# **DRAFT SCOPING REPORT**

APPLICATION FOR MINING RIGHT AND ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED QUARRY ON PORTIONS 24 AND 25 OF THE FARM BROEDERSHOEK 129 JU, IN MBOMBELA, MPUMALANGA.

On Behalf of:

Sikhandzisa Family Trust

Prepared By:



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mineral resources

Department: Mineral Resources REPUBLIC OF SOUTH AFRICA

Regional office Saveways Crescent Centre, Mandela Drive, Emalahleni, Mpumalanga 1035

DMR REF No.: MP 30/5/1/2/2/10251 MR.

Date: 21/11/2019

#### SCOPING REPORT: APPLICATION OF MINING RIGHT FOR THE PROPOSED

### QUARRY ON PORTIONS 24 AND 25 OF THE FARM BROEDERSHOEK 129JU, MPUMALANGA PROVINCE.

# FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATION IN TERMS OF THE NATIONAL ENVIRONMETAL MANAGEMENT ACT (ACT 107 OF 1996) AND THE NATIONAL ENVIRONMNTAL MANAGEMENT WASTE ACT (ACT 59 OF 2008) IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCE DEVELOPMENT ACT (ACT 28 OF 2002) (AS AMENDED).

NAME OF APPLICANT: Sikhandzisa Family Trust

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#### **IMPORTANCE NOTICE**

In terms of the mineral and petroleum resource development act (act 28 of 2002 as amended). The Minister must grant a prospecting or mining right if among others the mining "will not result in acceptable to pollution, ecological degradation or damage to the environment",

Unless an environmental authorization can be granted following the evaluation of an Environmental Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act, (Act 107 of 1996)(NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 1 6(3)(b) of the EIA Regulation 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17(1)(c) the competent authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in terms of application for an environmental authorization for listed activities triggered by an application for a right or permit are submitted in the exact format, and provide all the information required in terms of this template, Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorization being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. Unprocessed supporting information may be attached as appendices. The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.



# **OBJECTIVES OF THE SCOPING PROCESS**

The objective of the scoping process is to, through a consultative process-

a) Identify the relevant polices and legislation relevant to the activity;

b) Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;

c) Identify and confirm the preferred activity and technology alternatives through an impact and risk ranking process;

d) Identify and confirm the preferred site, though a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all identified alternatives focusing on the geographical, physical, biological, social, economic and cultural aspects of the environment;

e) Identify the key issues to be addressed in the assessment phase;

f) Agree on the key issues to be addressed in the assessment phase; including the methodology to be applied, the expertise required as well as the extend of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and

g) Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.



### **EXTENSIVE SUMMARY**

#### BACKGROUND

**Sikhandzisa Family Trust** (hereafter the applicant) has appointed Singo Consulting (Pty) Ltd to undertake environmental authorizations associated with the proposed quarry on the farm Broedershoek in Mbombela, Mpumalanga province. There is an existing quarry on portion 24 of the farm Broedershoek 129 JU that has been operating for a period of two years, now the applicant is wishing to make additional activities to the quarry which will require more space and time hence the lodgment of a new mining right application for the above mentioned portion and an additional one which is portion 25.

The proposed area is situated in the Ehlanzeni District Municipality under Mbombela Local Municipality. The area can be accessed using R538 from the N4 road and it is located 16km North-East of Nelspruit and 19km South-East of White River.

The entire part of the Nelspruit is underlain by rocks belonging to the Nelspruit's Granite Suite occurring in a form of a batholith. The suite expands to distances of about 80km north of the Barberton Greenstone Belt, (Robb et al., 1983). Karoo and Transvaal Supergroup rocks rests on this suite in the Western and Eastern sides.

In order for the proposed quarry to operate, the applicant is required to submit an application for a mining right with the Department of Mineral Resources. In Support of the application to obtain the mining right, the applicant is required to conduct a Scoping and Environmental Impact Assessment (S&EIA) process that needs to be submitted to the DMR for adjudication, which includes activities triggered under the Environmental Impact Assessment Regulations of 2014 (as amended in April 2017) promulgated under the National Environmental Management Act, 1998 (Act 107 of 1998) and activities triggered under the National Environmental Management: Waste Act, 2008 (NEM:WA) (Act 59 of 2008).



#### Scoping and Environmental Impact Assessment (S&EIA) process:

A S&EIA is conducted in two phases. The first phase is scoping, and the second phase is the EIA/EMPr report compilation. The scoping phase will always commence once the application has been submitted with the competent authority and the following tasks will be undertaken: identify interested and affected parties (I&APs) and stakeholders, identify relevant policies and legislation; consider the need and desirability of the project; consider alternative technologies and sites; identify the potential environmental issues; determine the level of assessment and public participation process required for the EIA phase; and identify preliminary measures to avoid, mitigate or manage potential impacts. The objectives of the EIA phase will be to assess the potential impacts associated with the preferred project alternatives as per the terms of reference for the assessment that are set out in the scoping report. The EIA/EMPr report will document the assessment findings and will detail the measures required to avoid, mitigate and/or manage the potential impacts. The requirements for the S& EIA process are specifically contained in Chapter 4 Part 3 of the NEMA Reg No 326 (amended on 7 April 2017). The EIA phase, and 107 days for competent authority to review).

The main issues which will need to be examined in detail during the EIA are the following:

- Impacts on neighboring residential and nearby communities (socio-economic impacts);
- Impacts on surface water and wetlands;
- Biodiversity;
- ✤ Heritage
- Impacts on air quality;
- Noise impacts;
- Blasting and vibration impacts;
- Impacts on groundwater;
- How rehabilitation will be conducted when the quarry activities are complete.



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#### LIST OF ABBREVIATIONS

ASAPA: Association of Southern African	BID: Background Information Document
Professional Archaeologists	
DEA: Department of Environmental Affairs	DMR: Department of Mineral Resources
DWS: Department of Water and Sanitation	EA: Environmental Authorisation
EIA: Environmental Impact Assessment	EIAR: Environmental Impact Assessment
	Report
<b>EMPr:</b> Environmental Management	GDARD: Gauteng Department of Agriculture
Programme	and Rural Development
GN: Government Notice	HIA: Heritage Impact Assessment
I&AP: Interested & Affected Party	IBA: Important Bird Area
IWULA: Integrated Water Use Licence	LoM: Life of Mine
Application	
MPRDA: Minerals and Petroleum Resources	Mtpa: Million tons per annum
Development Act, 2002	
NEM: WA: National Environmental	<b>NEMA:</b> National Environmental Management
Management: Waste Amendment Act, 2008	Act, 1998 (Act No. 107 of 1998)
NHRA: National Heritage Resources Act, 1999	NWA: National Water Act, 1998 (Act No. 36 of
(Act No. 25 of 1999)	1998)
PPP: Public Participation Process	RoM: Run of Mine
SAHRA: South African Heritage Resources	SANS: South African National Standard
Agency	
SCC: Species of Conservation Concern	S&EIA: Scoping and Environmental Impact
	Assessment
WMA: Water Management Area	



# **1. INTRODUCTION AND BACKGROUND**

Sikhandzisa Family Trust has appointed Singo Consulting (Pty) Ltd to undertake environmental authorizations associated with the proposed quarry in the farm Broedershoek 129JU on portions 24 and 25 for an extent of approximately 165.205 ha. The application of a mining right to the DMR includes the above-mentioned property and extent. An application was lodged to the Department of Mineral Resources on the 26<sup>th</sup> of August 2019 (Ref No: MP 30/5/1/2/2/10251 MR). The larger extent of the mining right entails a life of a quarry of 30 years and covers the above-mentioned farm portions.

In order for the proposed mine to operate, the applicant is required to submit an application for a mining right in terms of Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) with the DMR. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping and Environmental Impact Assessment (S&EIA) process that needs to be submitted to the DMR for adjudication, which includes activities triggered under the Environmental Impact Assessment Regulations of 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (Act 107 of 1998) and activities triggered under the National Environmental Management: Waste Act, 2008 (NEM:WA) (Act 59 of 2008).

The proposed quarry operations trigger various listed activities which have been listed within the scheduled activities in Government Notice Regulation No 324, 325 and 327 (amended 7 April 2017) and therefore require a full Scoping and EIA process to be followed. Prior to any listed activity being approved by the DMR, it is required that an environmental process is undertaken, and a report is submitted to the relevant environmental authority for consideration.



The purpose of the S&EIA process is to ensure that potential environmental, economic and social impacts associated with operation and closure/ rehabilitation of a project are identified, assessed and appropriately managed. There are two primary phases, namely the scoping phase and the impact assessment phase. These two phases are discussed in more detail below:

# 1.1 SCOPING PHASE

The scoping phase is conducted as the precursor to the Environmental Impact Assessment (EIA) process during which:

 Project and baseline environmental information is collated. Baseline information for the scoping report is gathered through visual inspections during field visits of the proposed project area and surroundings, desktop studies which include GIS mapping, and review of existing reports, guidelines and legislation.

Landowners, adjacent landowners, local authorities, environmental authorities, as well as other stakeholders which may be affected by the project, or that may have an interest in the environmental impacts of the project are identified.

Interested and affected parties (I&APs) are informed about the proposed project.

• Environmental authorities are consulted to confirm legal and administrative requirements.

• Environmental issues and impacts are identified and described.

• Development alternatives are identified and evaluated, and non-feasible development alternatives are eliminated.

 The nature and extent for further investigations and specialist input required in the EIA phase is identified.

• The draft and final scoping reports are submitted for review by authorities, relevant organs of state and I&APs.

• Key I&AP issues and concerns are collated into an issues and response report for consideration in the EIA phase.

# **1.2 EIA PHASE PROCESS**

After the initial scoping phase, the EIA phase of the application includes:

 Specialist investigations are undertaken in accordance with the terms of reference established in the scoping assessment (plan of study for EIA appended to the scoping report).
 The scope for specialist work is determined accordingly to the nature and scale of the project impacts.



An evaluation of development alternatives and identification of a proposed option.

An assessment of existing impacts (no-go development option), environmental impacts that may be associated with the proposed project option, and cumulative impacts using the impact assessment methodology.

 Identification of mitigation measures to address the environmental impacts and development of actions required to achieve the mitigation required.

Consultation with I&APs.

 Incorporation of public comment received during scoping and the draft EIA into the final EIA report.

Issuing of the final EIA report for review.

• After the draft EIA report was reviewed, comments received are incorporated in the final EIA report and final Environmental Management Program (EMPr).

The requirements for the S&EIA process are specifically contained in Chapter 4 Part 3 of the NEMA Reg No 326 (amended on 7 April 2017). The EIA process can take up to 300 days to complete (87 days for scoping phase, 106 days for EIA phase, and 107 days for competent authority to review).

# 2. PROPONENT AND ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) DETAILS

# 2.1 DETAILS OF THE PROPONENT

For purposes of this project, the following person may be contacted:

Table 0-1:Proponent's contact details.

NAME OF APPLICANT	TITUS DOMINIC MDLULI-SIKHANDZISA FAMILY TRUST
CELL NO:	+ 27 829 724 388
FAX NO:	086 5144 103
EMAIL:	skdftdomza@gmail.com
POSTAL ADDRESS:	P O Box 3546, Nelspruit, Mpumalanga 1200
PHYSICAL ADDRESS:	P O Box 3546, Nelspruit, Mpumalanga 1200
FILE REFERENCE NUMBER DMR:	MP 30/5/1/2/2/10251 MR



# 2.2 DETAILS OF EAP

Sikhandzisa Family Trust has appointed Singo Consulting (Pty) Ltd as an independent Environmental Assessment Practitioner (EAP) to undertake a Scoping and Environmental Impact Assessment (S&EIA) process that is required to support the application for a mining right. Singo Consulting (Pty) Ltd has no vested interest in the proposed project and hereby declares its independence as required by the EIA Regulations. For purposes of this S&EIA, the following person may be contacted at Singo Consulting (Pty) Ltd:

Table 2: Contact details of the EAP.

ENVIRONMENTAL ASSESSMENT	SINGO CONSULTING (PTY) LTD	
PRACTITIONER		
Contact Person (s):	Senior: Kenneth Singo	
	Junior1: Siyabonga Mashigo	
	Junior2: Nokuthula Nkosi	
Address:	09 Langa Crescent, Corridor Hill crossing. First Floor (South Block), Office No.16, eMalahleni	
Postal Address:	P/Bag X 7297, Postnet Suit 87, Highveld Mall, Witbank 1035	
Contact Number(s):	Senior: 078 2727 839 / 072 0816 682 / 013 692 0041	
	Junior1: 079 177 8410 / 013 692 0041	
	Junior2: 081 386 8589/013 692 0041	
Facsimile:	+27 86 5144 103	
Email(s):	Senior: <u>kenneth@singoconsulting.co.za</u>	
	Junior1: <a href="mailto:siyabonga@singoconsulting.co.za">siyabonga@singoconsulting.co.za</a>	
	Junior2: nokuthula@singoconsulting.co.za	

#### 2.2.1 Expertise of Environmental Assessment Practitioner

#### 2.2.1.1 Qualification (Appendix 4)

See the attached CV on appendix 4.

# 2.2.2 Specialist studies

Specialist studies will be undertaken to address the key issues that require further investigation. The specialist studies involve the gathering of data relevant to identifying and assessing impacts that may occur as a result of the proposed project. The specialists will also recommend appropriate mitigation/control or optimisation measures to minimise potential negative impacts or enhance potential benefits, respectively. Specialists will be appointed, and the relevant specialist assessments will be made available during the EIA phase.



# **2.3 PROPERTY DESCRIPTION**

Table 3: Description of the proposed quarry site.

Farm Name:	Portions 24 and 25 of the Farm Broedershoek 129 JU
Application area (Ha)	165.205ha
Magisterial district:	Magisterial District: Nelspruit
Distance and direction from nearest town	Approximately 16km North-East of Nelspruit and 19km South-East of White River local towns.
21-digit Surveyor General Code for each farm portion	T0JU000000012900024-Portion 24 T0JU0000000012900025-Portion 25
Locality map	See Figure 1 below
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaisance permit, Technical co-operation permit, Additional listed activity)	Description of Quarry Method and Process Drilling and blasting activities will be required for hard material. Waste
	Undesired material such as asphalt will be transported to a batch plant to form ready mix products like concrete products.



# 2.4 LOCALITY MAP

The proposed area is located on portions 24 and 25 of the farm Broedershoek 129 JU. The project is in the jurisdiction of Mbombela Local Municipality in the Ehlanzeni District Municipality, which falls within the Mpumalanga Province. The proposed quarry operation is situated Approximately 16km North-East of Nelspruit and 19km South-East of White River town (Refer to Figure 1). The project area can be accessed using an existing R 538 road from the N4. The area is enclosed by small local towns such as Msogwaba, Tekwane North and Emoyeni (See Figure 1).



Figure 1: Locality Map of the Broedershoek 129 JU farm.



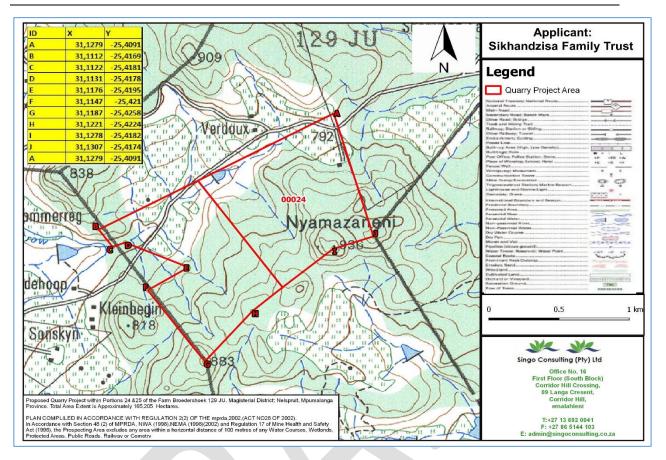


Figure 2: Regulation 2.2 of the Broedershoek 129 JU farm.

#### 2.4.1 Landowners

The mining right is applicable to the entire extent of Portions 24 and 25 of the above-mentioned property. Sikhandzisa Family Trust is the rightful landowner of portion 24 and portion 25 and is in control of the land, however the Windeed system is not updated as yet as observed on the figure below, portion 25 still shows that Standard Bank Van Suid Afrika Ltd is the owner. Adjacent landowners will also be consulted and offered an unbiased opportunity to comment on the proposed quarry operation.

Table 4: Landowners	of the	affected	properties
---------------------	--------	----------	------------

Landowner(s)	Property description	Title deed number
Sikhandzisa Family Trust	Broedershoek 129 JU, Portion 24	T4639/2009
Standard Bank Van Suid-Afrika Ltd	Broedershoek 129 JU, Portion 25	T3314/1994



Farm	List			Printed 201908/29 103 ndeeco sNexis® Product
Farm Nami Farm Numi	ce MPUMALANGA n Division JU e BROEDERSHOEK ber 129			
Remaining	Extent NOT SELECTED			
PORTIO	N LIST			
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
1	OXIOR CIVIL ENTERPRISES PTY LTD	T5932/2018	2018/05/14	R3000000.00
3	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
5	BROEDERSHOEK TRUST	T54813/1984	1984/11/28	R225000.00
6	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
7	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
8	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
9	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
10	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
11	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
12	*** NO LONGER EXISTS - SEE ENDORSEMENTS ***		-	
13	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T77163/1992	1992/08/14	R0.00
14	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA	T77163/1992	1992/08/14	R0.00
15	N M H TRADING 14 PTY LTD	T137615/2007	2007/10/08	R11970000.00
16	N M H TRADING 14 PTY LTD	T137615/2007	2007/10/08	R11970000.00
24	SIKHANDZISA FAMILY TRUST	T4639/2009	2009/06/01	R510000.00
25	STANDARD BANK VAN SUID-AFRIKA LTD	T3314/1994	1994/01/19	R10.00
28	SIHLE PROP DEVELOPERS CC	T830/2018	2016/01/25	R6840000.00
27	SIBOZA NONHLUPHO THELMA	T83138/2003	2003/07/09	R260000.00
35	BROEDERSHOEK TRUST	T59305/1998	1998/05/29	R0.00
36	BROEDERSHOEK TRUST	T14396/2015	2015/09/29	R0.00
37	ROCLA PTY LTD	T4938/2014	2014/03/31	R28024000.00

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#### 2.4.2 Description of current land cover

Land cover information is a crucial reference dataset that informs a wide variety of activities ranging from environmental planning and protection, development planning, economic development, compliance monitoring, enforcement and strategic decision making. Land cover basically refers to physical material that is apparent on the surface of the earth. This includes grass, asphalt, trees, water and bare ground ect. According to Wikipedia there are actually two types of methods of capturing information on land. This include a standard field survey and analysis of remotely sensed imagery. Land change models can be derived from these types of information to predict future changes or alterations of the current land. Below is the general information about the South African landcover but mostly focused on the Mpumalanga province.

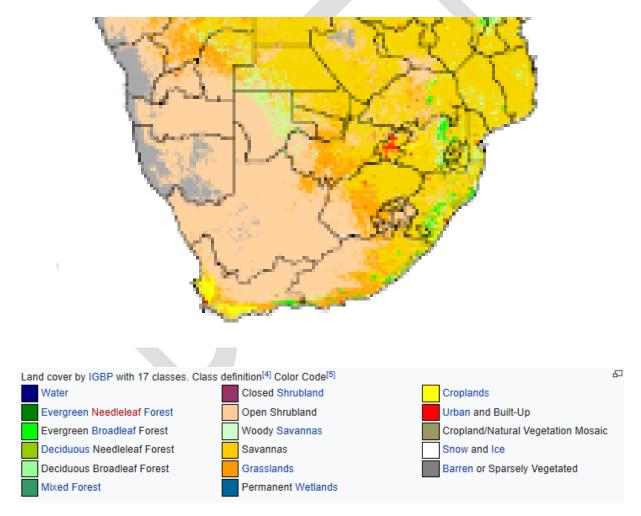


Figure 3: Shows the general information about the South African Landcover.



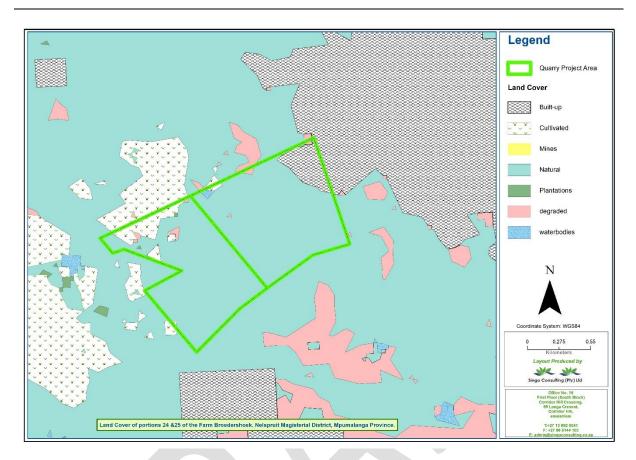


Figure 4: Shows the land cover of the proposed area and the surrounding environment.

As observed on figure 4 above, the area in question is dominated by natural areas with a touch of built-up area on the far east of portion 24. Portion 25 is also dominated by natural areas with a bit of cultivated lands. The proposed quarry operation is expected to induce small alterations to the current land cover of the area.

# 2.4.3 Land claims

Mpumalanga Regional Land Claims Commissioner was consulted on the 1<sup>st</sup> of October 2019 to verify any existing or possible land claims against the proposed farm portions. (See figure below and Appendix for consultation correspondence). This is to ensure that proper consultation is followed as per the NEMA regulation.



	We refer to the land claims enquiry on the 23 October 2019 on land claims lodge with the Department.
OWNERS WIRSTON P	Note that the lodgement of land claim is based on the Restitution of Land Rights Ac Act no 22 of 1994 and the Restitution of Land Rights Amendment Act, (Act not 15 o 2014,
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: MPLIMALAMGA 10 Bet Sheet, Bet Tower building, Resilution Husse, Nelspuil,   Primer Big X11330, Nelspuil, 1200 Tet. (013) 752 4054   Par. (013) 752 3410	Please note that there are no land claims lodged before 1998 re-lodgement period however there are new claims lodged. The Commission is empowered to investigate all land claims and where applicable issues a Government Gazette to interested and affected parties if such land claims has been approved as valid claims.
	The above claim was lodged in terms of the Restitution of Land Rights Amendment Act, 2014 (Act No 15 of 2014) ("the Amendment Act") which, amongst others, reopened the lodgement of claims for a period of five years.
Enquiries: Lazarus Masuku SING CONSULTING (PTY) LTD	The validity of the Amendment Act was challenged in the Constitutional Court. The Constitutional Court found the Amendment Act to be invalid because of the failure of Parliament to facilitate public involvement as required by the Constitution. The Amendment for the secret
E-mail: nokuthula@singcoresulting.co.za	Amendment Act ceased to be law on 28 July 2016 and the Commission is no longer allowed to accept lodgement of new claims from that date.
ATT: Nokuthula Nkosi Dear Sir/Watan	The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, but it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims. Parliament was given until 27 July 2018 to pass such a law.
LAND CLAIM IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 AND AS AMENDED IN TERMS OF THE RESTITUTION OF THE LAND RIGHTS AMENDMENT ACT 2014 (ACT NO 15 OF 2014).	The Commission will therefore not be processing these new claims until it finishes claims lodged by 31 December 1998 or until Parliament passes a new law providing for re-opening of lodgement of claims.
	We apologise for the inconvenience caused.
PROPERTY DESCRIPTION OF THE CLAIMED LAND:	Please quote the claim reference number in all correspondence with the Commission.
Portion 24 and 25 of the farm Broedershoek 129 JU	Yours sincerely,
REFERENCE NUMBER: R 6/141/279/52796	MR.E.S. NKOSI CHIEF DIRECTOR OFFICE OF REGIONAL LAND CLAIMS COMMISSION DATE: 29 10 019

Figure 5: Shows land claim status of the proposed area.

#### **3. POLICY AND LEGISLATIVE CONTEXT**

This section provides an overview of the governing legislation identified which may relate to the proposed project.

# 3.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, ACT 108 OF 1996 AS AMENDED Section 24 states:

"Everyone has the right— (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that—

(i) prevent pollution and ecological degradation;

(ii) Promote conservation; and



(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".

#### 3.2 MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT

The Mineral and Petroleum Resources Development Act, 2002 (MPRDA), outlines the procedural requirements an applicant must follow to get a mining right who wishes to proceed with a mining project, part of which requires the applicant to obtain Environmental Authorisation (EA) in terms of the National Environmental Management Act (1998, as amended).

The MPRDA is administered by the Department of Mineral Resources (DMR) and governs the sustainable utilisation of South Africa's mineral resources. The MPRDA aims to "make provision for equitable access to, and sustainable development of, the nation's mineral and petroleum resources".

In the event that the proposed activities require material (e.g. sand, gravel, aggregate) for the purposes of construction then the provisions of the MPRDA may apply. In support of the application to obtain the mining right, the applicant is required to conduct a Scoping Report, EIA /EMPr and I&APs consultation process that need to be submitted to the DMR for adjudication.

# 3.3 NATIONAL ENVIRONMENTAL MANAGEMENT ACT

The main aim of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) is to provide for co-operative governance by establishing decision-making principles on matters affecting the environment. In terms of the NEMA EIA regulations, the applicant is required to appoint an environmental assessment practitioner (EAP) to undertake the EIA, as well as conduct the public participation process. In South Africa, EIA became a legal requirement in 1997 with the promulgation of regulations under the Environment Conservation Act (ECA).

Subsequently, NEMA was passed in 1998. Section 24(2) of NEMA empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed and reported on to the competent authority responsible for granting the relevant environmental authorisation.

On 21 April 2006 the Minister of Environmental Affairs and Tourism promulgated regulations in terms of Chapter 5 of the NEMA.



These regulations, in terms of the NEMA, were amended in June 2010 and again in December 2014. The December 2014 NEMA regulations are applicable to this project. Mining Activities officially became governable under the NEMA EIA in December 2014. The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment and reporting of the activities that have been identified. The purpose of these procedures is to provide the competent authority with adequate information to make decisions which ensure that activities which may impact negatively on the environment to an unacceptable degree are not authorized, and that activities which are authorized are undertaken in such a manner that the environmental impacts are managed to acceptable levels.

In accordance with the provisions of Sections 24 (5) and Section 44 of the NEMA the Minister has published Regulations (GN R. 982) pertaining to the required process for conducting EIA's in order to apply for, and be considered for, the issuing of an Environmental Authorisation (EA). These Regulations provide a detailed description of the EIA process to be followed when applying for EA for any listed activity.

The Regulations differentiate between a simpler Basic Assessment Process (required for activities listed in GN R. 983 and 985) and a more complete EIA process (activities listed in GN R. 984). In the case of this project there are activities triggered under GN R. 984 and as such a full EIA process is necessary. On 7 April 2017, the NEMA 2014 regulations were amended, and accordingly the activities triggered under GN R. 324, 325 and 327 are applicable to this application.

A Scoping and EIA process is reserved for activities which have the potential to result in significant impacts which are complex to assess. Scoping and EIA accordingly provides a mechanism for the comprehensive assessment of activities that are likely to have more significant environmental impacts.

# 3.4 NATIONAL WATER ACT

The National Water Act, 1998 (NWA) also has a role to play in regulating mining. Mining almost always uses water and/or has an impact on a water resource such as a stream, wetland or river. The NWA is administered by the Department of Water and Sanitation (DWS).

The NWA section 21 defines eleven water uses that require an environmental authorisation:

21 (a): taking water from a water resource;

21 (b): storing water;



21 (c): impeding or diverting the flow of water in a watercourse;

21 (d): engaging in a stream flow reduction activity contemplated in section 36;

21 (e): engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);

21 (f): discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;

21 (g): disposing of waste in a manner which may detrimentally impact on a water resource;

21 (h): disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;

21 (i): altering the bed, banks, course or characteristics of a watercourse;

21 (j): removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and

21 (k): using water for recreational purposes. The proposed mine is in the process of applying for an Integrated Water Use Licence (IWUL) as per the water uses indicated

# 3.5 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT

The National Environmental Management: Waste Act, 2008 (NEM:WA) (Act 59 of 2008) lists activities triggered for the mining project and for the management of waste that will be generated as part of this project to prevent environmental pollution and littering. On the 2<sup>nd</sup> of June 2014 the National Environmental Management: Waste Amendment Act came into force. Waste is accordingly no longer governed by the MPRDA, but is subject to all the provisions of the National Environmental Management: Waste Act, 2008 (NEM:WA).

Section 16 of the NEMWA must also be considered which states as follows:

A holder of waste must, within the holder's power, take all reasonable measures to-

 "Avoid the generation of waste and where such generation cannot be avoided, to minimise the toxicity and amounts of waste that are generated;

Reduce, re-use, recycle and recover waste;

 Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner;

 Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour, or visual impacts;



Prevent any employee or any person under his or her supervision from contravening the Act; and

Prevent the waste from being used for unauthorised purposes."

These general principles of responsible waste management will be incorporated into the requirements in the EMPr to be implemented for this project. The NEM: WA provides for specific waste management measures to be implemented; as well as providing for the licensing and control of waste management activities. Waste management activities will be applicable to Category A, B and C according to GN R 921 (Nov 2013) and the proposed residue stockpiles in terms of Category B, Activity 11 of GNR 921, and, therefore, form part of the application process.

# 3.5.1 NEMWA THE PLANNING AND MANAGEMENT OF RESIDUE STOCKPILES AND RESIDUE DEPOSITS REGULATIONS, 2015 (GN R 632):

This regulates the planning and management of residue stockpiles and residue deposits from a prospecting, mining, exploration or production operation. However, with Sikhandzisa Family Trust operation there will be no waste generation since the activity will be a closed system.

# 3.5.2 NEMWA NATIONAL NORMS AND STANDARDS FOR THE ASSESSMENT OF WASTE FOR LANDFILL DISPOSAL, 2013 (GN R. 635)

These norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill. The aim of the waste assessment tests is to characterize the material to be deposited or stored in terms of the above-mentioned waste assessment guidelines set by the DEA.

# 3.5.3 NEMWA WASTE CLASSIFICATION AND MANAGEMENT REGULATIONS, 2013 (GN R. 634)

Chapter 9 of the above-mentioned Regulations stipulates the requirements for a motivation and consideration of listed Waste Management Activities that do not require a Waste Management License. The motivation must:

 Demonstrate that the waste management activity can be implemented without unacceptable impacts on, or risk to, the environment or health;

- Must provide a description of the waste;
- Description of waste minimisation or waste management plans;
- Description of potential impacts, etc.:



 The transitional provisions under Chapter 6 of this Regulation prescribes timeframes in which all waste must be classified within 18 months from the date of commencement of these regulations (23 August 2013).

Waste streams generated from mine activities will, where applicable, be classified accordingly to determine their nature (i.e. general or hazardous), and subsequently managed and disposed of in accordance with the relevant legislative requirements

# 3.6 NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT

The National Environmental Management: Air Quality Act (NEM: AQA) (Act No. 39 of 2004 as amended) is the main legislative tool for the management of air pollution and related activities. The Object of the Act is:

- To protect the environment by providing reasonable measures for-
- The protection and enhancement of the quality of air in the republic;
- The prevention of air pollution and ecological degradation;
- Securing ecologically sustainable development while promoting justifiable economic and social development; and

• Generally, to give effect to Section 24(b) of the constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and wellbeing of people.

The NEM: AQA mandates the Minister of Environmental Affairs to publish a list of activities which result in atmospheric emissions and consequently cause significant detrimental effects on the environment, human health and social welfare. The Listed Activities and Minimum National Emission Standards were published on the 22nd November 2013 (Government Gazette No. 37054).

According to the Air Quality Act, air quality management control and enforcement is in the hands of local government with District and Metropolitan Municipalities as the licensing authorities. Provincial government is primarily responsible for ambient monitoring and ensuring municipalities fulfil their legal obligations, with national government primarily as policy maker and coordinator. Each sphere of government must appoint an Air Quality Officer responsible for coordinating matters pertaining to air quality management. Given that air quality management under the old Act was the sole responsibility of national government, local authorities have in the past only been responsible for smoke and vehicle tailpipe emission control. The National Pollution Prevention Plans Regulations which came into effect on 21 July 2017 and tie in with The National Greenhouse Gas Emission Reporting Regulations which took



effect on 3 April 2017. In summary, the regulations aim to prescribe the requirements that pollution prevention plans of greenhouse gases declared as priority air pollutants need to comply with, in terms of the NEM: AQA. The regulations specify who needs to comply, and by when, as well as prescribing the content requirements. Mines do have an obligation to report on the GHG emissions under these regulations.

# 3.7 THE NATIONAL HERITAGE RESOURCES ACT

The National Heritage Resources Act (NHRA) (Act 25 of 1999) stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34(1) of the NHRA states that, "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..." The NHRA is utilized as the basis for the identification, evaluation and management of heritage resources and in the case of CRM those resources specifically impacted on by development as stipulated in Section 38 of NHRA, and those developments administered through NEMA, MPRDA and the NEMWA legislation. In the latter cases the feedback from the relevant heritage resources authority is required by the State and Provincial Departments managing these Acts before any authorizations are granted for development. The last few years have seen a significant change towards the inclusion of heritage assessments as a major component of Environmental Impacts Processes required by NEMA and MPRDA. This change requires us to evaluate the Section of these Acts relevant to heritage. The NEMA 23(2)(b) states that an integrated environmental management plan should, "...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage".

A study of subsections (23)(2)(d), (29)(1)(d), (32)(2)(d) and (34)(b) and their requirements reveals the compulsory inclusion of the identification of cultural resources, the evaluation of the impacts of the proposed activity on these resources, the identification of alternatives and the management procedures for such cultural resources for each of the documents noted in the Environmental Regulations.

A further important aspect to be taken account of in the Regulations under NEMA is the Specialist Report requirements laid down.

The MPRDA defines 'environment' as it is in the NEMA and, therefore, acknowledges cultural resources as part of the environment. Section 39(3)(b) of this Act specifically refers to the evaluation, assessment and identification of impacts on all heritage resources as identified in Section 3(2) of the National Heritage Resources Act that are to be impacted on by activities



governed by the MPRDA. Section 40 of the same Act requires the consultation with any State Department administering any law that has relevance on such an application through Section 39 of the MPRDA. This implies the evaluation of Heritage Assessment Reports in Environmental Management Plans or Programmes by the relevant heritage authorities (Fourie, 2008b).

In accordance with the legislative requirements and EIA rating criteria, the regulations of the South African Heritage Resources Agency (SAHRA) and Association of Southern African Professional Archaeologists (ASAPA) have also been incorporated to ensure that a comprehensive and legally compatible Heritage Impact Assessment (HIA) is compiled.

# 3.8 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT

The overarching aim of the National Environmental Management: Biodiversity Act (No 10 of 2004) (NEMBA), within the framework of NEMA, is to provide for:

 The management and conservation of biological diversity within South Africa, and of the components of such biological diversity;

The use of indigenous biological resources in a sustainable manner; and

• The fair and equitable sharing among stakeholders of benefits arising from bioprospecting involving indigenous biological resources.

The South African National Biodiversity Institute (SANBI) was established on 1 September 2004 through the signing into force of the NEMBA, its purpose being (inter alia) to report on the status of the country's biodiversity and the conservation status of all listed threatened or protected species and ecosystems.

• Other objectives include the identification, control and eradication of declared weeds and alien invaders in South Africa. These are categorised according to one of the following categories, and require control or removal:

- Category 1a Listed Invasive Species: Category 1a Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be combated or eradicated;
- Category 1b Listed Invasive Species: Category 1b Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be controlled;
- Category 2 Listed Invasive Species: Category 2 Listed Invasive Species are those species listed by notice in terms of section 70(1)(a) of the Act as species which require a permit to carry out a restricted activity within an area specified in the Notice or an area specified in the permit, as the case may be; and



• Category 3 Listed Invasive Species: Category 3 Listed Invasive Species are species that are listed by notice in terms of section 70(1)(a) of the Act, as species which are subject to exemptions in terms of section 71(3) and prohibitions in terms of section 71A of Act, as specified in the Notice.

The provisions of this Act have been considered and where relevant incorporated into the proposed mitigation measures and requirements of the EMPr. It is also appropriate to undertake a Fauna and Flora Impact Assessment for developments in an area that is considered ecologically sensitive which require environmental authorisation in terms of NEMA, with such Assessment taking place during the EIA phase.

# 3.9 THE CONSERVATION OF AGRICULTURAL RESOURCES ACT

To provide for control over the utilization of the natural agricultural resources in South Africa in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

# 3.10 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT 16 OF 2013 (SPLUMA)

The Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA) is a framework law, which means that the law provides broad principles for a set of provincial laws that will regulate planning for the country. The Act introduces provisions to cater for development principles; norms and standards; inter-governmental support; Spatial Development Frameworks (SDFs) across national, provincial, regional and municipal areas; Land Use Schemes (LUS); and municipal planning tribunals.

SPLUMA also provides clarity on how planning law interacts with other laws and policies. It is a uniform, recognisable and comprehensive system that addresses the past spatial and regulatory imbalances and promotes optimal exploitation of minerals and mineral resources. SPLUMA achieves this by strengthening the position of mining right holders when land needs to be rezoned for mining purposes. SPLUMA's impact on optimal exploitation is particularly evident where conflict exists between mining right holders and landowners. Economic and policy considerations, as well as practical necessities, often motivate the state to grant mining rights to entities other than landowners. SPLUMA is a new national framework Act that provides clear principles and standards for provincial and local governments to formulate their own new spatial planning and land use policies. The new provincial legislation can regulate, among other things, land development, land use management, spatial planning and municipal planning.



# 3.11 ENVIRONMENT CONSERVATION ACT, 1989 (ACT 73 OF 1989) – NOISE CONTROL REGULATIONS

In terms of section 25 of the ECA, the national Noise Control Regulations (GN R154 in Government Gazette No. 13717 dated 10 January 1992) were promulgated. The NCRs were revised under GN R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations. The Gauteng Province promulgated provincial regulations: Noise Control Regulations of Gauteng 1999, (Provincial Gazette, Extraordinary no 75 of August 1999).

The noise control regulations will need to be considered in relation to the potential noise that may be generated mainly during the construction and decommissioning phases of the proposed project. The two key aspects of the noise control regulations relate to disturbing noise and noise nuisance. Section 4 of the regulations prohibits a person from making, producing or causing a disturbing noise, or allowing it to be made, produced or caused by any person, machine, device or apparatus or any combination thereof. A disturbing noise is defined in the regulations as 'a noise level which exceeds the zone sound level or if no zone sound level has been designated, a noise level which exceeds the ambient sound level at the same measuring point by 7 dBA or more. Section 5 of the noise control regulations in essence prohibits the creation of a noise nuisance. A noise nuisance is defined as 'any sound which disturbs or impairs or may disturb or impair the convenience or peace of any person'. Noise nuisance is anticipated from the proposed project particularly to those residents that are situated in close proximity to the project sites. South African National Standard 10103 also applies to the measurement and consideration of environmental noise and should be considered in conjunction with these regulations. A noise specialist study is proposed for the EIA process.

# **3.12 NOISE STANDARDS**

There are a few South African Bureau of Standards (SABS) relevant to noise from mines, industry and roads which are:

South African National Standard (SANS) 10103:2008. 'The measurement and rating of environmental noise with respect to annoyance and to speech communication';

- SANS 10210:2004. 'Calculating and predicting road traffic noise';
- SANS 10328:2008. 'Methods for environmental noise impact assessments.
- SANS 10357:2004. 'The calculation of sound propagation by the Concave method';



SANS 10181:2003. 'The Measurement of Noise Emitted by Road Vehicles when Stationary'; and

SANS 10205:2003. 'The Measurement of Noise Emitted by Motor Vehicles in Motion'.

The relevant standards use the equivalent continuous rating level as a basis for determining what is acceptable. The levels may take single event noise into account, but single event noise by itself does not determine whether noise levels are acceptable for land use purposes. With regards to SANS 10103:2008, the recommendations are likely to inform decisions by authorities, but non-compliance with the standard will not necessarily render an activity unlawful per se. The noise assessment will take these noise standards and impacts into consideration.

# 4. DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

# **4.1 LISTED AND SPECIFIED ACTIVITIES**

Table 5: Listed activities.

NAME OF ACTIVITY	Aerial extent	LISTED	APPLICABLE	WASTE
(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site	of the Activity	ACTIVITY	LISTING	MANAGEMENT
office, access route etcetcetc	Ha or m <sup>2</sup>	(Mark with an	NOTICE	AUTHORISATION
E.g. for mining, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etcetc)		X where applicable or affected).	(GNR 983, 984, 985	(Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
GNR 983 Listing Notice 1: Activities requi Assessment	ring an enviror	mental auth	norisation subj	ect to a Basic
The development of facilities or infrastructure for the transmission and distribution of electricity- (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; Relevance: A power distribution switch yard will be constructed (substation).	2ha	X	GNR 983 Listing Notice 1: Activity 11	N/A
The development of – (ii) channels exceeding 100 square metres in size (iv) dams where the dam including infrastructure and water surface area, exceeds 100 square meters in size (vi) bulk storm water outlet structures exceeding 100 square metres in size; (xii) Infrastructure or structures with a physical footprint of 100 square meters or more. <i>Relevance: A pollution control</i> <i>dams will be constructed.</i>	2ha	X	GNR 983 Listing Notice 1: Activity 12	N/A



The development of a road where no reserve exists where the road is wider than 8 meters but excluding roads which are identified and included in activity 27 in listing Notice 2 of 2014. <i>Relevance: Access roads will be upgraded, and mine haul roads constructed.</i>	3km	X	GNR 983 Listing Notice 1: Activity 24	N/A
The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation. <i>Relevance: the</i> <i>area applied for is 20 hectares</i> <i>consisting of indigenous vegetation.</i>	1ha	X	GNR 983 Listing Notice 1: Activity 27	N/A
GNR 984Listing Notice 2: Activities require and Environmental Impact Assessment.	ring an enviror	mental auth	norisation sub	ject to a Scoping
The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres. <i>Relevance: Hydrocarbon fuels (e.g.</i> <i>diesel and grease) will be stored on site</i> <i>for fuelling of vehicles.</i>	12.5m³	X	GNR 984 Listing 2: Activity 21	N/A
The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods- (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons day. <i>Relevance: Conveyors transporting</i> granite	N/A	X	GNR 984 Listing 2: Activity 7	N/A
The clearance of an area of 20 hectares or more of indigenous vegetation <b>Relevance: Mining activities to occur on</b> <b>a rock without vegetation</b>	1ha	X	GNR 984 Listing 2: Activity 16	N/A
Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource. <i>Relevance: Mining activity</i>	165, 205ha	X	GNR 984 Listing 2: Activity 17	X Applicable
Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying,	1ha	Х	GNR 984 Listing 2: Activity 21	X Applicable



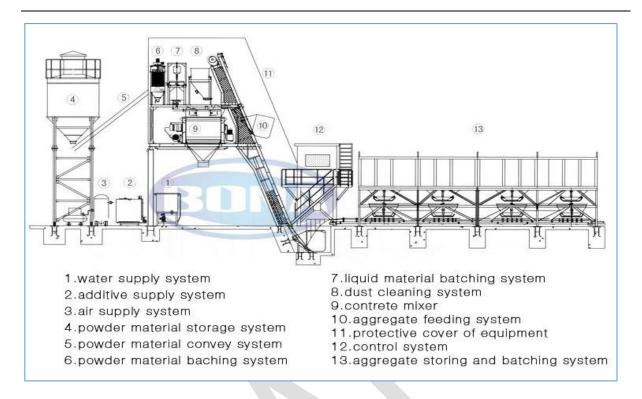
Version: Draft

concentrating, crushing, screening and washing GNR 983 Listing Notice 3: Activities requi	ring an enviror	nmental auti	norisation sub	ject to a Basic
Assessment The development of a road wider than 4 metres with a reserve less than 13,5 metres.	3km	X	GNR 985 Listing Notice 3: Activity 4	N/A
The development of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres. <b>Relevance: Storage of fuels and other dangerous goods</b>	1ha	X	GNR 985 Listing Notice 3: Activity 10	N/A
The clearance of an area of 300 square metres or more of indigenous vegetation in Mpumalanga where: iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning. Relevance: The application area is zoned for agriculture and currently being used for mining.	1ha	X	GNR 985 Listing Notice 3: Activity 12	N/A

### 4.2 QUARRY OPERATIONS

The Trust is already running a small scale quarry operation on portion 24 of the farm Broedershoek with the DMR Ref No: MP 30/5/1/3/3/2/1/ (10860) EM, due to the availability of the desired mineral in an economically sustainable quantity, the applicant decided to lodge an application for mining right in order to be able to make additional quarry operations such as a Batch Plant (See figure 6 below) and produce more products.





#### Figure 6: Typical illustration of a Batching plant.

The proposed quarry will extend from portion 24 where there are currently quarry activities to portion 25 of the proposed farm. There are currently no activities taking place on portion 25, the area is partially covered by vegetation.

Drilling and blasting activities will be required for hard material. Waste material will be handled by excavators and small-articulated trucks, as well as dozers. Where practical, throw blasting will be utilised to minimise loading and hauling requirements of hard material.

The quarrying method will be a standard truck and shovel application. The desired material will be transported to the plant by trucks and conveyor belt. The material will be crushed, screened into different products and trucked out of the site to potential markets.

Undesired material such as asphalt will be transported to a batch plant to form ready mix products like concrete products.





#### Figure 7: Shows an example of a quarry operation.

The entire part of the Nelspruit is underlain by rocks belonging to the Nelspruit's Granite Suite occurring in a form of a batholith. The suite expands to distances of about 80km north of the Barberton Greenstone Belt, (Robb et al., 1983). Karoo and Transvaal Supergroup rocks rests on this suite in the Western and eastern sides.

According to Visser 1956, the Nelspruit's granite suite is considered the oldest magnetite-series granite of about 3105 Ma of age. The term Batholith can be described as a large emplacement of igneous plutonic rock that moulds from cooled or cooling magma sitting deep in the earth's crust. Slow cooling of magma associated with this give rise to well-formed and coarse-grained porphyritic granodiorites. The Nelspruit Suite has a wide variety of textures. This ranges from gneiss to porphyritic granite and two plutons.

Of all these different textures, the common one is porphyritic granitoid which is coarse-grained and compositionally made up of granodiorite or quartz monzonite. Second being tonalitic which are grey to pink and composed of quartz, plagioclase, microcline and biotite (Robb et al., 2006). The Nelspruit Suite also contains lesser occurrences of gneiss (which is granodioric in composition) and porphyritic granite (Robb, 1978, 1979, 1994; Robb et al., 1983, in Robb et al,



2006:66). Johnson et al believes that there is also a minor component of this very batholith occurring as intrusions, namely Hebron and Berlin Plutons.

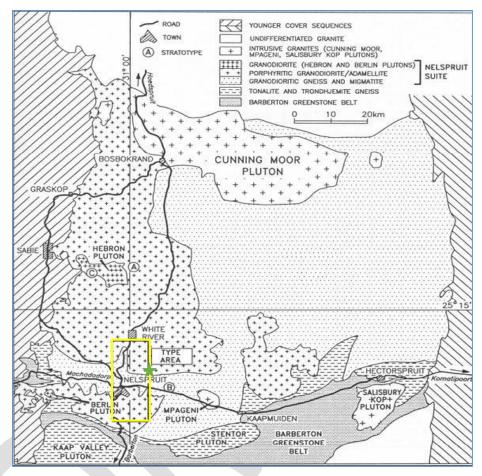


Figure 8: Shows the type of geology occurring in Nelspruit where the proposed area is situated.

# 4.2.1 MINING METHODOLOGY:

## 4.2.1.1 Construction Phase Activities

The following activities are expected to take place during the construction of the quarry:

Temporary construction facilities will be established on site to support the construction phase. These facilities could include:

Demarcation of the quarry site

 The main entrance or gate where access/exit movements will be monitored by the security personnel.



• Well-demarcated boundaries of the quarry site to avoid deviations from the proposed plan, all the construction activities of the quarry must take place within the authorized boundaries.

### Visual Impact

• The movements of machinery during construction will cause temporary disturbance to the scenery of the surrounding community.

The overall landscape of portion 24 and portion 25 will change.

### Signage

 Safety signs will be erected on site and on the road passing by the project area to avoid injuries.

### Ablution facilities

 Ablution facilities such as portable toilets will be brought on site during the construction phase of the quarry to avoid digging of the ground for pipes.

### Soil removal

Soil to be removed due to paving of walk paths within the site.

### Biodiversity/Ecological Impact

The proposed area is densely covered by various vegetation types. It is expected that there will be a removal of vegetation during the construction phase in order to access the desired mineral. This will lead to permanent loss of the vegetation occurring there.

### 4.2.1.2 Operational Phase Activities

During the operational phase the quarry is expected to impact the environment in various ways, however it is not known at this stage the magnitude and extent of those impacts, the purpose of this report is to assess and highlight impacts that may emanate when the proposed quarry is operating. Recommended studies will be conducted during the EIA phase and mitigation measures will be put in place to make the activity suit the surrounding environment. At this stage the recommended specialist studies include the following:



- Biodiversity/ Ecology
- Hydrological studies
- soil 🎸
- Blasting and noise impacts.
- ✤ Heritage

The above-mentioned studies are recommended because once the quarry starts operating there will be:

> Impact on Biodiversity

The proposed area is densely covered by various vegetation types. It is expected that there will be a removal of vegetation during the construction phase in order to access the desired mineral. This will lead to permanent loss of the vegetation occurring in the area.

Storm water (Hydrological Studies)

Water that is entering and leaving the proposed area must be studied in detail. Poor management of storm water could result to contamination of surrounding water bodies and even loss of soil due to erosion.

Impact on soil

The quarry operation is expected to cause impact on topsoil. During the construction phase as well as the operational phase topsoil will be removed to access the desired commodity. Oil spillages are expected to occur because of mechanical equipment on site. This may result to permanent loss of soil if proper mitigation measures are not in place. Therefore, it is recommended that a detailed soils study with proper recommendations be conducted.

> Blasting and noise

Noise will be frequently generated from blasting, mining vehicles and crushing. Blasting will be required to disintegrate hard rocks on site. Disintegrated rocks will be taken for crushing and screening, this process will take place six days/week. Trucks will always come in and out of the plant during the day. The desired material will be taken from the quarry to potential markets.

> Possible Discovery of Heritage sites

An environmental screening tool was conducted and the results portrays that the area is highly sensitive to Archeology and Heritage, therefore it is recommended that the applicant appoint a specialist from the perspective of Heritage to identify areas that needs to be avoided when the quarry operation commence.



> Air quality

The scope of work at the quarry will involve blasting and crushing of the mineral, enormous amount of dust may be generated from these activities. As such, impacts associated with these must be assessed, studied in detail and mitigation measures must be put in place.

### Additional possible Impact

Traffic

The proposed area is located not far from the N 4 road and it can be accessed using R538 from N 4 and the unnamed tared road leading straight to the proposed area as seen below. The quarry operation has more than 5 – 10 heavy vehicles coming in and out of the quarry six days a week. Should the granting of the mining right be successful, more heavy vehicles will come in and this may affect the frequently used N 4 road. Therefore, it is recommended to the applicant to appoint a traffic management specialist to assess and develop alternatives/mitigation measures for the project.

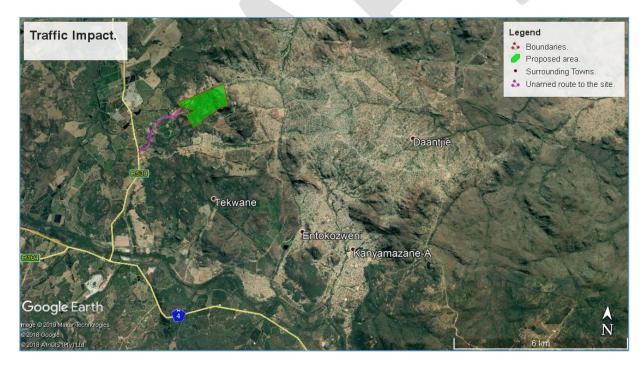


Figure 9: Shows access roads to the proposed quarry and they are susceptible to traffic congestion.



### 4.2.1.3 Existing Infrastructures that will be used:

 Access & Haul roads (with necessary security) including the upgrading of the access point to the gravel road;

- Contractor's Yard with septic/chemical ablution facilities;
- Offices;
- Weighbridge, workshop and stores (with septic/chemical ablution facilities);
- Rail Siding;
- Diesel facilities and a hardstand;
- Power and Water;
- Surface water management measures (storm water diversion berms and trenches etc.);
- Crushing and Screening

## 4.3 NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

The Mpumalanga government has proposed railway line from Lothair area to Swaziland that will require large amount of ballast material. The increase of building (RDP buildings), construction and road maintenance projects especially on the national road N4 and other surrounding communities of the proposed quarry, triggered the need of the applicant to establish the quarry in Msogwaba village. The development of the quarry also speaks directly to the 2019-2020 Mbombela IDP. Establishment of the proposed quarry will also contribute to the diversification of activities on the property.

There are a number of economic benefits from this quarry project, these include the fact that revenue at the quarry will facilitate fund allocation to local economic development. Local contractors and businesses are also likely to benefit from supplying the quarry with certain goods and services. Sikhandzisa Family Trust is fully committed to implementing development plans and projects that will be in line with the provision of the broad-based socio-economic empowerment charter for the South African Mining industry.

Development of the project will also contribute to the national South African economy through exports that will leverage foreign income to the country. The National Government will obtain tax revenue from the project. The project will provide income for the mining company through profits as well as providing wages for employees. More information regarding employment generated by this quarry project will be included in the EIA report. Indirect income will also be increased through the mine's procurement of goods and services.

Although mining is becoming more of contributor to the local economy, the primary objective



should be to prevent mining activities from encroaching onto high potential agricultural land and areas of high biodiversity and to ensure that the mining area is properly rehabilitated and that the agricultural values of the land use are restored once the mineral resource is fully depleted. The location of the granite resource to be mined is fixed, but the mine infrastructure has been located with due consideration to known environmental and social sensitivities, while still considering engineering feasibility and financial factors. Thus, in summary, the proposed project is needed and desirable to:

• Enable Sikhandzisa Family Trust to commence with the quarry operations and produce the desired material;

Facilitate the employment and economic development opportunities.

### 4.4 PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The estimated period is 30 years which comprises of construction, mining and closure together with rehabilitation. A period for the management of post closure risks will also be investigated during the EIA phase.

# 4.5 DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES

The identification and investigation of alternatives is a key aspect during the S&EIA process. All reasonable and feasible alternatives must be identified and assessed during the scoping phase to determine the most suitable alternatives to consider and assess during the EIA phase. There are however some significant constraints that have to be taken into account when identifying alternatives for a project of this scope. Such constraints include social, financial and environmental issues, which will be discussed in the evaluation of the alternatives. The preferred option is to be highlighted and presented to the authorities. Alternatives can typically be identified according to:

- Location alternatives;
- Process alternatives;
- Technological alternatives; and
- Activity alternatives (including the No-go option).

For any alternative to be considered feasible, such an alternative must meet the need and purpose of the development proposal without presenting significantly high associated impacts.



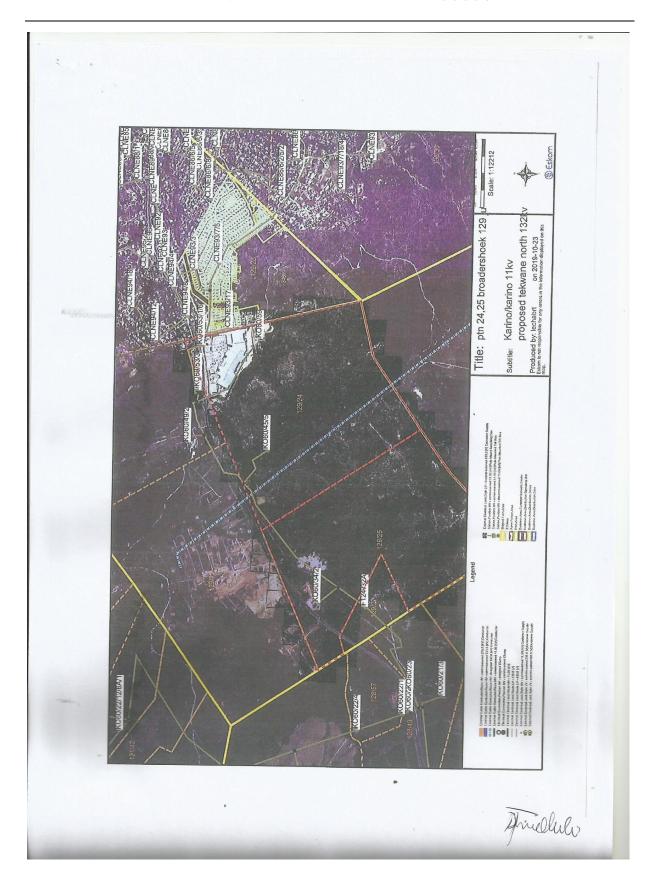
The alternatives are described, advantages and disadvantages are presented. It is further indicated which alternatives are considered feasible from a technical as well as environmental perspective. Incremental alternatives typically arise during the EIA process are usually suggested as a means of addressing identified impacts. These alternatives are closely linked to the identification of mitigation measures and are not specifically identified as distinct alternatives. This section provides information on the development footprint alternatives, the properties considered, as well as the type of activity.

### **4.5.1 LOCATION ALTERNATIVES**

According to the geological report completed through desktop studies, the area seems to be ideal for the proposed mineral. Portion 24 of the farm is already operating which basically means the land is already disturbed. Portion 25 is located close to the frequently used road giving easy access to all the project personnel and future clients.

There is an ESKOM powerline passing by the project area and ESKOM has already conducted a study to show that the development cannot harm or rather impact their infrastructure, however it is the responsibility of the quarry to ensure that Eskom's infrastructure is not damaged due to their activities. See the attachment below.







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### **4.5.2 LAND USE ALTERNATIVES**

At this stage there are no alternatives considered for this activity. This is because on portion 24 of the farm, already there is a viable quarry operation that is operating, the land is already disturbed. Portion 25 is still covered by vegetation and about 10% of the proposed area is used for cultivation. Terrestrial sensitivity is very low and plant species are of medium sensitivity, however it recommended that a specialist be appointed especially on the aquatic biodiversity perspective this is because there is an existing wetland on portion 24 of the project area and it falls under the Inkomati-Usuthu Management Area (figure 10).

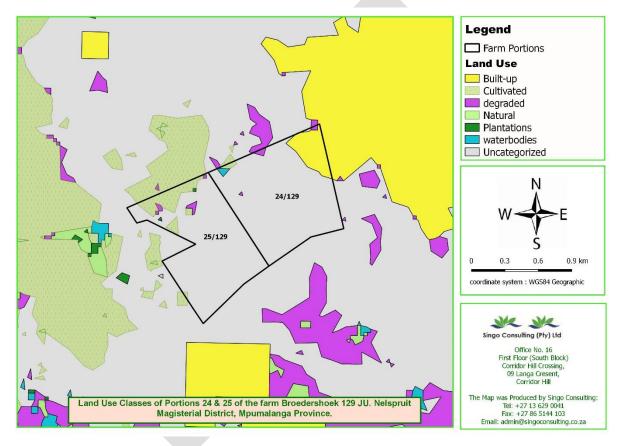


Figure 10: Shows the current land use of the proposed area.



### **4.5.3 PROCESS ALTERNATIVES**

> Alternative Location

The proposed site is the preferred alternative. The area is easily accessible, the geology indicates the presence of the desired mineral. The only disadvantage preferred location is the loss of natural areas and cultivated lands occurring in the area due to the quarry operations.

Alternative Technology

The applicant already has a crushing and screening technology on site, this alternative showed to be cost effective and time efficient. At this stage crushing and screening on site is the only preferred alternative. It is recommended to the applicant to conduct a noise impact assessment during the EIA phase.

# 4.5.4 NO-GO ALTERNATIVE

The no-go alternative would entail not operating further from portion 24 to portion 25 of the farm and leaving the area at its natural state.

In accordance with the National Environmental Management Act No. 107 of 1998 (NEMA) Regulations, the no-go alternative is required to be investigated and assessed. The no-go alternative would mean that the quarry project is not undertaken and therefore the associated negative environmental and social impacts will not occur. This alternative will need to be weighed against the findings of the EIA as well as the potential socio-economic benefits that may result from the project. The results of the assessment will be presented in the EIA report.

# 5. PUBLIC PARTICIPATION PROCESS (PPP)

# 5.1 OBJECTIVES OF PUBLIC PARTICIPATION

 Provides Interested and Affected parties (I&APs) with an opportunity to voice their support, concerns and questions regarding the project, application or decision;

Provides an opportunity for I&APs, Environmental Assessment Practitioners (EAPs) and the Competent Authority (CA) to obtain clear, accurate and understandable information about the environmental, social and economic impacts of the proposed activity or implications of a decision;

 Provides I&APs with the opportunity of suggesting ways of reducing or mitigating negative impacts of an activity and for enhancing positive impacts



 Enables the applicant to incorporate the needs, preferences and values of affected parties into the application;

### **5.2 LEGISLATION**

The PPP must comply with the several important sets of legislations that require public participation as part of an application for authorization or approval; namely:

- The Mineral and Petroleum Resources Development Act (Act No. 28 of 2002 MPRDA);
- The National Environmental Management Act (Act No. 107 of 1998 NEMA);

The National Environmental Management Waste Act (NEM: WA, Act No. 59 of 2008);
 and

The National Water Act (NWA, Act No. 36. Of 1998). Adherence to the requirements of the above-mentioned Acts will allow for an Integrated PPP to be conducted, and in so doing, satisfying the requirement for public participation referenced in the Acts. The details of the Integrated PPP are provided below.

## **5.3 IDENTIFICATION OF I& APS**

Potential Interested and Affected Parties (IAPs) were identified based on the definition of IAPs in the EIA regulations. The IAP database includes authorities and surrounding landowners. The public participation process and consultation is and will be in adherence to the relevant legislation. People and/or organizations were registered as IAPs for the project if they:

- > Are landowners or tenants adjacent to the proposed study area of the quarry project.
- > Are the local municipality/ ward councilors of the area,
- Are an authority or organ of state having jurisdiction in respect of any aspect of the activity,
- Responded to the Background Information Document (BID), press advertisements and site posters,
- > Attended a public meeting.
- The PPP commenced on the 22<sup>nd</sup> of October 2019 and the public meeting was held on the 3<sup>rd</sup> of November 2019 with an initial notification and call to register for a period of 30 days, ending on the 20<sup>th</sup> of November 2019.



The notification procedure included (Appendix 3-5):

- Newspaper advertisement: published in Mpumalanga News on the 17<sup>th</sup> of October 2019,
- Site Notices: erected at prominent points of the area on the 30<sup>th</sup> of October 2019.
- Registered emails were composed and sent to the identified authorities, adjacent landowners, ward councilors and I&APs that have registered thus far.

## 5.4 Notification of Authorities

- Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs
- Mpumalanga Department of Mineral Resources (DMR)
- Mpumalanga Department of Water & Sanitation (DWS)-
  - Inkomati-Usuthu Catchment Management Agency
- Mpumalanga Tourism and Parks Agency.

In addition to the authorities listed above, the BID was circulated to the following commenting authorities:

- Mbombela Local Municipality Draft report will be sent for review and comment.
- Mpumalanga Department of Economic Development and Tourism
- Mpumalanga Department of Labour
  - South African biodiversity planning- Draft report will be sent for review and comment.
- Department of Mpumalanga Tourism and Parks Agency
  - Inkomati-Usuthu Catchment Management Agency- Draft report will be sent for review and comment.
- Transnet
- Eskom
- Copies and proof of distribution of the authority notifications are contained in Appendix

# 5.4 BACKGROUND INFORMATION DOCUMENT

Included in the I&AP notification letters, facsimiles, and e-mail is a Background Information Document (BID).

The BID includes the following information:

- Locality map and description
- Project description and background



- Legal framework
- Explanation of the Scoping and EIA Process to be followed
- Provide opportunity to get involve and comment on the proposed project
- Notifications to IAPs were provided in English

BIDs were also circulated via email to relevant authorities and other IAPs during the First round of PPP. The BIDs containing comment forms were also provided at the first Public Meeting held on the 3<sup>rd</sup> of November 2019 at Nutting House Lodge, Mbombela, Mpumalanga.

### 5.5 NOTIFICATION OF AVAILABILITY OF SCOPING REPORT

All registered I&APs and stakeholders have been notified via email and newspaper of the availability of the Draft Scoping Report for review for a period of 30 days from the 21st of November 2019. This report will be available at the following locations:

Table 0-1: Location allocated for getting hold of the report.

Place	Address
Nelspruit Public Library	45 Smora Machel Drive, Nelspruit, 1201
Upon request from the EAP's contact details	Senior: Kenneth Singo Cell No: 078 2727 839 / 072 0816 682 / 013 692 0041 Email: <u>kenneth@singoconsulting.co.za</u>
	Junior: Siyabonga Mashigo Cell No: 079 177 8410 / 013 692 0041 Email: <u>siyabonga@singoconsulting.co.za</u>
	Junior2: Nokuthula Nkosi Cell No: 081 386 8589/013 692 0041 Email: <u>nokuthula@singoconsulting.co.za</u>



Table 0-2: List of Identified I & APs.

Names of I&AP's	Organization
Mr. D Mdluli	Landowner/Applicant
Mr. E Jele Mr. S Mbuyane	City of Mbombela
Mr. R Luyt	Department of Agriculture, Rural Development, Land & Environment Affairs
Mr. S Nevondo Mr. Mbulaheni Mrs. N Mandlazi	Department of Water and Sanitation
Mrs. Thandi	Inkomati Usuthu Catchment Management Area
Ms. L Shawa	Department of Labour
Mrs. P Lindoor, Mr. L Masuku, Mrs. N Nkambule Mr. V Khoza	Commission on Restitution of Land Rights
Mr. F Krige Mr. K Kumbele Mrs. M Lotter	Mpumalanga Tourism and Parks Agency/Biodiversity
Mr. M Wayleaves	Eskom
Mr. J Oliver Mrs. R Barkhuizen	Sanral
Mr. Y Chabalala Mr. P Mnisi Ms. T Mavulwana	Transnet



Table 0-3: Summary of all the I&APs identified related to the proposed activity.

		Date comments received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
Landowner					
Mr. D Mdluli T: 082 972 4388 E: <u>skdftdomza@gmail.com</u>	x	05/03/2018	The landowner is the applicant. Refer to append	dix 2	Appendix 2
Organs of State (Governmental	depo	artments)			1
Mbombela Local Municipality	X	21/08/2019		Appendix 3	
Mr. D Mabuza (General Manager Towns Planning & Development)	x	28/08/2019	Mr. Mabuza forwarded the email to the LEDs to assist.		
dumisani.mabuza@mbombela .gov.za Mr. E Jele (LED) Ernest.Jele@mbombela.gov.za Mr. S Mbuyane (LED)	x	29/08/2019	Mr. Mbuyane reverted with a date to engage (03/09/2019).	Acknowledgement email was sent agreeing to the proposed date.	
<u>Sthembiso.Mbuyane@mbomb</u> <u>ela.gov.za</u>	x	03/09/2019	A meeting was held with the LED officials to dis falling within the proposed mining right area we to be employed at the operation and how discussed the way forward was that a follow up minutes.	Appendix 3	



in this column. Mark with an X where those who must be	List the names of persons consulted comments in this column. Mark with an X received		Issues raised EAPs response to issues as mandated by the	applicant Section and paragraph reference In this report w issues and/or responses were incorporated	
	x x	16/10/2019 13/11/2019	An invitation was sent stating that the m encompass all aspects of the project and w on 03/11/2019 at Nutting House in Nelspruit. Junior Consultant, Nokuthula Nkosi, called M	ras to be held r. Mbuyane to	3
			ask for an update regarding the Social &La Mbuyane stated that he had handed over to was on leave until Monday.		
Msogwaba Councillors Themba T: 071 191 8546 Mrs. Sikonela T: 072 370 9343 E: limdiwesikonela@gmail.com	X	05/11/2019	Junior Consultant, Nokuthula Nkosi, called getting his contact details at the community on the 3 <sup>rd</sup> of November 2019 at Nutting Hous so that he can share his email address so that him information regarding the proposed proj that his email was not working. We also contacts of the 2 <sup>nd</sup> councillor within the project we may consult her and share the informati also share with him, to which we did not get c	meeting held e, Mbombela, we may send ect. He stated asked for the ct area so that on with her to	3
		05/11/2019	Junior Consultant, Nokuthula Nkosi, called who stated that he cannot communicate wi and would call back, which he did not.		
		08/11/2019	Junior consultant, Nokuthula Nkosi, called remind him to share the contact details councillor so that we may use her email ad them both informed regarding the application	of the other dress to keep	
		13/11/2019	Junior Consultant, Nokuthula Nkosi, called T for the 2 <sup>nd</sup> councillors' details. He shared he we called her explaining what had ha apologised for the delay. A consultation er	r number and ppened and	



		Date comments received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
				sent to Mrs. Sikonela with the BID and Regulation Map as attachments.	
Department of Agriculture, Rural Development, Land & Environment Affairs agriculture, rural development, land & environmental affairs WELVIELCOF SOUTH MACA Mrs. R Luyt rluyt@mpg.gov.za 013 766 6983	X	16/10/2019	Please submit a hard copy of the draft Scoping and EIAR Reports directly to the relevant District office during the public commenting period.	A consultation email with BID and Regulation Map as attachments, was sent to the department. An acknowledgement email was sent.	Appendix 3
South African Heritage Resource Agency	X				Appendix 3
Department of Water and Sanitation Water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA Mr. S Nevondo nevondoS@dws.gov.za	x	15/10/2019 16/10/2019	Mr. Nevondo asked whether the report for this project sent to Department for comments Mr. Nevondo sent an acknowledgement	A consultation email with BID and Regulation Map as attachments, was sent to the department. It was explained that the BID was sent to notify the department of the proposed project. The hardcopy of the report will be couriered to their offices at the beginning of the review period.	Appendix 3
Mr.Mbulaheni <u>mbulaheni@dws.gov.za</u> Mrs. N Mandlazi	x	17/10/2019	email. Mrs. Mandlazi clarified that the project fell under the Inkomati Usuthu Water Management Area.	An acknowledgement email was sent to Mrs. Mandlazi and a request was made for a document or a map that illustrates the different water management areas so that in	



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<b>I&amp;APs</b> List the names of persons consu in this column. Mark with an X where those who must be consulted were in fact consulte		Date comments received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
<u>MandlaziN@dws.gov.za</u>				future, effective consultation can take place from the onset.	
Inkomati Usuthu Catchment Management Area Water for all in Inkomati-Usuthu Mrs. T Dzhangi dzhangit@iucma.co.za	x x	17/10/2019 18/10/2019	Mrs. Dzhangi returned a comment form requesting to be registered as an I&AP stating that she has an interest in the water resources that will be impacted by the project.	A consultation email with BID and Regulation Map as attachments was sent to Thandi. An acknowledgement email was sent to Mrs. Dzhangi and a note was made that reports will be made available during the review period.	Appendix 3
Department of Labour Ibour Department: Labour REPUBLIC OF SOUTH AFRICA Ms. L Shawa Iydia.shawa@labour.gov.za 013 753 2844	x x x	15/10/2019 22/10/2019 29/10/2019		<ul> <li>A consultation email with BID and Regulation Map as attachments, was sent to Ms. Shawa.</li> <li>A reminder email was sent to Ms. Shawa to participate and revert with any concerns/comments that the department might have</li> <li>An email reminding Lydia to revert with any comments was sent.</li> </ul>	Appendix 3
	x	13/11/2019		An email requesting Lydia to send any comments the department might have regarding the project was sent. A request was made asking that if she is not the correct person to consult, she should kindly refer us to the correct person so that we may consult effectively.	



I&APs     Date       List the names of persons consulted in this column. Mark with an X where those who must be consulted were in fact consulted.     received		comments	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
Commission on Restitution of Land Rights	x	01/10/2019 17/10/2019		A land enquiry email was sent requesting assistance in finding any possible land claims on portion 24 & 25 of the Farm Broedershoek 129 JU. A regulation map was attached for reference. A reminder email was sent requesting assistance from the department.	Appendix 3
Mrs. P Lindoor Mr. L Masuku Lazarus.Masuku@drdlr.gov.za Mrs. N Nkambule ntokozo.nkambule@drdlr.gov.z Q	x	22/10/2019 23/10/2019	A letter stating that there are new claims lodged but they will not be processed until it finished claims lodged by 31/12/1998 or until parliament passes a new law providing for reopening of lodgement claims.	A reminder email was sent requesting assistance in identifying possible claimants on the project area for consultation purposes.	
	x	29/10/2019		An acknowledgement email was sent.	
Mpumalanga Tourism and Parks Agency	X	15/10/2019		An email requesting biodiversity data and information on the proposed project area was requested from Mrs. Lotter.	
Frans.Krige@mtpa.co.za Ms. M Lotter (Biodiversity)					



List the names of persons consulted in this column. Mark with an X where those who must be consulted were in fact consulted.		Date comments received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
<u>Mervyn@intekom.co.za</u> / <u>mervyn.lotter@mtpa.co.za</u>					
Eskom	X	15/10/2019		A consultation email with BID and Regulation Map as attachments, was sent to Mr. Wayleaves.	Appendix 3
Eskom	x	22/10/2019		A reminder email was sent to Mr. Wayleaves to participate and revert with any concerns/comments that the department might have	
Mr. M Wayleaves wayleavesmou@eskom.co.za	x	28/10/2019	A comment form stating that the applicant read and adhere to the terms and conditions set out. The applicant is required to sign the agreement and send it back to the department.	Acknowledge of the instructions set out on the agreement form was sent to the department.	
	x	14/11/2019		The applicant signed/completed the agreement form and it was sent back to the department as per request.	Appendix 3
SANRAL	x	15/10/2019		A consultation email with BID and Regulation Map as	Appendix 3
SANRAL Mr. J Oliver	x	16/10/2019	The consultation email sent to the department was acknowledged. A contact of the person to contact should we not receive a response	attachments, was sent to the department. An acknowledgement email was sent.	



<b>I&amp;APs</b> List the names of persons consu in this column. Mark with an X where those who must be consulted were in fact consulted		Date comments received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference In this report where issues and/or responses were incorporated
<u>oliverj@nra.co.za</u> Mrs. R Barkhuizen <u>nrstat@nra.co.za</u> / <u>nrstatutory@nra.co.za</u>		22/10/2019	within the timeframes(60 days) given to us by the department were shared (Jan Oliver who will be dealing with it and will convert back to you. He can be contacted on (012) 426-6200 / 6242). A letter was received stating that SANRAL has		
			no comments/objections regarding the project as no routes are affected.	An acknowledgement email was sent stating that the departments comments were well received and noted.	
	X	15/10/2019 22/10/2019		A consultation email with BID and Regulation Map as attachments, was sent to the department. A reminder email was sent requesting the department to	Appendix 3
		24/10/2019	Ms. Mavulwna as well as Mr. Chabalala	participate and revert with any concerns/comments that the department might have	
Mr. Y Chabalala Yuza.Chabalala@transnet.net	X	24/10/2017	forwarded the email to Mr. Mnisi as the project is within his operating area.		
Ms. T Mavulwana <u>Ishilidzi.Mavulwana@Transnet.</u> <u>net</u>	x	29/10/2019		An email reminding Mr. Mnisi to revert with ant comments or concerns was sent.	
Philix Mnisi Philix.Mnisi@transnet.net	x	13/11/2019		An email requesting that Mr. Mnisi revert with any comments/concerns regarding the application was sent. A remainder was made that consultation ends on the 22 <sup>nd</sup> of November 2019.	
Other Interested and Affected I	Parties	5			
Community Meeting	X	03/11/2019	A community meeting was held at the Nutting	House, Mbombela with community member, the councillor,	Appendix 3



I&APsDateList the names of persons consultedcommentsin this column. Mark with an Xreceivedwhere those who must beconsulted were in fact consulted.			Issues raised	EAPs response to issues as mandated by the applicant					
	the applicant and the consultants. The meeting objective was to give interested and affected parties a brief description of the project and the progress of the application. It was explained that the mine is operational under a 2-year permit which would expire in December hence the application for a 30 years mining right. The community was also interested in the social ad labour plan for the operation. It was emphasised that employment going forward should be fair and that the affected community should be the priority when hiring as this was not the case with the mining permit.								
Mr. Motha T: 079 212 8130	x	03/11/2019	We know that the mine is operating but the workers are not from the community.						
Mr. M Ntimane T: 066 469 7320 E: amosmagic8@gmail.com	X	03/11/2019	Please correct the name Lehawu on the map. The area is Msogwaba and Lehawu is a smaller section of Msogwaba. The mine is not for Lehawu but Msogwaba so please correct your map.	The map was amended to be more accurate and appropriate as per request.	Appendix 3				
Mr. W Mbuyane T: 060 953 2183	x	03/11/2019	No Comments.	Appendix 3					
Mr. T Ngwenya T: 071 333 8370	x	03/11/2019	No Comments.	Consultant registered I&AP.	Appendix 3				



# 7. ENVIRONMENTAL ATTRIBUTES AND DESCRIPTION OF THE BASELINE RECEIVING ENVIRONMENT

# 7.1 Regional Geology

The entire part of the Nelspruit is underlain by rocks belonging to the Nelspruit's Granite Suite occurring in a form of a batholith. The suite expands to distances of about 80km north of the Barberton Greenstone Belt, (Robb et al., 1983). Karoo and Transvaal Supergroup rocks rests on this suite in the Western and eastern sides.

According to Visser 1956, the Nelspruit's granite suite is considered the oldest magnetite-series granite of about 3105 Ma of age. The term Batholith can be described as a large emplacement of igneous plutonic rock that moulds from cooled or cooling magma sitting deep in the earth's crust. Slow cooling of magma associated with this give rise to well-formed and coarse-grained porphyritic granodiorites. The Nelspruit Suite has a wide variety of textures. This ranges from gneiss to porphyritic granite and two plutons.

Of all these different textures, the common one is porphyritic granitoid which is coarse-grained and compositionally made up of granodiorite or quartz monzonite. Second being tonalitic which are grey to pink and composed of quartz, plagioclase, microcline and biotite (Robb et al., 2006). The Nelspruit Suite also contains lesser occurrences of gneiss (which is granodioric in composition) and porphyritic granite (Robb, 1978, 1979, 1994; Robb et al., 1983, in Robb et al, 2006:66). Johnson et al believes that there is also a minor component of this very batholith occurring as intrusions, namely Hebron and Berlin Plutons.



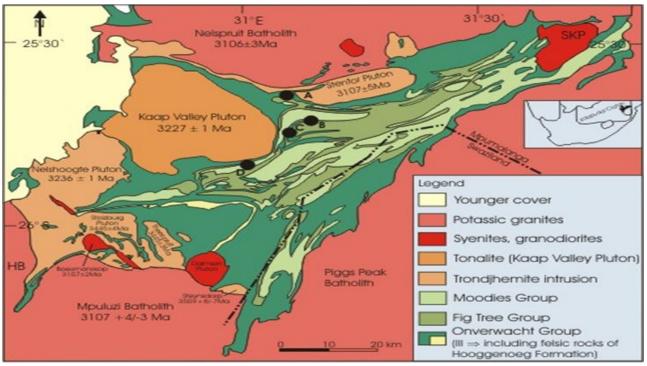


Figure 11: Generalized geological setting of Mbombela.

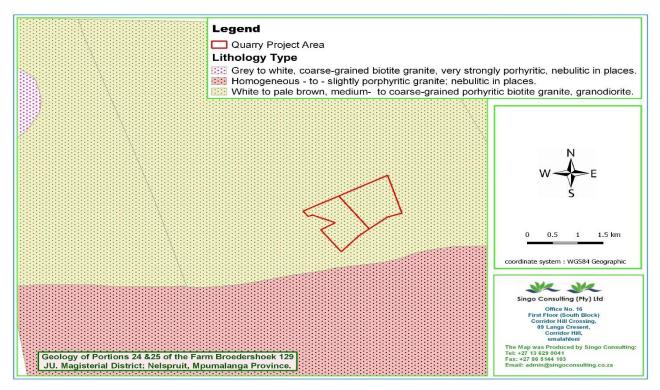


Figure 12: Shows the geological formation where the proposed area is situated.



## 7.2 Local Geology.

From both field and desktop studies, the quarry area is covered by granite, gneiss and granodiorite, see figure 6 below. These rocks are quite similar; however, their different terminologies are outlined below. This is according to the digital geology.com information centre.

Granite is a large-grained intrusive igneous rock. It is made up of quartz, feldspar and mica minerals, which makes it appear lighter in colour, (Myers, 1997).

Gneiss is a coarse-grained metamorphic rock (rocks that have been altered either by heat, pressure, and chemical processes or by both) from modification of granite rocks. Characteristically it can be banded or layered or massive. Large crystals in gneiss are composed of quartz, plagioclase, mica. Some gneisses (migmatites) that have undergone intensive metamorphism and deformation take on the appearance of swirled toothpaste.

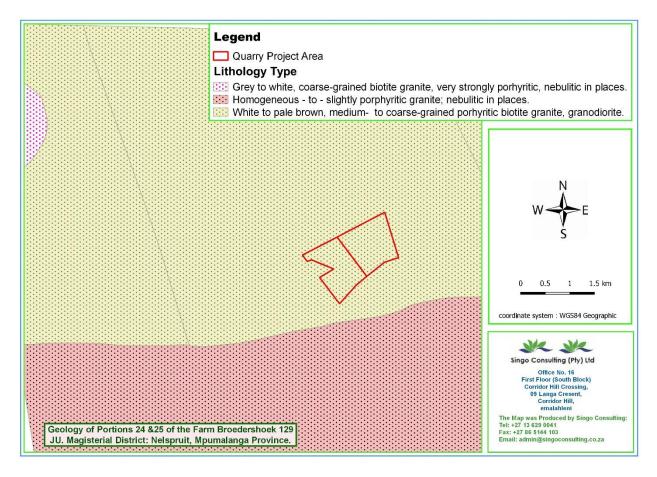


Figure 13: Shows the type of geology occurring where the proposed area is situated.



> Type of soil associated with the local geology.

The area of interest is characterized by shallow soils. Shallow soils have less than 50 cm depth of solum. These types of soils consist of a thin A horizon, they are also highly erodible.

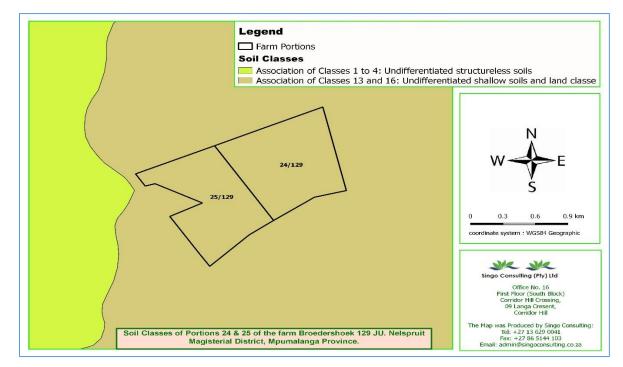


Figure 14:Shows the type of soils associated with the local geology of the proposed area.





Figure 15:Shows the type of soil observed during the site assessment of the proposed area.

### 7.3 Climate

Mbombela features a humid subtropical climate (Köppen Cwa) with mild winters and hot summers. Due to the altitude, summers are not as hot as one might expect. Summers are hot and somewhat humid, complete with high precipitation. Winters in the city are dry, with relatively warm temperatures during the day and chilly temperatures at night.

Climate data for Mbombela													
Month	Jan	Feb	Mar	Apr	Ma y	Jun	Jul	Au g	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	40 (104 )	39 (102 )	38 (100 )	36 (97)	35 (95)	32 (90)	32 (90)	35 (95)	38 (100 )	40 (104 )	38 (100 )	38 (100 )	40 (104)
Average high °C (°F)	29 (84)	29 (84)	28 (82)	27 (81)	25 (77)	23 (73)	23 (73)	25 (77)	27 (81)	27 (81)	27 (81)	28 (82)	27 (81)



Average	19	19	18	14	10	6	6	9	12	14	17	18	13
low °C (°F)	(66)	(66)	(64)	(57)	(50)	(43)	(43)	(48)	(54)	(57)	(63)	(64)	(55)
Record low	11	11	10	5	2	-2	-1	-1	2	5	10	10	-2
°C (°F)	(52)	(52)	(50)	(41)	(36)	(28)	(30)	(30)	(36)	(41)	(50)	(50)	(28)
Average precipitatio n mm (inches)	127 (5.0)	108 (4.3)	90 (3.5)	51 (2.0 )	15 (0.6 )	9 (0.4 )	10 (0.4 )	10 (0.4 )	26 (1.0)	75 (3.0)	115 (4.5)	131 (5.2)	767 (30.2 )
Average precipitatio n days	14	12	12	7	4	2	2	3	5	11	15	14	100

Mbombela normally receives about 667 mm of rain per year with most rainfall occurring during summer. It receives the lowest rainfall (2mm) in June and the highest (119mm) in December.

# 7.4 TOPOGRAPHY

The proposed area is characterized by steep slopes. As observed on figure 16 below, the contour lines are closely packed, this means the area is mountainous. The topography of the area ranges from the height of 925 and 695m.



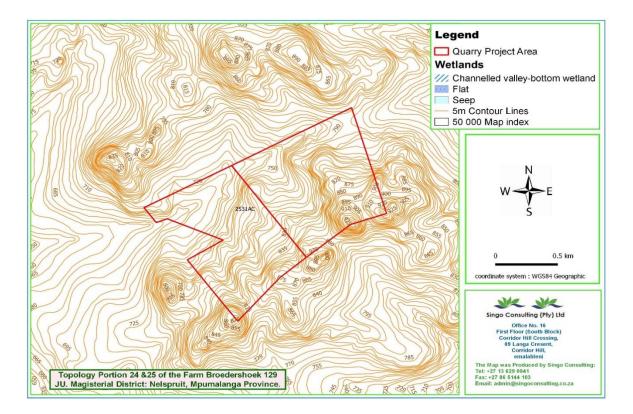


Figure 16: Shows the topology of the area of interest.

#### 7.5 SURFACE HYDROLOGY AND GROUND WATER

Hydro Study

The area falls entirely on the Inkomati-Usuthu Water Management Area. According to the primary phase study that was done by Tale Enviro Consulting (Pty) Ltd, the mining right application is basically situated in a dry area, within the radius of 2km there are no observable significant waterbodies, except for 3 seeps and depressions. However, a water sample was taken at a wetland on site and from the borehole on site. This is a granite quarry project, no contaminant flow of water is expected to flow from the quarry to the water bodies, as these water bodies are far. Besides that, the quarry will not contaminate groundwater because no sulphate ores that could possibly cause the formation of acid mine drainage will result during this project.



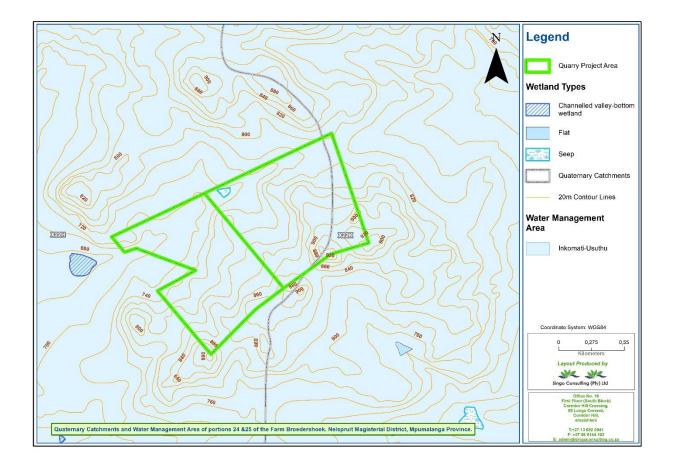


Figure 17: Shows the Quaternary Catchments and Water Management Areas of the proposed farm.



# 7.5 VEGETATION AND BIODEVERSITY

### Vegetation

According to the GIS desktop studies, the entire area of interest is sitting on the Sour Lowveld Bushveld.



Figure 18: Shows the type of vegetation in the proposed area.

### 7.6 SOCIAL ASPECTS

The study area falls within the Mbombela Local Municipality (MLM) under Ehlanzeni District (GSDM), Mpumalanga province. The demographics, households, economics, education and service delivery aspects for MLM are discussed below to provide a background of the area and initial insights for the socio-economic assessment that will be done and be presented in the EIA phase.



# 7.6.1 LAND TENURE

Land tenure is the legal regime in which land is owned by an individual, who is said to "hold" the land. It determines who can use land, for how long and under what conditions. Tenure may be based both on official laws and policies, and on informal customs. In other words, land tenure system implies a system according to which land is held by an individual or the actual tiller of the land. It determines the owners' rights and responsibilities in connection with their holding.

The proposed activity is located on the property that is owned by the applicant (Mr. Dominic Mdluli).

## 7.6.2 Demographics

According to the Mbombela IDP for 2019-2020, demography is the statistical study of human populations. It encompasses the study of the size, structure, and distribution of these populations. Population dynamics constitute a key feature in development planning because one needs to be aware of the composition of the population before embarking on a process of improving the lives of the people making up the population. All spheres of government are entrusted with providing services to the people and thereby improving the livelihood of these people. In doing so, a critical analysis of the structure of the population is necessary. It is necessary to know whether population is predominantly young or old. This helps government in allocating its resources effectively as people of different age groups may at times require different services. Not only is the different age group important but also other elements such as the size, fertility, mortality, race, health and wellbeing are equally important.

## 7.6.2.1 Age and Sex Structure

Age and sex are the most basic characteristics of a population. Every population has a different age and sex composition. The number and proportion of males and females in each age group have considerable impact on the population's social and economic situation, both present and future (Mbombela IDP, 2019).

Recent studies/surveys show that the municipal area has a relatively young population. This is indicated by the 37.3% compared with the 32.2% of children between the ages of 0-14 as well as the mere 3.9% of the elderly people. It is however evident that there was a decline in the percentage contribution to the total population of the youth, from **40%** in 2011 to **37.3%** in 2016. An increase in the percentage contribution to the total population of the total population of children aged 0-14 was however witnessed, from **29.5%** in 2011 to **32.2%** in 2016. This presents a need for the provision of



early childhood development centres, education, sports development facilities. This was also confirmed during the IDP community consultative meetings where the majority of wards raised the need for early childhood centres, schools and sport facilities.

The economically active group presents the youth together with adults above 34 years. This component indicates that the biggest chunk of the population is able to work. This is a positive sign especially towards the economic growth of the municipality. The downside of it is that it has declined from 66.2% in 2011 to 63.8 in 2016. This could either mean that people are losing hope to seek jobs or that many people die under these age groups.

Description		Years		
		2001	2011	2016
Age	0-14	33.81%	29.58%	32.20%
	15-34 (Youth)	39,03%	40.05%	37.30%
	15-64 (Economically active)	62.25%	66.20%	63.80%
	65+ (Elderly)	3.93%	4.15%	3.90%
Gender	Female	51.75%	51.08%	51%
	Male	48.24%	48.91%	49%
Sex ratio		93	96	98

Source: Stats SA Census Surveys 2001, 2011 and CS 2016

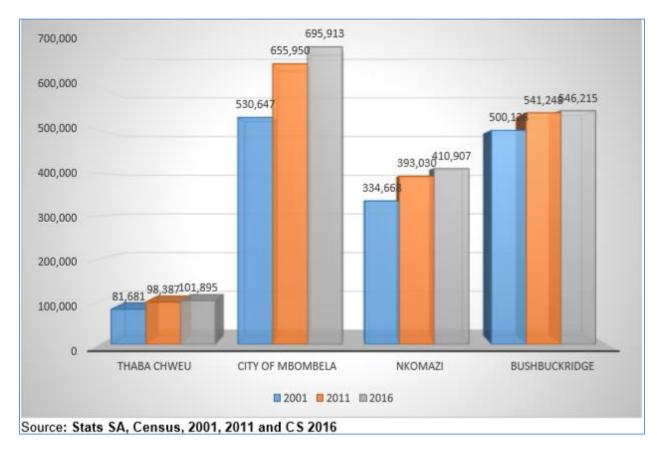
Figure 19: Shows a table from the Mbombela 2019-2020 IDP, stats for a period of three years.

# 7.6.2.2 Population Pyramid

According to Community Survey 2016 results which is based on the 2016 municipal boundaries, the Mbombela municipal area had a total population of 695 913. This population constitutes 39.6% of the entire population of Ehlanzeni District. Hence, the municipal area of Mbombela is the most populous within the Ehlanzeni District (Community Survey, 2016). With regards to the



municipal area's population trends over the past 15 years, the Municipality has been one of the fastest growing municipalities in the district (Mbombela IDP,2019).



#### Figure 20: Shows the population distribution of Mbombela (Source Mbombela IDP).

The Mbombela municipal area has recorded annual population growth rate of 2.3% per annum between 2001 and 2011 (Stats SA, 2011). Between 2011 and 2016, however, an annual population growth rate of 1.2% was observed within the municipal area. These trends can be attributed to the Municipality's economic potential to attract people from other countries, provinces and municipalities (Mbombela IDP, 2019).

### 7.6.2.3 Population groups

The Community Survey 2016 conducted by Statistics South Africa (StatsSA) indicates that the municipality is dominated by people of African (Black) descent most of whom speak the SiSwati language. The total contribution of the African group has increased between 2011 and 2016, from 89.1% to 95.9%. White people are the second dominant population group with 2.6% contribution to the total population whilst the Asian group remained the least contributing group with 0.4%. This



information is indicated on the table below and is based on the 2016 municipal boundaries (Mbombela IDP, 2019).

RACE/POPULATION GROUP	2016		
	NUMBER OF PEOPLE	PERCENTAGE (%)	
Blacks (African)	667 827	95.96%	
Whites	18 695	2.69%	
Coloureds	6 535	0.94%	
Asian	2 855	0.41%	

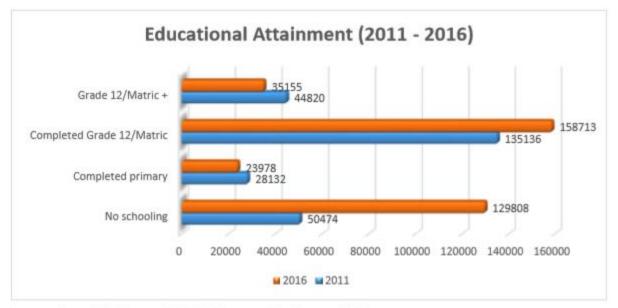
Source: Stats SA, Community Survey 2016

Figure 21: Shows population group observed during the 2016 Community survey by Stats SA. (Source: Mbombela IDP).

#### 7.6.2.4 Educational attainment

In terms of the latest StatsSA Community Survey 2016, there was a significant improvement in the number of persons who have completed their Grade 12/Matric within the Mbombela municipal area. In 2011, there were 135 136 people who completed their Grade 12 and this increased to 158 713 in 2016, recording a 17% increase. It is nonetheless imperative to note that during the same period, a dramatic increase was recorded in the number of people who have not been to school coupled with a decrease in the number of people with post matric qualifications. The results thereof indicate an increase by 79 334 in the number of people with no schooling and a 27.4% decline in the number of people in possession of post matric qualifications as depicted in the figure below.





Source: Stats SA Census 2011 & Community Survey 2016

Figure 22: Shows the stats of educational attainment within the Mbombela region which includes the area where the proposed development is located.

#### 7.6.3 Socio Economic Analysis

#### 7.6.3.1 Poverty and Inequality

According to the Mbombela IDP 2019-2020, the municipal area of Mbombela ranked the seventh amongst other local municipalities in the Province in terms of lower bound poverty rate and had 295 186 people living in lower bound poverty line. The City of Mbombela has in the past devised various means to curb poverty within the municipal area such as job creation, support for small agricultural businesses, and implementation of Food for Waste programmes. However, there is a need to intensify the poverty alleviation programmes by the City of Mbombela together with other external stakeholders. The municipality has approved an indigent policy and register to assist poor households who cannot afford to pay for basic services.

## 7.6.3.2 Sectors of Employment and their Contribution to the Regional Economy

The municipality comprises number of sectors that contribute to the regional economy and providing employment to the people of Mbombela and surrounding areas.



The commonly used method to measure economic growth is the use of gross domestic product (GDP). The following table depicts the rate of economic contribution by City of Mbombela municipal area to the economy of the Mpumalanga Province as well as trends on their respective local economies.

Rank	Local Municipal Area	% contribution to Mpumalanga economy 2017	Average annual economic growth 1996-2017	Average annual economic growth 2014-2017	Average annual projected growth 2017-2022
1.	City of Mbombela	23.0%	4.9%	1.5%	1.7%
2.	Emalahleni	17.3%	1.4%	-0.8%	0.8%
3.	Steve Tswhete	13.7%	2.7%	0.2%	1.1%
4.	Govan Mbeki	13.4%	1.2%	0.2%	2.1%
5.	Msukaligwa	4.3%	3.0%	0.5%	1.3%
6.	Bushbuckridge	4.1%	1.6%	1.3%	1.3%
7.	Thaba Chweu	3.9%	3.9%	3.9%	1.3%
8.	Nkomazi	3.2%	3.0%	1.3%	1.6%
9.	Lekwa	3.0%	1.2%	-0.3%	1.2%
10.	Mkhondo	2.7%	4.0%	2.4%	1.7%
11.	Chief Albert Luthuli	2.4%	3.3%	3.1%	1.1%
12.	Victor Khanye	2.3%	3.5%	2.2%	1.6%
13.	Thembisile Hani	2.1%	2.6%	2.1%	1.5%
14.	Dr JS Moroka	1.8%	1.0%	0.8&	1.3%
15.	Emakhazeni	1.2%	3.0%	3.3%	1.1%
16.	Dr Pixley Ka Isaka Seme	0.9%	2.5%	0.2%	1.3%
17.	Dipaleseng	0.7%	3.0%	-0.3%	1.0%

Source: Socio-Economic Review and Outlook (SERO) Report 2018

# Figure 23:Shows the economic contribution and growth of the City of Mbombela where the proposed area is situated. (Source: Mbombela IDP, 2019).

It is clear that the Mbombela municipal area was the highest contributor to the Province's economy with 23.0% during 2017. This is due to the fact that the municipality is the capital city of the province which makes it possible to attract huge investments and has major economic activities ranging from trade, agriculture, mining and tourism. From 2014 until 2017, the economy of the Mbombela municipal area has been growing by 1.5% annually. It is anticipated that in the next five years (2017 - 2022), its annual economic growth rate will average 1.7% according to the Mpumalanga Provincial Department of Finance, Economic Development and Tourism.

## 7.6.3.3 Migration

Human migration is described as a movement by humans from one area to another, sometimes over long distances or in large groups. This movement includes humans moving from province to



province, within a province and from one country to another on the basis of jobs and better life provision for their families.

#### 7.6.3.4 Employment

Employment is one of the indicators that could tell of the municipality's ability to generate revenue. This is because when people are employed, they are likely to be able to pay for the services.

	Age	City of Mbombela			
		Years	%	Ye	ar
Unemployment rate (strict definition)	General (15-65 years)			20	16
		2011	28.0	Male	Female
		2016	24.8	22.7	27.1

Figure 24: Shows the summarized table of unemployment rate in the Mbombela city in the year 2011-2016.

It can be deduced that unemployment within the Mbombela municipal area has declined by 3.2% between 2011 and 2017. The unemployment rate (strict definition) thus stood at 24.8% during 2017 from 28.0% in 2011. It can also be observed that females were the most affected by unemployment within the municipal area with 27.1% of unemployed females whilst male unemployment rate stood at 22.7% (Mbombela IDP, 2019).

#### 7.6.3.5 Household Income

According to the census, the number of households without an income is more as compared to other categories.

## 7.7 Service delivery

The table below depicts a summary of the status quo on household access to basic service delivery from 2001 until 2016.



BASIC SERVICE DELIVERY	STATISTICAL RESULTS		
INDICATORS	2001	2011	2016
Number of households with connection	109 539	144 517	161 931
to piped (tap) water: on site & off site			
Number of households with access to	39 079	67 381	74 171
basic sanitation (Water borne toilet,			
sceptic/chemical toilets)			
Number of households with access to	89 453	160 871	190 065
electricity			
Number of households with weekly	39 787	63 197	64 027
refuse removal by local authority			

Source: Stats SA Census Survey 2001, 2011 & CS 2016

## 7.7.1 Water and sanitation

The 2019-2020 IDP shows that the proportion of household with access to water at basic acceptable level has increased from 161 931 in 2016 to 167 824 in 2019, showing a 2.9% increase. The provision of access to basic sanitation, including VIP and non-VIP pit latrines, has also seen an increase from 117 925 in 2016 to 118 325 in 2019, an increase by 400 or 0.2%. This was achieved through the implementation of water and sanitation programs which were funded internally (own revenue) and externally by provincial and national grant allocations (i.e. MIG, MSIG). Extension of access to basic sanitation particularly in rural areas relies heavily on the implementation of water infrastructure programs which must still be prioritised and expedited.

## 7.7.2 Electricity

Provision of electricity within the municipal area is one area where the Municipality has made considerable progress. Throughout the years, the Municipality together with Eskom and the National Department of Energy have rigorously implemented electrification projects to benefit communities in all the affected areas. However, it should be noted that the backlog that is still existing is as a result of the additional households within the municipal area thereby causing additional demand.



#### UNDERTAKING

The EAP herewith confirms

a) The correctness of the information provided in the reports

b) The inclusion of comments and inputs from stakeholders and I& APs;

c) The inclusion of inputs and recommendations from the specialist reports where relevant; and

**d)** That the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. Parties are correctly reflected herein.

-END-



APPENDICES:

APPENDIX 1: DMR CORRESPONDENCE

**APPENDIX 2: LANDOWNER LETTER AND CORRESPONDECE** 

APPENDIX 3: CONSULTATION REPORT (PROOF OF NOTIFICATION (FAX AND EMAIL); AND RESPONSES RECEIVED FROM STAKEHOLDERS).

APPENDIX 4: CURRICULUM VITAE

APPENDIX 5: PROOF OF PLACEMENT OF SITE NOTICES AND NEWSPAPER ADVERT

APPENDIX 6: BACKGROUND INFORMATION DOCUMENT (BID)

APPENDIX 7: SITE CONDITIONS (PICTURES)

**APPENDIX 8: PROOF OF DRAFT SUBMISSIONS** 



#### **APPENDIX 1: DMR CORRESPONDENCE**



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#### **APPENDIX 4: CURRICULUM VITAE**



## Appendix 5: PROOF OF PLACEMENT OF SITE NOTICES AND NEWSPAPER ADVERT



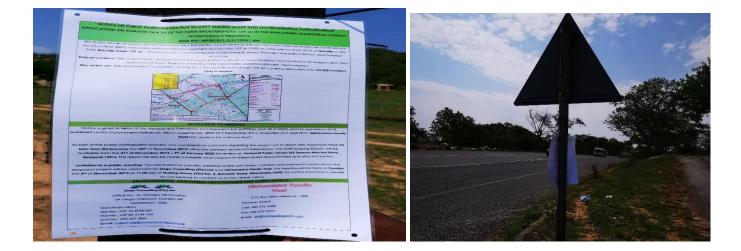


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#### Mpumalanga News:





## **APPENDIX 6: BACKGROUND INFORMATION DOCUMENT (BID)**



## Appendix7: SITE CONDITIONS (PICTURES)





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## **APPENDIX 8: PROOF OF DRAFT SUBMISSIONS**

