F 2.2.1 Establishing access roads on the site

- The access road to the mining/prospecting area and the camp-site/site office must be established in consultation with the landowner/tenant and existing roads shall be used as far as practicable.
- Should a portion of the access road be newly constructed the following must be adhered to:
 - The route shall be selected that a minimum number of bushes or trees are felled and existing fence lines shall be followed as far as possible.
 - Water courses and steep gradients shall be avoided as far as is practicable.
 - Adequate drainage and erosion protection in the form of cut-off berms or trenches shall be provided where necessary.
- If imported material is used in the construction or upgrading of the access road this must be listed in C 2.17
- The erection of gates in fence lines and the open or closed status of gates in new and existing positions shall be clarified in consultation with the landowner/tenant and maintained throughout the operational period.
- No other routes will be used by vehicles or personnel for the purpose of gaining access to the site.

NOTE: The design, construction and location of access to provincial roads must be in accordance with the requirements laid down by the Provincial or controlling authority.

F 2.2.2 Maintenance of access roads

- In the case of dual or multiple use of access roads by other users, arrangements for multiple responsibility must be made with the other users. If not, the maintenance of access roads will be the responsibility of the holder of the mining permit/ prospecting right.
- Newly constructed access roads shall be adequately maintained so as to minimise dust, erosion or undue surface damage.

F 2.2.3 Dust control on the access and haul roads

- The liberation of dust into the surrounding environment shall be effectively controlled by the use of, inter alia, water spraying and/or other dust-allaying agents. The speed of haul trucks and other vehicles must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.

F 2.2.4 Rehabilitation of access roads

- Whenever a mining permit/ prospecting right is suspended, cancelled or abandoned or if it lapses and the holder does not wish to renew the permit or right, any access road or portions thereof, constructed by the holder and which will no longer be required by the landowner/tenant, shall be removed and/or rehabilitated to the satisfaction of the Regional Manager.
- Any gate or fence erected by the holder which is not required by the landowner/tenant, shall be removed and the situation restored to the pre mining/ prospecting situation.
- Roads shall be ripped or ploughed, and if necessary, appropriately fertilised (based on a soil analysis) to ensure the regrowth of vegetation. Imported road construction materials which may hamper regrowth of vegetation must be removed and disposed of in an approved manner prior to rehabilitation.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.

F 2.3 OFFICE/CAMP SITES

F 2.3.1 Establishing office / camp sites

- Office and camp sites shall be established, as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/ prospecting area.
- The area chosen for these purposes shall be the minimum reasonably required and which will involve the least disturbance to vegetation. Topsoil shall be handled as described in F 2.1 above
- No camp or office site shall be located closer than 100 metres from a stream, river, spring, dam or pan.
- No trees or shrubs will be felled or damaged for the purpose of obtaining firewood, unless agreed to by the landowner/tenant.
- Fires will only be allowed in facilities or equipment specially constructed for this purpose. If required by applicable legislation, a fire-break shall be cleared around the perimeter of the camp and office sites.
- Lighting and noise disturbance or any other form of disturbance that may have an effect on the landowner/tenant/persons lawfully living in the vicinity shall be kept to a minimum.

F 2.3.2 Toilet facilities, waste water and refuse disposal

- As a minimum requirement, the holder of a mining permit/ prospecting right shall, at least, provide pit latrines for employees and proper hygiene measures shall be established.
- Chemical toilet facilities or other approved toilet facilities such as a septic drain shall preferably be used and sited on the camp site in such a way that they do not cause water or other pollution.
- The use of existing facilities must take place in consultation with the landowner/tenant.
- In cases where facilities are linked to existing sewerage structures, all necessary regulatory requirements concerning construction and maintenance should be adhered to.
- All effluent water from the camp washing facility shall be disposed of in a properly constructed French drain, situated as far as possible, but not less than 200 metres, from any stream, river, pan, dam or borehole.
- Only domestic type wash water shall be allowed to enter this drain and any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility.
- Spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility.
- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., shall be stored in a container at a collecting point and collected on a regular basis and disposed of at a recognised disposal facility. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the camp site.
- Biodegradable refuse generated from the office/camp site, processing areas vehicle yard, storage area or any other area shall either be handled as indicated above or be buried in a pit excavated for that purpose and covered with layers of soil, incorporating a final 0,5 metre thick layer of topsoil (where practicable). Provision should be made for future subsidence of the covering.

F 2.3.3 Rehabilitation of the office/camp site

- On completion of operations, all buildings, structures or objects on the camp/office site shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), which states:
 - (1) *When a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, the holder of any such right or permit may not demolish or remove any building, structure, object -*
 - (a) *which may not be demolished in terms of any other law;*
 - (b) *which has been identified in writing by the Minister for purposes of this section;*

or

- (c) *which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*
- (2) *The provision of subsection (1) does not apply to bona fide mining equipment which may be removed*

- Where office/camp sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.
- Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10cm above the surrounding ground surface.
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.
- Photographs of the camp and office sites, before and during the mining/ prospecting operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

F 2.4 VEHICLE MAINTENANCE YARD AND SECURED STORAGE AREAS

F 2.4.1 Establishing the vehicle maintenance yard and secured storage areas

- The vehicle maintenance yard and secured storage area will be established as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/prospecting area.
- The area chosen for these purposes shall be the minimum reasonably required and involve the least disturbance to tree and plant life. Topsoil shall be handled as described in F 2.1 above.
- The storage area shall be securely fenced and all hazardous substances and stocks such as diesel, oils, detergents, etc., shall be stored therein. Drip pans, a thin concrete slab or a facility with PVC lining, shall be installed in such storage areas with a view to prevent soil and water pollution.
- The location of both the vehicle maintenance yard and the storage areas are to be indicated on the layout plan.
- No vehicle may be extensively repaired in any place other than in the maintenance yard.

F 2.4.2 Maintenance of vehicles and equipment

- The maintenance of vehicles and equipment used for any purpose during the mining/prospecting operation will take place only in the maintenance yard area.
- Equipment used in the mining/prospecting process must be adequately maintained so that during operations it does not spill oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on the mining/prospecting area must not constitute a pollution hazard in respect of the above substances. The Regional Manager shall order

such equipment to be repaired or withdrawn from use if he or she considers the equipment or machinery to be polluting and irreparable.

F 2.4.3 Waste disposal

- Suitable covered receptacles shall be available at all times and conveniently placed for the disposal of waste.
- All used oils, grease or hydraulic fluids shall be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility.
- All spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility.

F 2.4.4 Rehabilitation of vehicle maintenance yard and secured storages areas

- On completion of mining/prospecting operations, the above areas shall be cleared of any contaminated soil, which must be dumped as referred to in section F 2.4.3 above.
- All buildings, structures or objects on the vehicle maintenance yard and secured storage areas shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002.
- The surface shall then be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area. The area shall then be fertilised if necessary (based on a soil analysis).
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.

- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

F 3 OPERATING PROCEDURES IN THE MINING AREA

F 3.1 Limitations on mining/prospecting

- The mining of or prospecting for precious stones shall take place only within the approved demarcated mining or prospecting area.
- Mining/ prospecting may be limited to the areas indicated by the Regional Manager on assessment of the application.
- The holder of the mining permit/ prospecting right shall ensure that operations take place only in the demarcated areas as described in section F 1.1.2 above.
- Operations will not be conducted closer than one and a half times the height of the bank from the edge of the river channel and in such manner that the stability of the bank of the river is effected.

- Precautions shall also be taken to ensure that the bank of the river is adequately protected from scouring or erosion. Damage to the bank of the river caused by the operations, shall be rehabilitated to a condition acceptable to the Regional Manager at the expense of the holder.
- Restrictions on the disturbance of riverine vegetation in the form of reeds or wetland vegetation must be adhered to. The presence of these areas must be entered in Part of the programme and indicated on the layout plan.

F 3.2 Mining/ prospecting operations within the riverine environment

NOTE: The Department of Water Affairs and Forestry may impose additional conditions which must be attached to this EMP. In this regard, please see the Best Practice Guideline for small scale mining developed by DWAF (BPG 2.1)

(available from <http://www.dwaf.gov.za>)

- The mining of or prospecting for precious stones in the river or the banks of the river will be undertaken only after the Regional Manager has consulted with the Department of Water Affairs and Forestry.
- The canalisation of a river will not be undertaken unless the necessary permission has been obtained from the Department of Water Affairs and Forestry. Over and above the conditions imposed by the said Department, which conditions shall form part of this EMP, the following will also apply:
 - ❖ The canalisation of the flow of the river over different parts of the river bed shall be constructed in such a manner that the following are adhered to at all times:
 - ◆ The flow of the river may not be impeded in any way and damming upstream may not occur.
 - ◆ The canalisation of the flow may not result in scouring or erosion of the river-bank.
 - ◆ Well points or extraction pumps in use by other riparian users may not be interfered with and canalisation may not impede the extraction of water at these points.
- Access to the riverbed for the purpose of conducting excavations in the river-bed, shall be through the use of only one access at a time. The location of the access to the river channel across the river-bank shall be at a point of the river-bank where the least excavation and damage to vegetation will occur and shall not be wider than is reasonably required. The position of the river access together with all planned future access points, must be indicated on the layout plan.

F 3.2.1 Rehabilitation of access to river-bed

- When rehabilitating the access point, the original profile of the river-bank will be re-established by backfilling the access point with the original material excavated or other suitable material.
- The topsoil shall then be returned over the whole area to its original depth and if necessary fertilised and the vegetation allowed to grow.

- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.
- In the event of damage from an occurrence where high flood waters scour and erode access points in the process of rehabilitation over the river-bank or an access point currently in use, repair of such damage shall be the sole responsibility of the holder of the mining permit or prospecting right.
- Repair to the river-bank to reinstate its original profile to the satisfaction of the Regional Manager must take place immediately after such event has occurred and the river has subsided to a point where repairs can be undertaken.
- Final acceptance of rehabilitated river access points will be awarded only after the vegetation has re-established to a point where the Regional Manager is satisfied that the river-bank is stable and that the measures installed are of durable nature and able to withstand high river-flow conditions.

F 3.2.2 Rehabilitation of mining/prospecting area in the bed of the river

- The goal of rehabilitation with respect to the area where mining/prospecting has taken place in the river-bed is to leave the area level and even, and in a natural state containing no foreign debris or other materials and to ensure the hydrological integrity of the river by not attenuating or diverting any of the natural flow.
- All scrap and other foreign materials will be removed from the bed of the river and disposed of as in the case of other refuse (see section F 2.3.2 above), whether these accrue directly from the mining/prospecting operation or are washed on to the site from upstream.
- Removal of these materials shall be done on a continuous basis and not only at the start of rehabilitation.
- Where reeds or other riverine vegetation have been removed from areas, these shall be re-established systematically in the approximate areas where they occurred before mining/prospecting.
- An effective control programme for the eradication of invader species and other exotic plants, shall be instituted on a regular basis over the entire mining/prospecting area under the control of the holder of the mining permit/ prospecting right, both during mining/prospecting and at the stage of final rehabilitation.

2. THE WATER USE LICENCE

The National Water Act, (Act 36 of 1998), is based on the principles of sustainability, efficiency and equity, meaning that the protection of water resources must be balanced with their development and use. In addition to being issued with a prospecting right or mining permit a small-scale miner may also need to get a **water use licence** for the proposed water uses that will take place, except in certain cases.

NOTE: The Department of Water Affairs and Forestry (DWAf) developed specific Best Practice Guideline for small scale mining that relates to stormwater management, erosion and sediment control and waste management. Copies of these guidelines can be obtained from the regional office of DME or DWAf.

Applications for a water use licence must be made in good time, such that approval can be granted before a water use activity can begin. The appropriate licence forms for each kind of expected water use

should be completed together with supporting documentation. The main supporting document required is a technical report. To make the technical report easier, you can refer to sections in this EMPlan, as most of what the technical report requires has already been done in the EMPlan. If you refer to the EMPlan it must be attached to the technical report.

F 3.3 EXCAVATIONS

F 3.3.1 Establishing the excavation areas

- Whenever any excavation is undertaken for the purpose of locating and/or extracting ore bodies of all types of minerals, including precious stone-bearing gravels, the following operating procedures shall be adhered to:
 - ❖ Topsoil shall, in all cases (except when excavations are made in the river-bed), be handled as described in F 2.1 above.
 - ❖ Excavations shall take place only within the approved demarcated mining/prospecting area.
 - ❖ Overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the ore or gravel has been excavated.
 - ❖ Trenches shall be backfilled immediately if no ore or precious stone-bearing gravel can be located.

F 3.3.2 Rehabilitation of excavation areas

The following operating procedures shall be adhered to:

- The excavated area must serve as a final depositing area for the placement of tailings during processing.
- Rocks and coarse material removed from the excavation must be dumped into the excavation simultaneously with the tailings.
- Waste, as described in paragraph F 2.3.2 above, will not be permitted to be deposited in the excavations.
- Once excavations have been refilled with overburden, rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil previously stored, shall be returned to its original depth over the area.
- The area shall be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to propagate the locally or regionally occurring flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/ prospecting operation, be corrected and the area be seeded with a vegetation seed mix to his or her specification.

F 3.4 PROCESSING AREAS AND WASTE PILES (DUMPS)

F 3.4.1 Establishing processing areas and waste piles

- Processing areas and waste piles shall not be established within 100 metres of the edge of any river channel or other water bodies.
- Processing areas should be established, as far as practicable, near the edge of excavations to allow the waste, gravel and coarse material to be processed therein.
- The areas chosen for this purpose shall be the minimum reasonably required and involve the least disturbance to vegetation.
- Prior to development of these areas, the topsoil shall be removed and stored as described in paragraph F 2.1 above.
- The location and dimensions of the areas are to be indicated on the layout plan and once established, the processing of ore containing precious stones shall be confined to these areas and no stockpiling or processing will be permitted on areas not correctly prepared.
- Tailings from the extraction process must be so treated and/or deposited that it will in no way prevent or delay the rehabilitation process.

F 3.4.2 Rehabilitation of processing areas

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- On completion of mining/prospecting operations, the surface of the processing areas especially if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 300mm and graded to an even surface condition and the previously stored topsoil will be returned to its original depth over the area.
- Prior to replacing the topsoil the material that was removed from the processing area will be replaced in the same order as it originally occurred.
- The area shall then be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

F 3.5 TAILINGS DAM(S) (SLIMES DAM)

The permission of the Regional Manager must be obtained should a tailings dam be constructed for the purpose of handling the tailings of the mining/prospecting operations. The construction, care and maintenance of tailings dams have been regulated and the relevant regulation is copied herewith, both for your information and as a guideline to the commissioning, management, operation, closing and aftercare of a tailings deposition facility.

Regulation 73 promulgated under the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) requires the following:

Management of residue stockpiles and deposits

56. (1) *The assessment of impacts relating to the management of residue stockpiles and deposits, where appropriate, must form part of the environmental impact assessment report and environmental management programme or the environmental management plan.*
- (2) *Residue characterisation*

- (a) Mine residue must be characterised to identify any potentially significant health and safety hazard and environmental impact that may be associated with the residue when stockpiled or deposited at the site(s) under consideration.
- (b) Residue stockpiles and deposits must be characterised in terms of its –
- (i) physical characteristics, which may include -
 - (aa) the size distribution of the principal constituents;
 - (bb) the permeability of the compacted material;
 - (cc) void ratios of the compacted material;
 - (dd) the consolidation or settling characteristics of the material under its own weight and that of any overburden;
 - (ee) the strength of compacted material;
 - (ff) the specific gravity of the solid constituents; and
 - (gg) the water content of the material at the time of deposition, after compaction, and at other phases in the life of the deposit.
 - (ii) chemical characteristics, which may include -
 - (aa) the toxicity;
 - (bb) the propensity to oxidize and /or decompose;
 - (cc) the propensity to undergo spontaneous combustion;
 - (dd) the pH and chemical composition of the water separated from the solids;
 - (ee) stability and reactivity and the rate thereof; and
 - (ff) neutralising potential.
 - (iii) mineral content, which include the specific gravity of the residue particles and its impact on particle segregation and consolidation;
- (3) Classification of residue stockpiles and deposits
- (a) All residue stockpiles and deposits must be classified into one or a combination of the following categories –
- (i) the safety classification to differentiate between residue stockpiles and deposits of high, medium and low hazard on the basis of their potential to cause harm to life or property; and
 - (ii) the environmental classification to differentiate between residue stockpiles and deposits with -
 - (aa) a potentially significant impact on the environment due to its spatial extent, duration and intensity of potential impacts; or
 - (bb) no potentially significant impact on the environment.
- (b) All mine residue stockpiles and deposits must be classified by a suitably qualified person(s).
- (c) The classification of residue stockpiles and deposits shall determine the –
- (i) level of investigation and assessment required;
 - (ii) requirements for design, construction, operation, decommissioning, closure and post closure maintenance; and
 - (iii) qualifications and expertise required of persons undertaking the investigations, assessments, design, construction thereof.
- (d) The safety classification of residue stockpiles and deposits shall be based on the following criteria –

Number of residents in zone of influence	Number of workers in zone of influence	Value of third party propert in zone of influence	Depth to underground mine workings	Classification
0	< 10	0 – R2 m	> 200m	Low hazard
1 – 10	11 – 100	R 2 m – R20 m	50 m – 200 m	Medium hazard
> 10	> 100	> R20 m	< 50 m	High hazard

- (e) *A risk analysis must be carried out and documented on all high hazard residue stockpiles and deposits.*
 - (f) *The environmental classification of residue stockpiles and deposits must be undertaken on the basis of –*
 - (i) *the characteristics of the residue;*
 - (ii) *the location and dimensions of the deposit (height, surface area);*
 - (iii) *the importance and vulnerability of the environmental components that are at risk; and*
 - (iv) *the spatial extent, duration and intensity of potential impacts.*
 - (g) *An assessment of the environmental impacts shall be done on all environmental components which are significantly affected.*
 - (h) *The assessment of impacts and analyses of risks shall form part of the environmental assessment and management programme.*
- (4) *Site selection and investigation:*
- (a) *The process of investigation and selection of a site must entail –*
 - (i) *the identification of a sufficient number of possible candidate sites to ensure adequate consideration of alternative sites;*
 - (ii) *qualitative evaluation and ranking of all alternative sites;*
 - (iii) *qualitative investigation of the top ranking sites to review the ranking done in (ii);*
 - (iv) *a feasibility study to be carried out on the highest ranking site(s), involving –*
 - (aa) *a preliminary safety classification;*
 - (bb) *an environmental classification;*
 - (cc) *geotechnical investigations; and*
 - (dd) *groundwater investigations.*
 - (b) *The geotechnical investigations may include–*
 - (i) *the characterization of the soil profile over the entire area to be covered by the residue facility and associated infrastructure to define the spatial extent and depth of the different soil horizons;*
 - (ii) *the characterization of the relevant engineering properties of foundations soils and the assessment of strength and drainage characteristics.*
 - (c) *The groundwater investigations may include–*
 - (i) *the potential rate of seepage from the residue facility;*
 - (ii) *the quality of such seepage;*
 - (iii) *the geohydrological properties of the strata within the zone that could potentially be affected by the quality of seepage;*
 - (iv) *the vulnerability and existing potential use of the groundwater resource within the zone that could potentially be affected by the residue facility.*
 - (d) *From these investigations, a preferred site must be identified.*
 - (e) *Further investigation on the preferred site, shall include –*
 - (i) *land use;*
 - (ii) *topography and surface drainage;*
 - (iii) *infrastructure and man-made features;*
 - (iv) *climate;*
 - (v) *flora and fauna;*
 - (vi) *soils;*
 - (vii) *ground water morphology, flow, quality and usage; and*
 - (viii) *surface water.*

- (f) *The investigations, laboratory test work, interpretation of data and recommendations for the identification and selection of the most appropriate and suitable site for the disposal of all residue that have the potential to generate leachate that could have a significant impact on the environment and groundwater must be carried out by a suitably qualified person.*

(5) *Design of residue stockpile and deposit*

- (a) *The design of the residue stockpile and deposit shall be undertaken by a suitably qualified person.*
- (b) *An assessment of the typical soil profile on the site is required for residue stockpiles and deposits which -*
 (i) *have a low hazard potential; and*
 (ii) *have no significant impact on the environment.*
- (c) *The design of the residue stockpile and deposit must take into account all phases of the life cycle of the stockpile and deposit, from construction through to closure and must include -*
 (i) *the characteristics of the mine residue;*
 (ii) *the characteristics of the site and the receiving environment;*
 (iii) *the general layout of the stockpile or deposit, whether it is a natural valley, ring dyke, impoundment or a combination thereof and its 3-dimensional geometry at appropriate intervals throughout the planned incremental growth of the stockpile or deposit;*
 (iv) *the type of deposition method used; and*
 (v) *the rate of rise of the stockpile or deposit.*
- (d) *Other design considerations, as appropriate to the particular type of stockpile and deposit must be incorporated -*
 (i) *the control of storm water on and around the residue stockpile or deposit by making provision for the maximum precipitation to be expected over a period of 24 hours with a frequency of once in a 100 years, in accordance with the regulations made under section 8 of the National Water Act, 1998;*
 (ii) *the provision, throughout the system, of a freeboard of at least 0.5 m above the expected maximum water level, in accordance with regulations made under the National Water Act, 1998, to prevent overtopping;*
 (iii) *keeping the pool away from the walls; where there are valid technical reasons for deviating from this, adequate motivation must be provided and the design must be reviewed by a qualified person as required in terms of sections 9(6) or 9(7) of the Mine Health and Safety Act, 1996;*
 (iv) *the control of decanting of excess water under normal and storm conditions;*
 (aa) *the retention of polluted water in terms of polluted water in terms of GN R991(9), where measures may be required to prevent water from the residue deposit from leaving the residue management system unless it meets prescribed requirements;*
 (bb) *the design of the penstock, outfall pipe, under-drainage system and return water dams;*
 (cc) *the height of the phreatic surface, slope angles and method of construction of the outer walls and their effects on shear stability;*
 (dd) *the erosion of slopes by wind and water, and its control by (ee) vegetation, berms or catchment paddocks; and*
 (ee) *the potential for pollution.*
- (e) *A design report and operating manual shall be drawn up for all residue stockpiles and deposits which -*
 (i) *have a medium to high hazard; and*
 (ii) *have a potentially significant impact on the environment.*

- (f) *Relevant information must be included in the draft environmental management programme or environmental management plan.*
- (6) *Construction and operation of residue deposits:*
- (a) *The holder of any right or permit in terms of the Act, must ensure that-*
- (i) *the residue deposits, including any surrounding catchment paddocks, is constructed and operated in accordance with the approved environmental management programme or environmental management plan;*
 - (ii) *the design of the residue deposit is followed implicitly throughout the construction thereof, and that any deviations from the design be approved by the Regional Manager and the environmental manage programme and environmental management plan be amended accordingly;*
 - (iii) *as part of the monitoring system, measurements of all residues transported to the site and of all surplus water removed from the site are recorded;*
 - (iv) *the provision for appropriate security measures be implemented to limit unauthorised access to the site and intrusion into the residue deposit;*
 - (v) *specific action be taken in respect of any sign of pollution;*
 - (vi) *adequate measures be implemented to control dust pollution and erosion of the slopes; and*
 - (vii) *details of rehabilitation of the residue deposit be provided in the draft environmental management programme or environmental management plan.*
- (b) *A system of routine maintenance and repair in respect of the residue deposit must be imlemented to ensure the ongoing control of pollution, the integrity of rehabilitation and health and safety maters at the site.*
- (7) *Monitoring of residue stockpiles and deposits:*
- (a) *A monitoring system for residue stockpiles and deposits with respect to potentially significant impacts as identified in the environmental assessment must be included in the environmental management programme or environmental management plan.*
- (b) *In the design of a monitoring system for a residue stockpile or deposit, consideration must be given to -*
- (i) *baseline and background conditions with regard to air, surface and groundwater quality*;
 - (ii) *the air, surface and groundwater quality objectives;*
 - (iii) *residue characteristics;*
 - (iv) *the degree and nature of residue containment;*
 - (v) *the receiving environment and secifically the climatic, local geological, hydrogeological and geochemical conditions;*
 - (vi) *potential migration pathways;*
 - (vii) *potential impacts of leachate;*
 - (viii) *the location of monitoring points and the prescribed monitoring protocols; and*
 - (ix) *the reporting frequency and procedures.*
- (8) *Decommissioning, closure and after care:*
- (a) *The decommissioning, closure and post closure management of residue deposits must be addressed in the closure plan, which must contain the following -*
- (i) *the environmental classification, including assumptions on which the classification were based;*
 - (ii) *the closure objectives, final land use or capability;*
 - (iii) *conceptual descpription and details for closure and post closure management;*
 - (iv) *cost estimates and financial provision for closure and post-closure management; and*
 - (v) *residual impacts, monitoring and requirements to obtain mine closure in terms of the Act.*

F 3.6 FINAL REHABILITATION

- All infrastructure, equipment, plant, temporary housing and other items used during the mining period will be removed from the site (section 44 of the MPRDA)
- 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.
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

F 4 MONITORING AND REPORTING

F 4.1 Inspections and monitoring

- Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the prospecting right, mining permit or reconnaissance permission in order to ensure that the provisions of this programme are adhered to.
- Ongoing and regular reporting of the progress of implementation of this programme will be done.
- Various points of compliance will be identified with regard to the various impacts that the operations will have on the environment.
- Inspections and monitoring shall be carried out on both the implementation of the programme and the impact on plant and animal life.
- Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

Regulation 55 promulgated in terms of the MPRDA requires the following:

Monitoring and performance assessments of environmental management programme or plan

- (1) *As part of the general terms and conditions for a prospecting right, mining right or mining permit and in order to ensure compliance with the approved environmental management programme or plan and to assess the continued appropriateness and adequacy of the environmental management programme or plan, the holder of such right must-*
 - (a) *conduct monitoring on a continuous basis;*
 - (b) *conduct performance assessments of the environmental management programme or plan as required; and*
 - (c) *compile and submit a performance assessment report to the Minister to demonstrate adherence to sub-regulation (b).*
- (2) *The frequency of performance assessment reporting shall be-*
 - (a) *in accordance with the period specified in the approved environmental management programme or plan, or, if not so specified;*
 - (b) *as agreed to in writing by the Minister; or*
 - (c) *biennially (every two years).*
- (3) *The performance assessment report, shall be in the format provided in guidelines that will from time to time be published by the Department and shall as a minimum contain-*
 - (a) *information regarding the period that applies to the performance assessment;*
 - (b) *the scope of the assessment;*
 - (c) *the procedure used for the assessment;*
 - (d) *the interpreted information gained from monitoring the approved environmental management programme or plan;*
 - (e) *the evaluation criteria used during the assessment;*
 - (f) *the results of the assessment; and*

- (g) *recommendations on how and when deficiencies that are identified and/or aspects of non-compliance will be rectified.*
- (4) *The holder of a prospecting right, mining right or mining permit may 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.*
- (5) *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.*
- (6) *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-*
- (a) *repeat the whole or relevant parts of the performance assessment and revise and resubmit the report; and/or*
 - (b) *submit relevant supporting information; and/or*
 - (c) *appoint an independent competent person(s) to conduct the whole or part of the performance assessment and to compile the report.*
- (7) *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.*
- (8) *When the holder of a prospecting right, mining right or mining permit intends closing such operation, a final performance assessment shall be conducted and a report submitted to the Minister to ensure that -*
- (a) *the requirements of the relevant legislation have been complied with;*
 - (b) *the closure objectives as described in the environmental management programme or plan have been met; and*
 - (c) *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.*
- (9) *The final performance assessment report shall either precede or accompany the application for a closure certificate in terms of the Act.*

F 4.2 Compliance reporting / submission of information

- *Layout plans will be updated on a regular basis and updated copies will be submitted on a biennial basis to the Regional Manager*
- *Reports confirming compliance with various points identified in the environmental management programme will be submitted to the Regional Manager on a regular basis and as decided by the said manager.*
- *Any emergency or unforeseen impact will be reported as soon as possible.*
- *An assessment of environmental impacts that were not properly addressed or were unknown when the programme was compiled shall be carried out and added as a corrective action.*

F 5 CLOSURE

When the holder of a prospecting right, mining permit or reconnaissance permission intends closing down his/her operations, an environmental risk report shall 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 :

F 5.1 ENVIRONMENTAL RISK REPORT

"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."*

F 5.2 CLOSURE OBJECTIVES

Closure objectives form part of this EMPlan and must-

- (a) identify the key objectives for mine closure to guide the project design, development and management of environmental objectives;
- (b) provide broad future land use objective(s) for the site; and
- (c) provide proposed closure cost

F 5.3 CONTENTS OF CLOSURE PLAN

A closure plan forms part of the EMP and must include the following:

- (a) a description of the closure objectives and how these relate to the prospecting or 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.

F 5.4 TRANSFER OF ENVIRONMENTAL LIABILITIES TO A COMPETENT PERSON

Should the holder of a prospecting right, mining permit or reconnaissance permission 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 prospecting right, mining right or 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.

F 5.5 NOTES ON LEGAL PROVISIONS

NOTE: The holder of a prospecting right, mining permit or reconnaissance permission must also take cognisance of the provisions of other legislation dealing with matters relating to conservation, and which include, *inter alia*, the following:

- * National Monuments Act, 1969 (Act 28 of 1969).
- * National Parks Act, 1976 (Act 57 of 1976)
- * Environmental Conservation Act, 1989 (Act 73 of 1989)
- * National Environmental Management Act, 1998 (Act No. 107 of 1998)
- * Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- * The National Water Act, 1998 (Act 36 of 1998)
- * Mine Safety and Health Act, 1996 (Act 29 of 1996)
- * The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

H. UNDERTAKING

I,.....JC Olivier....., the undersigned and duly authorised thereto by.....HJC Plant.....
.....
~~Company~~/Close Corporation/~~Municipality~~ (Delete that which is not applicable) have studied and understand the contents of this document in it's entirety and hereby duly undertake to adhere to the conditions as set out therein including the amendment(s) agreed to by the Regional Manager in Section G and approved on

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

.....
Signature of applicant

.....
Designation

Agency declaration: This document was completed by**AGES**.....on behalf of.....**HJC Plant**.....

J. APPROVAL

Approved in terms of Section 39(4) of the Mineral and Petroleum Resources Development Act, 2002 (Act 29 of 2002)

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

.....
REGIONAL MANAGER

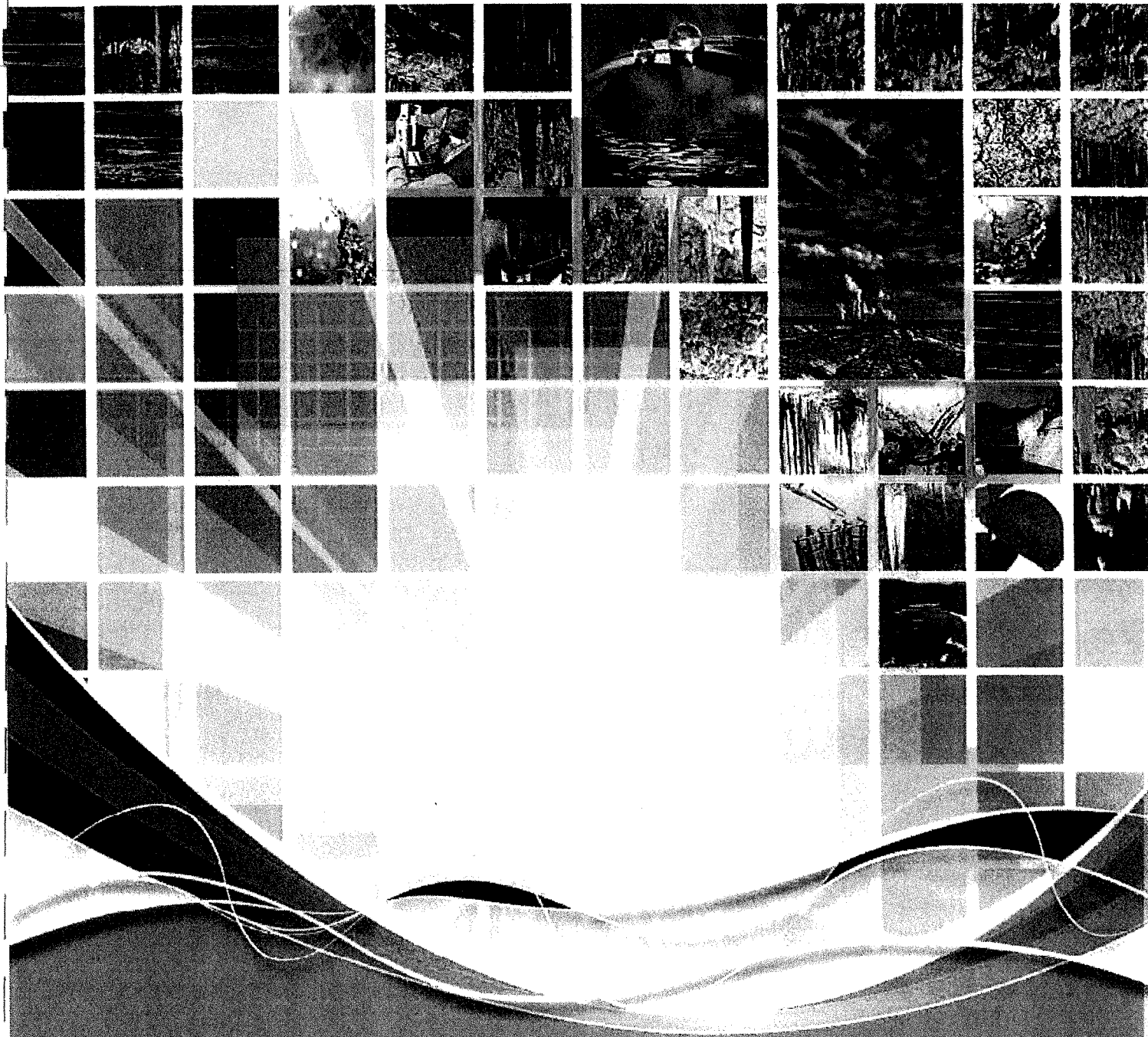
REGION:.....

This document has been compiled by the Directorate: Mine Environmental Management of the Department of Minerals and Energy at their Head Office in Pretoria. Any comments, suggestions or inputs will be sincerely appreciated. If you have any comments or suggestions regarding this document or its application, please forward your contribution to:

The Director: Mine Environmental Management
Private Bag X 59
PRETORIA
0001

Tel : 012 317 9288
Fax: 012 320 6786
E-mail: dorothy@mepta.pwv.gov.za

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LP 30/5/1/3/2/1557 MP

Proof of Public Consultation HJC Plant

May 2011

Prepared for HJC Plant.
Document version 1.0



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TOUCHING AFRICA

Prepared by





Department of Minerals Resources
Private Bag X 9467, Polokwane, 0700, Tel: 015-287 4700, Fax: 015-287 4729
101 Dorp Street, Polokwane, 0699
From: Directorate Mineral Regulation: Limpopo Region
Enquiries: Mpoi Charles Hamese Ref: LP30/5/1/3/2/1557 MP
Email:mpoi.hamese@dmr.gov.za

HJC Olivier Beleggings BK trading as
HJC Plant
P O Box 4040
Polokwane
0700

FAX : 015 263 6657
Attention : Olivier Hannes JC

Dear Madam / Sir

ACCEPTANCE OF AN APPLICATION FOR A MINING PERMIT: HJC OLIVIER BELEGGINGS BK TRADING AS HJC PLANT ON THE FARM ONVERWACHT 914 LS, IN THE MAGISTERIAL DISTRICT OF POLOKWANE.

I refer to the abovementioned matter and I confirm that your application for a mining permit for **Gravel** in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) has been accepted.

Take note that due to a system failure this office was unable to adjudicate your application within the prescribed time frames of 14 days and therefore this office apologise for any inconvenience caused.

In terms of Section 27(5) of the Act, you are therefore required to submit the following:

- (a) to submit Environmental Management Plan in seven folds on or before the **06th June 2011 (60 days)**.
- (b) to notify in writing and consult with the landowner or lawful occupier and any other affected party; and

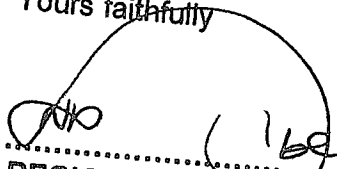
(c) to consult the Department of Land Affairs if it is state-owned land, in the event the land is subject to land restitution consult the office of the Commission of Land Rights and submit the result of such consultation to this office on or before the 07th May 2011 (30 days).

Take note that the Department must finalize your application by October 2011. Failure and or delays in submitting all required or requested information within the prescribed timeframes could have a negative impact on the aforementioned decision-date.

Further be advised that due a system failure, the application could not be adjudicated against the Minact data base for old order rights and therefore the following will be applicable:

Should it transpire at later stage that the area under application is encumbered by an old order right, the Department will be entitled to refuse this application based on the fact that an old order right for the same minerals, has already been granted to another entity, as the granting thereof would be contrary to the provisions of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

Yours faithfully


.....
REGIONAL MANAGER
LIMPOPO REGION: POLOKWANE
DATE: 07.04.2011

AG



Enq: H.P. Jannasch
Tel: 015 291 1577
Fax: 015 291 1577
Cell 083 419 0909

The Land Claims Commissioner
Office of the Commission on Restitution of Land Rights
Private bag X9552 Fax 015-295 7404
POLOKWANE
0700

4 May 2011

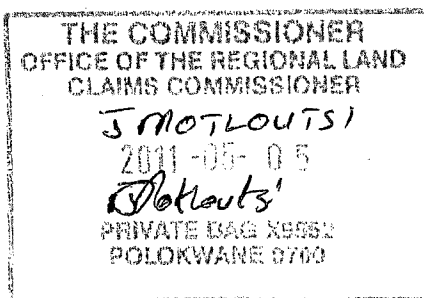
**APPLICATION FOR A MINING PERMITS FOR HJC PLANT ON PORTION
21 OF THE FARM ONVERWACHT 914 LS IN THE MAGISTERIAL
DISTRICT OF POLOKWANE FOR GRAVEL MATERIAL FOR ROAD
CONSTRUCTION, LIMPOPO PROVINCE**

AGES has been appointed to compile the EMP in terms of section 39 and regulation 52 of the Minerals and Petroleum Resources Development Act, 2002, (Act 28 of 2002) for the abovementioned mining permit.

An application for a mining permit has been accepted by the **DMR** on 7 April 2011 with reference no *LP 30/5/1/3/2/1557 MP*

Any issues or comments with regards to the Environmental Management Plan of this application must be directed to AGES at the above address and a copy to the

Regional Manager FAX No : 015 287 4729
DMR
Private Bag 9467
POLOKWANE
0700



Yours sincerely

H.P. Jannasch

Acknowledgement of receipt of letter and Application forms:

Name:..... Date: Signature.....

AGES Limpopo (Pty) Ltd
Reg: 2006/020831/07 Vat: 4060190362

120 Marshall Street
Polokwane
0699

P.O Box 2526
Polokwane
0700

Tel +27 15 291 1577
Fax +27 15 291 1577
limpopo@ages-group.com www.ages-group.com

Offices in: Eastern Cape Gauteng Limpopo Namibia Northwest Province Western Cape Zimbabwe



Enq: H.P. Jannasch
Tel: 015 291 1577
Fax: 015 291 1577
Cell 083 419 0909

Mr L Mahlatse
The National Department of Agriculture
PO Box 3620
POLOKWANE
0700

06 May 2011

Dear Sir

**APPLICATION FOR A MINING PERMITS FOR HJC PLANT ON PORTION
21 OF THE FARM ONVERWACHT 914 LS IN THE MAGISTERIAL
DISTRICT OF POLOKWANE FOR GRAVEL MATERIAL FOR ROAD
CONSTRUCTION, LIMPOPO PROVINCE**

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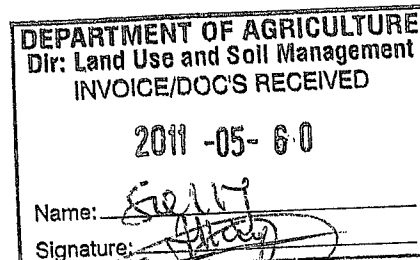
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DMR
Private Bag 9467
POLOKWANE
0700

Yours sincerely

H.P. Jannasch



Acknowledgement of receipt of letter and Application forms:

.Name:..... Date: Signature.....

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120 Marshall Street
Polokwane
0699

P.O Box 2526
Polokwane
0700

Tel +27 15 291 1577
Fax +27 15 291 1577
limpopo@ages-group.com www.ages-group.com

Offices in: Eastern Cape Gauteng Limpopo Namibia Northwest Province Western Cape Zimbabwe



Enq: H.P. Jannasch
Tel: 015 291 1577
Fax: 015 291 1577
Cell 083 419 0909

Environmental Impact Management Directorate 06 May 2011
The Limpopo Department Economic Development, Environment and Tourism
PO Box 55464
POLOKWANE
0700

Dear Sir/Madam

**APPLICATION FOR A MINING PERMITS FOR HJC PLANT ON PORTION
21 OF THE FARM ONVERWACHT 914 LS IN THE MAGISTERIAL
DISTRICT OF POLOKWANE FOR GRAVEL MATERIAL FOR ROAD
CONSTRUCTION, LIMPOPO PROVINCE**

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An application for a mining permit has been accepted by the **DMR** on 7 April 2011 with reference no *LP 30/5/1/3/2/1557 MP*

Any issues or comments with regards to the Environmental Management Plan of this application must be directed to AGES at the above address and a copy to the

Regional Manager FAX No : 015 287 4729
DMR
Private Bag 9467
POLOKWANE
0700

Yours sincerely

H.P. Jannasch

Acknowledgement of receipt of letter and Application forms:

Name: *R.D. Dols* Date: *06/5/2011* Signature: *[Signature]*

Hein Jannasch

From: Hein Jannasch [hjannasch@ages-group.com]
Sent: 06 May 2011 11:39 AM
To: 'mabadah@dwa.gov.za'
Subject: Mining permit Application on Onverwacht 914 LS Portion 21

Dear Mr Mabada

Kindly receive the attached notification of the application for a mining permit on the farm Onverwacht 914 Ls Portion 21 for your attention.

Kind regards

Hein Jannasch
*Senior Environmental
Scientist*

*Pri.Sci.Nat
M.Sc. Environmental Management*

Director

AGES Limpopo (PTY) LTD

AGES (PTY) LTD

Reg: 2002/010298/07 Vat: 4200204891

LIMPOPO OFFICE
120 Marshall Street
Polokwane 0699

Tel: +27 15 291 1577
Fax: +27 15 291 1577
Cell: +27 83419 0909
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AGES Limpopo (Pty) Ltd
Reg: 2006/020831/07 Vat: 4060190362

120 Marshall Street
Polokwane
0699

P.O Box 2526
Polokwane
0700

Tel +27 15 291 1577
Fax +27 15 291 1577
limpopo@ages-group.com www.ages-group.com

Offices in: Eastern Cape Gauteng Limpopo Namibia Northwest Province Western Cape Zimbabwe



Enq: H.P. Jannasch
Tel: 015 291 1577
Fax: 015 291 1577
Cell 083 419 0909

The Department of Water Affairs and Forestry
Private Bag X 9506
POLOKWANE
0700

06 May 2011

Dear Sir

**APPLICATION FOR A MINING PERMITS FOR HJC PLANT ON PORTION
21 OF THE FARM ONVERWACHT 914 LS IN THE MAGISTERIAL
DISTRICT OF POLOKWANE FOR GRAVEL MATERIAL FOR ROAD
CONSTRUCTION, LIMPOPO PROVINCE**

AGES has been appointed to compile the EMP in terms of section 39 and regulation 52 of the Minerals and Petroleum Resources Development Act, 2002, (Act 28 of 2002) for the abovementioned mining permit.

An application for a mining permit has been accepted by the **DMR** on 7 April 2011 with reference no *LP 30/5/1/3/2/1557 MP*

Any issues or comments with regards to the Environmental Management Plan of this application must be directed to AGES at the above address and a copy to the

Regional Manager FAX No : 015 287 4729
DMR
Private Bag 9467
POLOKWANE
0700

Yours sincerely

H.P. Jannasch

Acknowledgement of receipt of letter and Application forms:

Name:..... Date: Signature.....

AGES Limpopo (Pty) Ltd
Reg: 2006/020831/07 Vat: 4060190362

120 Marshall Street
Polokwane
0699

P.O Box 2526
Polokwane
0700

Tel +27 15 291 1577
Fax +27 15 291 1577
limpopo@ages-group.com www.ages-group.com

Offices in: Eastern Cape Gauteng Limpopo Namibia Northwest Province Western Cape Zimbabwe



Enq: H.P. Jannasch
Tel: 015 291 1577
Fax: 015 291 1577
Cell 083 419 0909

The Municipal Manager Polokwane municipality
PO Box 111
POLOKWANE
0700

06 May 2011

Fax : 015-290 2317/8

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 Reg: 2008/020831/07 Val: 4060190362

120 Marshall Street Polokwane 0699
 P.O Box 2528 Polokwane 0700
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 Fax +27 15 291 1577
 limpopo@ages-group.com www.ages-group.com

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 0899

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Ecological Report version 1.0

**An Environmental Report on the Flora for the proposed
borrow pit for gravel mining on portion 21 of the farm
Onverwacht 914 LS, Limpopo Province**

November 2010

Compiled by: Dr. BJ Henning (Pr. Sci. Nat)

Senior Environmental Scientist



An Environmental Report on the Flora for the proposed borrow pit for gravel mining on portion 21 of the farm Onverwacht 914 LS, Limpopo Province

November 2010

Conducted for:

HJC Olivier Beleggings

P.O. Box 4040

Polokwane

0700

Attention: Mr. Hannes Olivier

COMPILED BY:



Dr. BJ Henning (Pr. Sci. Nat)

Senior Environmental Scientist

Offices: Gauteng, Northwest Province, Limpopo Province, Eastern Cape

Limpopo Province: 120 Marshall street, Polokwane.

PO Box 2526 Pietersburg 0700 Tel: +27-15-291 1577 Fax: +27-15-291 1577

Cell: 083644 9957

REPORT DISTRIBUTION LIST

Name	Institution
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1. ASSIGNMENT

Africa Geo Environmental Services (AGES) was commissioned by HJC Olivier beleggings BK to assess the vegetation and to compile an ecological report for the proposed borrow pit for the mining of gravel on portion 21 of the farm Onverwacht 914 LS.

The assignment is interpreted as follows: Compile an ecological assessment study on the flora and general ecology of the site and potential sensitive zones in terms of a set of criteria.

The following basic steps were followed:

1. *Initial preparation - desktop study*
2. *Vegetation and habitat survey*
3. *Plant community delimitation, description and sensitivity analysis*
4. *General recommendations and special management strategies*

2. INTRODUCTION

In the past little concern was given to floristic and ecosystem conservation issues. Development of infrastructure took place without proper consideration of the effect thereof on the natural environment. Today it is widely recognised that it is of utmost importance to conserve natural resources in order to maintain ecological processes and life support systems for plants, animals and humans. To ensure that sustainable development takes place, it is therefore important that the environment is considered before local authorities approve any development.

All components of any of the ecosystems (physical environment, vegetation, animals) of a site are interrelated and interdependent. A holistic approach is therefore imperative to effectively include the development, utilisation and where necessary conservation of the given natural resources in an integrated development plan, which will address all the needs of the modern human population (Bredenkamp & Brown 2001).

The ecological report addresses the most important aspects of the impacts of the excavation of material from the proposed borrow pit site on the general ecology and flora of the natural environment.

3. Location

The study was conducted in the Polokwane Local Municipality of the Capricorn District, Limpopo Province on a proposed borrow pit site of about 1.5 hectares in size. The site is located on a portion of portion 21 of the farm Onverwacht 914 LS. The aim of the study was to investigate the ecological suitability of the proposed borrow pit site for the abstraction of gravel for commercial purposes.

The location of the site is indicated in figure 1.

4. General Ecology

The table below indicate basic information on the ecological aspects of the vegetation of the general area:

Table 1. Environmental information of the proposed development borrowpit sites

Ecological aspects	Ecological Classification
Vegetation type (Mucina et al. 2005)	Polokwane Plateau Bushveld
State of Vegetation	Slight degraded to overgrazed
Vegetation Structure	Degraded woodland
Geology & Soils	Shallow gravelly / rocky soils derived from Turfloop Granite Landtype: BD52
Landscape topography	Slightly undulating plains
Land-use and significance	The herbaceous layer is largely in an overgrazed state, although the woody layer can still be considered as semi-natural. No significant ecological features occur on site. Site currently used as grazing for livestock.

A vegetation survey was conducted during October 2010 which the following was documented:

- State of vegetation and time of survey
- Plant species of importance:
 - Dominant plant species
 - Red data plant species
 - Protected tree species
 - Exotic species
 - Indicator species of the state of the vegetation
- Average cover and height of floristic components
- General ecological information such as soil type, geology, location of drainage channels etc

Plant communities were identified on site and a classification of vegetation data was done to identify, describe and map vegetation units, which will include a sensitivity map.

5. RESULTS: VEGETATION UNITS

The analysis of the data resulted in the identification of 1 vegetation / ecological unit for the borrow pit as previously identified for the extraction of gravel. Table 2 indicate specific characteristics of the vegetation unit of the borrow pit sites.

6. POTENTIAL IMPACTS

Excavation of borrowpits is an inherently destructive process, and there are a number of environmental impacts that remain after a site has been mined for gravel as follows:

1. Destruction or disturbance to sensitive ecosystems leading to reduction in the overall extent of a particular habitat and loss of rare, endangered, endemic and/or protected species
2. Fragmentation of sensitive habitats through the impairment of the movement and/or migration of animal species resulting in genetic and/or ecological impacts
3. Increased soil erosion, increase in silt loads and sedimentation
4. Establishment and spread of declared weeds and alien invader plants
5. Increased noise and dust pollution during construction and operation leading to potential displacement of individuals.
6. Road mortalities
7. Negative effect of human activities
 - a. Increased risk of veld fires leading to damage to sensitive habitats or loss of individuals of rare, endangered, endemic and/or protected species or loss of vegetation production
 - b. Potential increase in feral animals and impact on indigenous fauna e.g. cats, rats.
 - c. Illegal hunting or disturbance.
8. Potential soil and water pollution through spillages from vehicles and other equipment used for excavation.

Table 2 also indicate the specific impact rating assessment the abovementioned impacts will have on the natural environment of the borrowpit sites. The impact rating assessment classes are included in Appendix B.

Table 2. Description of sites for proposed borrowpits

Characteristics	Degraded woodland
State	Degraded woodland area adjacent to an old archaeological site
Red data / endemic plant species & recommendations	None observed on site
Dominant plant species	<i>Acacia tortilis</i> , <i>Dichrostachys cinerea</i> , <i>Gymnosporia senegalensis</i> , <i>Aristida</i> species, <i>Diospyros lycioides</i> , exotic weeds.
Indicator species	Typical pioneer grass species, forbs and young individuals of woody species indicate the degraded state of the area. Indicator species such as <i>Aristida</i> species and exotic weeds occur on site.
Protected tree species	None, an isolated marula tree occur on periphery of site and should be left undisturbed.
Geology & soil	Shallow Glenrosah soils derived from granite / gneiss
Recommendations:	Area highly suitable for development of borrowpit, although impacts on surrounding natural woodland area should be avoided.
Extent	Site specific
Duration	Short-term (mining period)
Intensity	Low impact
Probability	Definite
Significance	Low significance
Status	Neutral
Confidence	High

The typical state of the vegetation on the borrow pit sites are indicated in the photographs below:

Photograph 1. Vegetation of the site



7. RECOMMENDATIONS & MANAGEMENT STRATEGIES

Any development will have a profound impact on the environment in that most of the natural areas will be destroyed on which the footprint of the borrowpit is placed. Following the investigation and ecological interpretation of the vegetation in the study area, some general recommendations for the site should be adhered to:

- The site is in a slightly degraded state in general and would be suitable for the extraction of bedding material. The sites have a moderate to low sensitivity and the borrow pit should be utilized in such a way that surrounding natural areas are minimally impacted on.
- During the course of borrow pit excavations, operations should be planned in such a way that the amount of work that will be necessary for the finishing off of the borrow pit is reduced as far as possible. Indiscriminate excavation without due regard for the desired final shape of the borrow pit should not be permitted and should be rectified immediately.
- Rehabilitation operations should ideally be conducted in parallel with extraction. Accordingly, progressive rehabilitation, in which depleted sections of a borrow pit are reclaimed while extraction is ongoing in other sections of the same pit is encouraged. This approach is particularly well suited to large borrow pits and to long-term operations, and is especially effective when the intended end-use is “nature area”, as it enhances the establishment of plant communities. In addition to this approach the rehabilitation will improve the following aspects:
 - Reduces the visual impact of the borrow pit or quarry;
 - Facilitates adequate conservation and utilisation of topsoil;
 - Simplifies the management of runoff and attendant erosion;
 - Reduces health and safety risks; and
 - Minimises the effect of operations on nearby communities and plant/animal populations.
- It is essential that sites are cleaned up and returned to an acceptable state when an operation is closed down. Some measures to assist with this are:
 - Infrastructure that has been erected at the site should be demolished and removed.
 - All equipment, plant, concrete footings, fencing, etc. Should be removed from site;

- All services should be dismantled and removed from site.
- All foreign materials should be removed from site.
- Domestic or other waste should not be disposed of in the borrow pit, but should be removed from site and disposed off at an approved landfill and
- Soil contaminated with oil, grease, fuel or other hydrocarbon should not be disposed of in the excavation.
- Unlimited mining of the bedding material for the road upgrading can be supported, especially considering the vegetation and physical environment of the footprint areas of the borrowpits not being suitable for any of the red data plant species that may be found in the area.

8. CONCLUSION

The area for the proposed mining of bedding material on the proposed development site is confined to an area with a moderate to low sensitivity, whereon only limited mitigating measures regarding soil erosion and peripheral impacts are needed. The recommendations should be adhered to and considering these aspects, the proposed development of the borrowpit and mining operation can be supported.

9. REFERENCES

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Appendix A. Plant Species List

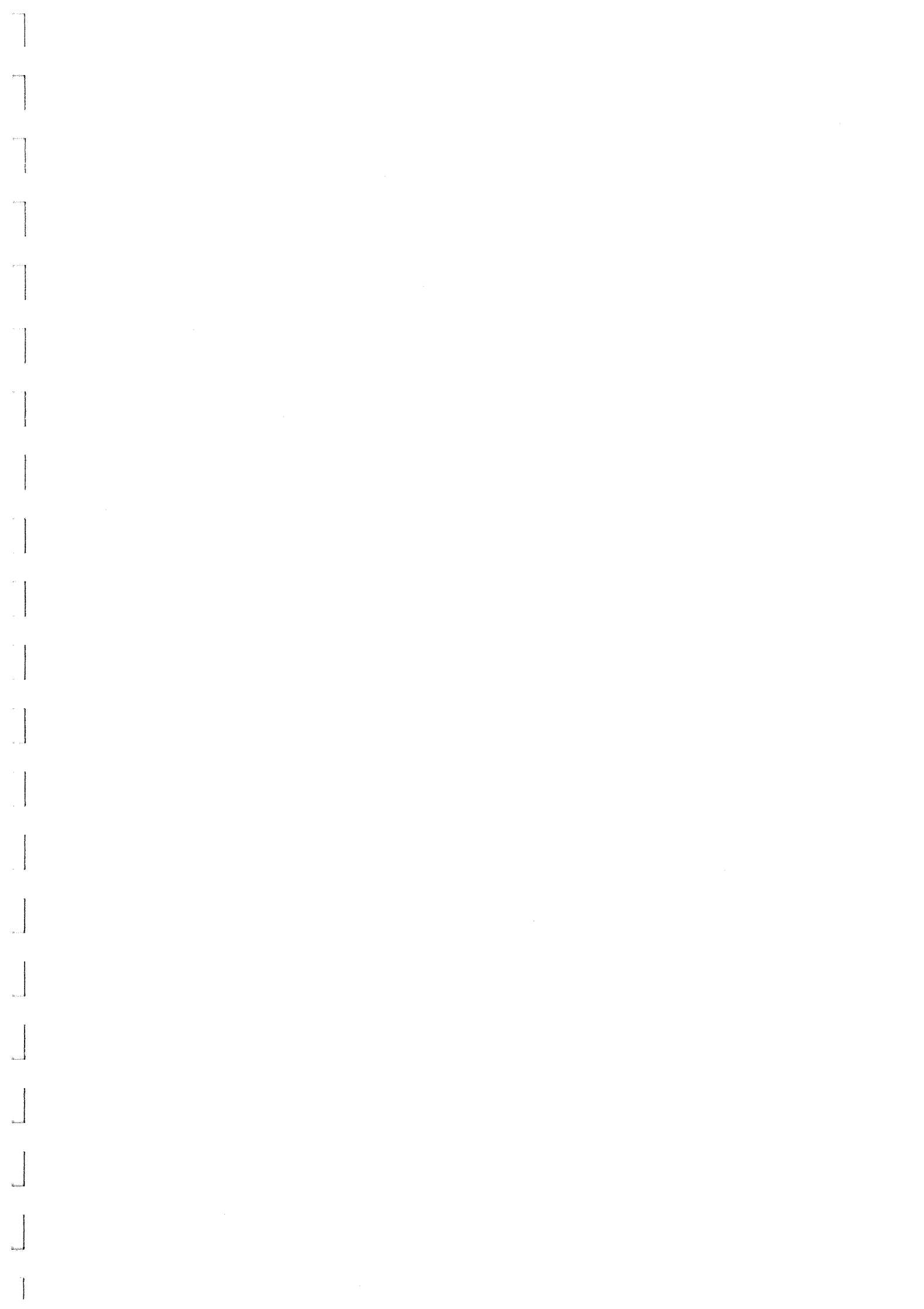
Woody species
<i>Aloe marlothii</i>
<i>Acacia tortilis</i>
<i>Clerodendrum glabrum</i>
<i>Combretum apiculatum</i>
<i>Commiphora glandulosa</i>
<i>Dichrostachys cinerea</i>
<i>Diospyros lycioides</i>
<i>Ehretia rigida</i>
<i>Euclea undulata</i>
<i>Grewia bicolor</i>
<i>Gymnosporia buxifolia</i>
<i>Gymnosporia senegalensis</i>
<i>Lippia javanica</i>
<i>Ormocarpum trichocarpum</i>
<i>Pappea capensis</i>
<i>Rhus lancea</i>
Grasses
<i>Aristida spp.</i>
<i>Brachiaria nigropedata</i>
<i>Eragrostis lehmanniana</i>
<i>Eragrostis rigidior</i>
<i>Heteropogon contortus</i>
<i>Hyparrhenia hirta</i>

<i>Pogonarthria squarrosa</i>
<i>Themeda triandra</i>
<i>Urochloa mosambicensis</i>
Herbs/Forbs / succulents
<i>Aloe davyana</i>
<i>Aptosimum lineare</i>
<i>Athrixia elata</i>
<i>Blepharis saxatallis</i>
<i>Boophane distychna</i>
<i>Commelina africana</i>
<i>Dicerocarum eriocarpum</i>
<i>Felicia muricata</i>
<i>Geigeria burkei</i>
<i>Hermannia depressa</i>
<i>Hermstaedia odorata</i>
<i>Indigofera cryptantha</i>
<i>Opuntia ficus-indica</i>
<i>Pavonia burchellii</i>
<i>Rhynchosia monophylla</i>
<i>Thesium utile</i>
<i>Viscum rotundifolium</i>
<i>Ziziphus zeyheriana</i>

Appendix B. Criteria for impact rating assessment

Criteria	Description of elements that are central to each issue
Extent of the impact	Describe whether the impact will be: <ul style="list-style-type: none"> • Site specific (extending only as far as the activity, or limited to the site and its immediate surroundings). • Regional (will have an impact on the region). • National (will have an impact on a national scale – particularly if an ecosystem or species of national significance is affected). • International (will have an impact across international borders or will impact on an ecosystem or species of international significance).
Duration of impact	<ul style="list-style-type: none"> • Short term (0-5 years). • Medium term (5-15 years). • Long term (16-30 years, impact will cease after the operational or working life of the activity, either due to natural process or by human intervention). • Permanent (Impact will be where mitigation or moderation 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 or temporary). • Discontinuous or intermittent (impact may only occur during specific climatic conditions or during a particular time of year).
Intensity	Establish whether the impact will be: <ul style="list-style-type: none"> • Low impact (affect the environment in such a way that natural, cultural and soil functions and processes are not affected). • Medium (affected environment is altered by natural, cultural and soil functions and

Criteria	Description of elements that are central to each issue
	<p>processes continue although in a modified way).</p> <ul style="list-style-type: none"> • High (natural, cultural and soil functions and processes are altered to the extent that they will be temporarily or permanently cease).
Probability of occurrence	<ul style="list-style-type: none"> • Improbable (low likelihood). • Probable (distinct possibility). • Highly probable (most likely). • Definite (impact will occur regardless of any prevention measures).
Determination of significance	<ul style="list-style-type: none"> • No significance (the impacts do not influence the proposed development and / or environment in any way). • Low significance (the impacts will have a minor influence on the proposed development and / or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation (a choice of other methods to alleviate the impacts). • Medium significance (the impacts will have a moderate influence on the proposed development and / or environment. The impact can be ameliorated (lessened or improved) by a modification in the project design or implementation of effective mitigation measures. Should have an influence on decision, unless mitigated). • High significance (the impacts will have a major influence on the proposed development and / or environment. The impacts could have the no-go implication on portions of the development regardless of any mitigation measures that could be implemented. Influence decision, regardless of any possible mitigation).
Status	<ul style="list-style-type: none"> • Positive: Impact will be beneficial to the environment. • Negative: Impact will not be beneficial to the environment. • Neutral: No positive or negative impact.
Confidence	<p>The degree of confidence there is in the predictions based on the available information and level of knowledge and expertise:</p> <ul style="list-style-type: none"> • Low • Medium • High





SOUTH AFRICAN HERITAGE RESOURCES AGENCY
111 HARRINGTON STREET, CAPE TOWN, 8001
PO BOX 4637, CAPE TOWN, 8000
TEL: 021 462 4502 FAX: 021 462 4509

FOR ATTENTION: SAHRA Limpopo OR PHRA: Limpopo

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SAHRA File No: 9/2/253/0027

Date Received: 09 September 2007

Date of Comment: 02 October 2007

Sent to Peer Review:

Date to Peer Review:

SAHRA Contact Person: Mrs Portia Ramalamula

DME Ref No:

REVIEW COMMENT ON ARCHAEOLOGICAL IMPACT ASSESSMENT

BY ARCHAEOLOGY/PALAEONTOLOGY UNIT OF THE HERITAGE RESOURCES AGENCY

South Africa has a unique and non-renewable archaeological and palaeontological heritage. Archaeological and palaeontological sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.

AIAs and PIAs often form part of the heritage component of an Environmental Impact Assessment or Environmental Management Plan. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as indicated in SAHRA Regulations and Guidelines.

This form provides review comment from the Archaeologist of the relevant heritage resources authority for use by Heritage Managers, for example, when informing authorities that have applied to SAHRA for comment and for inclusion in documentation sent to environmental authorities. It may be used in conjunction with Form B, which provides relevant peer review comment.

- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **LIMPOPO PROVINCE/Mr Tlou Setumu....**
- B. SAHRA PROVINCIAL MANAGER : **LIMPOPO PROVINCE : Mr Victor Netshivha.....**
- C. AUTHOR(S) OF REPORT: **Mr F Roodt**
- D. ARCHAEOLOGY CONTRACT GROUP: **R & R Cultural Resources Consultants**
- E. CONTACT DETAILS: **P.O Box 1600, Polokwane, 0700, Tel: 015 225 7075, Cell: 083 770 2131, Fax: 086 670 9130, e-mail: hr19@mweb.co.za.....**
- F. DATE OF REPORT: **August 2007**
- G. TITLE OF REPORT: **HERITAGE REOURCES SCOPING REPORT DEVELOPMENT OF PHASE 2 AND 3 OF THE ONVERWACHT BORROW PIT MINE POLOKWANE: LIMPOPO.....**
- H. Please circle as relevant: Archaeological component of EIA / EMP / HIA / CMP Other (Specify).....
- I. REPORT COMMISSIONED BY (CONSULTANT OR DEVELOPER): **HP Jannasch, Africa Geo-Environmental Services**
- J. CONTACT DETAILS: **P.O. Box 2526, Polokwane, 0700, Tel: 015 291 1577, Fax: 015 291 1577, Cell: 083 419 0909,e-mail**
- K. COMMENTS:

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REVIEW COMMENT ON ARCHAEOLOGICAL IMPACT ASSESSMENT

F Roodt

August 2007, Received 09 September 2007

HERITAGE RESOURCES SCOPING REPORT DEVELOPMENT OF PHASE 2 AND 3 OF THE ONVERWAGHT BORROW PIT MINE POLOKWANE: LIMPOPO

The area for the proposed mining development was surveyed to identify any possible heritage resources that might be found.

Structural remains of the recent historical period, identifiable by the rectangular foundations, as well as a circular floor used for the threshing of grain are located on the terrain. These remains are of low significance. A large Late Iron Age site of medium significance exists on the farm that was documented on a previous visit. One of the cattle kraals from that site extends onto the proposed mining area.

The author recommends that:

- The feature of historical site must be properly documented and mapped, there after it can be destroyed as it is of low significance.
- The Iron Age cattle kraal must be recorded and mapped in relation to the rest of the archaeological site and monitored during the extraction of gravel (mining) by an archaeologist because it may contain burials.
- It is further recommended that heritage management plan be developed for the stonewalled archaeological site on the farm Onverwacht in order to prevent future damage and secure its protection in terms of Section 35 of the NHRA.

SAHRA will require that, in terms of s.38 (4)(b&c) of the National Heritage Resources Act, the provisions of ss 35 & 36 apply, as appropriate. The specialist will require a mitigation permit from the relevant Heritage Resources Authority. On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, the heritage authority will make further recommendations in terms of the report. Very often permission is given for the destruction of the remainder of the archaeological or palaeontological sites. Very rarely, if a site has high heritage significance the authority may request that it be conserved, that mini-site management plans, interpretive material and possibly protective infrastructure be established.

If the recommendations made in the specialist report and in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological component of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development, construction or mining, SAHRA or an archaeologist must be alerted immediately.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, the developer must ensure that a professional Palaeontological Desk Top study is undertaken to assess whether or not the development will impact upon palaeontological resources. If this is deemed unnecessary, at

least a letter of exemption from a Palaeontologist is needed. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary (see attached list of accredited Palaeontologists).

Decisions on Built Environment (e.g. structures over 60 years) and Cultural Landscapes must be made by the Limpopo SAHRA Provincial office (Victor Netshiyvha: vnetshiyvha@lp.sahra.org.za)/ Provincial Heritage Authority (Limpopo, Mr Tlou Setumu, lihra@lantic.net) to whom this Archaeological Review Comment will be copied

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: 

EMAIL: pramalamula@sahra.org.za

SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: 

EMAIL: mlesile@sahra.org.za

NAME OF HERITAGE RESOURCES AGENCY: SAHRA

PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE HERITAGE RESOURCES AGENCY ARCHAEOLOGIST AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL/PALAEONTOLOGICAL SITE IS STILL SUBJECT TO A PERMIT/PERMISSION FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL AND PALAEONTOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/PALAEONTOLOGICAL MITIGATION AS NECESSARY). THIS REPORT MAY BE TAKEN ONLY AS APPROVAL IN PRINCIPLE, IN TERMS OF SECTION 35 OF THE NATIONAL HERITAGE RESOURCES ACT. THE PROVINCIAL MANAGER OF THE HERITAGE RESOURCES AUTHORITY MUST ADVISE AS TO APPROVAL IN TERMS OF HERITAGE ISSUES ENCOMPASSED BY OTHER ASPECTS OF THE LEGISLATION, SUCH AS ISSUES OF THE BUILT ENVIRONMENT (STRUCTURES (E.G. FARM HOUSES), OVER 60 YEARS), INDIGENOUS KNOWLEDGE SYSTEMS OR OF CULTURAL LANDSCAPES AS THIS IS NOT WITHIN THE SCOPE OF THE ARCHAEOLOGIST.

PLEASE NOTE THAT SAHRA IS NOW RESPONSIBLE FOR GRADE I HERITAGE RESOURCES (AND EXPORT) AND THE PROVINCIAL HERITAGE RESOURCES ARE RESPONSIBLE FOR GRADE II AND GRADE III HERITAGE RESOURCES, EXCEPT WHERE THERE IS AN AGENCY ARRANGEMENT WITH THE PROVINCIAL HERITAGE RESOURCES AUTHORITY.

Tel: (015) 2257075
083 770 2131
Fax: 086 670 9130
E-Mail: hr19@mweb.co.za



P.O. Box 1600
POLOKWANE
0 7 0 0

AFRICA GEO-ENVIRONMENTAL SERVICES
P O Box 2526
POLOKWANE, 0700

10 May 2007

Phase 1 Heritage Resource Impact Assessment (Scoping & Evaluation)
ONVERWACHT BURROW PITS
POLOKWANE, LIMPOPO
STATEMENT WITH REGARD TO HERITAGE RESOURCES MANAGEMENT

Map reference: South Africa 1:50000 2329DC
General co-ordinates: S23° 49' 10.1" E29° 34 03.4"
Farm: Onverwacht 914 LS

INTRODUCTION

The Project proposal constitutes an activity, which may potentially be harmful to heritage resources that may occur in the demarcated area. The National Heritage Resources Act (NHRA - Act No. 25 of 1999) protects all structures and features older than 60 years (section 34), archaeological sites and material (section 35) and graves and burial sites (section 36). In order to comply with the legislation, the Applicant requires information on the heritage resources, and their significance that occur in the demarcated area. This will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

In terms of the National Heritage Resources Act (1999) the following is of relevance:

Historical remains

Section 34(1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeological remains

Section 35.(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.

Section 35(4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite.

Burial grounds and graves

Section 36 (3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

- (a) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (b) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in detection or recovery of metals.

Section 36 (6) Subject to the provision of any law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority-

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the content of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

Culture resource management

Section 38(1) Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development* ...

must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

*'development' means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including-

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carry out any works on or over or under a place*;
- (e) any change to the natural or existing condition or topography of land, and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil;

'place' means a site, area or region, a building or other structure ...

*'structure' means any building, works, device or other facility made by people and which is fixed to the ground, ...

Terminology:

- Early Stone Age: Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs before present.
- Middle Stone Age: Various lithic industries in SA dating from ± 250 000 yr - 30 000 yrs before present.
- Late Stone Age: The period from ± 30 000-yr to contact period with either Iron Age farmers or European colonists.
- Early Iron Age: Most of the first millennium AD.
- Middle Iron Age: 10th to 13th centuries AD.
- Late Iron Age: 14th century to colonial period. *The entire Iron Age represents the spread of Bantu speaking peoples.*
- Historical: Mainly cultural remains of western influence and settlement from AD 1652 onwards – mostly structures older than 60 years in terms of Section 34 of the NHRA.
- Phase 1 assessments: Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.
- Phase 2 assessments: In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

In order to comply with legislation, the developer requires information on the heritage resources, and their significance that may occur on the demarcated site. This would enable the developer to take pro-active measures to limit the adverse effects, which the development could have on any heritage resources.

TERMS OF REFERENCE

The author was contracted to undertake a Phase 1 *Heritage Resources Impact Assessment* of the proposed terrain. The aim was to determine the presence, or not, of heritage resources such as archaeological or historical sites and features, graves and places of religious and cultural significance; to assess the impact of the proposed project on such heritage resources; and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features. This survey forms part of the environmental impact assessment process and data regarding the environmental and geo-morphological conditions and socio-economic issues should be read in the main report. Consequently, a letter containing a qualified statement of the *status quo* with regard to heritage resources, instead of a full report, is deemed sufficient.

DESCRIPTION OF THE TERRAIN

The proposed burrow pits are located approximately 10 km northeast of Polokwane on the R81 road. The area is relatively flat, but gently rising to the northeast with a kopje to the south. Vegetation is predominantly grass and small acacia trees.

METHODOLOGY

A survey of the demarcated area was undertaken on foot, during which standard methods of archaeological observation were applied. Archaeological visibility is good as vegetation cover is

moderate. Special attention was given to disturbances, either natural or man-made, as well as changes in vegetation that may have resulted from previous human intervention.

DISCUSSION

No heritage remains of importance were noted on the mining terrain. However there is a large stone walled archaeological site about 300m east north east of the development site. The coordinates is as follows: $S23^{\circ} 49' 14.6'' E29^{\circ} 34' 06.0''$. (Map 1) The site appears to be of Ndebele origin, but it not completely sure due to the lack of diagnostic pottery. The site is clearly visible because of the stonewalling as well as the change in vegetation cover - the site containing a thick grove of large aloes.

The developer is aware of the site. The development will not impact on the archaeological remains, which is to be avoided.

MANAGEMENT AND MITIGATION MEASURES

No management or mitigation measures are required. However the developer must stay clear of the above-mentioned site. This letter serves to confirm that *no significant heritage resources* such as archaeological or historical material or places of social or religious significance were found on the site of the proposed development. *From a heritage resources management point of view, we have no objection with regard to the development.*

However, the discovery of previously undetected subterranean heritage remains must be reported to the Limpopo Heritage Authority or the archaeologist, and may require further mitigation measures.

Yours faithfully



FRANS ROODT (BA Hons, MA Archaeology, Post Grad. Dip. Museology; UP)
Principal Investigator for R & R Cultural Resource Consultants



Fig 1. General view of the site, note site has already been cleared.

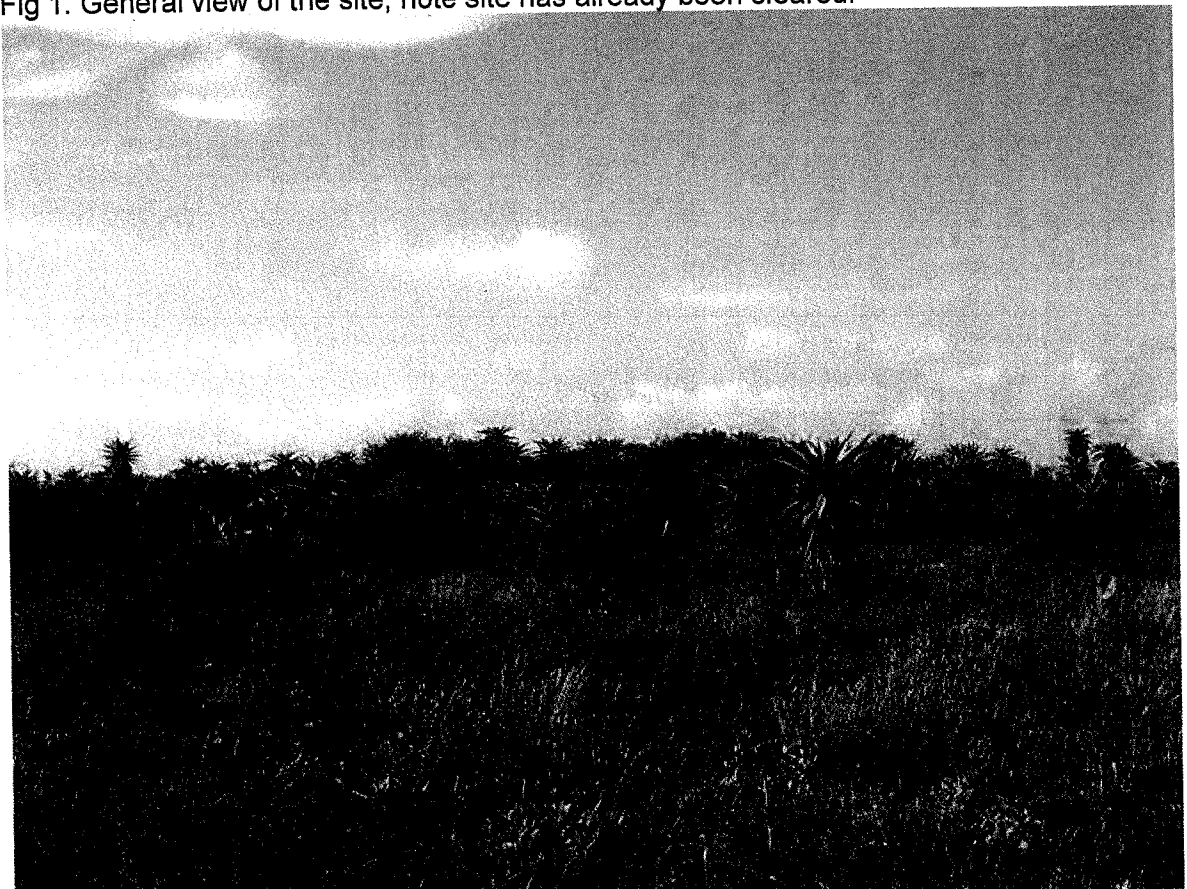


Fig 2. Archaeological site, note the large aloes.



Fig 3. Stone wall and midden deposit.



Permitting area



1:5000

0 200 Meters

HJC Plant
Borrow pit 1 - 2010

Based on the 1:50 000
Topomap
2025 DC

