DRAFT BASIC ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

2022 Prospecting Right Application for alluvial diamonds on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, RE of the Farm Haddon 30 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Musina Magisterial District under Musina Local Municipality, Limpopo Province

Prepared by

Singo Consulting (Pty) Ltd

on behalf

Chipo Holdings (Pty) Ltd

For

mineral resources & energy
Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

DMRE REF: LP30/5/1/1/2/ (14639) PR

2022

mineral resources & energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

NAME OF APPLICANT:

Chipo Holdings (Pty) Ltd

CONTACT PERSON: Mr Thabo Sebeya

TEL NO : +27 13 692 3052

FAX NO: +27 86 514 4103

EMAIL: Thabo.sebeya@gmail.com

PHYSICAL ADDRESS: 21 Corridor Hill Crossing, 9 Langa Crescent, Witbank, 1035

FILE REFERENCE NUMBER SAMRAD: (DMRE REF: LP30/5/1/1/2/14639 PR)

IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorisation is issued".

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (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 16(3)(b) of the EIA Regulations, 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 conforms to the requirements of the EIA Regulations, any protocol or minimum information requirements relevant to the application as identified and gazetted by the Minister in a government notice or instruction or guidance provided by the competent authority to the submission of application.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or a permit are submitted in the exact format of 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 Authorisation 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 the 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.

OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

The objective of the basic assessment process is to, through a consultative process—

(a) determine the policy and legislative context within which the proposed activity is located and how the activity

complies with and responds to the policy and legislative context;

(b) identify the alternatives considered, including the activity, location, and technology alternatives;

(c) describe the need and desirability of the proposed alternatives;

(d) through the undertaking of an impact and risk assessment process, inclusive of cumulative impacts which focused

on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:

(i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the

sites and location identified through the life of the activity to—

(i) identify and motivate a preferred site, activity and technology alternative; (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and

(iii) identify residual risks that need to be managed and monitored.

EXECUTIVE SUMMARY

Chipo Holdings (Pty) Ltd applied a Prospecting Right subject to Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) and an application for an Environmental Authorisation in terms of Chapter 6 of GNR 982 enacted under the National Environmental Management Act (Act 107 of 1998) (NEMA) for alluvial diamond.

The proposed project will aim to ascertain if an economically viable mineral exists within the application area. In order to undertake the Proposed prospecting activities, Chipo Holdings (Pty) Ltd will require a Prospecting Right in terms of the Mineral and Petroleum Resources Development Act (MPRDA, Act No.28 of 2002) and obtain an Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA, Act No. 107 of 1998) which involves the submission of a Basic Assessment Report and Environmental Management Programme report (BAR & EMPr) to the Competent Authority.

Singo Consulting (Pty) Ltd has been appointed by Chipo Holdings (Pty) Ltd to manage the Environmental Authorisation process by conducting Environmental Impact Assessment, Public Participation and to compile the Basic Assessment Report and Environmental Management Programme report in support of the Prospecting Right application which in turn will be submitted to the Department of Mineral Resources and Energy for adjudication. This BAR & EMPr has been designed to meet the specifications as set out in the NEMA's 2014 EIA Regulations. Feedback received from stakeholders will form the basis of this BAR & EMPr.

Locality Description: The proposed Prospecting Right Application covers portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, a portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, encircling a total of 1 100 ha. The proposed project area is situated under the jurisdiction of the Musina Local Municipality under the Magisterial District of Musina. The project area is situated approximately 12 km north of Musina and approximately 14 km West of Malale Village. It is along the Limpopo River and can be accessed through Road D1942 (Malale Village) and N1 towards Zimbabwe(Beitbridge Border Post).

Proposed activities, Public Participation Process, Impact Assessment and Environmental Management Programme: The project will be for minimum days (5 years), whereby searching of the alluvial

diamond will be done through a sampling of alluvial gravel/sand along the Limpopo River through the use of a dredger, automatic handheld auger and Tractor-Loader-Backhoe (TLB). The set-up for sampling will be temporary and it will be moveable to access all planned sampling areas. The sampling sites are planned to be along the existing roads to avoid more impact or loss of vegetation. Therefore, no access roads will be constructed to the proposed sites as there are access roads used by the South African National Defence Force (SANDF), farmers and their employees.

Interested and Affected Parties (I&APs) including organs of state were notified and consulted regarding the project through the local newspaper, emails, BIDs, site notices, telephone and face-to-face consultation. Face-to-face consultation together with site assessment was done. However, access to other farms/portions was not granted. Representatives from the Tshirundu Royal council (Land Claimants) were consulted and are supporting the projects if the project is granted, more job opportunities will be created as Musina IDP shows a low employment rate. Singo Consulting (Pty) Ltd is engaging with the Department of Agriculture, Land Reform and Rural Development to get the contact details of all the land claimants to be consulted.

Impacts associated with the prospecting activities were identified and thoroughly assessed. Impacts include but are not limited to soil pollution, water pollution, visual impacts, and noise pollution. Mitigation measures for the identified impacts were developed.

Table of contents

LIST OF TABLES

LIST OF FIGURES

APPENDICES

ABBREVIATIONS AND ACRONYMS

CA	Competent Authority
CBA	Critical Biodiversity Area
DAFF	Department of Agriculture, Forestry and Fisheries
DEFF	Department of Environmental, Forestry and Fisheries
DMRE	Department of Mineral Resources & Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPR	Environmental Management Programme report
ESA	Ecological Support Area
ESM	Environmental Site Manager
GDP	Gross Domestic Product
GN	Government Notice
GIS	Geographic Information System
GPS	Global Positioning System
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
Mamsl	Meters above mean sea level
MHSA	Mine Health and Safety Act (Act No. 29 of 1996) [as amended]
MPRDA	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002) (as amended)
NEMA	National Environmental Management Act, 1998 (Act no 107 of 1998) (as amended)
NEMAQA	National Environmental Management: Air Quality Act (Act No. 39 of 2004) (as amended)
NEMBA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEMWA	National Environmental Management: Waste Act (Act No. 59 of 2008) (as amended)
NHRA	National Heritage Resource Act, 1999 (Act No. 25 of

	1999)
NVFFA	National Veld and Forest Fire Act (Act No. 101 of 1998)
NWA	National Water Act, 1998 (Act No. 36 of 1998) (as amended)
PM	Public Meeting
PPE	Personal Protective Equipment
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SANS	South African National Standards
SAWS	South African Weather Service
SDF	Spatial Development Framework
SLP	Social and Labour Plan
SM	Site Manager

PART A:

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1.1 Details of the Environmental Assessment Practitioner

Singo Consulting (Pty) Ltd was appointed by Chipo Holdings (Pty) Ltd as an independent EAP to compile this report. The contact details of the consultants who compiled and reviewed this report are as follows:

Table 1: Details of the compiler and reviewer EAP

EAP CONTACT DETAILS

Name	Tsedzuluso Mundalamo
Tel	013 692 0041
Cell	072 3626 124
Email	tsedzuluso@singoconsulting.co.za
Postal address	Office 870. 5 Balalaika Street Tasbet Park Ext 2. Witbank 1035

EAP REVIEWER

Name	Dr Kenneth Singo
Tel	013 692 0041
Cell	078 2727 839 / 072 0816 682
Email	kenneth@singoconsulting.co.za
Postal address	Office 870. 5 Balalaika Street Tasbet Park Ext 2. Witbank 1035

1.2 Qualifications of the EAP

a) The expertise of the EAP who prepared the Report

- **Mr Tsedzuluso Mundalamo**

University of the Witwatersrand, Master of Science in Geographical Information Systems and Remote Sensing

b) The expertise of the EAP who reviewed the Report

- **Dr Kenneth Singo**

University of Johannesburg, PhD (Applied Environmental Mineralogy & Geochemistry).

Summary of the appointed consulting firm

In the year 2008, Singo Consulting (Pty) Ltd was established as an Independent Consulting Company focused to create opportunities within the Mining and Environmental Industry. With time, Singo Consulting (Pty) Ltd has diversified its services, providing high-value Geological, Hydrological, Environmental, Cleaning and Rehabilitation specialized services to clients across a range of industries that are primarily natural resource-based.

The company aims to be a consulting firm that communicates sound environmental services solutions. Singo Consulting (Pty) Ltd takes pride in the fact that it holds no equity in any project which in turn permits it to offer clients objective support on crucial issues.

2 Locality of the overall Activity

Table 2: Location of the Overall Activity

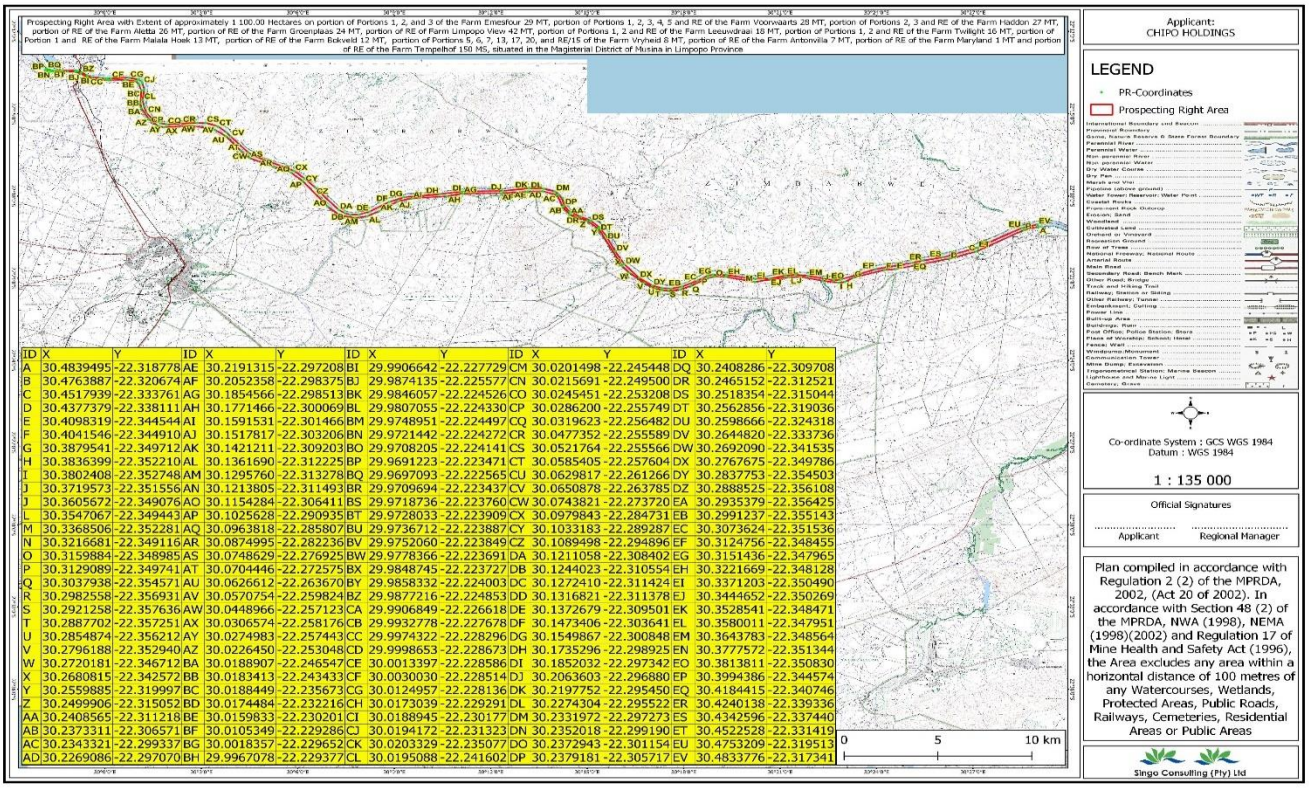
Farm Name:	Emesfour 29 MT, Voorwaarts 28 MT, Haddon 27 MT, Haddon 30 MT, Aletta 26 MT, Groenplaas 24 MT, Limpopo View 42 MT, Leeuwdraai 18 MT, Twilight 16 MT, Malala Hoek 13 MT, Bokveld 12 MT, Vryheid 8 MT, Antonvilla 7 MT, Maryland 1 MT and Tempelhof 150 MS
Farm Portion:	Portion of Portions 1, 2, and 3, portion of Portions 1, 2, 3, 4, 5 and RE, portion of Portions 2, 3 and RE, portion of RE, portion of RE, portion of RE, portion of Portions 1, 2 and RE, portion of Portions 1, 2 and RE, portion of Portion 1 and RE, portion of RE, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15, portion of RE, portion of RE and portion of RE
Application area (Ha):	1 100
Magisterial district:	Musina
Distance and direction from nearest town	approximately 12 km north of Musina
21 digit Surveyor General Code for the Farm	T0MS00000000015000000 T0MT00000000000100000 T0MT00000000000700000 T0MT00000000000800005 T0MT00000000000800006 T0MT00000000000800007 T0MT00000000000800013 T0MT00000000000800015 T0MT00000000000800017 T0MT00000000000800019 T0MT00000000000800020 T0MT00000000001200000 T0MT00000000001300000 T0MT00000000001300001 T0MT00000000001600000 T0MT00000000001600001

	T0MT00000000001600002 T0MT00000000001800000 T0MT00000000001800001 T0MT00000000001800002 T0MT00000000002400000 T0MT00000000002600000 T0MT00000000002700000 T0MT00000000002700002 T0MT00000000002700003 T0MT00000000002800000 T0MT00000000002800001 T0MT00000000002800002 T0MT00000000002800003 T0MT00000000002800004 T0MT00000000002800005 T0MT00000000002900001 T0MT00000000002900002 T0MT00000000002900003 T0MT00000000003000000 T0MT00000000004200000
Locality map	See Figure 1 & 2 below

3 Locality map

(show nearest town, scale not smaller than 1:250000)

The project is situated along the Limpopo River, northern side of Musina Town. The proposed area is surrounded by crop, livestock, and wilderness. The project area is situated approximately 12 km north of Musina and approximately 14 km East of Malale Village. It can be accessed via the N1(to Zimbabwe) and D1942 from Malale village. A sketch plan together with the locality map which reflects the size and location of the area is displayed below in Figure 1 and Figure 2 respectively.



ID	X	Y	ID	X	Y	ID	X	Y	ID	X	Y	ID	X	Y
A	30.4839495	-22.318778	AE	30.2191315	-22.297208	BI	29.9906642	-22.227729	CM	30.0201498	-22.245448	DQ	30.2408286	-22.309708
B	30.4763887	-22.320674	AF	30.2052358	-22.298375	BJ	29.9874135	-22.225577	CN	30.0215691	-22.249500	DR	30.2465152	-22.312521
C	30.4517939	-22.333761	AG	30.1854566	-22.298513	BK	29.9846057	-22.224526	CO	30.0245451	-22.253208	DS	30.2518354	-22.315044
D	30.4377379	-22.338111	AH	30.1771466	-22.300069	BL	29.9807055	-22.224330	CP	30.0286200	-22.255749	DT	30.2562856	-22.319036
E	30.4098319	-22.344544	AI	30.1591531	-22.301466	BM	29.9748951	-22.224497	CQ	30.0319623	-22.256482	DU	30.2598666	-22.324318
F	30.4041546	-22.344910	AJ	30.1517817	-22.303206	BN	29.9721442	-22.224272	CR	30.0477352	-22.255589	DV	30.2644820	-22.333736
G	30.3879541	-22.349712	AK	30.1421211	-22.309203	BO	29.9708205	-22.224141	CS	30.0521764	-22.255566	DW	30.2692090	-22.341535
H	30.3836399	-22.352210	AL	30.1361690	-22.312225	BP	29.9691223	-22.223471	CT	30.0585405	-22.257604	DX	30.2767675	-22.349786
I	30.3802408	-22.352748	AM	30.1295760	-22.313278	BQ	29.9697093	-22.222565	CU	30.0629817	-22.261266	DY	30.2837753	-22.354503
J	30.3719573	-22.351556	AN	30.1213805	-22.311493	BR	29.9709694	-22.223437	CV	30.0650878	-22.263785	DZ	30.2888525	-22.356108
J	30.3605672	-22.349076	AO	30.1154284	-22.306411	BS	29.9718736	-22.223760	CW	30.0743821	-22.273720	EA	30.2935379	-22.356425
L	30.3547067	-22.349443	AP	30.1025628	-22.290935	BT	29.9728033	-22.223909	CX	30.0979843	-22.284731	EB	30.2991237	-22.355143
M	30.3368506	-22.352281	AQ	30.0963818	-22.285807	BU	29.9736712	-22.223887	CY	30.1033183	-22.289287	EC	30.3073624	-22.351536
N	30.3216681	-22.349116	AR	30.0874995	-22.282236	BV	29.9752060	-22.223849	CZ	30.1089498	-22.294896	EF	30.3124756	-22.348455
O	30.3159884	-22.348985	AS	30.0748629	-22.276925	BW	29.9778366	-22.223691	DA	30.1211058	-22.308402	EG	30.3151436	-22.347965
P	30.3129089	-22.349741	AT	30.0704446	-22.272575	BX	29.9848745	-22.223727	DB	30.1244023	-22.310554	EH	30.3221669	-22.348128
Q	30.3037938	-22.354571	AU	30.0626612	-22.263670	BY	29.9858332	-22.224003	DC	30.1272410	-22.311424	EI	30.3371203	-22.350490
R	30.2982558	-22.356931	AV	30.0570754	-22.259824	BZ	29.9877216	-22.224853	DD	30.1316821	-22.311378	EJ	30.3444652	-22.350269
S	30.2921258	-22.357636	AW	30.0448966	-22.257123	CA	29.9906849	-22.226618	DE	30.1372679	-22.309501	EK	30.3528541	-22.348471
T	30.2887702	-22.357251	AX	30.0306574	-22.258176	CB	29.9932778	-22.227678	DF	30.1473406	-22.303641	EL	30.3580011	-22.347951
U	30.2854874	-22.356212	AY	30.0274983	-22.257443	CC	29.9974322	-22.228296	DG	30.1549867	-22.300848	EM	30.3643783	-22.348564
V	30.2796188	-22.352940	AZ	30.0226450	-22.253048	CD	29.9998653	-22.228673	DH	30.1735296	-22.298925	EN	30.3777572	-22.351344
W	30.2720181	-22.346712	BA	30.0188907	-22.246547	CE	30.0013397	-22.228586	DI	30.1852032	-22.297342	EO	30.3813811	-22.350830
X	30.2680815	-22.342572	BB	30.0183413	-22.243433	CF	30.0030030	-22.228514	DJ	30.2063603	-22.296880	EP	30.3994386	-22.344574
Y	30.2559885	-22.319997	BC	30.0188449	-22.235673	CG	30.0124957	-22.228136	DK	30.2197752	-22.295450	EQ	30.4184415	-22.340746
Z	30.2499906	-22.315052	BD	30.0174484	-22.232216	CH	30.0173039	-22.229291	DL	30.2274304	-22.295522	ER	30.4240138	-22.339336
AA	30.2408565	-22.311218	BE	30.0159833	-22.230201	CI	30.0188945	-22.230177	DM	30.2331972	-22.297273	ES	30.4342596	-22.337440
AB	30.2373311	-22.306571	BF	30.0105349	-22.229286	CJ	30.0194172	-22.231323	DN	30.2352018	-22.299190	ET	30.4522528	-22.331419
AC	30.2343321	-22.299337	BG	30.0018357	-22.229652	CK	30.0203329	-22.235077	DO	30.2372943	-22.301154	EU	30.4753209	-22.319513
AD	30.2269086	-22.297070	BH	29.9967078	-22.229377	CL	30.0195088	-22.241602	DP	30.2379181	-22.305717	EV	30.4833776	-22.317341

Figure 1: Stetch plan(REG 2.2) of the project area *(Singo Consulting (Pty) Ltd, 2022)*

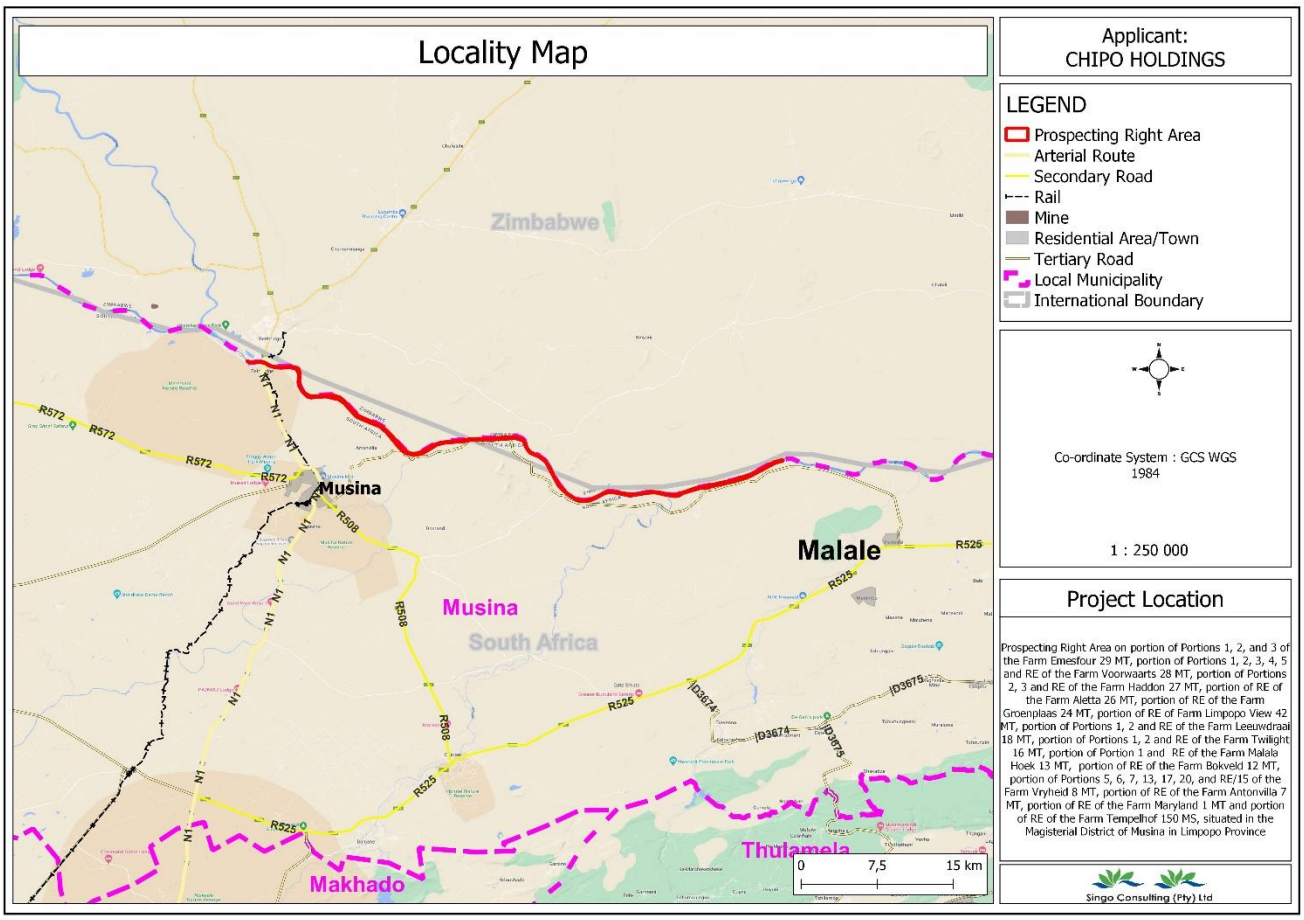


Figure 2: Locality of the project area *(Singo Consulting (Pty) Ltd, 2022)*

4 DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

4.1 Listed and specified activities

The legal requirement for Environmental Authorisation for prospecting came into effect after the promulgation of the NEMA 2014 EIA Regulations on the 8th December 2014. Prior to this, Prospecting Rights were subjected to the provisions of the MPRDA (2002). In this regard, a Prospecting Right and Environmental Authorisation are required in terms of the MPRDA (2002) and NEMA 2014 EIA Regulations, respectively. The applicable NEMA listed activities anticipated to be triggered by this project are outlined in Table 3 below

Table 3: Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting – sampling site, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc…etc…etc. 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, plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)**	**Aerial extent of the Activity** **Ha or m²**	**LISTED ACTIVITY** **(Mark with an X where applicable or affected).**	**APPLICABLE LISTING NOTICE** **GNR 517, June 2021**	**WASTE MANAGEMENT AUTHORISATION** **(Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)**
Prospecting Area	1 100 ha	X	GNR 517 Listing Notice 1, Activity 20.	Not Required
Augering Sampling **The project will involve sampling of 20 sample sites (25m² each sampling area). No clearing of vegetation will occur as the alluvial gravel/sand is exposed**	0.05 ha		Not Listed	
Trap Sampling **Dredging machines will be placed at the bank of the Limpopo River,where there is existing Road (No Vegetation clearing).**				
Cone and Quartering **Alluvial gravel/sand will be scooped/pushed to one stockpile area. No clearing of vegetation will occur as the alluvial gravel/sand is exposed**	2.55			

Area to be disturbed	:	Augering sampling
	:	5*5=25 m^2
		20 sampling areas* 25 m^2=500 m^2
		500 m^2÷10000=0.05 ha
Area to be disturbed	:	Cone and Quartering Sampling
		50*25=1 250 m^2
		20 sampling areas* 1 250 m^2=25 000 m^2
		25 000 m^2÷10000=2.5 ha
Area to be disturbed	:	Dredging sampling
		0 ha: the dredger will be placed on the existing road on the riverbank
Total Area to be disturbed	:	2.55 ha

4.2 Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

The proposed prospecting area is depicted in Figure 1 and 2. Activities for the prospecting of Chipo Holdings (Pty) Ltd will be done in three phases as indicated in Table 4 below; namely: phases 1, 2 and 3. Both Invasive and non-invasive prospecting types involve in all phases. There will be a brief period at the end of each phase to compile and review outcomes. The findings will decide not only whether prospecting progresses but also how it will proceed. The applicant will only take action over the next prospecting phase once satisfied with the results obtained in the previous phases. Types of equipment to be used for the above-mentioned activities are shown in Figure 4.

. Table 4: Prospecting Phases and Time Frames

Phase	Activity	Skill(s) required	Timeframe	Outcome	Timeframe for outcome	What technical expert will sign off on the outcome?
Phase1: Invasive Prospecting						
	Sampling via Augering (5) Sampling via TLB for Cone and Quartering (5) Sampling Via Dredger (1)	Exploration Geologist Exploration Geologist Explration Geologist	Month 1 (30 days)	Gravel/sand samples Samples analyses	Month 1 Month 2 – 3	Exploration Geologist Laboratory analyst
Phase 1: Non-invasive Prospecting						

	Consultations with landowners	Land Tenure Specialist	Month 1	Legal Access Agreement	Month 1	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 7-8	Stratigraphic correct auger holes data Analytical correct auger data	Month 8 – 10 Month 8 - 10	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Alluvial diamonds quality modeling	Exploration Geologist	Month 10-12	Contour maps Reserve breakdown	Month 10-12	Exploration Geologist /Modeller
	Inspection/Consultation with landowners	Land Tenure Specialist /Augering contractor	Month 5-6	Rehabilitation clearance certificate	Month 5 - 6	Land Tenure Specialist / Environmental officer
Phase 2: Invasive Prospecting						
	Sampling via Augering (7) Sampling via TLB for Cone and Quartering (5) Sampling Via Dredger (1)	Exploration Geologist Exploration Geologist Exploration Geologist	Month 13	Gravel/sand samples Samples analyses	Month 13 Month 13-14	Exploration Geologist Laboratory analyst
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 13-15	Lithology data Structural data	Month 13-14	Geophysicist
	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 13-14	Auger hole water yield Water samples	Month 17-20	Geohydrologist
Phase 2: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 12	Legal Access Agreement	Month 12	Land Tenure Specialist
Phase	**Activity**	**Skill(s) required**	**Timeframe**	**Outcome**	**Timeframe for outcome**	**What technical expert will sign off on the outcome?**
	Data processing and validation	Exploration Geologist	Month 17-18	Stratigraphic correct Auger data Analytical correct auger hole data	Month 20 – 22 Month 20 - 22	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Lithofacies and Alluvial diamonds quality modeling	Exploration Geologist	Month 22-24	Contour maps Reserve breakdown	Month 22-24	Exploration Geologist /Modeler
	Inspection/Consultation with landowners	Mining Rights officer	Month 16-17	Rehabilitation clearance certificate	Month 16 - 17	Land Tenure Specialist / Environmental officer
Phase 3: Invasive Prospecting						
	Sampling via Augering (8) Sampling via TLB for Cone and Quartering (5) Sampling Via Dredger (1)	Exploration Geologist	Month 25	Gravel/sand samples Samples analyses	Month 25 Month 25-36	Exploration Geologist Laboratory analyst
	Geophysical survey (Optional)	Geophysicist Exploration Geologist	Month 25-27	Lithology data Structural data	Month 25-36	Geophysicist

	Geohydrological survey (Optional)	Geohydrologist Exploration Geologist	Month 25-26	Auger hole water yield Water samples	Month 29-36	Geohydrologist
Phase 3: Non-invasive Prospecting						
	Consultation with landowners	Mining Rights officer	Month 24	Legal agreement	Month 24	Land Tenure Specialist
	Data processing and validation	Exploration Geologist	Month 29-30	Stratigraphic correct auger hole data Analytical	Month 32 – 36 Month 32 - 36	Exploration Geologist /Database administrator Exploration Geologist /Database administrator
	Alluvial diamonds Modelling	Exploration Geologist	Month 34-36	Contour maps Reserve breakdown	Month 34-36	Exploration Geologist /Modeler
	Inspection/consultation with landowners	Land Tenure Specialist	Month 28-29	Rehabilitation clearance certificate	Month 28 - 36	Land Tenure Specialist / Environmental officer

Phase 1

Phase 1 involves both invasive and non-invasive prospecting.

Desktop study: All historical geological data (including assays and mineralogy) will be gathered and evaluated. This will include assessments of any existing mining operations/prospecting in the area and any relevant data from any institution that may have done work in and around that specific area. As part of this phase, remote sensing studies will be carried out to prepare for the implementation of subsequent phases. In addition, Access within the farms will be communicated with the respective Landowners. Therefore, no impact is associated with the desktop study.

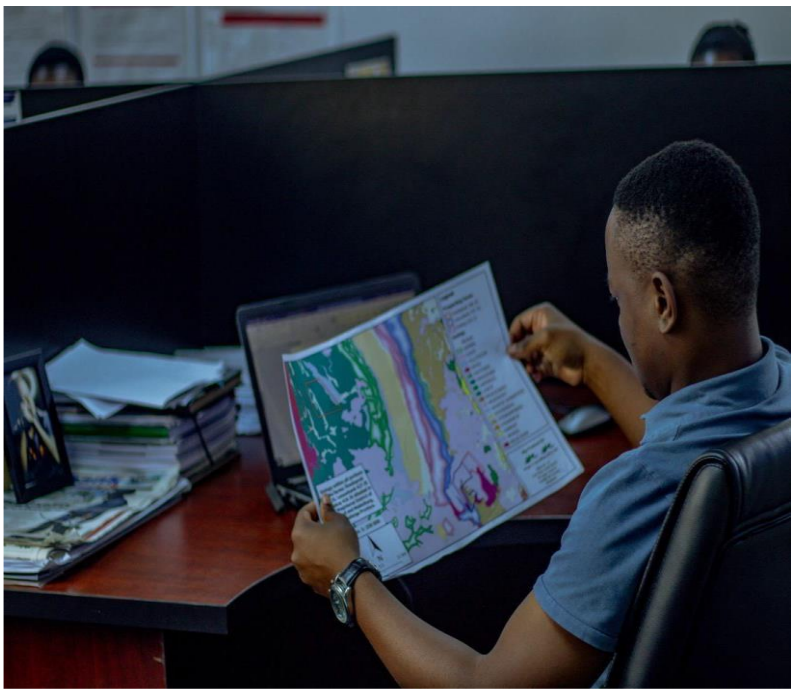


Figure 3: Typical Example of Desktop Study *(Singo Consulting (Pty) Ltd, 2022)*

Mapping and Sampling: Visual observations of the floodplain will be undertaken together with sample collection for laboratory analysis. The samples will be collected through the use of TLB, automatic handheld auger, manual handheld auger and Dredger (Figure 4). The samples will be collected to analyze diamond indicators i.e. pyrone garnet, Ilmenite, spinel, chrome-diopside and chromite.

Augering Sampling: The samples will be collected along the dry floodplain through the use of an automatic handheld auger. Alluvial gravels/sands will be augered and removed from the auger bits into the sampling bags. Note that no vegetation will be cleared for the sampling purpose. The sampling sites are planned along the existing routes. Therefore, the proposed project area(floodplain) will be accessed through the existing roads and routes. Once augering is completed, pits/voids will be backfilled by scooping the sand/gravel around the voids/pits and moving to the next sampling area. A total of 5 areas will be sampled in this phase.

Figure 4: TLB (Internet Search, 2022), automatic handheld automatic auger (Internet search, 2022), manual auger (Singo Consulting (Pty) Ltd, 2022) and dredger (Internet search, 2022)

Cone and Quartering sampling. This type of sampling will be conducted through the use of TLB. This type of sampling is done to reduce the sample size of the population without creating a systematic bias. A TLB will be used to push alluvial gravels/sands to a Cone-like stockpile area. The stockpile then is divided into 4 equal areas. The representatives from all 4 areas will be mixed and divided to the desired size. This sampling method is depicted in Figure 5. 5 samples of alluvial gravels/ sand will be collected through this method. Wastes/discards will be spread and leveled after the sampling is completed.

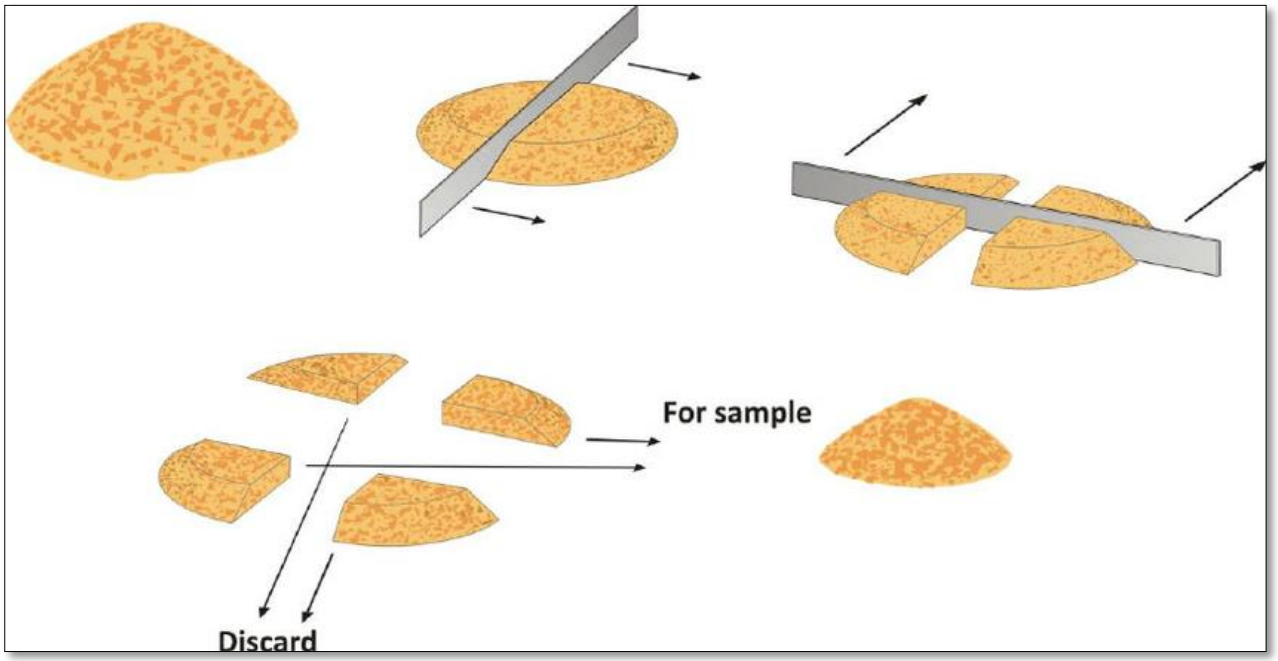


Figure 5: Typical Example of Cone and Quartering Sampling Method

Dredging Sampling: During the rainy season, the dredger will be used for the collection of samples for analysis of diamond indicators i.e. pyrone garnet, Ilmenite, spinel, chrome-diopside and chromite. The dredger will be placed at the riverbank (safe distance) and the Dredger bucket will be placed inside the water for collection of moving sediments/debris during the rainy season. The sample will be collected at the outlet point outside the river (Figure 4 (d)). Vehicles will be prohibited on floodplains. No analysis will be taken place on-site,

In addition, a geophysical survey will be conducted for buried mineral deposits. This can be through handheld or aircraft-mounted instruments.

Geochemical analysis

All samples collected will be submitted to an accredited laboratory for analysis and determination of the average mineral content. Laboratory work will include the following.

Mineral distribution and reserve estimation

Mineral distribution and reserve estimation relate to computerized desk studies which encompass the following main actions:

- **Data processing and validation**

Data obtained during the sampling needs to be processed and validated versus stratigraphic, structural and analytical data received and correlated with the surrounding sampling area in the reserve area.

- **Alluvial diamond quality modeling**

Detailed in situ reserve and quality determinations will then be possible through computer-based modeling, and qualitative and quantitative calculation.

Pre-feasibility studies:

Geological modeling of gathered existing geological data and prospecting data will be performed, if the results warrant it.

Phase 2: Mapping and Sampling

The results of phase 1 determine the continuity or discontinuity of the project. In this phase, more samples will be collected as compared to phase 1 and will be done the same way as in phase 1(Table 5).

Phase 3: Sampling, closure & rehabilitation

The results of phase 2 determine the continuity or discontinuity of the project. In this phase, more samples will be collected as compared to phases 1 and 2 and will be done the same way as in phases 1 and 2(Table 5). The last phase will be progressive closing pits/voids and rehabilitation. This will restore the area to a good or better condition than it was before prospecting began.

Sampling/Augering will not take more than 2 hours as auger/TLB are fast and alluvial gravels/soils are soft. No accommodation for staff and workers will be provided on-site. Employees will be transported to and from the prospecting sites daily. No equipment will be left on site after sampling. There will be no storage of diesel fuel, oil and lubricants on site. Equipment and machinery will be properly serviced to minimize fuel, lubricant, and oil spillage. The area will be rehabilitated naturally during the rainy season. Figure 6 below depicts the same area over different years as an illustration of the natural modification of the floodplain. In the year 2014, the river was dry, in 2017 it was flooded and in 2020 the river was dry again.

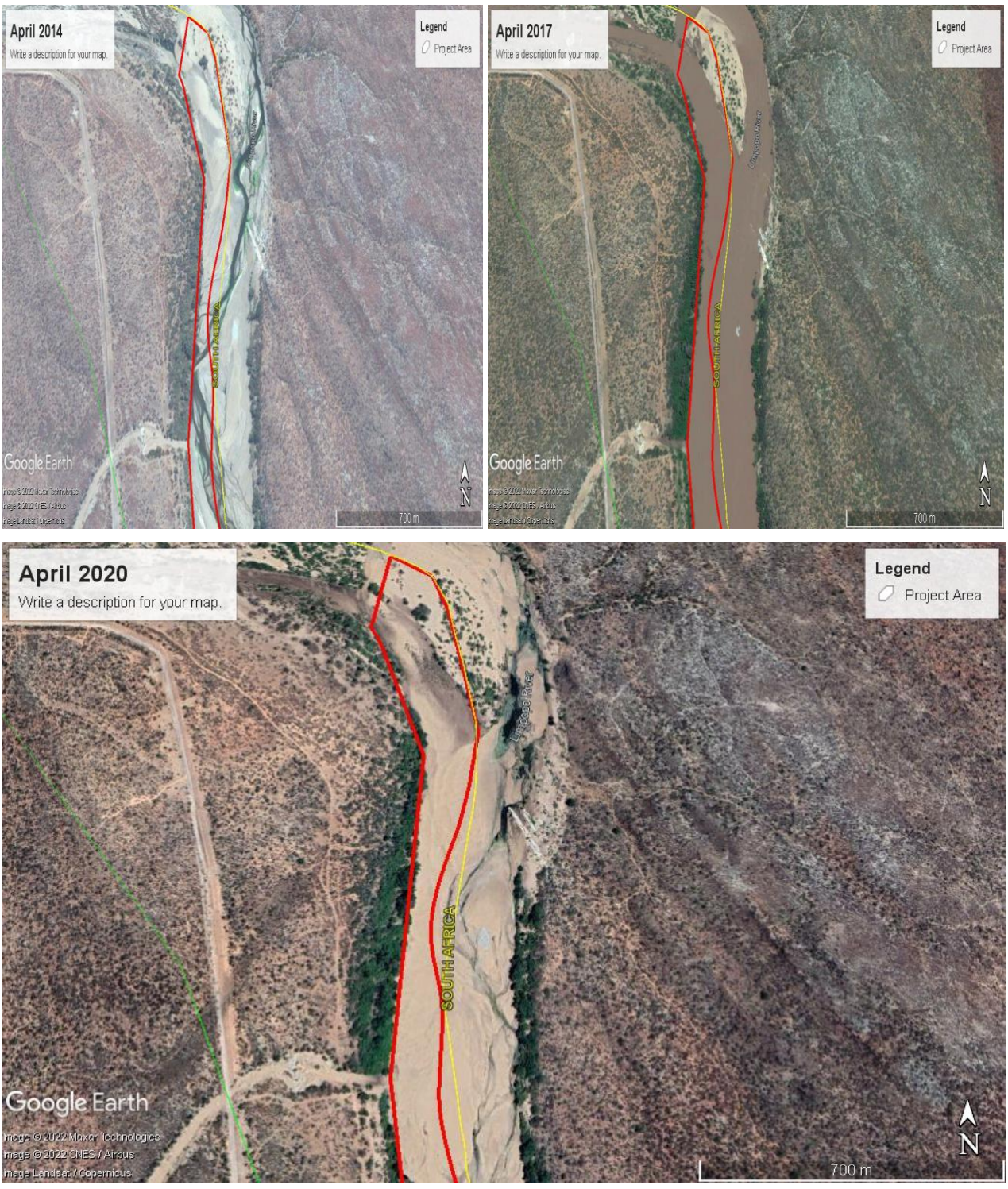


Figure 6:Limpopo River in the year:2014 2017 and 2020

5 POLICY & LEGISLATIVE CONTEXT

Table 4: Policy and Legislative Context

Applicable Legislation and Guidelines	**Reference Where Applied (i.e. where in this document has it been explained how the development complies with and responds to the legislation and policy context)**	**How does this Development Comply with and Respond to the Legislation and Policy Context**
National Environmental Management Act (No. 107 of 1998) (NEMA):	This entire report is prepared as part of the prospecting right application under the NEMA, section 24	In terms of the National Environmental Management Act, an Application for Environmental Authorisation is subject to a Basic Assessment Report. The application was lodged at the DMRE
Minerals and Petroleum Resources Development Act (No.28 of 2002) (MPRDA): In support of the Prospecting Right Application submitted by Chipo Holdings (Pty) Ltd, the applicant is required to conduct a NEMA BAR process in terms of Section 5A and Chapter 16 of the MPRDA.	This entire report is prepared as part of the Prospecting Right Application under the MPRDA, section 16(2).	The application is for a prospecting right and therefore all regulations pertaining to the application process of a prospecting right and environmental management are applicable to this application. DMRE REF: LP30/5/1/1/2/(14639) PR
National Water Act (No. 36 of 1998) (NWA): Water may not be used without prior authorisation by the DWS. Section 21 of the National Water Act (No.36 of 1996) the NWA water uses for which authorisation is required.	Water Use Licence has been applied for this prospecting project.	A Water Use License(WULA) is required for this Application as the proposed activities will be occurring within the watercourse (Floodplain of Limpopo River). Water for drinking will be bought from local shops. Water from the river will not be extracted and used for other purposes

The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA) Section 57 and 87	Regulations published under NEMBA provide a list of protected species (flora and fauna), according to the Act (GN R. 151 dated 23 February 2007, as amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed	No applications have been submitted in terms of the National Environmental Management: Biodiversity Act.
Musina Local Municipality Integrated Development Plan (IDP) Strategic Development Framework (SDF)	Needs and Desirability, socio-economic needs. Land use	Incorporated in Section 6 and 9.1 of this BAR. The applicant acknowledges the need to maximize economic benefit from mining, industrial, business, agricultural and tourism development in the area and promote a climate for economic development in line with the municipal development frameworks.
Municipality By-Laws: Waste Management by-law Act 59 of 2008, Air Quality Management By-law Act 39 of 2004, Noise control by-law, Spatial Planning and Land Use Management act no 16 of 2013 (SPLUMA).	Environmental Management measures awareness plan	Best practice guidelines will be followed for any by-law's management and the development of the mine environmental and other legislative management.
Constitution of South Africa, Specifically, everyone has the right: a) to an environment that is not harmful to their health or wellbeing; and	BAR & EMPr	Prospecting activities will only proceed after effective consultation. All activities will be conducted in a manner that does not violate the Constitution of the Republic of South Africa.

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.		
National Heritage Resources Act, 1999	Management measures	Should archaeological artifacts or skeletal material be revealed in the area during development activities, such activities should be halted, and SAHRA notified in order for an investigation and evaluation of the find(s) to take place.

6 NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

The mineral being prospected is a diamond (alluvial). This project; if granted, will assist Chipo Holdings (Pty) Ltd to determine if any economically viable resources are present in the Area

Should prospecting prove successful and a resource quantified, it would indicate a potentially viable economic activity in the form of mining that is likely to contribute greatly to the socio-economic status quo in the form of increased income, employment and other benefits that would cascade through the local, regional and national levels.

7 MOTIVATION OF THE OVERALL PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVE

Alluvial diamond deposits are usually located within river terrace gravels that have been transported from their location of origin, usually from kimberlite deposits. Geology is the primary driver in determining the location of prospecting and mining. After due consideration and conducting background and desktop studies, it was found that there are kimberlite pipes which led to the opening of Venetia Mine in 1992. Diamond-bearing gravels were discovered as early as 1903 close to the Limpopo River (35 km Northeast of the present mine). Sampling led to the discovery of kimberlite pipes in 1980 (https://www.mining-technology.com/projects/de beers/ accessed 03/07/2022). The need to search for diamonds along the Limpopo river is influenced also by the presence of these kimberlite pipes, geology and tributaries feeding the River. (see **Figure 7** for the project geology).

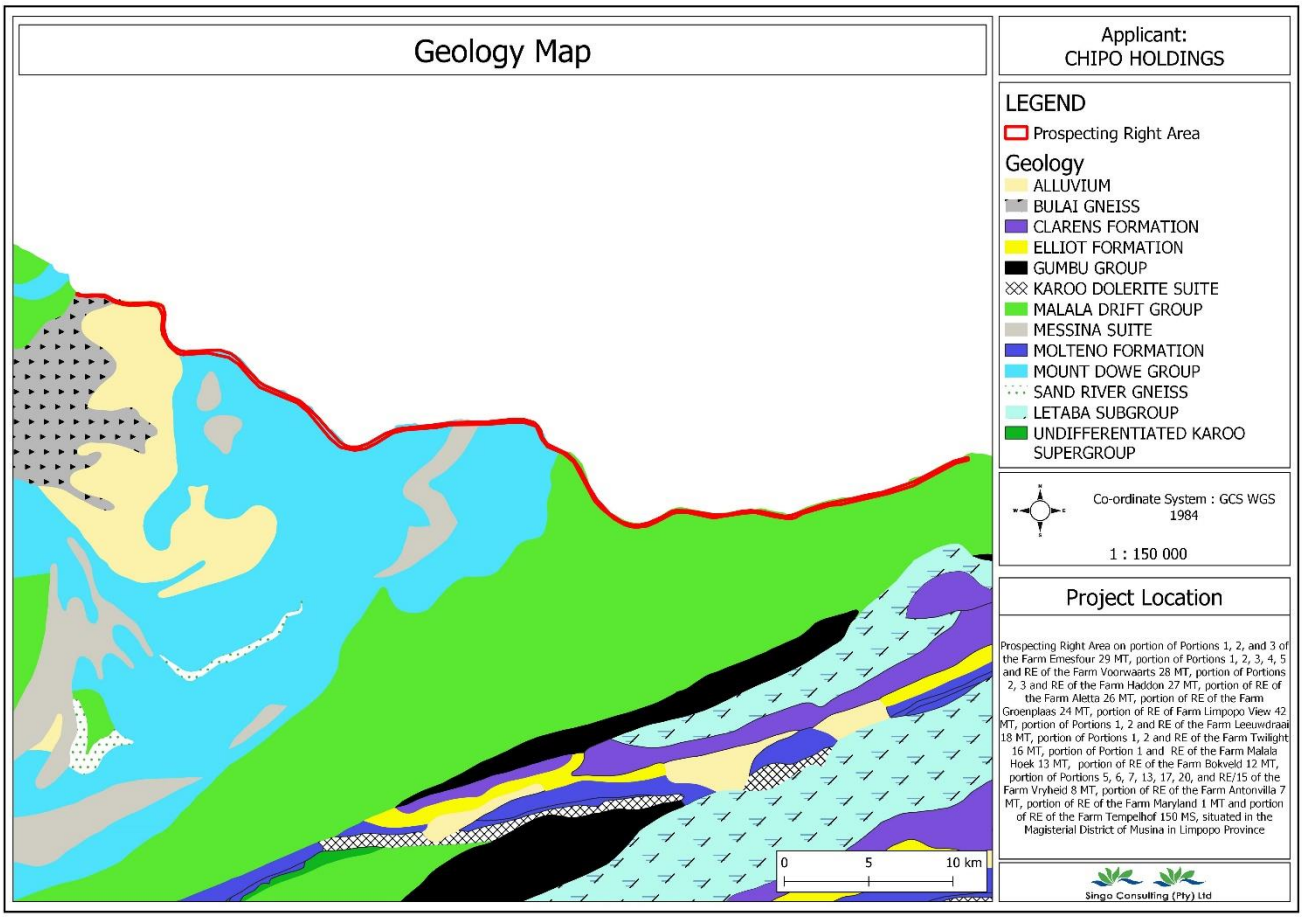


Figure 7: Geological Map (Singo Consulting (Pty) Ltd, 2022)

8 FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES WITHIN THE SITE

(NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.)

8.1 Details of all alternatives considered

(With reference to the site plan provided and the location of the individual activities on site, provide details of the alternatives considered with respect to:

(a) the property on which or location where it is proposed to undertake the activity;

(b) the type of activity to be undertaken;

(c) the design or layout of the activity;

(d) the technology to be used in the activity;

(e) the operational aspects of the activity; and

(f) the option of not implementing the activity)

8.1.1 The property on which or location where it is proposed to undertake the activity

The prospecting Right application directly affects the aforementioned properties(farms) The development footprint encircles 1 100 ha. There is no alternative area of interest.

8.1.2 The type of activity to be undertaken

During this prospecting effort, no bulk sampling will be done. Due to the lack of significant historical datasets, invasive prospecting activities such as sampling, as well as non-invasive activities, will be carried out during prospecting. TLB, dredger and automatic handheld auger will be used for sample collection

8.1.3 Design or Layout

No permanent structures will be constructed since exploration is temporary. Landowners will be consulted duly for access and usage of the existing access roads.

- Portable ablution facilities will be used.
- It is planned to use one auger for all 20 sampling pits.
- Rehabilitation will closely be controlled, and supervision will be focused.
- The sampling points will be located where there are access roads/routes.

8.1.4 Technology Alternatives

The technology chosen is deemed effective for exploring deposits of this type, resource definition and evaluation. This is inclusive of non-invasive and invasive technology. The non-invasive includes desktop studies, geological file mapping and geophysical surveys whilst the invasive includes the prospecting samples for resource estimation. Prospecting will be done in interrelated phases. No technology alternative identified

8.1.5 The operational aspects of the activity

A prospecting period of 5 years has been applied for. No permanent services including water supply, electricity, or sewerage facilities are required. All infrastructure to be developed will be mobile and temporary including portable toilets and shade.

8.1.6 The option of not implementing the activity

If prospecting efforts are not carried out, knowledge about mineral reserves in the studied region would be lost. If economically viable reserves exist in the study area but the applicant is unable to prospect, the reserves will be sterilized, and the resulting socio-economic advantages will be lost. The proposed prospecting activities have the potential to harm the area's ecological as well as

social environments. These effects, on the other hand, can potentially be avoided, minimized, reduced, and managed to very low levels, as evidenced by the impact assessment.

8.2 Details of the Public Participation Process Followed

(Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land)

8.2.1 Public Participation Methodology

South Africa, being one of the countries with the most progressive constitutions, enshrined the public's right to be involved in decisions. Section 57(1) of the new Constitution provides: "The National Assembly may (b) make rules and orders concerning its business, with due regard to representative and participatory democracy, accountability, transparency and public involvement". This provision, along with several others gave rise to many new trends in South African legislation. In environmental legislation, the idea of public participation (or stakeholder engagement) features strongly and especially the National Environmental Management Act, 1998 (Act 107 of 1998, NEMA – as amended) and the recent regulations passed under the auspices of this Act make very strict provisions for public participation in environmental decision-making.

Public participation can be defined as "a process leading to a joint effort by stakeholders, technical specialists, the authorities and the proponent who work together to produce better decisions than if they had acted independently" (Greyling, 1999). From this definition, it can be seen that the input of the public is regarded as very important indeed.

The Public Participation Process (PPP) is designed to provide sufficient and accessible information to Interested and Affected Parties (I&APs) in an objective manner to assist them to:

- Raise issues of concern and suggestions for enhanced benefits.
- Verify that their issues have been recorded.
- Assist in identifying reasonable alternatives.
- Contribute relevant local information and knowledge to the environmental assessment.
- Comment on the findings of the environmental assessments.
- Obtain information on the outcome, i.e. the competent authority's decision, and how and by when the decision can be appealed.

8.2.1.1 Public Participation Plan: Discussion of approach and methodology to meet the requirements of the Regulations.

Regulation	Approach & Methodology to meet requirements
Regulation 40(1), Regulation 40(3) & Regulation 43 – provide all potential or registered interested and affected parties, including the competent authority, access to project-related information, access to the Basic Assessment report which will be made available for at least 30 days to submit comments on draft reports before submission of final reports for decision-making.	<u>Notification of Basic Assessment (BA) process to be undertaken for application for Environmental Authorisation (EA) to be distributed using the following means:</u> • E-mail • Post/Postnet • Process notices placed at locations that are accessible to I&APs • Advertisement in the printed media. • Face-to-face consultation <u>Notification of availability of report and period for review using the following means:</u> • Newspaper advert, including details of where the report can be accessed and details of the Singo Consulting website. • Notification letter (to be sent via email, fax or post) to registered I&APs. • Notifications to communities via Ward Councillor, royal council members, ward committee members, identified and confirmed community representatives, and local community forum members. • SMS and/ or WhatsApp notifications where no other means are available. <u>Availability of report for review:</u> • Electronic copies can be made available to parties via email or wetransfer • CDs to be posted, if requested. • Hard copy report to be available at Public library
	<u>Submission of comments to EAP:</u> • Comments can be submitted directly to the EAP through email, post, or fax . • Any comments provided telephonically or via instant message will be transcribed and recorded as formal comments.

Regulation 40(2) - Provide access to all project information that has the potential to influence any decision regarding the application, unless protected by law, and must include **consultation** with Competent Authority, Organs of State & registered I&APs. Regulation 41(6) – Relevant **information available and accessible**	Provision of project information and consultation via various means including: • Telephonic consultation. • Email correspondence. • Correspondence sent via post. • SMS and/or WhatsApp • Site notices • Face-to-face consultation
Regulation	**Approach & Methodology to meet requirements**
	• Project maps (including locality map, layout map, sensitivity map, landowner map, etc) • Photos of the project site and surrounds • Presentation with narration providing a summary of the project details and the findings of the BA • Posters providing a summary of the findings of the BA • A means of submitting written comments or queries. • Communities will be consulted via the relevant Ward Councillor, ward committee members, community representative or local community forum members, as determined and confirmed during the consultation process.
Regulation 41(2)(a) – **Site notice**	• Site notices (A3) will be placed at and around affected properties by the EAP, landowner or specialist. • Size and content will be in accordance with Regulation 41(3) & 41(4).
Regulation 41(2)(b) – **Written notification** to affected and neighbouring landowners and occupiers; municipality; ward councilors; Organs of State & other parties required by the CA	• Notification letter to be sent via email, fax or post.
Regulation 41(2)(c) – (e) – **Advertisements**	• Advert (18x4) to be placed in a local newspaper.

Regulation	Approach & Methodology to meet requirements
Regulation 42 – **Project database**	• I&APs to be identified through a process of networking and referral, obtaining information from the Singo Consulting existing stakeholder database, liaison with potentially affected parties in the greater surrounding area and a registration process involving the completion of a reply form. • Organs of State, key stakeholders and affected and surrounding landowners will be identified and registered on the project database. • Other stakeholders will be required to formally register their interest in the project through either directly contacting the Singo Consulting Public Participation team via email or fax or use of the Singo Consulting website. • In order to access the Singo Consulting online stakeholder engagement platform for a specific project, I&APs will be required to provide their details such that they are automatically registered on the project database. • The register of I&APs will contain the names of: o all persons who requested to be registered on the database through the use of the Singo Consulting website, or in writing and disclosed their interest in the project; o all Organs of State which hold jurisdiction in respect of the activity to which the application relates; and o all persons who submitted written comments or attended virtual meetings and viewed virtual presentations on the Singo Consulting website during the public participation process. • The information captured on the project database will contain the names, organisation and contact details, as required.
Regulation 44 – **Comments** to be recorded	• Comments will be able to be submitted directly to the EAP using email.
Regulation	**Approach & Methodology to meet requirements**

	○ A means to register on the project database and provide details of their interest in the project ○ A means of submitting written comments or queries. • The online platform allows for instant feedback and comments to be submitted, in so doing saving time for the stakeholder and also giving the assurance that their comments have been submitted for inclusion in the project reporting. • Written comments can also be submitted via email, post or fax. • Any comments provided telephonically or via instant message will be transcribed and recorded as formal comments. • I&APs without the applicable electronic facilities to access the Singo Consulting website will be provided with the opportunity to submit their comments and communicate with the public participation team via SMS, WhatsApp or by sending a Please-call-me notification. These comments will be transcribed and recorded as formal comments. • All comments received throughout the EIA process will be acknowledged and captured in the comments and responses report (C&RR) with a relevant response. The C&RR will be included in the final report submitted to the CA.

	• A means to register on the project database and provide details of their interest in the project • A means of submitting written comments or queries. • The online platform allows for instant feedback and comments to be submitted, in so doing saving time for the stakeholder and also giving the assurance that their comments have been submitted for inclusion in the project reporting. • Written comments can also be submitted via email, post or fax. • Any comments provided telephonically or via instant message will be transcribed and recorded as formal comments. • I&APs without the applicable electronic facilities to access the Singo Consulting website will be provided with the opportunity to submit their comments and communicate with the public participation team via SMS, WhatsApp or by sending a Please-call-me notification. These comments will be transcribed and recorded as formal comments. • All comments received throughout the EIA process will be acknowledged and captured in the comments and responses report (C&RR) with a relevant response. • The C&RR will be included in the final report submitted to the CA.
Regulation 4(2) – Notification of **decision** on an application	<u>Notification of Environmental Authorisation (EA) using the following means:</u> • A notification letter with details as outlined in the EA issued will be sent via email, fax or post. • Notification will be available on the Singo Consulting website. • Notifications that the EA has been issued and where to download and/or obtain a copy to communities via Ward Councillor and his/her ward committee members and identified and confirmed community representatives. • SMS or WhatsApp notification.

The Public Participation is the basis of any EIA process. The Public Participation Process (PPP) seeks to provide the opportunity for all stakeholders including potential players and all applicable I&APs, state departments, state bodies and the competent authority (CA) to register so that they can raise concerns, contribute to local knowledge, comment on the Draft Basic Assessment Report (DBAR) & Environmental Management Programme report (EMPr) but most importantly provide suggestions for enhanced benefits. Comments received during the Public Participation Process are incorporated into the Final BAR & EMPr to be submitted to the competent authority (Department of Mineral Resources & Energy) for adjudication.

Defining Stakeholders

The term public can be taken to mean any individual or group in society, including the government and business sector. Who or what is included in the "public" depends very much on the activities under consideration. The term "stakeholder" helps clarify the meaning or "public" in the context of development activities.

A stakeholder is any person or group or institution that has an interest in an activity, project or program. This includes both intended beneficiaries and intermediaries, those positively affected, and those involved and/or those who are generally excluded from the decision-making process.

Stakeholders can usefully be categorized into five main types:

- Directly affected people (who live or work where the project will be located)
- indirectly affected people (who live nearby or use resources from the project area)
- public sector agencies (ministries, provincial or local government, government-mandated mass organizations)
- private developers (private companies with direct investment in the project) and their subcontractors and financiers
- others (donors, NGOs with a stake in the project, external advisors, and the business sector).

Objectives of the Public Participation

- Main objectives for involving the public are:
- the identification of key issues of concern to the public, addressing public perceptions,
- the provision of local expertise and knowledge,
- the identification of possible alternatives/options,
- ensuring that affected groups are involved at the very beginning of project design, and
- the critical review of documentation.

The separation of these objectives is somewhat artificial as the achievement of one will often depend upon the achievement of another.

Identification of Interested and Affected Parties.

Landowners

Landowners were identified through an online search engine (WinDeed) and were consulted on face-to-face consultation, where landowners were unavailable, BID and Site notices were left with employees and pasted at the gates respectively. Windeed documents are in Appendix 6

Interested and Affected Parties Identification Procedure

The Interested & Affected Parties for this particular project were identified through windeed search, e-mail media communications, Department of Agriculture, Land Reform and Rural Development and DMRE(Existing mineral rights). Other means of Identification & notification adopted were through the print media (in a form of a newspaper) and placement of notices in public spaces and physical one-on-one engagement on site. Interested and Affected parties are shown on Table 5 below.

On 10th June 2022, a site assessment was done on some of the farms within the proposed prospecting right area. Where landowners were not found, BIDs were left with employees and employees refused to give the landowners contact details. Some of the farm gates were locked and could not access the prospecting area for assessment. However, A3 site notices were placed at the gates or entrances. The landowners once they saw the notices at their properties, they replied by asking to be added as I&APs and to be sent a Draft BAR and EMPR. The consultants went to ZZ2 Esmefour Farm for face-to-face consultation and site assessment. The consultants left BID with the farm manager and waited for access to the river. However, through telephonic conversation and WhatsApp messaging. Access to the site was denied. Ground truthing photos from denied access farms are not in this report. There is an ongoing arrangement for ground-truthing on those farms. The project BIDs were also shared with the companies having mineral rights within the proposed area through emails. A meeting with the representatives from the Tshirundu Royal Council was held on 29th June 2022 in Musina, Limpopo province. However, Singo Consulting (Pty) Ltd is engaging with the Department of Agriculture, Land Reform and Rural Development (Vhembe Region) to get the contact details of the other claimants.

Table 5: Interested and Affected Parties

Names of I & AP's	**Farm Name/Organisation**	**Contact numbers**	**Email Address**
ESMEFOUR BOEDERY (PTY) LTD	Esmefour 29 MT (Portions, 1,2 and 3) Voorwaarts 28 MT(Portions 1, 2,3, 4, 5 and RE) Groenplaats 24 MT (RE)		
SANDQUEST FARMING (PTY) LTD	Haddon 27 MT (Portion 2, 3 and RE) Haddon 30 MT (RE)		
CP POTGIETER BOERDERY (PTY) LTD	Limpopo View 42 MT (RE)		
MAREMANI NATURE RESERVE (PTY) LTD	Twilight 16 MT (Portions 1 and 2, RE) Malala Hoek 13 MT (Portions 1 and RE) Bokveld 12 MT (RE)		
LAUTR VIVERE DEVELOPMENT CC NIMMERSAULT TRUST CARPATHIAN FARM (PTY) LTD	Vryheid 8 MT (Portions 5, 6, 7, 13, 17, 20 and RE/15)		
Musina Local Municipality	Antonvilla 7 MT (RE)		
Groter Messina Plaaslike Oorgansraand	Maryland 1 MT (RE)		
Musina Local Municipality	Tempelhof 150 MS		
David Nethengwe	Department of Water and Sanitation		
Rudzani Muswana	Musina Public Library		
Thapelo Machate	Department of Fisheries, Forestry and the Environment		
Tshirundu Royal Council	Claimant		
Kimbracento (Pty) Ltd	Existing Mineral Right		
Smarty (SA) Minerals (Pty) Ltd	Existing Mineral Right		
	Limpopo Department of Economic Development, Environment and Tourism		

Newspaper Advertisements

Newspaper advertising is used to target demographics that are traditionally much harder to reach through other media such as the internet and other social networks. A newspaper advertisement (18x4) in both English and Tshivenda was published on the 3rd of June 2022 in the *Limpopo Mirror* to notify all the Interested & Affected Parties of the proposed development. See Figure 10 for the published newspaper Advertisement.

15-year-old boy stabbed to death

By Kaizer Nengovhela

A cloud of sadness still hangs over Vari-Ha-Mutonga village after the 15-year-old Hlupheka Shishonge was stabbed to death by a 16-year-old boy last Tuesday night (24 May). Hlupheka was a Grade 8 pupil at Elim Secondary School.

According to provincial police spokesperson Brig Motlafela Mojapelo, Hlupheka was on his way home from church at around 20:30 that night when an argument ensued between him and another boy. The boy then produced a knife, stabbed Hlupheka in the chest and ran away.

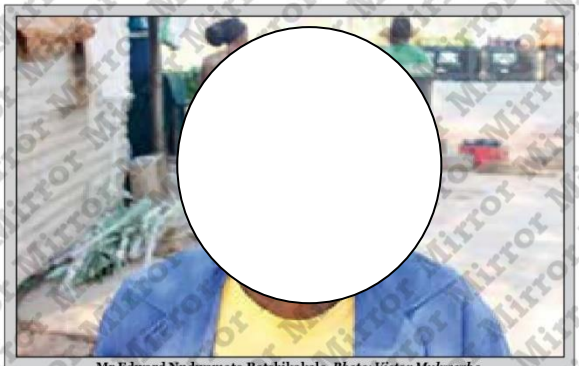
"We were alerted by members of the community about the incident. When we arrived at the scene, the young boy was lying dead on the ground. We subsequently opened a case of murder and arrested a 16-year-old suspect two days after the incident," said Mojapelo.

Hlupheka's uncle, Mr Thomas Baloyi, said that the family was battling to cope with their loss. "This is a big shock to us. Hlupheka was still so young. He was a bright pupil who always worked hard at school. He was very focused on education and never quarrelled with anyone. He easily associated himself with other people."

The suspect appeared briefly in the Waterval Magistrate's Court on Monday, 30 May. The case was postponed to 13 June for further police investigations.

Hlupheka will be laid to rest at the Vari-Ha-Mutonga cemetery on Saturday, 4 June.

Hlupheka Shishonge (15) from Vari-Ha-Mutonga village was stabbed to death last Tuesday night (24 May). ***Photo: Godfrey Siaga.***



Mr Edward Ndwamato Ratshikakale. ***Photo: Victor Mukwevho.***

Life remains tough for former coal mine worker who returned home

By Victor Mukwevho

Mr Nndwamato Ephraim Ratshikakale from Matangari village in the Vhembe region worked inside a coal mine for more than 22 years. When he was diagnosed with pneumoconiosis, or "black lung disease", in 2012, he was laid off from his job, and since then he has had a hard time getting by.

Ratshikakale joined the Tshikondeni Coal Mine in 1990, shortly after he was retrenched from another mine in Randfontein, Gauteng, where he had worked for 13 years. He said it had been a tough job extracting coal from deep inside the belly of the earth, under very unhealthy conditions.

"There was a lot of coal dust underground. The only noise you hear is your hammer and falling pieces of coal. Believe you me, there was no protective clothing back then as is the case now. We worked without even covering our faces."

While he worked at the coal mine, he started experiencing breathing problems, especially in the evening. "In 2012, we were taken to a doctor where it was discovered that I am suffering from pneumoconiosis. I was told that, because of my condition, I could no longer go underground, so I was retrenched. I pleaded with the management to be given another job at the mine, but to no avail. I had to pack my bags and come home, and since then, life has been very hard for me. I have five children and a wife to support." Ratshikakale said he could not even do piece jobs anymore because of his damaged lungs.

One of his daughters, Khodani, said they had been devastated when her father was retrenched. "It was very hard for us as his children. We could not go to private schools anymore; we had to attend public schools where the teachers spent most of their time attending union meetings during school hours. As there was no money for transportation anymore, we had to walk to school. At times, food became a scarcity at home. We could no longer study, because even paying for electricity was a challenge for my father," she said.

In her opinion, the mine could have offered one of them a job to support the family when her father was retrenched. "I was only 16 years old when my father was retrenched, but I would have willingly gone underground to work if such an offer was made to us at the mine."

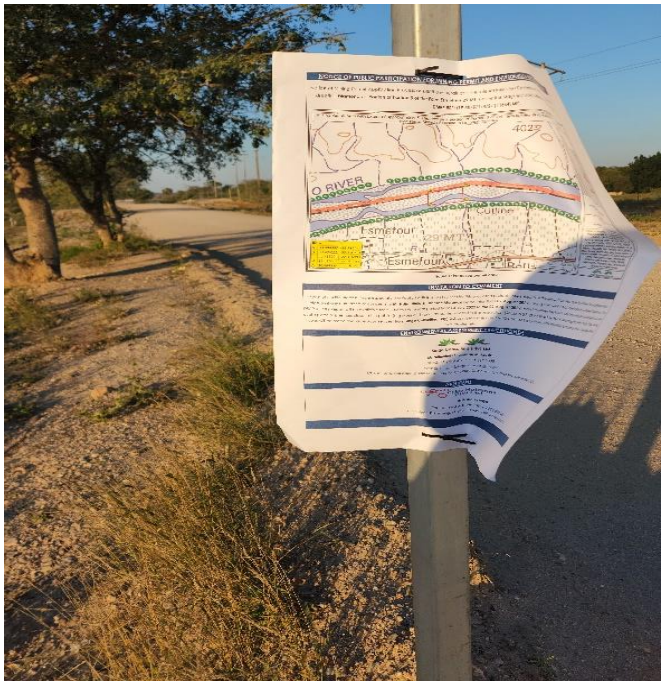
Figure 8: Newspaper Advertisement (encircled with red polygon)

Email consultation

Organs of State were consulted through the emails. These include the Limpopo Department of Economic Development, Environment, and Tourism (LEDET). Department of Forestry, Fisheries and Environment(DFFE), SANRAL, Limpopo Department of Water and Sanitation. Christo Reeders Attorneys and ZZ2.

Public Site Notices

Site notices were placed at and around the affected properties, adjacent properties, access road (D1942) and Musina Public Library on the 10th of June 2022 as another means of notifying any person/s who would be Interested & Affected by the proposed development. Refer to **Photo *1*** for Proof of site Notice Placement.



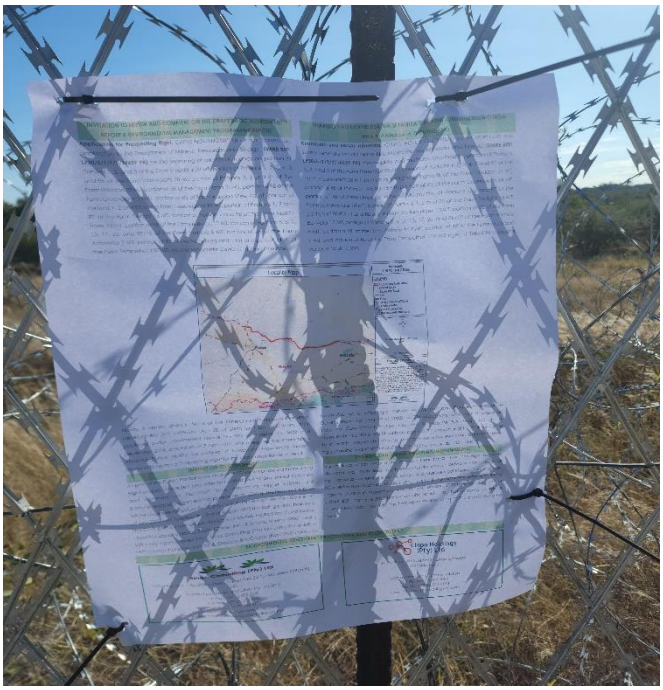


Photo 1: Site notice placement

Face-to-Face Consultation

On the 10th of June 2012, Some of the employees from the farms were consulted during a face-to-face consultation. In addition, SANDF officials and the Vhembe Department of Water and Sanitation were consulted. All affected and interested parties consulted during the aforementioned time were left with BID. This includes the meeting with Tshirundu Royal Council representatives. Details of the meeting are provided below.

Meetings

On 28th June, a Meeting with Tshirundu Royal Council representatives was held at Helule Office Park, Musina Town, Limpopo Province. Ha-Tshirundu is the claimant of these farms: Singo Consulting (Pty) Ltd consultants have presented the project to the representatives and they are supporting the projects and raised issues of low employment rate within the area. See **Photo 2**.

Photo 2: Public Meeting

Draft Basic Assessment Report (BAR) and Environmental Management Programme report (EMPr)

The Draft BAR and EMPR will be released for 30 days from 04th July 2022 to 7th August 2022 (excluding Public Holidays)(**Now from 17th July 2022 to 16th August 2022**). Hard copies of the Draft BAR and EMPr will be submitted to organs of state and relevant authorities upon request .i.e Limpopo Department Of Local Economic Development, Environment And Tourism (LEDET), Department of Agriculture, Land Reform and Rural Development (DALRRD), South African National Roads Agency Ltd (SANRAL) & Department of Water and Sanitation (DWS) and Department of Forestry, Fisheries and Environment (DFFE). Additionally, copies will be placed at the Musina Public Library. Electronic copies will be made available to I&APs upon request from Singo Consulting (Pty) Ltd via emails; Dropbox link; Google drive; WeTransfer, etc.

Summary of issues raised by I&APs

(Complete the table summarising comments and issues raised, and reaction to those responses)

NO ISSUES RAISED

by the time of releasing this Draft BAR and EMPR for comment and review period

9 THE ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE ALTERNATIVES

(The environmental attributes described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

9.1 BASELINE ENVIRONMENT

Please note that ground truthing on other farms were not done as access to the farms was denied. However, arrangement for access to those immovable properties are ongoing.

LOCALITY

The proposed Prospecting Project is located within the Magisterial District of Musina under the jurisdiction of the Musina Local Municipality, situated within the Vhembe District Municipality. See Figure 13 for ease of reference. The project will influence an increase in the socio-economic of the Musina area. More diamond mines will be opened which can compete with the existing Venetia Mine. The impact of Covid-19 has resulted in more loss of jobs and the prospecting within this area may result in more creation of jobs when the sampling results prove the viability of the sought mineral.

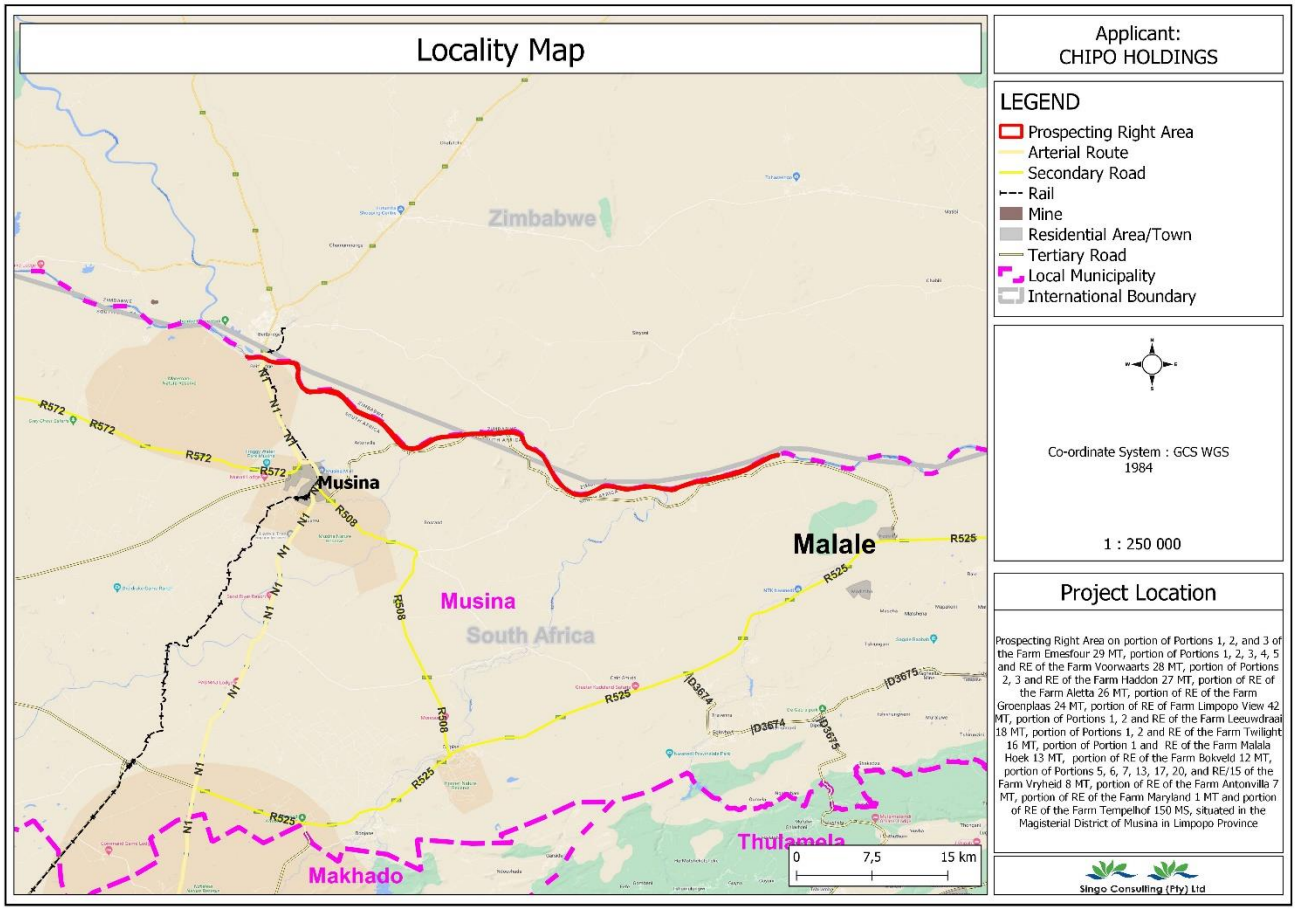


Figure 9: Project location (Singo Consulting (Pty) Ltd, 2022)

SOCIAL CHARACTERISTICS OF THE STUDY AREA AND SURROUNDING AREA

Population

The proposed Prospecting Right Area falls within Musina Local Municipality. The total population of Musina has grown from 104 655 (2011) to 132 009 (2016). The area composes of 54.25% female and 45.75% male. Musina is dominated by the youth aged between 15-34 years of the total population at 58 841, which implies a high growth rate in the labour force (Community Survey, 2016). At present, the local economy is unable to provide sufficient employment opportunities to meet the needs of the economically active populations. A youthful population structure also implies a relatively higher dependency ratio. The Musina IDP (2021/2022) currently estimates that only 46% of the population is currently economically active as a high percentage of the population is between the age of 15 and 35.

The majority of the population lives in rural areas. The rural areas are the most underdeveloped. The largest percentage of the rural population between the ages of 15 – 65 years comprises women. This can be attributed to the migration of means for employment opportunities elsewhere.

The key developmental challenges faced by Musina are that of lack of employment opportunities, because of a population growth rate that exceeds the economic growth rate. The prevalence of illegal immigration; and the lack of economic activities and investment opportunities in the area to aid the issue of employment creation.

Age Structure

The population has a youthful age structure and the immediate significance of this young age structure is that the population will grow rapidly in the future and this implies a future high growth rate in the labour force. At present, the local economy is unable to provide sufficient employment opportunities to meet the needs of the economically active population. A youthful population structure also implies a relatively higher dependency ratio.

There is a high percentage of the population that is economically inactive which can be attributed to the high percentage of the population being under the age of 15, which per definition renders them economically inactive. The largest percentage of the rural black population between the ages of 15 – 65 years comprises women.

This can be attributed to the migration of men to employment opportunities elsewhere. The high level of male absenteeism implies that women are predominantly the key decision-makers at home.

Dwelling Types

The following table reflects the main dwelling types found in Musina Local Municipality. Traditional residential areas account for 87% percent of the total households followed by formal residential areas presumably those found in Musina Town and the R293 Townships.

Employment Status

In the analysis of the labour and employment situation in a region, it is necessary to focus attention on the size and spatial distribution of the labour force. Secondly, the characteristics of the labour market should be analyzed. To this end, it is necessary to examine the supply of labour, which is derived from figures on the economically active population in a region. The productivity of a location is also directly related to the number of individuals who are active in the workforce. High levels of economic activity are directly related both to the productivity and competitiveness of an area. Where economic inactivity is high, this indicates a loss of productive resources available to the local business base, therefore impacting negatively on overall economic performance.

According to the IHS Global Insight database, in 2011, the Municipality had an economically active population of 118,469 which represents about 21.60% of the entire population. In recent years, in common with the provincial and district economies, the Municipality has experienced an increase in overall employment levels. The total number of employed people is 89,881 and the total number of unemployed persons is 30,691 (25.9%).

The unemployment rate in Musina has decreased by 10.2% in recent years (from 36.1% in 2001 to 25.90% in 2011). The unemployment rate for Limpopo Province has also decreased by 9.30% in the same period (from 29.90% to 20.60%).

This project; if granted, will assist Chipo Holdings (Pty) Ltd to determine if any economically viable resources are present in the Area. Should prospecting prove successful and a resource quantified, it would indicate a potentially viable economic activity in the form of mining that is likely to contribute greatly to the socio-economic status quo in the form of increased income, employment and other benefits that would cascade through the local, regional and national levels.

GEOLOGY

Limpopo Mobile Belt

The Limpopo Belt, or Limpopo Mobile Belt, as it is sometimes known is a Precambrian formation (Schlüter 2006) that joins the Kaapvaal craton to the Zimbabwe craton, running East to West (Chinoda et al. 2009) and covering a large portion of the Limpopo River basin

(Chinoda et al. 2009). The Limpopo Mobile Belt has experienced significant mineralization and follows very closely the Limpopo River valley (Ashton et al. 2001).

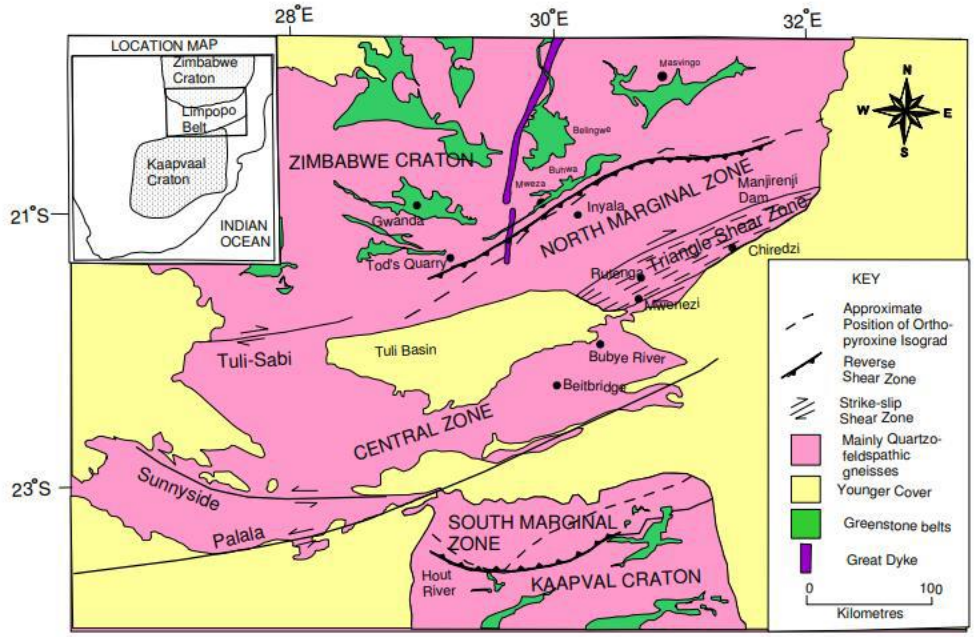


Figure 10:Simplified map of the Limpopo Mobile Belt showing its subdivisions, major shear zones and the adjacent cratons.

The Limpopo belt is an extensive ENE-trending linear zone of high-grade metamorphic tectonics which separates the Archaean nuclei of the Rhodesian craton to the north from the Kaapvaal craton to the south. The belt consists of reworked Archaean granite-greenstone terrain with an early Proterozoic cover sequence, the Messina Formation, infolded and metamorphosed with the basement. Two major zones of shearing and transcurrent dislocation separate marginal granulite zones from a central zone which consists of complexly infolded cover rocks and a reworked basement. The northern granulite zone appears to grade transitionally into the Rhodesian craton to the north, whereas there is some evidence that the southern granulite zone is faulted against the Kaapvaal craton to the south. The whole belt has behaved as a zone of crustal weakness throughout geological time and is characterized by repeated shear deformation, igneous intrusion and extrusion, despite the cessation of major regional tectono-thermal reactivation about 1900 Ma ago.

The exposed parts of the Limpopo Belt are distributed throughout the South African, Botswanan and Zimbabwean portions of the basin (Chinoda et al. 2009). The Limpopo Mobile Belt, as it is sometimes known, is divided into three zones:

The Northern Marginal Zone

The Northern Marginal Zone of the Limpopo Belt in southern Africa comprises a Plutonic Assemblage of granitoids including a distinctive suite of porphyroclastic granites. and a much less abundant Supracrustal Assemblage of metabasites and iron formations. These rocks are at granulite-facies above a normal thickness of continental crust. Most of the Plutonic Assemblage are intrusive rocks that crystallized from dry melts from 2800 to 2600 Ma, with a relatively simple thermal history. They may have been derived from the partial melting of a mafic source. Some supracrustal rocks have experienced two thermal events at granulite facies (Chinoda *et al*. 2009).

A reverse-sense shear zone forms the boundary of the Northern Marginal Zone with the Zimbabwe craton. The southern boundary is the Triangle shear zone, which is proven as a continuous structure along a much greater strike length than previously documented. A widespread sub-vertical foliation in the Northern Marginal Zone and the reverse shear zone formed during progressive NNW-SSE shortening. Crustal thickening occurred both magmatically and tectonically in the late Archaean and was accompanied by synchronous uplift. Protracted magmatism provides a mechanism to incorporate supracrustal rocks into the lower crust, and can explain the occurrence of more than a single thermal event.

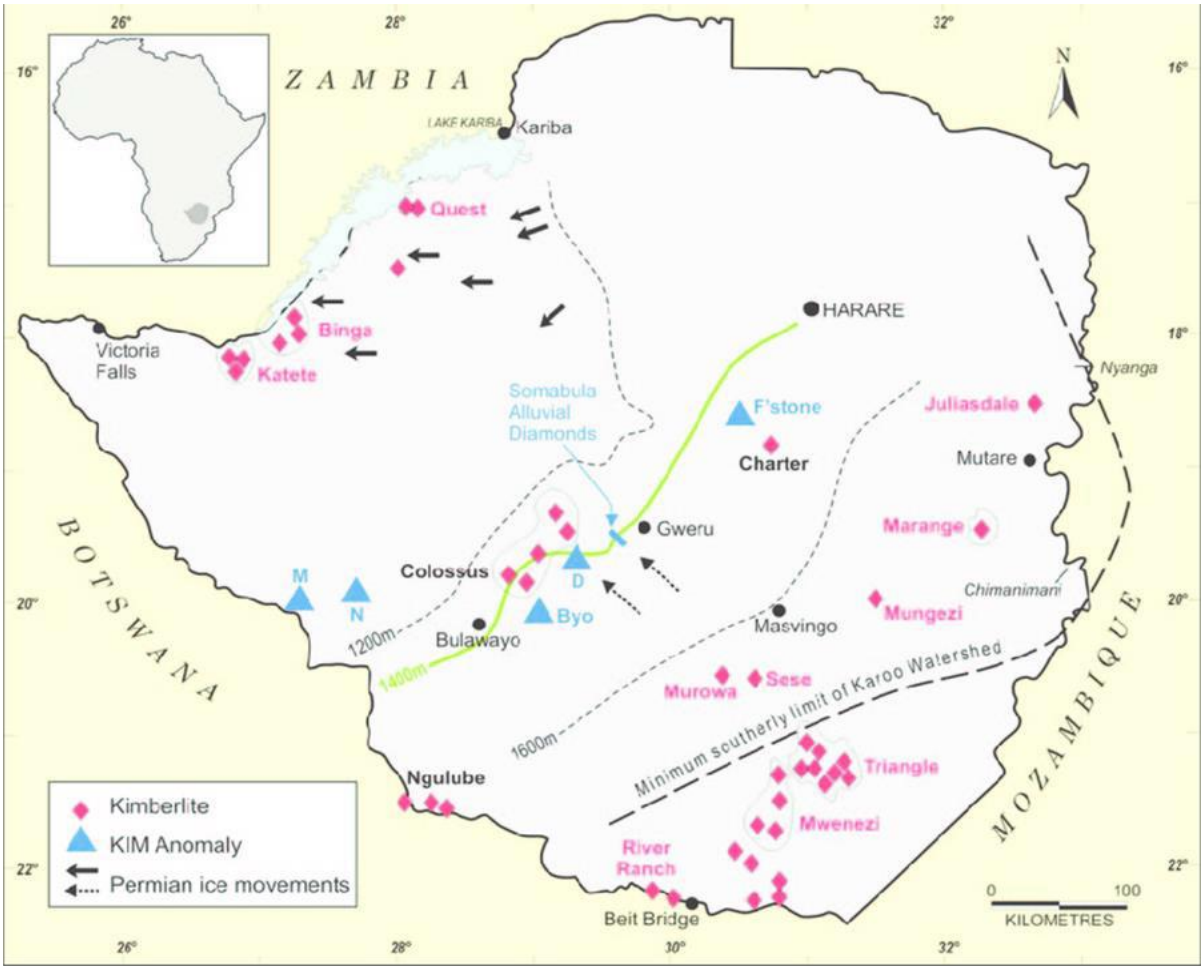


Figure 11: Locations of known kimberlite clusters in Zimbabwe

Description why the geological formation substantiates the minerals to be prospected for

The landscape of much of Zimbabwe reflects the imprint of two major cycles of erosion (African and post-African) since the disruption of Gondwana. The African erosion cycle commenced with the disruption of Gondwana, while the ensuing post-African cycle of erosion was initiated by the late Palaeogene uplift along the line of the modern central watershed. This rejuvenated the river network, leading to the removal of the carapace of deeply weathered saprolite that developed under the humid mid-Cretaceous climate of the earlier African cycle. The post-African surface is thus an etch surface, with the characteristic plain and inselberg topography marking the weathering base of the African erosion event. A very subordinate Plio-Pleistocene, the cycle is reflected by terraces immediately marginal to the major river systems. The confinement of the Save and Zambezi drainages to graben structures resulted in their evolution largely independently of the two major erosion cycles that moulded the landscape of the rest of the country. The palaeo-drainage reconstruction has important implications for the dispersion of diamonds and associated pathfinder minerals from primary kimberlite sources. The Sese-Murowa kimberlites are inferred to be the primary source of hitherto unexplained alluvial diamonds in basal gravels of the Somabula Karoo outlier, located on the central Zimbabwe watershed, some 120 km to the northwest.

The drainage evolution model also provides a framework to infer likely distal kimberlite sources for several major unexplained kimberlitic pathfinder mineral anomalies associated with the southern margin of the Kalahari Formation.

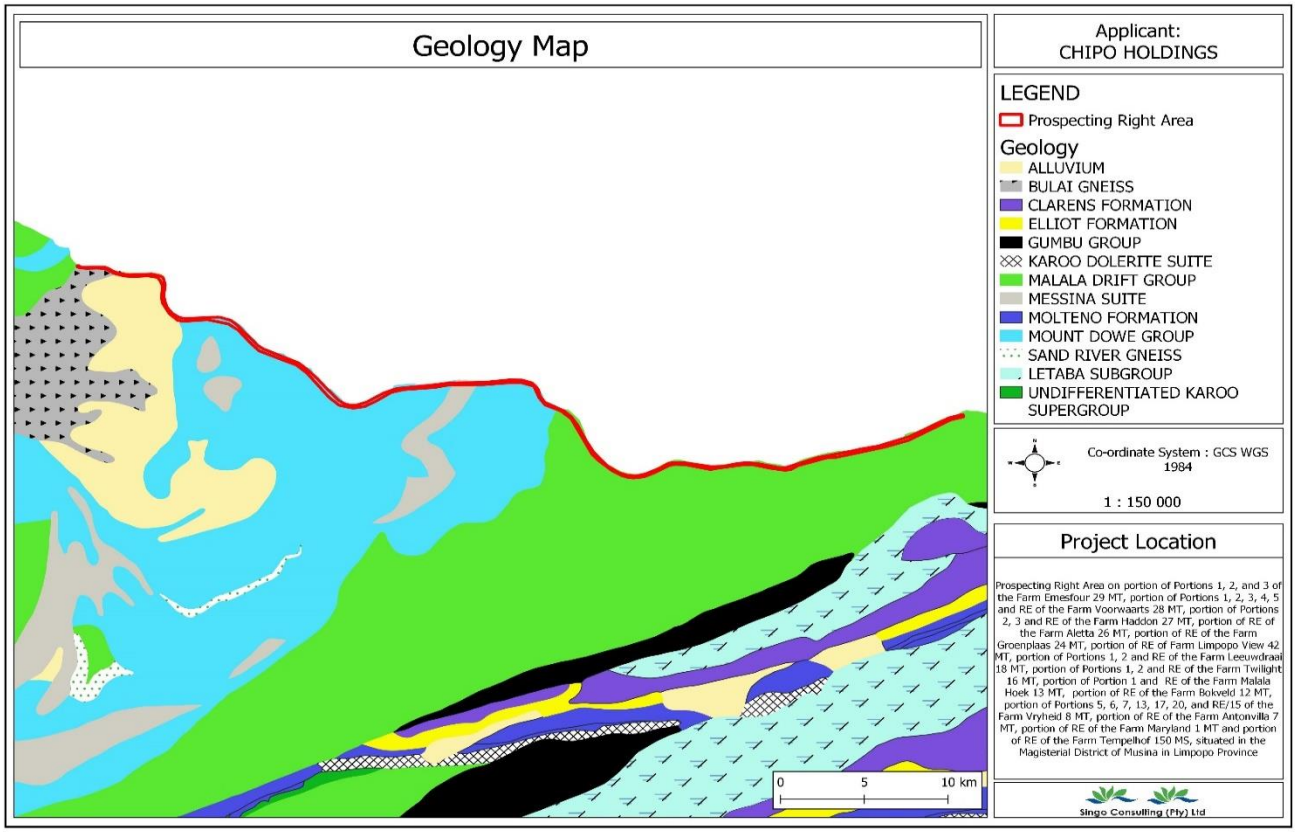


Figure 12: Geology Map of the application area

SOILS

The dominant soil within the prospecting right area is sand. However, the area is surrounded by the following classes as they are visible on the river bank profile.

(a). Freely drained, structureless soils.

Freely drained, structureless soils can be defined based on their soil depth, soil drainage, erodibility, and natural fertility.

- **Soil depth**

The depth of the soil profile is from the top to the parent material or bedrock. This type of soil can be classified as a restricted soil depth. A restricted soil depth is a nearly continuous layer that has one or more physical, chemical, or thermal properties.

- **Soil Drainage**

Soil drainage is a natural process by which water moves across, though, and out of the soil because of the force of gravity. The soils in the proposed area have excessive drainage due to the soils having a very coarse texture.

- **Erodibility**

Erodibility is the inherent yielding or non-resistance of soils and rocks to erosion. The freely drained structureless soils have high erodibility. A high erodibility implies that the same amount of work exerted by the erosion processes leads to a larger removal of material.

- **Natural Fertility**

Soil fertility refers to the ability of soil to sustain agricultural plant growth, i.e., to provide plant habitat and result in sustained and consistent yields of high quality. The soil, as a nature of them, contains some nutrients which are known as 'inherent fertility'. Among the plant nutrients, nitrogen, phosphorus, and potassium are essential for the normal growth and yield of the crop. The proposed area has low natural fertility soil.

(b) Lithosols soils

Lithosols are classified as a group of shallow azonal soils lacking well-defined horizons, especially an entisol consisting of partially weathered rock fragments, usually on steep slopes.

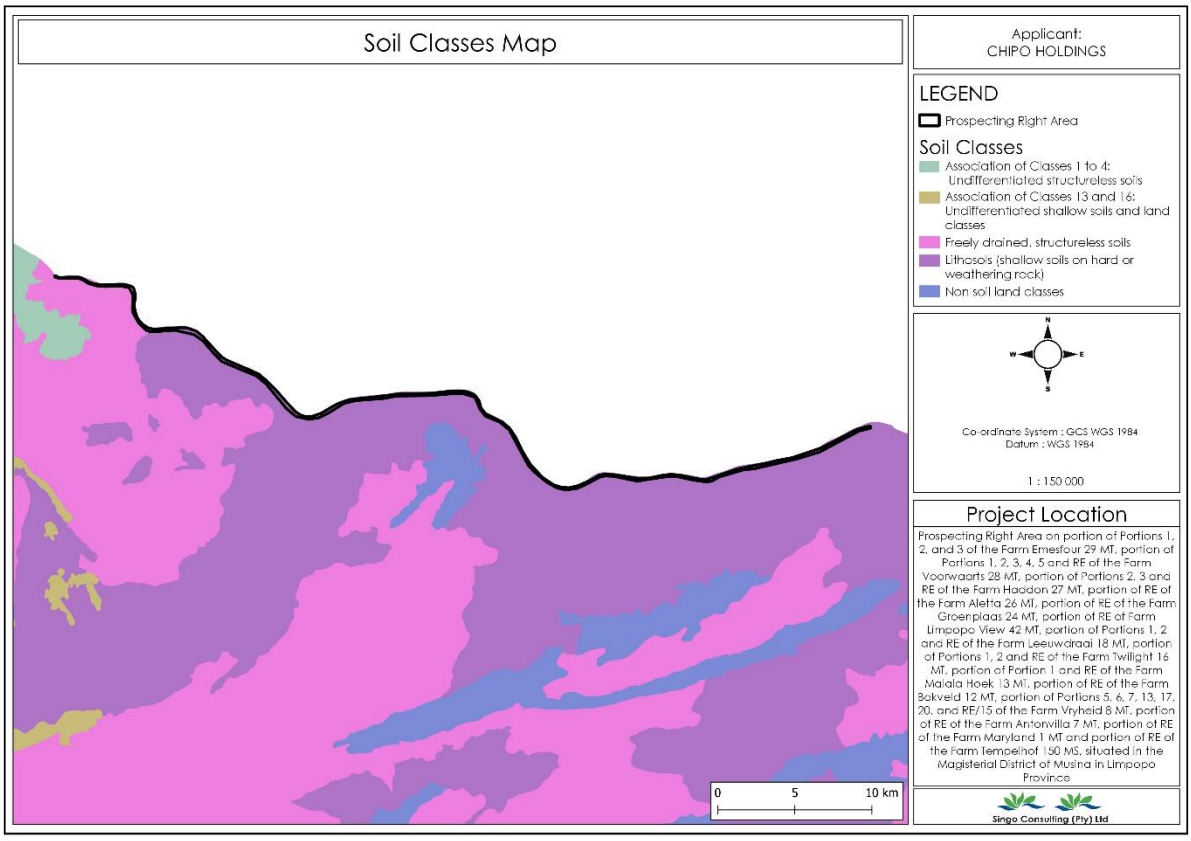


Figure 13: Soil classes map within the study area

LAND CAPABILITY

According to the map produced by the GIS Specialist (see Figure 17), the land capability of the surrounding area as seen on the following page is said to be grazing and also a small patch of wilderness. Bare land was observed during the site assessment conducted on the 10th of June 2022. The area is surrounded by Livestock and game farming. In addition, crop farming is practised around the proposed area(See **Photo *1***). Ground truthing was not done at ZZ2 Esmefour Farm, however, consultation was done and arrangements for access are ongoing

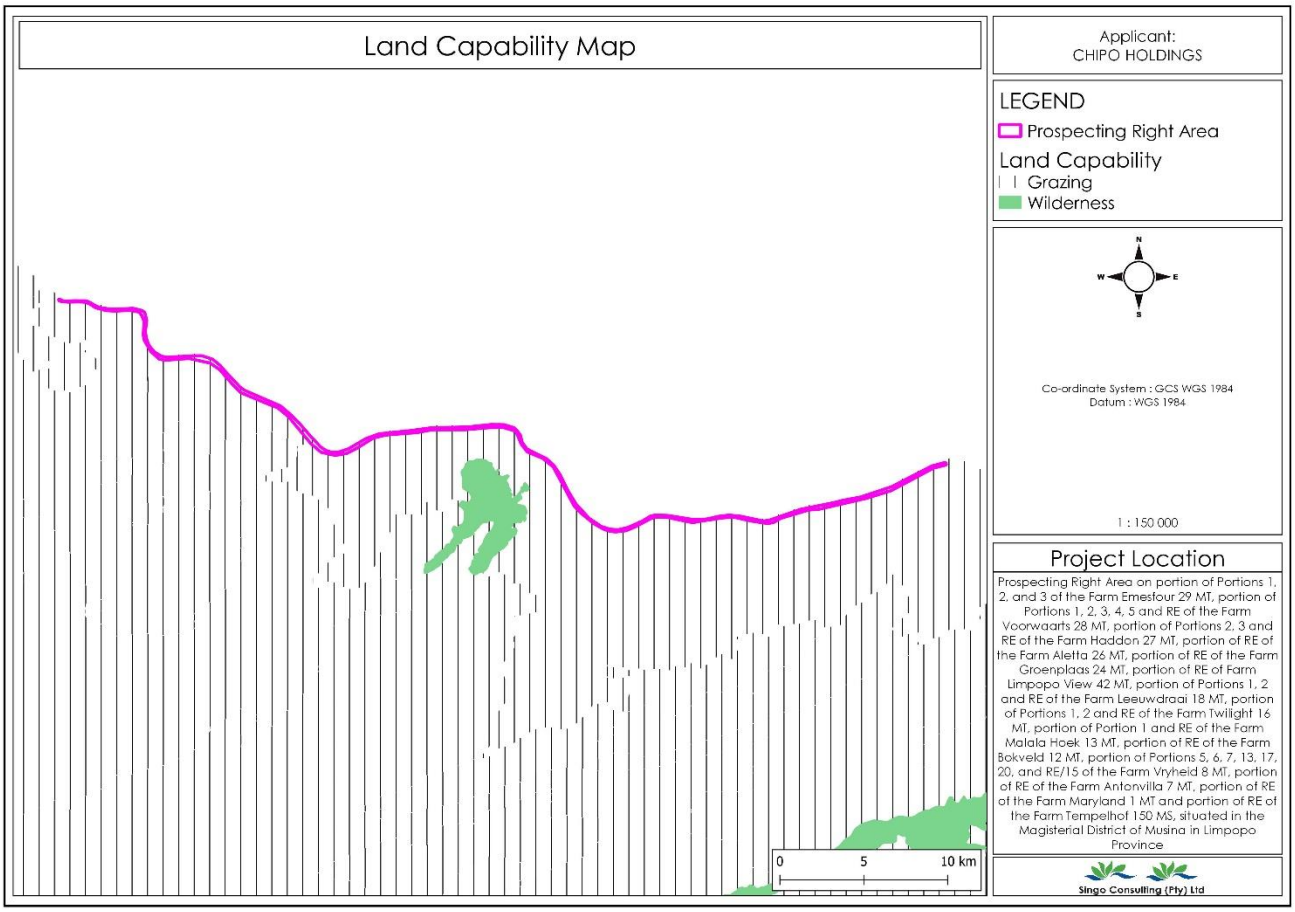


Figure 14: Land capability map

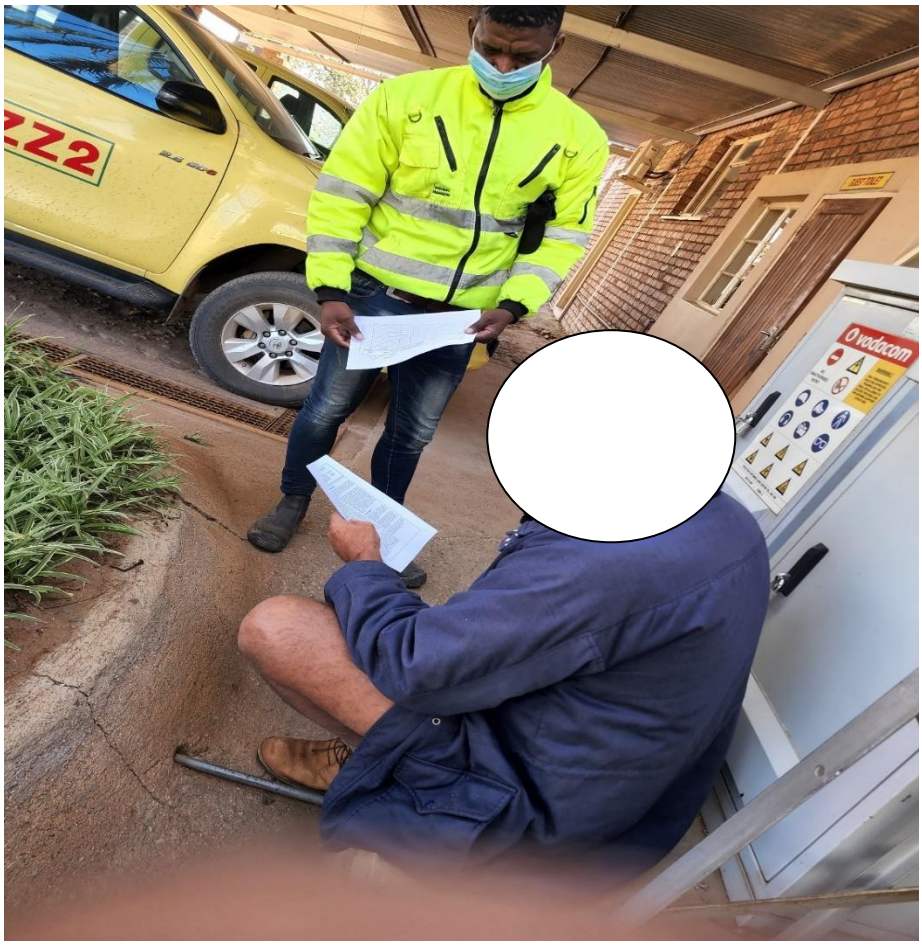


Photo 3: ZZ2 Farming office: Esmefour Tomato Farming (Consultation)

CLIMATE

The project area is located within a dry tropical climate zone characterized by dry winters and hot humid summers. The area experiences one cycle of rainfall that extends from October of the previous year to March of the following year (approximately 182 days). Most of the rainfall occurs as localized heavy thunderstorms. The area normally receives between 201 and 400 mm of rain per year, peaking during January and February, with most rainfall occurring during the summer. The area receives the lowest rainfall (1 mm) in July and the highest (47 mm) in December (Figure 18).

Temperatures rarely drop below zero during winter, and the climate is moderately isothermic, varying by no more than 17°C between monthly highs and lows in 2015-16. The maximum summer temperature is experienced from November to February with an average high of 30°C. The lowest temperatures are experienced between May and August. See **Figure 15** below for the Monthly average temperature and Rainfall. **Figure 16** illustrates the Mean Minimum Annual Rainfall of the area.

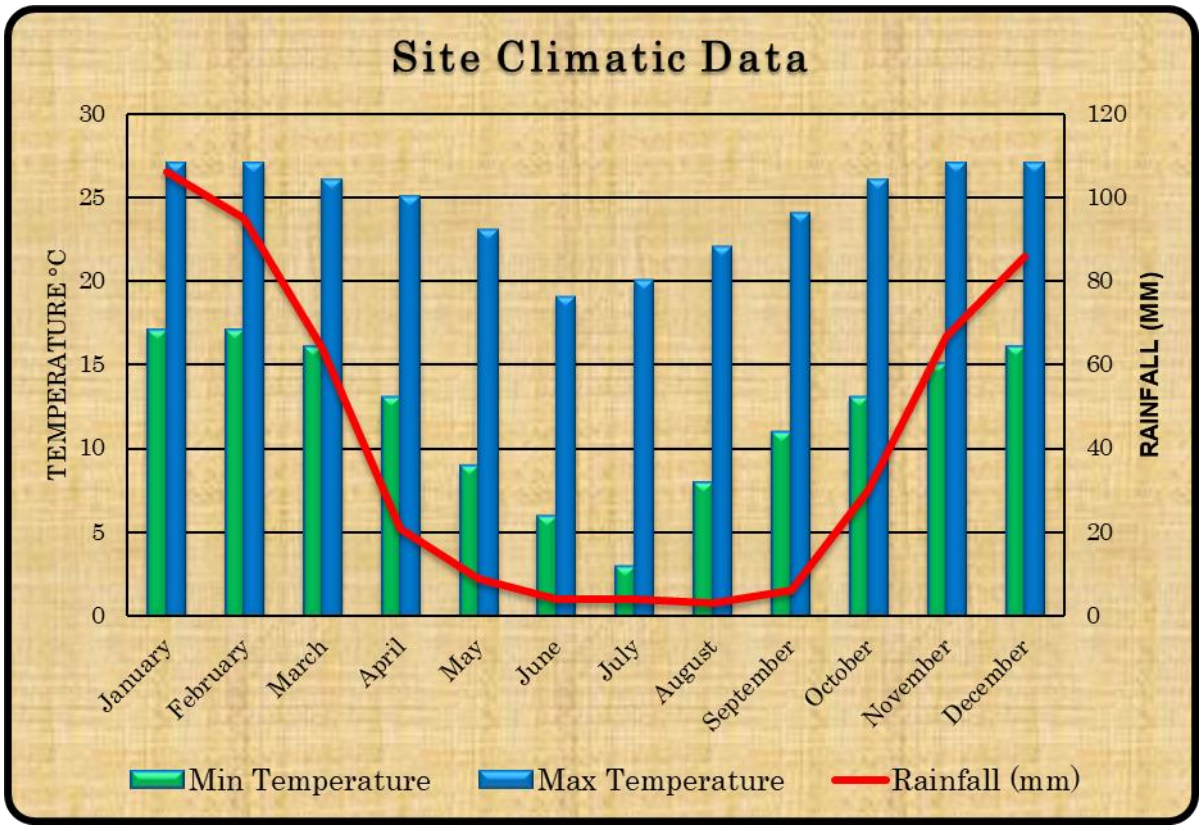


Figure 15:Average temperature and rainfall graph for Musina

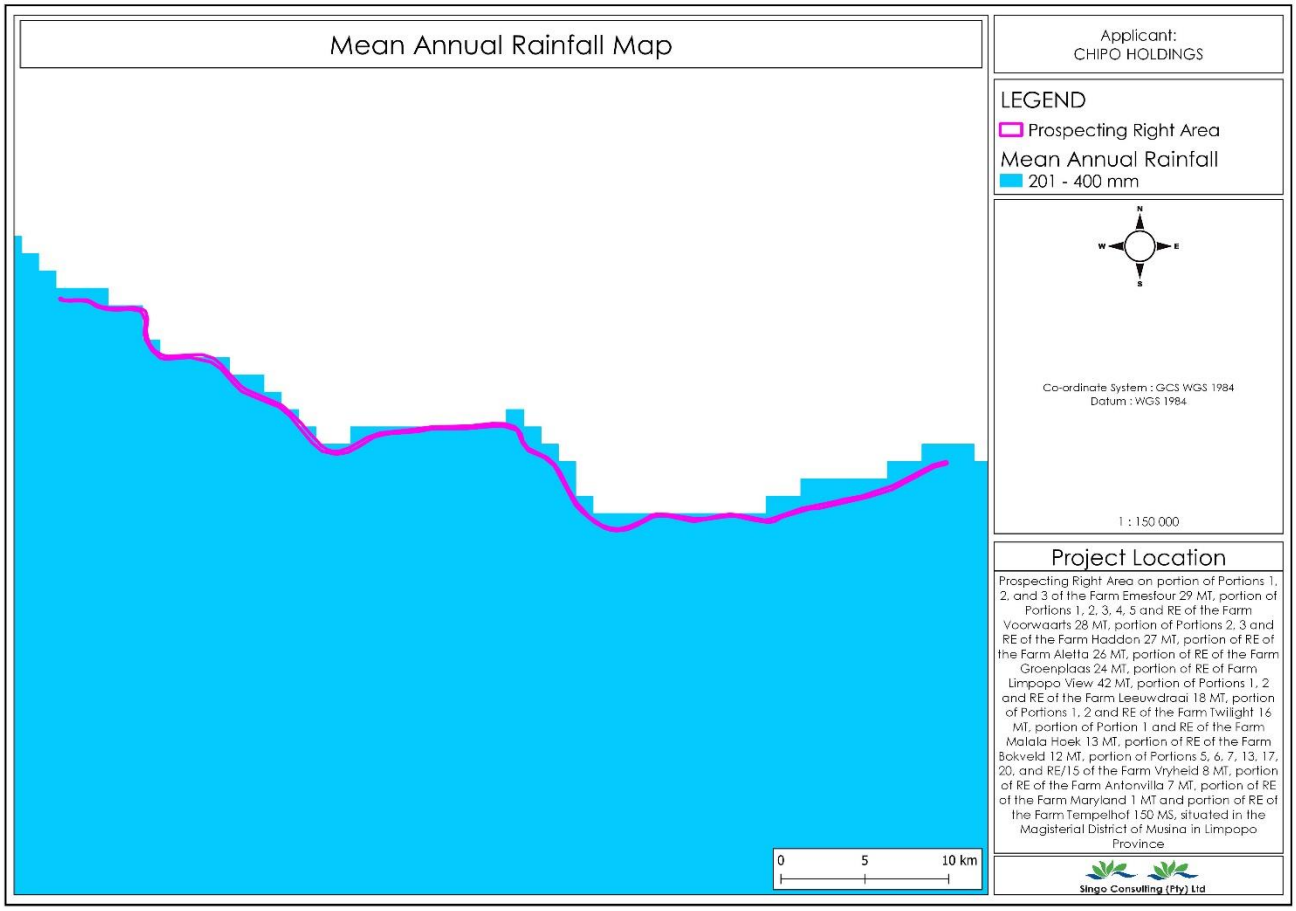


Figure 16: Mean annual rainfall for the project area

TOPOGRAPHY

The topology of the area is illustrated below in Figure 17. A Topographic map is a map that indicates, to scale, the natural features of the Earth's surface, as well as human features, with features in the correct relationship to each other (Oxford Dictionary; 2020). The topography map other than showing landform features, rivers, and associated water resources, also shows the height above sea level with the use of contour lines. Contour lines are imaginary lines on the ground surface joining the points of equal elevation.

In this environmental project, the topography is used to determine how surface water flows during rainy seasons or how it would flow during the existence of the project. The topography also influences groundwater vulnerability, as topography also influences run-off and infiltration.

The highest elevation point within the proposed project is 460 mamsl on the western and the lowest elevation is 380 mamsl. The slope is generally steep along the boundaries of the northern polygon and the boundaries of the southern polygon, this is seen by the contours being much close to one another.

As evidenced by the contours on the topographic map, the movement and direction of the rivers (Perennial and Non-Perennial) are largely influenced by the contours which represent the nature of the slope (gentle or Steep). onsite and around the project site there are Sand River and Nzhelele River flow from the south-western direction to the north-eastern direction. Limpopo River travels from the western direction to the eastern direction which is categorized under National Freshwater Ecosystem Priority Areas (NFEPA).

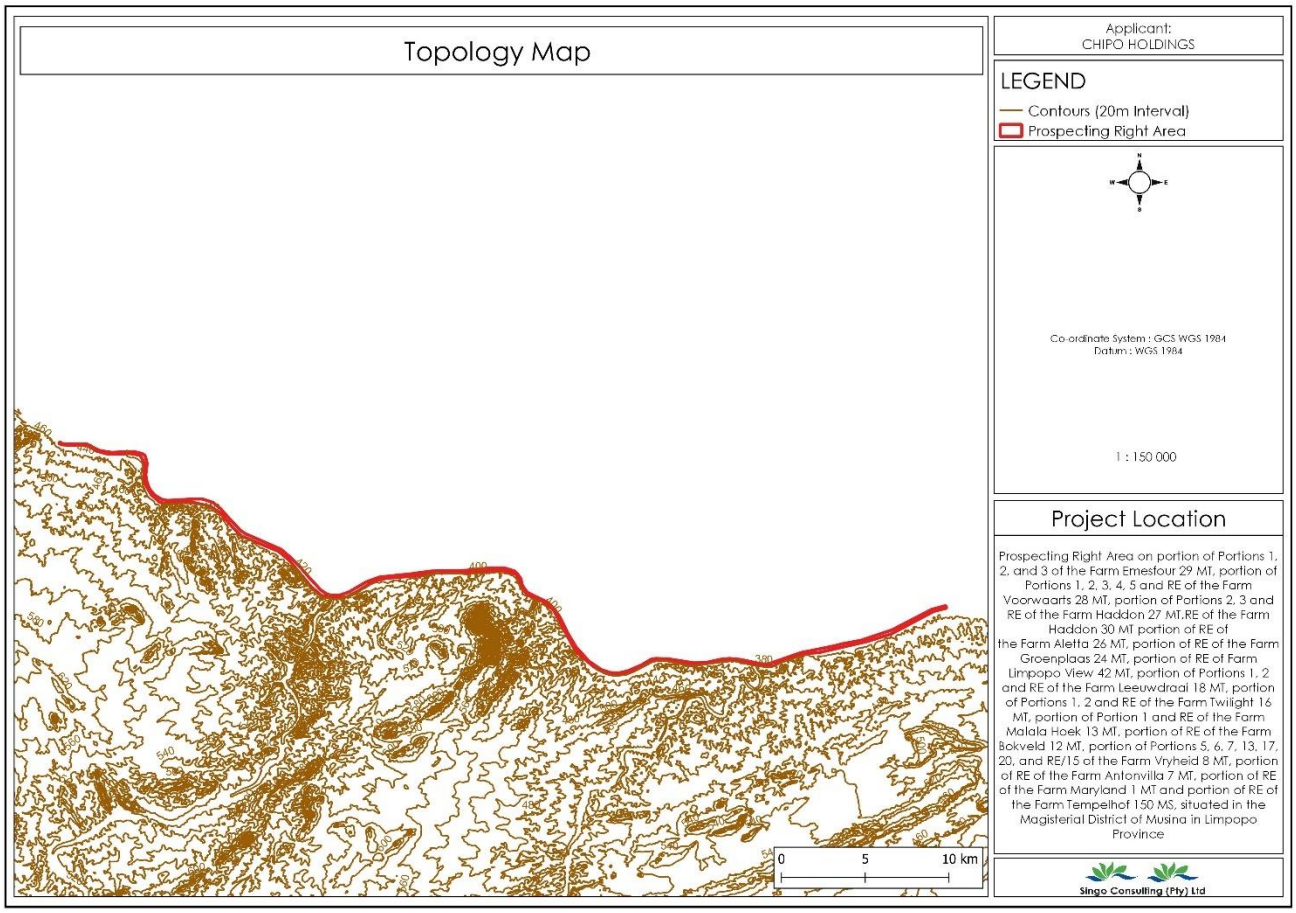


Figure 17: Topology

SURFACE WATER

- **Catchment Description**

A baseline Hydrological study was conducted for this project and the report is attached as part of Appendix F. The prospecting area falls on A71L, A71K, A80G and A80J quaternary catchments under Limpopo Water Management Area (WMA). The Limpopo WMA is one of the most economically important WMAs in South Africa. Economic activity in the WMA is highly diverse and is characterized by commercial agriculture, dry land and subsistence agriculture and eco-tourism.

The quaternary catchments range from 870 to 1765 km ^{2}(extent), mean annual evaporation (MAE) between 1900m and 2050 mm, and mean annual precipitation (MAP) 288 and 333 mm. A copy of the basic hydrological report is attached in Appendix 4.

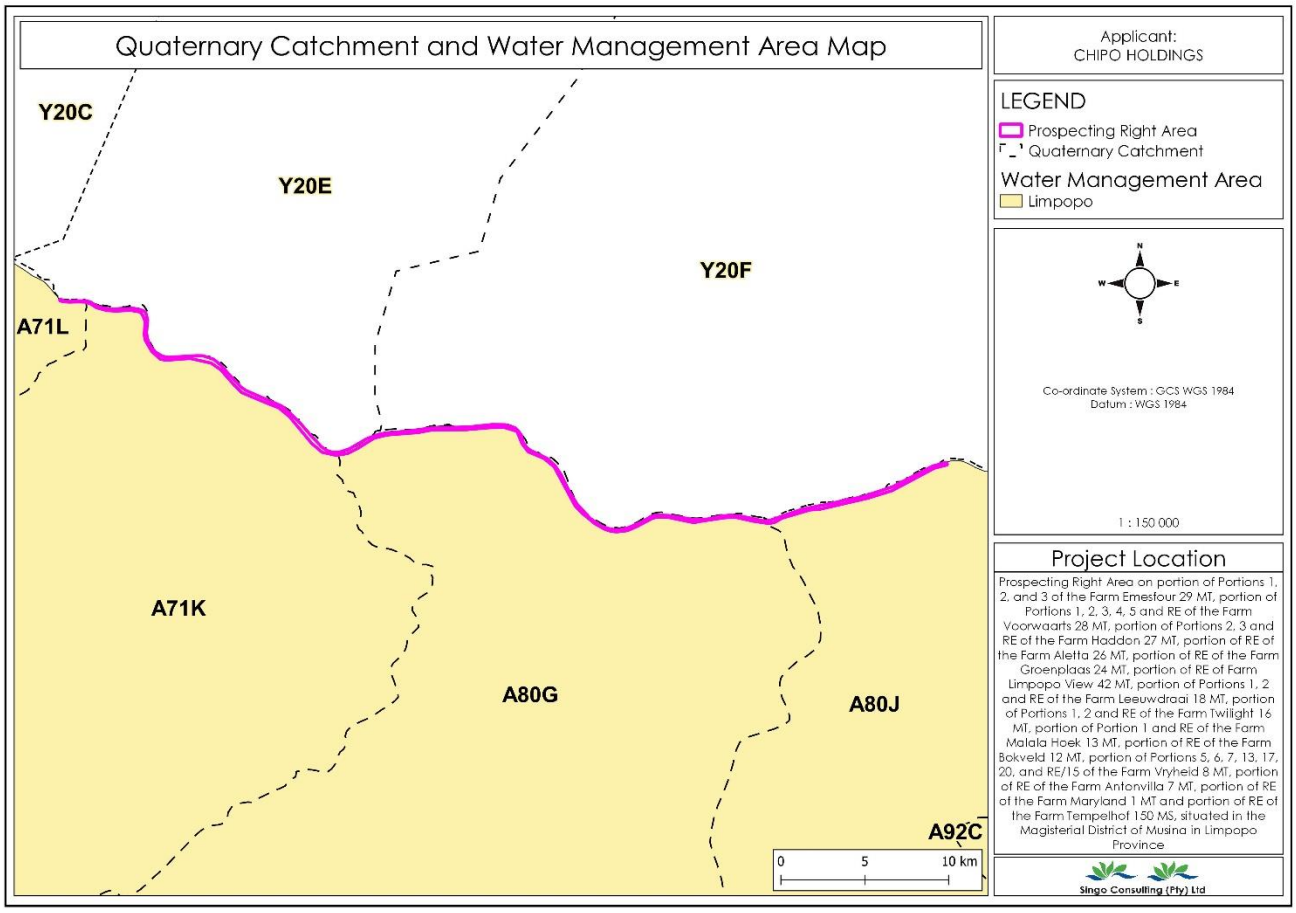


Figure 18: Quaternary catchment map

- **Drainage**

The project is within the Limpopo River floodplain. The hydrology surrounding the proposed area is of vital importance. In this context, hydrology is all the surface waters appearing within and nearby the proposed project area, where a potential to be impacted by the project's existence. The hydrology map illustrates that the following water bodies exist within and nearby the project area

- Perennial River (Limpopo, Sandrivier, Nzhelele River and Nwanedi)
- Non-perennial River
- Unknown River
- Channeled Valley Bottom wetlands
- Seep wetlands
- Depression
- Floodplain

Channeled valley bottom wetlands are linear fluvial, net depositional valley bottom surfaces that have a straight channel with the flow on a permanent, seasonal, or ephemeral/episodic basis (Rountree, Todd, Kleynhans, et al, 2007: iv). Seep wetlands are defined as wetlands that occur in the area where the groundwater reaches the surface, Non-Perennial rivers are rivers that flow only on certain occasions, and perennial rivers are rivers that flow all year round. Depression/ Pan wetlands are wetlands that can be identified by their edges or boundaries, these pans are usually small, often temporary and only contain water for short periods. And floodplain is a feature that shows that an area is prone to flooding.

The project is within the Limpopo River(Figure 19). Therefore, the location of the sampling area has been identified and water samples were taken from upstream, existing hole and midstream for laboratory analysis. This is done to ensure that the prospecting process should not affect the waterbody in terms of water quality and quantity.

There will be procedures and guidelines put in place for this project to avoid the risk of water contamination through nearby wetlands, and other waterbodies identified, such as ensuring strict management of waste material and buffering of 100 m. It will be advised on more mitigation measures to ensure the waterbodies as seen on the hydrology map are not contaminated.

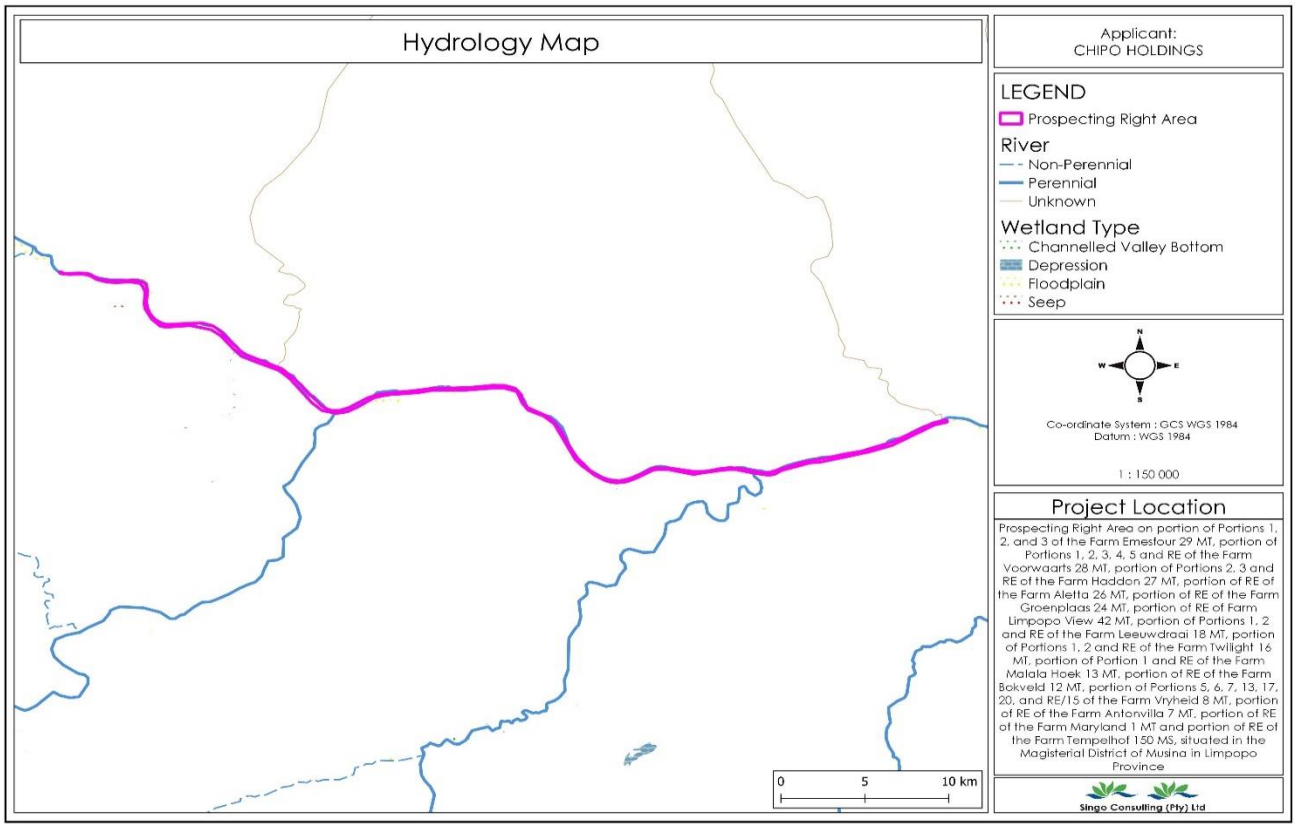


Figure 19: Hydrology map

- **Wetlands Delineation**

According to National water Act 36 of 1998, a wetland is defined as Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil. Wetland delineation is the process of identifying the outer edge of the temporary zone of the wetland.

Whilst the identification of a wetland is useful, normally the requirement (specifically for EIA and WULA) is for the wetland to be delineated – for its boundaries to be precisely determined so that it can be mapped out and indicated as a sensitive area. This edge marks the boundary between the wetland (water resource) and the adjacent terrestrial areas. This process is aided by using the various indicators which are used to identify a wetland, the indicators are as follows:

- The position in the landscape will help identify those parts of the landscape where wetlands are more likely to occur.
- The type of soil form (i.e. the type of soil according to a standard soil classification system), since wetlands are associated with certain soil types.
- The presence of wetland vegetation species.
- The presence of redoxymorphic soil features, which are morphological signatures that appear in soils with prolonged periods of saturation (due to the anaerobic conditions which result).

In this study, the redoxymorphic indicator will be used to delineate a wetland, this is because it is the most reliable, diagnostic indicator of wetland. These features develop due to prolonged saturation (and associated anaerobic conditions) and can be used to indicate zones of a permanently, seasonally or temporarily high-water table, as described in the characteristics of the permanent, seasonal and temporary wetland zones in the national water Act 36 of 1998. A copy of a basic hydrology study is attached in Appendix 4

HYDROGEOLOGY

Typically, five distinct aquifer types:

- Basement (fractured Achaean-Proterozoic igneous/ metamorphic)
- Hard rock (e.g., Table Mountain TMG, Waterberg and Natal Groups sandstone; fractured)
- Karst/ dolomite (dissolution)
- Karoo (fractured and influenced by dykes)
- Porous (intergranular Quaternary alluvial, coastal, Aeolian and other surficial unconsolidated deposits)

The study area falls under **the Karoo (fractured and influenced by dykes)**. For effective borehole yields, the boreholes must target the fracture zones in this area.

Regional Groundwater Occurrence and Aquifers

Based on the geology within the study area, the structural geology, and the geomorphology, the following conditions can arise to enhance aquifer development within the study area:

- The fractured transition zone between weathered and fresh bedrock
- Fractures along contact zones between the host rocks due to heating and cooling of rocks involved with the intrusions
- Contact zones between sedimentary rocks of different types
- Interbed or bedding plane fracturing
- Openings on discontinuities formed by fracturing
- Faulting due to tectonic forces
- Stratigraphic unconformities
- Zones of deeper weathering
- Fractures related to tensional and decompressional stresses due to off-loading of overlying material
- Groundwater occurs within the joints, bedding planes and along dolerite contacts. Groundwater potential is generally low in these rocks, with 87% of borehole yields < 3 l/s.

The lithology sandstone makes up the fractured Ellisras aquifer. The pores of the geological units are generally strongly cemented, and fractured flow over secondary structures such as faults, bedding plane fractures, and so on is the primary flow mechanism. Due to the establishment of cooling joints, the intrusion of dolerite dykes and sills into the fractured aquifer has resulted in the formation of preferential flow routes along the contacts of these lithologies. The dykes may operate as permeable or semi-permeable barriers to prevent water from flowing across them.

Potential contaminants

Because this activity will only take place for a brief time, the possible pollutants for Alluvial Diamond prospecting are limited and can be easily handled. The following contaminants are expected to be of concern during the prospecting activity

- Leakage or overflow of ablution waste during the prospecting activity.
- Hydrocarbon spill into the soil through light vehicles which will be on site

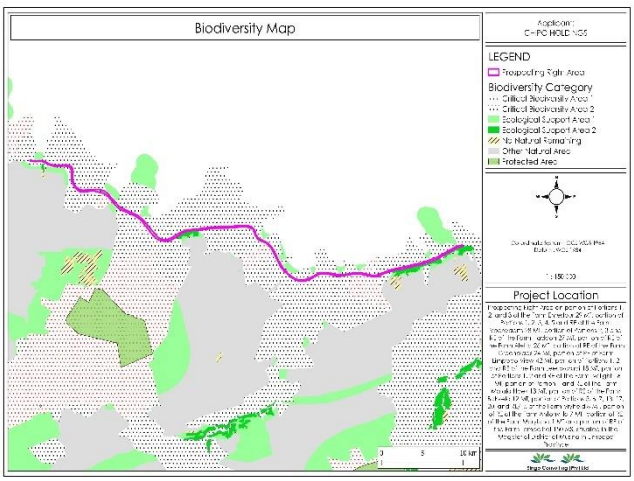
A copy of geohydrology is attached in Appendix 4

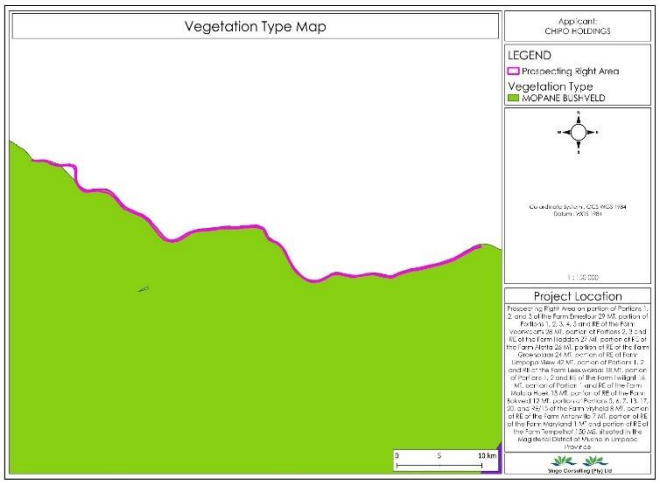
BIODIVERSITY

A basic ecological study will be done when access to the immovable properties of Esmefour Boerdery (Pty) Ltd is granted. Therefore, the information presented in this section is through desktop study from GIS maps and screening tool report

Vegetation

The study site falls within the Savanna Biome in South Africa as classified by Rutherford and Westfall (1986), and the Mopane Bushveld vegetation type (Figure 17) as described by Mucina and Rutherford (2006). However, no vegetation within the proposed site. According to *Screening Tool*, the area is classified low plant species area. The Mopane vegetation unit is characterized by undulate terrain to very irregular plains and some hills. In the western section, open woodland to moderately closed shrubveld dominated by *Colophospermum* mopane on clayey bottomlands and *Combretum apiculatum* on hills.





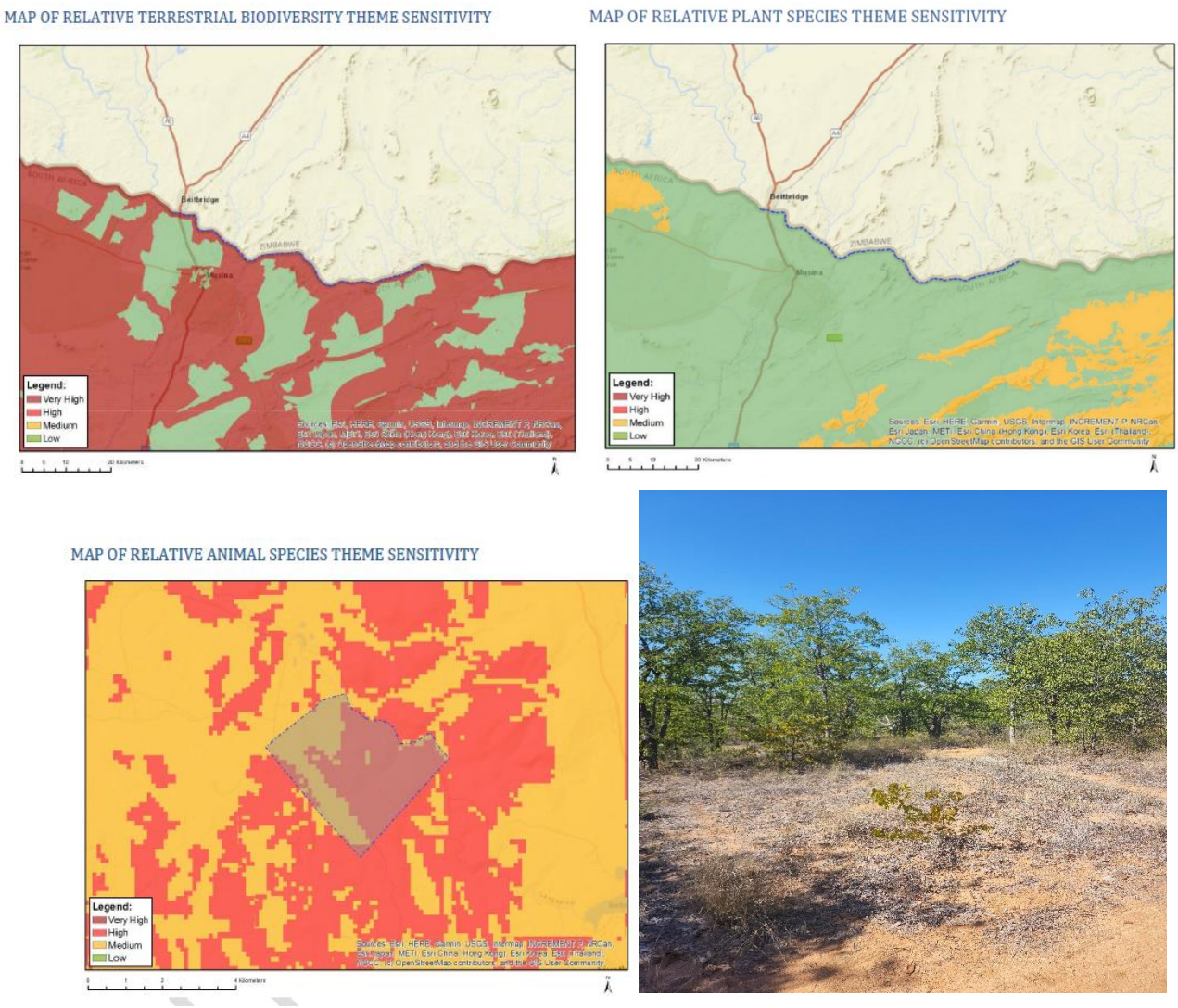


Figure 20: Terrestrial Biodiversity (GIS), Vegetation type (GIS), Terrestrial Biodiversity(screening report), Plant Species (screening report), Animal Species (screening report) and vegetation

CULTURAL AND HERITAGE

A Heritage Impact Assessment was not undertaken as part of the development of the impact assessment. Based on available Geographic Information System data, graves and any historical and cultural features are not present within the Proposed area.

9.2 Environmental aspects which may require protection and/or remediation

Two wetlands have been identified around the application area (approximately 0.3 km from the boundaries of the proposed project area). Water courses are also near the boundaries of the proposed project area.

No sampling site will be located within 100 meters of any properties, buildings, or homes located within the project area's boundaries. Existing access roads will be utilized to access the sampling sites (No vehicles will enter the floodplain of the River).

Livestock, crop and game farming are practiced around the project area. Sampling is proposed to take place in the floodplain where there are existing access roads (illegal routes).

9.3 Description of the current land use/cover

The proposed area is covered by rock, alluvial gravels/sand and water and it is depicted in Figure 21. Land uses/cover 3 km radius are inclusive of the following:

- Crop farming
- Livestock farming
- Game Farming
- Gravel roads
- Homesteads
- Waterbodies

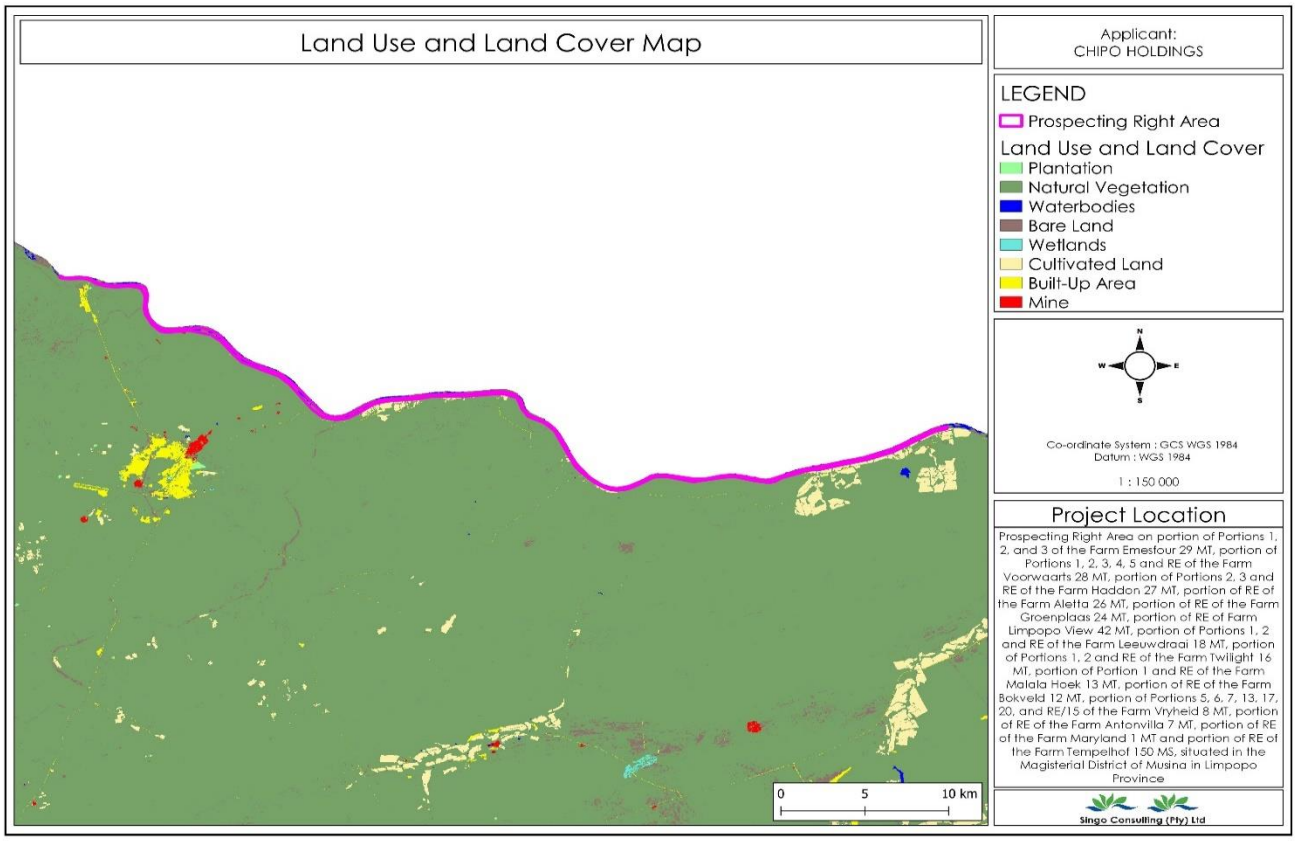


Figure 21: Land use map

9.4 Description of specific environmental features and infrastructure on the site

The application area is served by gravel roads that are in reasonable condition. The noticeable environment features and infrastructure around the site includes but are not limited to the agricultural fields, fences and buildings, electrical powerlines, wetland and farmsteads.

9.5 Environmental and current land use map

(Show all environmental, and current land use features)

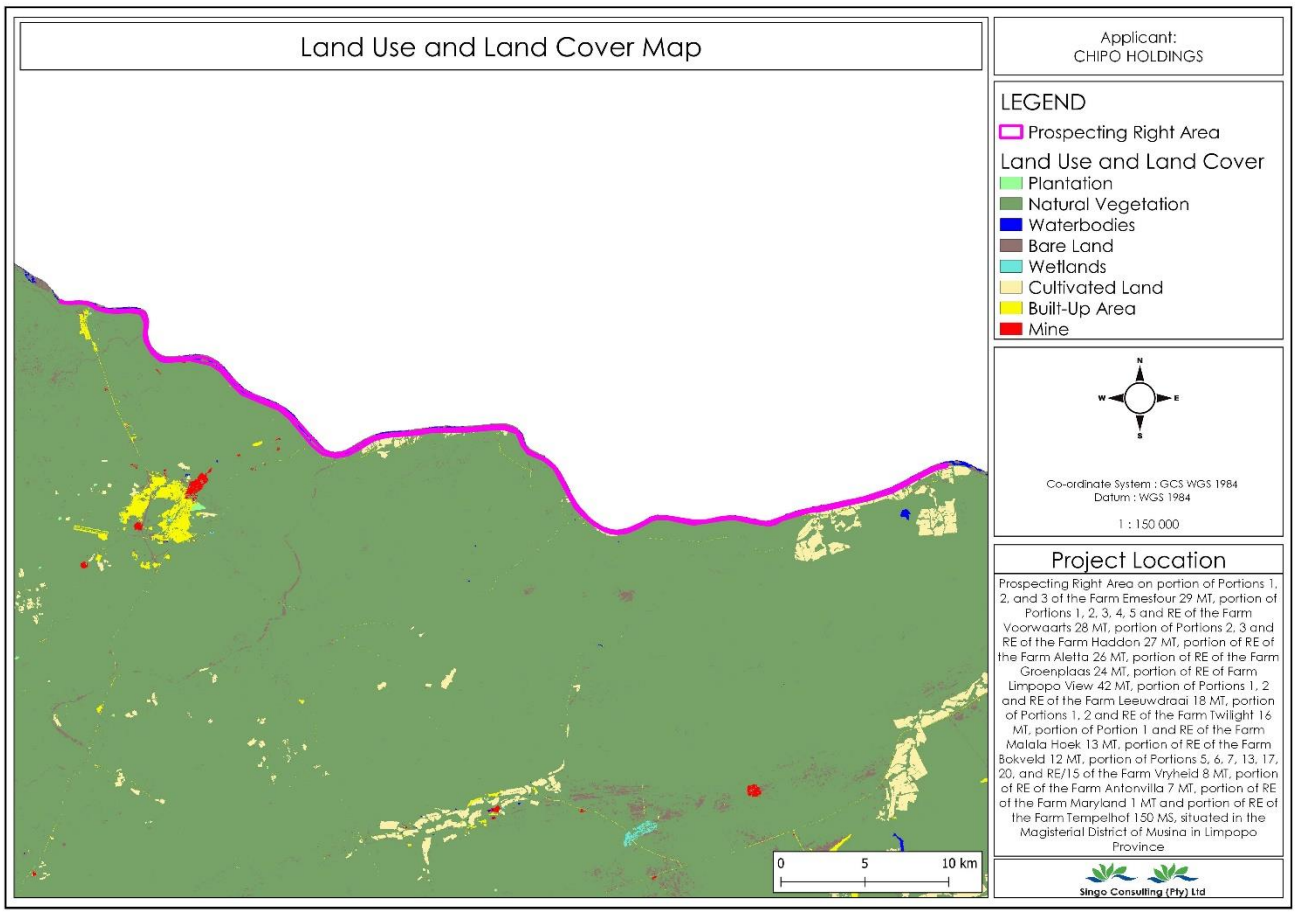


Figure 22: Land use map

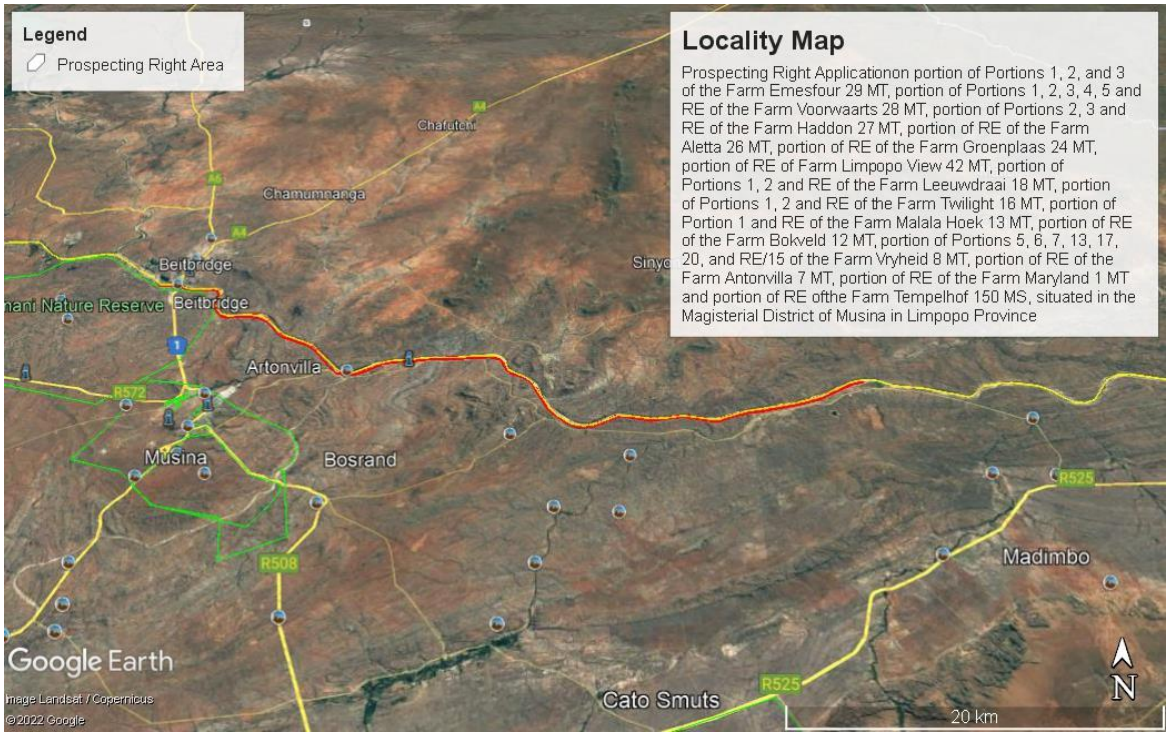


Figure 23: Google Earth view of current land use

10 METHODOLOGY USED IN DETERMINING AND RANKING THE NATURE, SIGNIFICANCE, CONSEQUENCES, EXTENT, DURATION AND PROBABILITY OF POTENTIAL ENVIRONMENTAL IMPACTS & RISKS.

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).

Assigning significance to potential impacts requires integration of the severity (magnitude of the potential impacts), type of the impact, the extent to which the impact will occur, probability of the impact (the likelihood of the impact occurring) and the duration of the impact. This is the best way to determine whether the impact is important or not, once the mitigation is considered.

Impacts have been assigned a rating of high (H), medium/moderate (M), low (L), very low (VL) or no impact. A significance rating is assigned twice to the impact. Firstly, to indicate significance without mitigation or optimization and secondly, to indicate significance after mitigation or optimization. This is done to highlight the importance of mitigation or optimization of potential impacts.

Table 6: Impact Severity rating

Category	Description/definition
High	Impacts will be of high significance if one of the following applies: • The extent is national to international • The duration is long term to permanent • The severity will be high • Probability is definite
Moderate	Impacts will be of moderate significance if one of the following applies: • The extent is local to regional • The duration is medium to long term • The severity is major • The probability is highly probable
Low	Impacts will be of low significance if one of the following applies: • The extent is local • The duration is temporary to permanent • The severity is low • The probability is probable

Very low	Impacts will be of very low significance if one of the following applies: • The extent is site-specific • The duration is temporary to permanent • The severity is very low • The probability is improbable
No impacts	A potential concern of impact which, upon evaluation, is found to have no impact.

This section describes the methodology that was applied to assess the significance of environmental and heritage impacts. The significance rating process follows the established impact/risk assessment formula:

- Significance = Consequence x Probability, WHERE.
- Consequence = Severity + Spatial Scale +Duration, AND
- Probability = Likelihood of an impact occurring

The matrix calculates the rating out of 75 and then converts this to a percentage. The percentage is the figure quoted in the matrix. The weight assigned to the various parameters for positive and negative impacts is presented in Table 8.

Table 7: Impact severity

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
7	Very significant impact on the environment. Irreparable damage to highly valued species, habitat or ecosystem. Persistent severe damage.	Irreparable damage to highly valued items of great cultural significance or complete breakdown of social order.	International	Permanent to mitigation	Certain/ definite
6	Significant impact on highly valued species, habitat or ecosystem.	Irreparable damage to highly valued items of cultural significance or breakdown of social order.	National	Permanent mitigated	Almost certain/ high probability

Rating	Severity		Spatial scale	Duration	Probability
	Environmental	Social/cultural heritage			
5	Very serious, long-term environmental impairment of ecosystem function that may take several years to rehabilitate.	Very serious widespread social impacts. Irreparable damage to highly valued items.	Province/ region	Project life (The impact will cease after the operational life span of the project)	Likely
4	Serious medium-term environmental effects. Environmental damage can be reversed in less than a year.	On-going serious social issues. Significant damage to structures/ items of cultural significance	Municipal area	Long-term (6-15 years)	Probable
3	Moderate, short-term effects but not affecting ecosystem function. Rehabilitation requires the intervention of external specialists and can be done in less than a month.	On-going social issues. Damage to items of cultural significance.	Local	Medium term (1-5 years)	Unlikely/ low probability
2	Minor effects on the biological or physical environment. Environmental damage can be rehabilitated internally with/ without the help of external consultants.	Minor medium-term social impacts on the local population. Mostly repairable. Cultural functions and processes are not affected.	Limited	Short-term (Less than 1 year)	Rare/ improbable
1	Limited damage to a minimal area of low significance, (e.g., ad hoc spills within plant area). It will have no impact on the environment	Low-level repairable damage to commonplace structures	Very limited	Immediate (Less than 1 month)	Highly unlikely/ none

Table 8: Impact significance.

Probability/Likelihood	Consequence (severity + scale + duration)								
	1	3	5	7	9	11	15	18	21
1	1	3	5	7	9	11	15	18	21
2	2	6	10	14	18	22	30	36	42
3	3	9	15	21	27	33	45	54	63
4	4	12	20	28	36	44	60	72	84
5	5	15	25	35	45	55	75	90	105
6	6	18	30	42	54	66	90	108	126
7	7	21	35	49	63	77	105	126	147

Table 9: Impact significance threshold limit

Significance		
Low	0 - 35	
Medium-Low	36 - 76	
High-Medium	73 - 107	
High	108 - 147	

Table 10: Possible impacts associated with the project activities.

Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
Soil	N	2	6	4	12	5	60	Medium-Low
Surface water	N	4	5	5	14	4	56	Medium-Low

Noise	N							
Macrofauna/Micro-Organisms	N	2	4	6	12	4	48	Medium-Low
Air	N	4	5	5	14	4	48	Medium-Low

Activity 1: Desktop Study

Description: This is the initial stage of any site investigation whereby the information is acquired by doing research in the office before the site visit. This is normally done sitting on a desk in the office hence the term 'desktop study'. It is also referred to literature review. It provides initial information and understanding of the proposed area or subject before the actual physical site visit. In some instances, a desktop study may be a standalone study carried out instead of a physical site investigation/visit. The desktop study is done through analyses of any available exploration data, high-resolution satellite images, geological maps, and topographical maps. This includes consultation with landowners, I&APs and site assessment. No impacts are associated with this activity.

Activity 2: Field Mapping and alluvial gravel sampling

Geological mapping is a method that is largely used in science or exploration. It involves visual observations and collecting samples for laboratory analysis and producing a range of maps. The maps have various uses including assessing ground-water quality and contamination risks; predicting an earthquake, volcano, and landslide hazards; characterizing energy and mineral resources and their extraction costs; waste repository siting; land management and land-use planning; and general education. Field Mapping is carried out through visual observation of alluvial gravels/sands

This is the stage of collecting representative alluvial gravels/sands samples along floodplain using an automatic handheld auger, dredger and TLB. This is done to have representative samples for the determination of the grade and quantity of the mineral. This can be used to determine the economic feasibility of the mineral. The samples will be collected in sampling bags and loaded in the bakkie, then to the nearby laboratory. No bulk sampling will take place. No access road will be created. No vegetation will be removed. Impacts associated include soil profile and structure modification, water pollution, air pollution, noise pollution, visual impacts and impact on macrofauna/micro-organisms.

Activity 3: Geochemical Analysis

All samples collected will be then submitted to a nearby registered laboratory for analysis of diamond indicators i.e. garnet, Ilmenite. The grade and quantity of the mineral will be determined in the laboratory. No impacts are associated with this activity.

Activity 4: Geophysics survey

Geophysical surveys are used, not to identify diamond-bearing gravel lenses, but to outline a relatively small area of interest that can then be prospected further. This will be done for subsurface minerals. Although a great many of the geophysical techniques can be used in specific examples, two successful methods are electromagnetic methods and gravity/microgravity surveys. A consideration to conduct airborne geophysical surveys will be made once preliminary investigations have been completed. No impact associated with this activity

Activity 5: Data processing and validation

Data obtained during the sampling need to be processed and validated versus stratigraphic, structural and analytical data received and correlated with surrounding auger holes in the reserve area. No impact is associated with this activity.

Description: The significance of the impacts of the activity on the affected environment is potentially medium-low, with high probabilities of occurrence. Most of the environment will be potentially impacted over a limited spatial extent with noise occurring over a local extent. Mitigation measures need to be applied to reduce or prevent physical impacts on the environment.

Table 11: Impact of Sampling Collections.

Affected environment	Nature of Impact (Negative/Positive)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Significance rating (pre-mitigation)
Soil	N	2	6	4	12	5	60	Medium-Low
Surface water	N	4	5	5	14	4	56	Medium-Low
Noise	N	2	4	6	12	4	48	Medium-Low
Macrofauna/Micro-Organisms	N	2	6	4	12	5	60	Medium-Low
Air	N	4	5	5	14	4	48	Medium-Low
Visual aspects	N	2	6	4	12	5	60	Medium-Low

Surface water

The proposed area is along the Limpopo River floodplain. Considerable care must be taken to ensure that these watercourses are not disturbed and contaminated by the proposed activities.

Noise

Cumulative impacts are expected to be significant due to sampling and the movement of TLB. Surrounding farmers will also contribute to noise levels in the area with agricultural activities. Prospecting operations will take place between **07:00 and 17:30.** No noise is expected after the aforementioned time. The total cumulative impacts are expected to be low-medium.

Macrofauna/micro-organisms

Microorganisms and fauna are expected to be impacted when sampling. These could be a result of oil, lubricants and fuel spillages. Soil profile and texture are expected to change and affect the microorganisms and macro-fauna living within the soil. Soil nutrient decomposing will also be affected as a result of sampling. However, during the rainy season, the area will be leveled naturally.

Visual aspects

Cone and Quartering sampling will modify the topography of the area. Cone-shape-like stockpiles will be temporarily present on site. Upon completion of the sample, the disturbed area will be leveled using TLB. As the proposed is within the floodplain, the area will return to its original state after rainfall.

11 IMPACTS AND RISKS IDENTIFIED INCLUDING THE NATURE, SIGNIFICANCE, CONSEQUENCE, EXTENT, DURATION AND PROBABILITY OF THE IMPACTS, INCLUDING THE DEGREE TO WHICH THESE IMPACTS

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated).

Table 12: Impact Significance Calculation – Operational and Rehabilitation Phase

Activity	Affected environment	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)	Nature of Impact (Positive/Negative)	Spatial Scale (7)	Duration (7)	Severity (7)	Consequence	Probability (7)	Significance (147)
		Before mitigation							After mitigation						
Field mapping and sands/gravels sampling	Soil	N	2	6	4	12	5	60	N	2	2	2	6	4	24
	Air quality	N	4	5	5	14	4	48	N	3	1	2	6	4	24
	Interested and Affected Parties	N	3	3	4	10	5	50	N	3	3	3	9	5	45
	Noise	N	3	2	3	8	6	48	N	2	2	2	6	3	18
	Surface water	N	4	5	5	14	4	56	N	3	3	1	7	3	21
	Macrofauna/Micro-organisms	N	2	6	4	12	5	48	N	2	2	2	5	4	23
	Visual aspects	N	2	6	4	12	5	60	n	2	2	2	6	4	24

12 POSITIVE AND NEGATIVE IMPACTS OF THE PROPOSED ACTIVITY (IN TERMS OF THE INITIAL SITE LAYOUT) AND ALTERNATIVES ON THE ENVIRONMENT AND COMMUNITY

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

Potential impacts that were identified during the Basic Assessment Process are discussed under environmental component headings in this section. The project will not cause adverse surface disturbances as the planned prospecting activities will be managed and rehabilitation will occur progressively per sample pit/area.

Advantages & Disadvantages

The mineral map of Southern Africa shows the presence of kimberlites in close vicinity, and this is supported by the presence of Venetia Diamond Mine (72 Km Upstream of the proposed site). It adds more reasons to search for alluvial along this river, thus an added advantage for this project.

There are no known disadvantages of the selected site in terms of the mineral to be prospected for or the location and environmental issues/concerns. No alternative site is considered as the application area has the potential to host the minerals sought.

13 POSSIBLE MITIGATION MEASURES THAT COULD BE APPLIED AND THE LEVEL OF RISK

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered)

A description and assessment of the mitigation measures for each potential impact identified in the impact assessment process are provided in the following sections.

Possible mitigation measures include:

- Avoid and control through implementation of EMPr mitigation measures (e.g. speed limit enforcement & vehicle maintenance);
- Avoidance and control through preventative measures (e.g. site security, code of conduct);
- Avoid and control through implementation of preventative measures (e.g. monitoring, communication with landowners, emergency response procedures);
- Avoid through the implementation of suitable progressive rehabilitation and soil management;
- Avoid and control through implementation of EMPr mitigation measures (e.g. Spill prevention, Hydrocarbon Storage);.
- Remedy through clean-up and waste disposal; and
- Avoid and control through implementation of preventative measures (e.g. location of spill prevention, waste management).

14 STATEMENT MOTIVATING THE ALTERNATIVE DEVELOPMENT LOCATION WITHIN THE OVERALL SITE

(Provide a statement motivating the final site layout that is proposed)

The specific locations of sampling activities will be confirmed during Phase 1 of the Prospecting Work Programme. It is recommended that there should be no clearing of vegetation. Negotiations and agreements will be made with the landowner to use any existing infrastructure like access roads. The negative impacts identified above will be mitigated through the implementation of the proposed mitigation measures as detailed in the EMPr. Where negative impacts cannot be avoided, rehabilitation will be undertaken.

The impacts of the development alternative are considered of medium to the low significance and would be further reduced to low should the implementation of the proposed mitigation measures be done accordingly.

15 FULL DESCRIPTION OF THE PROCESS UNDERTAKEN TO IDENTIFY, ASSESS AND RANK THE IMPACTS AND RISKS THE ACTIVITY WILL IMPOSE ON THE PREFERRED SITE (IN RESPECT OF THE FINAL SITE LAYOUT PLAN) THROUGH THE LIFE OF THE ACTIVITY

(Including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures).

- **Approach to the EIA**

An Environmental Impact Assessment (EIA) is a good planning tool. It identifies the environmental, social and economic impacts of proposed development and assists in ensuring that a project will be environmentally acceptable and sustainably integrated into the surrounding environment.

The Basic Impact Assessment for this project complies with the National Environmental Management Act (1998) (as amended) and the NEMA EIA Regulations (2014) and guidelines of the Department of Environmental Affairs (DEA). The guiding principles of an EIA are listed below.

- **Guiding principles for an EIA**

The EIA must take an open participatory approach throughout. This means that there should be no hidden agendas, no restrictions on the information collected during the process and an open-door policy by the proponent. Technical information must be communicated to stakeholders in a way that is understood by them and that enables them to meaningfully comment on the project.

There should be ongoing consultation with interested and affected parties representing all walks of life. Sufficient time for comment must be allowed. The opportunity for comment should be announced on an ongoing basis. There should be opportunities for input by specialists and members of the public. Their contributions and issues should be considered when technical specialist studies are conducted and when decisions are made.

- **Information gathering**

Early in the Basic Assessment process, the Environmental Assessment Practitioner (EAP) identified the information that would be required for the impact assessment and the relevant data was obtained. In addition, available information about the receiving environment was gathered from reliable sources, interested and affected parties, previous documented studies in the area and previous EIA Reports. The project team visited the site to gain first-hand information and an understanding of the existing operations and the proposed project.

- **Basic Specialist Assessments**

The following basic studies will be/are conducted:

- Hydrogeology study
- Hydrological Study
- Soil study

The findings and recommendations identified by the various specialist studies undertaken will be incorporated into the Basic Impact Assessment and shared with stakeholders.

- **Legislative Framework**

The legal requirements were described and assessed in detail.

- **Alternatives**

Prospecting is conducted in phases, where the activities and location of sampling are dependent on the previous phase. Therefore, the specific locations of soil sampling cannot be as yet confirmed.

- **Description and assessment of impacts identified**

A comprehensive list of all potential impacts of the prospecting as identified by the EAP and the specialists is provided and assessed.

- **Environmental Management Programme**

An Environmental Management Programme containing mitigation, management and monitoring measures and specifying roles and responsibilities was compiled with specialist input and are included in this report.

- **Stakeholder engagement**

Registered interested and affected parties including relevant organs of state and claimants are consulted during the process. All their comments will be formally responded to and incorporated into the Final Basic Assessment Report and Environmental Management Programme that will be submitted to the competent authority.

16 ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties)

Potential impacts that may be caused by the proposed development will be identified using input from the following:

- Views of I&APs;
- Existing information;
- Baseline Specialist investigations;
- Site visit with the project team; and
- Legislation.

The following potential major direct, indirect and cumulative impacts were identified:

- Air pollution (dust, gaseous emissions),
- Land pollution;
- Water pollution (surface water and wetlands);
- Aesthetic, pollution;
- Increased noise levels;
- Impacts Micro organisms/macrofauna
- Visual aspects

Table 13: Potential environmental impacts and mitigation measures.

Potential environmental impacts and sources	**Measures to prevent, mitigate, minimize or manage the impacts**
Impact: Air pollution (dust, gaseous emissions) **Source:** Augering and movement of TLB	• Dust will be minimum as only will results when entering the sampling sites, a working agreement with farmers will be put in place to manage dust through working agreements of obtaining dust suppression measures where necessary. • A low-speed limit (30 km/h) will be imposed to reduce dust generation. • All equipment and vehicles will be equipped with the manufacturers' standard exhaust systems which will reduce emissions.
Impact: Water pollution (surface water and wetlands) **Source:** Spillages from vehicles on site	• All equipment and vehicles will be properly serviced to avoid oil, grease and fuel spillages • Any spillages which may occur will be investigated and immediate action will be taken. • Significant spills (>35 l) of any hazardous substance will be recorded and reported to the environmental personnel, DWA, DMRE and any other relevant authorities. • All machinery and vehicles will be serviced off-site and also inspected for any leaks
Impact: Land pollution **Source:** Poor waste management	• Completed pits will be rehabilitated • Areas that do not form part of the sampling site will not be disturbed • Prospecting will be conducted in an environmentally sustainable manner. • One of the prospecting objectives is to turn the area into other land use/s after closure. • Waste material will be properly managed • It is anticipated that a small amount of domestic waste will be generated by workers. Such waste materials will be kept in waste bins which will be disposed of regularly at the registered waste disposal site. The same will apply to office waste. • Any spillages which may occur will be investigated and immediate action will be taken. • Significant spills (>35 l) of any hazardous substance will be recorded and reported to the

	environmental personnel, DWA, DMRE and any other relevant authorities. • All machinery will be serviced off-site and also inspected for any leaks
Impact: Ecological degradation **Source:** Augering and moving of TLB and employees	• No aquatic species (Except microorganisms/Macro-fauna) will be killed and collection of firewood will not be allowed. • The movement of vehicles will be restricted to the designated area only.
Impact: Aesthetic, pollution **Source:** Machinery	• The visual impact will be temporary. • The stockpile will be spread using TLB • Water flow during the rainy season will rehabilitate the area naturally
Impact: Noise **Source:** Vehicle movements	• The operation will comply with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996) and its regulations as well as other applicable legislation regarding noise control. • Employees will be supplied with ear plugs. • All prospecting vehicles are equipped with silencers and maintained in a road-worthy condition. • All work will be carried out between 07:00 and 17:00 This will allow landowners and occupiers to have some respite from noise.

Table 14: Activity and potential impact in each phase.

Activity	Description	Affected environment	Potential impact
Prospecting phase			
Augering sampling and Cone and Quartering sampling by TLB	Augering sampling Stockpiling for cone and quartering sampling	Air quality	Carbon monoxide emission from TLB, auger and dredger Dust emission due to wind erosion Dust emission when augering
		Soil	Soil compaction due to the repetitive movement of TLB and people on the floodplain Soil compaction due to stockpiling for cone and quartering sampling Soil profile and textural modification due to stockpiling
		Interested and Affected Parties	Damage to roads caused by movement of vehicles and continual use of TLB and other vehicles moving to and from the site.
		Macrofauna/microorganisms biodiversity	Direct impacts on threatened fauna species, habitat disturbance and destruction, and disruption of birds nesting foraging or roosting in the area.
		Surface water	Lubricants, oil and fuel spillages from auger, dredger and TLB during sampling. This can lead to water pollution
		Noise	Increase of noise of augering and movement of TLB and other vehicles.
Decommissioning and closure			
Rehabilitation	All areas disturbed will be	Sample	Filing of sample pits/voids will be done to avoiding to minimize visual

	rehabilitated to their original state	pits/voids rehabilitation Stockpiles leveling	impacts Stockpiles will be leveled when sampling is completed. Rehabilitation will also occur naturally during the rainy season as the prospecting activities will be taking place along the floodplain.

17 SUMMARY OF SPECIALIST REPORTS

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form): -

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Basic hydrogeology study	• No onsite vehicle or machinery repairs such as changing oil. • No onsite storage of oil, diesel, or petrol. • Compliance of GN 704 4(b) and 7(a) and National Water Act 36 of 1998 (Chapter 3 – Part 4, Section 1 (a)(b).	**X**	Part A, BAR & EMPr

Basic hydrology study	• The contractor shall be responsible for rehabilitating all eroded areas in such a way that the erosion potential is minimized after prospecting has been completed • In case of emergencies or unforeseen events, the problem must be remediated immediately and any spillage into any watercourses be reported to the Department of Water Affairs. • Remove all project-related material/support equipment immediately on completion of any of the prospecting phases • For any activity that triggers Section 21 of the NWA Act 36 of 1998, it is recommended that a water use license be applied for • The prospecting footprint should be effectively rehabilitated immediately after taking out the samples • No onsite vehicle or machinery repairs such as changing oil. • No onsite storage of oil, diesel, or petrol	**X**	Part A, BAR & EMPr
Basic soil study	• The proposed prospecting land should be returned to its origin as before prospecting activities and the rehabilitation performance assessment in the proposed land must be done progressively (annually) during the operational phase by a soil specialist. • Final surface rehabilitation of all disturbed areas during Prospecting activities. Rehabilitation of unnecessary water management facilities once appropriate to do so • Specialists should be used to evaluate the erosion and other possible impacts during the entire prospecting process • Limit impacts to the footprints to keep physical impacts as small as possible. Areas for road, site lay-out should be minimized, dust	**X**	Part A, BAR & EMPr

	generation.		

NB. A basic ecology study will be done when access to the immovable properties of Esmefour Boedery (Pty) is granted as the arrangement are ongoing

18 ENVIRONMENTAL IMPACT STATEMENT

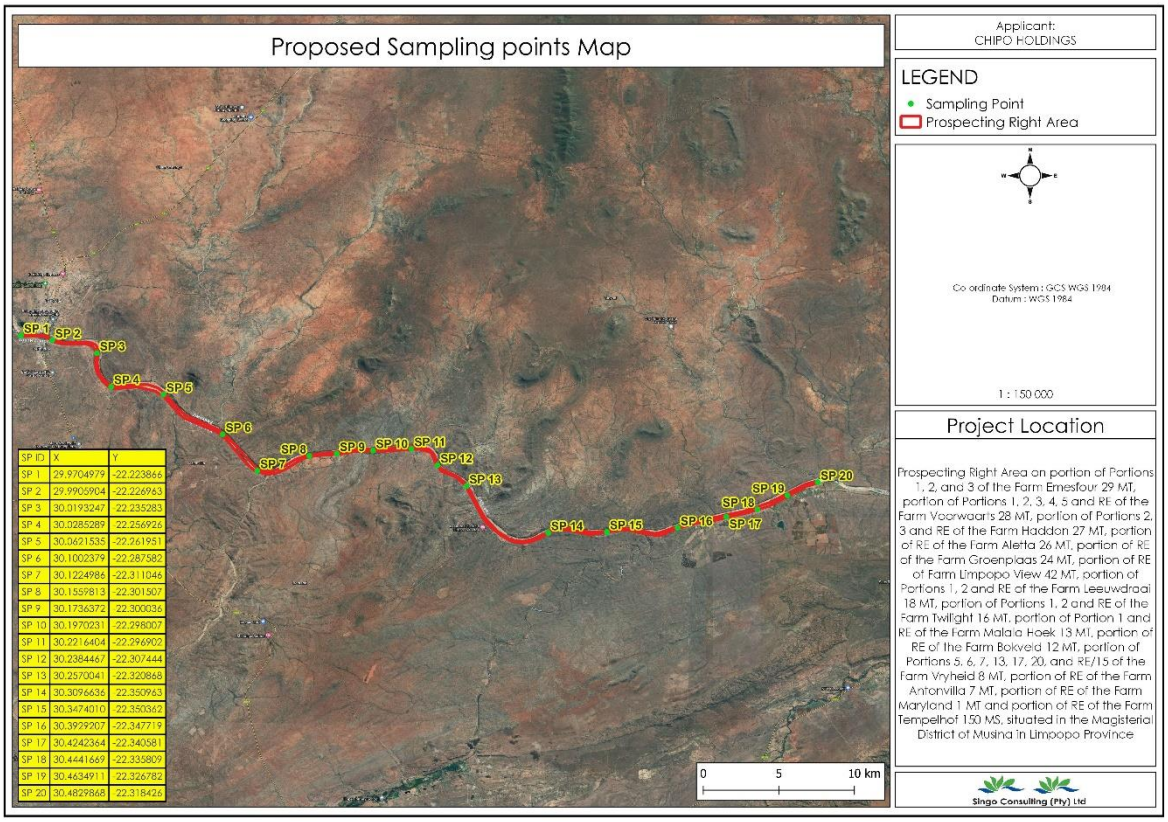
a) Summary of the key findings of the environmental impact assessment.

Key findings for the Basic Assessment

- The possible environmental impacts associated with the proposed prospecting are considered insignificant. A handheld mechanical auger method will be implemented for sampling. In addition, TLB will be used to stockpile the sand for cone and quartering sampling
- Augering and cone and quartering will be conducted during the dry season to minimize impacts on receiving environment whilst dredging sampling will take place when the river is flooded.
- The main impacts are associated with the waterbodies as the project area falls within the Limpopo River floodplain.

b) Final Site Map

(Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers)



SP ID	X	Y
SP 1	29.9704979	-22.223866
SP 2	29.9905904	-22.226963
SP 3	30.0193247	22.235283
SP 4	30.0285289	22.256926
SP 5	30.0621535	-22.261951
SP 6	30.1002379	-22.287582
SP 7	30.1224986	-22.311046
SP 8	30.1559813	22.301507
SP 9	30.1736372	22.300036
SP 10	30.1970231	-22.298007
SP 11	30.2216404	-22.296902
SP 12	30.2384467	-22.307444
SP 13	30.2570041	22.320868
SP 14	30.3096636	22.350963
SP 15	30.3474010	-22.350362
SP 16	30.3929207	-22.347719
SP 17	30.4242364	-22.340581
SP 18	30.4441669	-22.335809
SP 19	30.4634911	22.326782
SP 20	30.4829868	-22.318426

Figure 24: Proposed Sampling Points map

c) SUMMARY OF THE POSITIVE AND NEGATIVE IMPACTS AND RISKS OF THE PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES;

Table 15: Summary of positive and negative impacts

Negative	No concerns in terms of community health as all possible traces of waste and ore will be disposed of appropriately during prospecting. The following negative impacts may occur: • Noise: Automatic handheld augering, dredger and TLB will be used to minimize noise. sampling will be conducted during office hours to limit the disturbance of nearby residences. Invasion of privacy: Land access agreements will be signed before prospecting commences. This will limit unnecessary invasion.
Positive	• Discovery of economically viable mineral resources • Employment contributing to the economy • Positive contribution to the South African Gross Domestic Product • Concurrent rehabilitation during Prospecting Activities

19 PROPOSED IMPACT MANAGEMENT OBJECTIVES AND THE IMPACT MANAGEMENT OUTCOMES FOR INCLUSION IN THE EMPR;

(Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPR as well as for inclusion as conditions of authorization).

- The objective of the EMPr include:
  - Providing enough information for the prospecting activities to prevent and avoid unnecessary social and environmental impacts.
  - Providing a prospecting plan, guidance and guidelines to conduct prospecting with little to no impact on the environment.
  - Reducing impacts by implementing realistic operational management measures like imposing restrictions on the time of day when augering can take place.

- The desired outcomes of the aforementioned objectives include:
  - Implementing an augering, dredging and cone and quartering programme that does not impact sensitive environmental feature
  - Ensuring that all temporary impacts are reduced.
  - Rehabilitating the area after sampling to its original (or better) state.

- Reducing noise by operating during office hours and giving the nearby residents peace.
- Managing water and soil pollution through containment..
- Identifying impacts to inform planning, execution and rehabilitation. During the planning phase, identifying such impacts is vital to implement and mitigate during construction of the site office and accommodation, as well as during sampling, rehabilitation and closure.

- Impact management objectives

Soils: Prevent soil degradation by establishing effective rehabilitation measures.

Vegetation: No vegetation clearing will take place

Micro-organisms/macrofauna: Limit fauna removal to the footprint area and mitigated it as far as possible.

Visual impacts: Limit the visual impact of the proposed activity and mitigate against it as far as possible.

20 ASPECTS FOR INCLUSION AS CONDITIONS OF AUTHORISATION

(Any aspects which must be made conditions of the Environmental Authorisation)

The following aspects are recommended to be included as conditions in the Environmental Authorisation:

- The EMPR is a contractual document and must be implemented at all times during the prospecting phase;
- An independent environmental control officer (ECO) must be appointed to monitor the implementation of the EMPR and audit reports to be kept by the applicant;
    - All contractors and employees of Chipo Holdings (Pty) Ltd must be made aware of the EMPR and its requirements as well as the impact of not implementing the measures of the EMPR;
- Copies of the EMPR, Environmental Authorisation and any emergency procedures and method statements, must be kept on-site and be available at the request of the Competent Authority.

21 DESCRIPTION OF ANY ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE.

(Which relate to the assessment and mitigation measures proposed)

- All information provided to the environmental team, by the applicant and I&APs was correct and valid at the time that it was provided;

- The investigations undertaken by specialists during the BA process indicate the proposed site is suitable and technically acceptable.
- It is not always possible to involve all I&APs individually, however, every effort has been made to involve as many affected stakeholders as possible;
- Not all farms were assessed to access denial from the landowners. However, arrangements with landowners are ongoing
- The information provided by the applicant and specialists was accurate and unbiased; and
- The scope of this investigation is limited to assessing the environmental impacts associated with the prospecting activity.
- Not getting responses from DALRRD officials regarding the claimant's contact details

22 REASONED OPINION AS TO WHETHER THE PROPOSED ACTIVITY SHOULD OR SHOULD NOT BE AUTHORISED

a) Reasons why the activity should be authorized or not

In general, it is recognised that the proposed prospecting activities have the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. However, based on the findings of this BA documented in this report, all impacts can be mitigated to insignificant levels.

This report shows that the proposed development has the potential to provide socio-economic benefits to the local and regional communities. The EAP, therefore, recommends that the proposed activities be approved on the condition that the EMPr is strictly implemented and monitored for compliance.

Not implementing the prospecting activities will result in a loss of information on mineral reserves present in the study area. Should economically feasible reserves exist in the study area and the applicant cannot prospect, the opportunity to utilize the reserves for future mining and the minerals will be sterilized and resultant socio-economic benefits will be lost.

The proposed prospecting activities have the potential to harm the ecological environment as well as the social environment of the area. These impacts, however, can potentially be prevented, minimized, mitigated and managed to low and very low levels, as shown through the impact assessment.

b) Conditions that must be included in the authorisation

- The EMPr is a contractual document and must be implemented at all times during the prospecting phase;
- An independent environmental control officer (ECO) must be appointed to monitor the implementation of the EMPR and audit reports to be kept by the applicant;

- All contractors and employees of Chipo Holdings (Pty) Ltd must be made aware of the EMPr and its requirements as well as the impact of not implementing the measures of the EMPr;
- Copies of the EMPr, Environmental Authorisation and any emergency procedures and method statements, must be kept on-site and be available at the request of the Competent Authority.

23 PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

This Environmental Authorisation is required for 5 years

24 UNDERTAKING

(Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPR and is applicable to both the Basic assessment report and the Environmental Management Programme report).

Please refer to the EMPR in Part B of this document.

25 FINANCIAL PROVISION

(State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation). The financial provision was calculated according to Financial Provision Regulations 6 of 2015, published under Government Notice R1147 in Government Gazette 39425 of November 2015 (the Financial Provisioning Regulations) for National Environmental Management Act 1998 (Act No. 107 of 1998) (NEMA).

Table 16: Quantum Calculation

CALCULATION OF THE QUANTUM

Chipo Holdings (Pty) Ltd

Applicant:
Evaluator: **Tsedzuluso Mundalamo**

Ref No.: **DMRE REF: LP30/5/1/1/2/(14639) PR**
Date: **Jul-22**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	**Dismantling of processing plant and related structures (including overland conveyors and powerlines)**	**m3**	**0**	**17,14**	**1**	**1**	**0**
2 (A)	**Demolition of steel buildings and structures**	**m2**	**0**	**238,71**	**1**	**1**	**0**
2(B)	**Demolition of reinforced concrete buildings and structures**	**m2**	**0**	**351,79**	**1**	**1**	**0**
3	**Rehabilitation of access roads**	**m2**	**0**	**42,72**	**1**	**1**	**0**
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	**0**
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	**0**
5	**Demolition of housing and/or administration facilities**	**m2**	**0**	**477,42**	**1**	**1**	**0**
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**242984,15**	**1**	**1**	**0**
7	**Sealing of shafts adits and inclines**	**m3**	**0**	**128,15**	**1**	**1**	**0**
8 (A)	**Rehabilitation of overburden and spoils**	**ha**	**0**	**166847,44**	**1**	**1**	**0**
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	**0**
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	**0**
10	**General surface rehabilitation**	**ha**	2,55	32171,31	0,05	1	**4101,842025**
11	River diversions	ha	0	202179,31	1	1	**0**
12	**Fencing**	**m**	**0**	**150,77**	**1**	**1**	**0**
13	**Water management**	**ha**	**0**	**50255,25**	**1**	**1**	**0**
14	**2 to 3 years of maintenance and aftercare**	**ha**	**0**	**17589,34**	**1**	**1**	**0**
15 (A)	**Specialist study**	**Sum**	**0**	**0**	**1**	**1**	**0**
15 (B)	Specialist study	Sum	0	0	1	1	**0**
					Sub Total 1		**4101,842025**

1	Preliminary and General	492,221043	**weighting factor 2** 1	**492,221043**
2	Contingencies	410,1842025		**410,1842025**
			Subtotal 2	**5004,25**
			VAT (15%)	**750,64**
			Grand Total	**5755**

SIGN Tsedzuluso Mundalamo
DATE **Jun-22**

25.1 Explain how the aforesaid amount was derived

An amount of **R 5 755.00** is required to manage and rehabilitate the environment. The financial provision amount was calculated utilizing the methodology as prescribed by the Guideline Documents for the Evaluation of the Quantum of Closure Related Financial Provision Provided by a Mine issued by the DMRE.

25.2 Confirm that this amount can be provided for from operating expenditure

(Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).

Chipo Holdings (Pty) Ltd herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted.

26 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

a) Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). the EIA report must include the: -

26.1 Impact on the socio-economic conditions of any directly affected person

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an Appendix).

Potential impacts on landowners, land occupiers, communities or individuals or competing land uses in the area include:

- Potential soil pollution which may result from any hydrocarbon spills where heavy machinery and vehicles are moving as they contain large volumes of lubricating oils, hydraulic oils, and diesel to run. There is always a chance of these breaking down and/or leaking;
- Visual impacts: Visibility from sensitive receptors / visual scarring of the landscape as a result of the prospecting activities.
- Nuisance and health risks are caused by an increase in the ambient noise level as a result of noise and vibration impacts associated with the operation of vehicles, machinery and equipment.
- Increased dust pollution due to vehicles driving on gravel roads and sampling.
- Gaseous emissions from vehicles and machinery may cause an impact on ambient air quality.
- Minor change in traffic patterns as a result of traffic entering and exiting the site on the surrounding road infrastructure and existing traffic.
- Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, and heavy vehicles.
- Possibility of prospecting activities and workers causing veld fires, which can potentially cause injury and or loss of life to workers and surrounding landowners, visitors and workers.
- Potential creation of very limited extent short-term employment opportunities for the local community, during the prospecting phase.
- Multiplier effects on the local economy will be positive, but very limited in extent and only short term.

Mitigation measures are included in this report, as well as the EMPR.

26.2 Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling, or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as Appendix 2.19.2 and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

There are no identified heritage features or resources within the proposed prospecting area as the area is along the floodplain.

27 OTHER MATTERS REQUIRED IN TERMS OF SECTIONS 24(4)(A) AND (B) OF THE ACT

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in subregulation 22(2)(h), exist. The EAP must attach such motivation as Appendix 4).

The proposed sampling activities requested as part of this authorization are the only current viable manner in which a mineral resource can be identified and used to generate a SAMREC and/or JORC- a compliant resource which is a minimum requirement to determine whether it is viable to invest in a future mine.

PART B:

ENVIRONMENTAL MANAGEMENT PROGRAMME

28 DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

28.1 Details of the EAP

(Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

Herewith, it is confirmed that the requirement for the provision of the details and expertise of the EAP are already included in PART A, Section 1(a) of this report.

28.2 Description of the Aspects of the Activity

(Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1) (h) herein as required).

Herewith, it is confirmed that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1) (h) herein as required.

28.3 Composite Map

(Provide a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers).

Refer to section 18 above

28.4 Description of Impact management objectives including management statements

28.4.1 Determination of closure objectives

(Ensure that the closure objectives are informed by the type of environment described).

The prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of augering are dependent on the previous phase. Therefore, the specific locations of soil sampling cannot as yet be confirmed.

The closure objectives include:

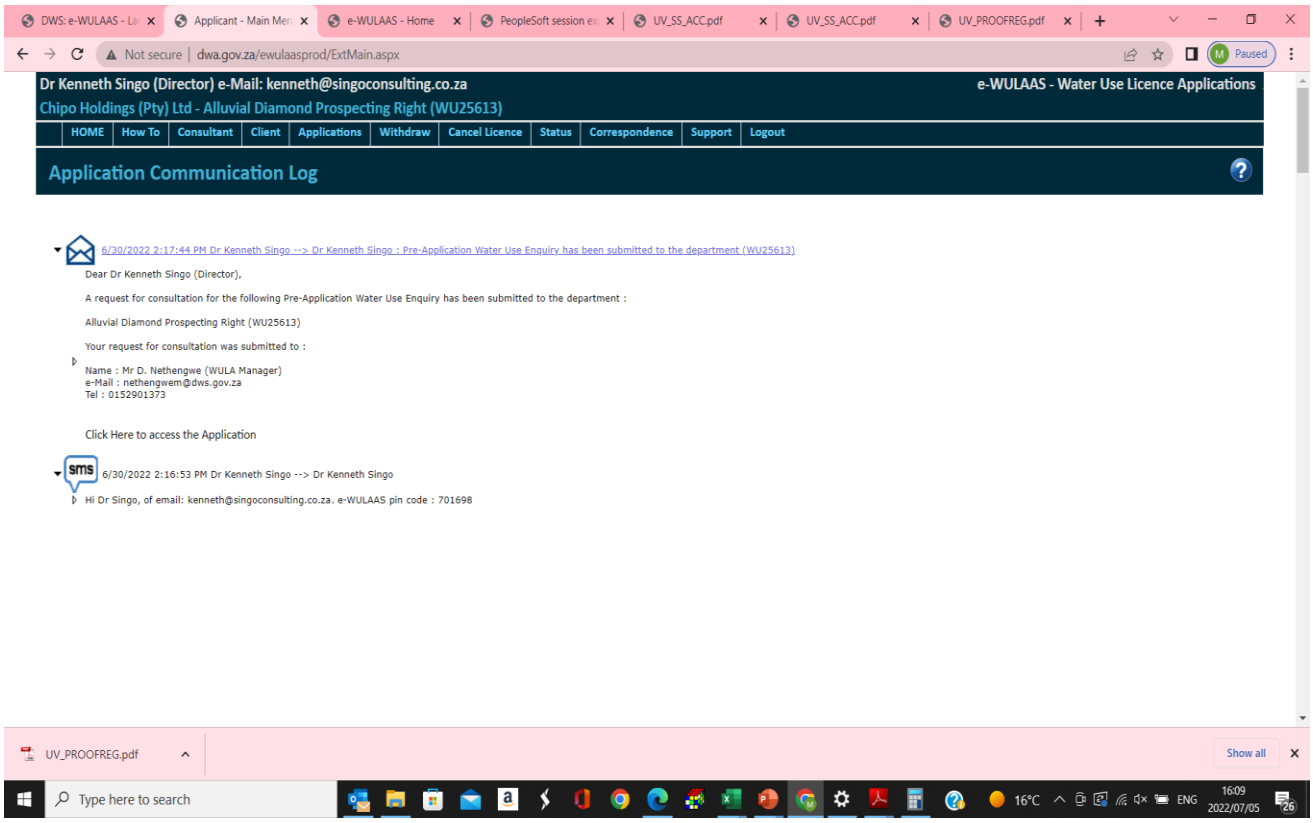
- Ensure that there are no safety risks associated with the sampling pits/voids through backfilling;
- Rehabilitate any pollution that occurred through hazardous spills or waste materials and remove the source of the pollution;
- .Ensure that stockpiles are leveled, no visual impacts

28.4.2 Volumes and rate of water use required for the operation

No water will be required for sampling purposes as the method to be adopted is the sampling method. Only a small water bucket will be used for any other purpose(drinking).

28.4.3 Has a water use licence been applied for?

Water Use Licence has been applied for, since the activities will occur along the Limpopo River floodplain. The project will make use of an automatic handheld auger, dredger, and TLB which do not require water to operate.



28.5 Impacts to be mitigated in their respective phases

Table 17: Impacts to be mitigated

Activities	Phase	Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Site access	Operation	1 100 ha, short term and localized	• All employees and visitors to the site must undergo a site induction which shall include basic environmental awareness and site-specific environmental requirements (e.g. site sensitivities and relevant protocols/procedures). This induction should be presented or otherwise facilitated by the Contractors EO/Mine EO wherever possible. • Landowners/lawful occupiers must be notified before accessing properties. The date and time that is suitable to landowners/lawful occupiers and is reasonable to the applicant should be negotiated and agreed upon. • The number, identity of workers, work location and work to be done must be provided to the landowner/lawful occupier before going on site. • Consideration must be taken by the applicant and/or contractors when on site not to interfere with the existing land uses and practices.	NEMA OHS & MHSA	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Storage of construction vehicles	Operation	short term and localized	• Any equipment that may leak, and does not have to be transported regularly, must be placed on watertight drip trays to catch any potential spillages of pollutants. The drip trays must be of a size that the equipment can be placed inside it; • Drip trays must be cleaned regularly and shall not be allowed to overflow. All spilled hazardous substances must be collected and adequately disposed of at a suitably licensed facility; and • Compacting of soil must be avoided as far as possible, and the use of heavy machinery must be restricted in areas outside of the proposed exploration sites to reduce the compaction of the soil.	NWA DWAF BPG	Throughout Construction and operation
Transportation/ access to and from Sampling sites	Construction and Operation	short term and localized	• Where possible, sampling sites should be located along existing access roads to reduce the requirement for additional access roads; • Before accessing any portion of land, the Applicant must enter into formal written agreements with the affected landowner. This formal agreement should additionally stipulate landowner's special conditions which would form a legally binding agreement;	NEMA NEMBA CARA NEMAQA Dust Regulations Road Traffic Act	Throughout Construction and operation

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
			• All farm gates must be closed immediately upon entry/exit; • Under no circumstances may the contractor damage any farm gates,		
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**
			environmental disturbance to the soil and to minimize disruption of traffic (where relevant); • All construction and vehicles using public roads must be in roadworthy condition and their loads secured. They must adhere to the speed limits and all local, provincial and national regulations with regards to road safety and transport; • Damage caused to public roads as a result of the construction activities must be repaired in consultation with the relevant municipal authorities; and • All measures should be implemented to minimize the potential of dust generation.		

Augering sampling: 20 sites ,with a footprint of 25 m^2 each **Cone and quartering sampling: 15 sites with a footprint of 1 250m^2** **Dredging sampling: the dredger will be placed on an existing road and the bucked will be sunked into the water for collection of debris or sediments**	Operation Decommissioning	0,05 ha, short term	• Compaction of soil must be avoided as far as possible, and the use of heavy machinery must be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils; • All measures should be implemented to minimize the potential of dust generation; • Noise attenuation on engines must be adequate, and the noisy activities must be restricted as far as is possible to times and locations whereby the potential for noise nuisance is reduced; • When working near to a potential sensitive area, the contractor must limit the number of simultaneous activities to the minimum; • Ensure proper storage of fuels; • On-site vehicles must be limited to approved access routes and areas on the site so as to minimize excessive environmental disturbance to the soil and to minimize disruption of traffic; • Workforce should be kept within defined boundaries and to agreed access routes. •	SANS 10103 ECA Noise Regulations NEMAQA Dust Regulations NWA	Throughout Construction and operation and decommissioning
Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**

Prospecting	Operation	2,55 ha, short term	Workers must be easily identifiable by clothing and ID badges. Workers should carry with them, at all times a letter from the applicant stating their employment, title, role and manager contact details.	OHS and MHSA	Throughout Construction and operation
Resource definition sampling	Planning Phase and Operation	short term	Residents (landowners and directly adjacent landowners) should be notified of any potentially noisy activities or work and these activities should be undertaken at reasonable times of the day. This work should not take place at night or on weekends;	MPRDA Regulations GN R527 SANS 10103	Planning Phase Throughout Construction and operation

Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**

			• recording, sampling or collection) can be taken by a professional paleontologist. • The Final BAR and appendices must be submitted to SAHRA for record purposes; • If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artifacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit, must be alerted immediately. A professional archaeologist or paleontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; and • If the development receives an Environmental Authorisation (EA), SAHRA must be informed and all documents pertaining to the EA must		

			be uploaded to the SAHRIS Case file.		

Activities	Phase	Size and Scale of Disturbance	Mitigation Measures	Compliance with Standards	Time Period for Implementation
Refueling	Construction and Operation	Short term and localized	• Refueling may only take place within demarcated areas that are subject to appropriate spill prevention and containment measures refueling and transfer of hazardous chemicals and other potentially hazardous substances must be carried out to minimize the potential for leakage and to prevent spillage onto the soil; • Drip trays should be utilized in relevant locations during transfer to prevent	NWA DWAF BPG	Throughout Construction and operation

			such spillage or leakage. Any accidental spillages must be contained and cleaned up promptly.		
Maintenance and repair	Construction and Operation	Short term and localized	• Vehicles and equipment must be regularly serviced to ensure they are in proper working condition and to reduce the risk of leaks. All leaks must be cleaned up immediately using spill kits or as per the emergency response plan. For large spills a hazardous materials specialist shall be utilized; • Accidental hydrocarbon spillages must be reported immediately, and the affected soil should be removed and rehabilitated or if this is not possible, disposed of at a suitably licenced waste disposal facility.	NWA DWAF BPG NEMA	Throughout Construction and operation
Pits/voids closure and stockpile leveling	Decommissioning and Closure	Short term and localized	• All pits/voids should be backfilled • All stockpiles should be leveled	NWA DWAF BPG	Throughout Decommissioning and Closure

Activities	**Phase**	**Size and Scale of Disturbance**	**Mitigation Measures**	**Compliance with Standards**	**Time Period for Implementation**

Rehabilitation	Rehabilitation	All disturbed areas	• Restoration and rehabilitation of disturbed areas must be implemented as soon as prospecting activities are completed; • Sites must be restored to their original condition • All contaminated soils must be removed and suitably disposed of; • Sites must be monitored by the ECO (including relevant specialist's inputs if, necessary) for adequate rehabilitation until the desired rehabilitation objectives have been achieved.	MPRDA Rehab Plan NEMA	Rehabilitation
Consultation	Planning Phase Construction and Operation	Medium term, local	• Stakeholder engagement will continue throughout the prospecting activities to ensure the community and landowners are kept informed and allowed to raise issues.	NEMA OHS and MHSA	Planning Phase Throughout Construction and Operation
Monitoring	Post-Operational	All rehabilitated areas	The post-operational monitoring and management period following decommissioning of prospecting activities must be implemented by a suitable qualified independent party for a minimum of one (1) year unless otherwise specified by the competent authority. The monitoring activities during this period will include but not be limited to:	MPRDA Rehab Plan	Post-operation

			Provision must be made to monitor any unforeseen impact that may arise as a result of the proposed prospecting activities and incorporated into post closure monitoring and management.		

28.6 IMPACT MANAGEMENT ACTIONS AND OUTCOMES

Table 18: Summary of impact management actions and outcomes

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Transportation to and from sampling sites	• Soil compaction; • Disturbance and loss of fauna and flora, Wearing and tearing of existing roads and Dust generation from increased traffic.	Soil disturbance; Fauna and Flora; Air quality.	Construction Operation	Avoid and control through implementation of EMP mitigation measures (e.g. speed limit enforcement, vehicle maintenance)	NEMA NEMBA CARA Threatened or Protected Species (TOPS) regulations NEMAQA

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Prospecting pits/voids and stockpiles	• Soil disturbance and compaction; • Emissions from vehicles; • Noise disturbance due to acoustic sources; • Dust generation; • Potential spills of hydrocarbons; • Influx of people;	Ecology; Topography; Access/footprint; Soil disturbance; Noise; Air Quality; Socio-economics;	Construction Operation Decommissioning	Control through the implementation of EMPR mitigation measures	SANS10103 ECA Noise Regulations NEMAQA Dust regulations NWA
Resource definition sampling	• Drainage and soil contamination; • Dust generation;	Air Quality; Noise; Surface water;	Operation	Control through the implementation of EMPR mitigation measures	SANS10103 ECA Noise Regulations NEMAQA Dust regulations

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved

Refueling	Potential hydrocarbon spills that could pollute soil or surface and/or groundwater resources.	Pollution; Surface water; Groundwater	Construction Operation	Control through the implementation of EMPr mitigation measures	NWA DWAF best Practice Guidelines	
Maintenance and repair	Potential hydrocarbon spills that could pollute surface and groundwater resources.	Pollution; Surface water; Groundwater	Construction Operation	Control through the implementation of EMPr mitigation measures	NWA	

Activity	Potential Impact	Aspects Affected	Phase	Mitigation Type	Standard to be Achieved
Pits/voids closure and stockpile leveling	• Impacts on micro-organisms • Soil pollution • Water pollution • Noise pollution • Visual impact	Surface water Soil Micro-organisms/macrofauna Visual aspects	Decommissioning	Control through the implementation of EMPr mitigation measures	NWA
Rehabilitation	• Soil compaction; • Soil and Water contamination; • Loss of habitat of microorganisms/macrofauna and • Disturbance to wildlife and communities in close vicinity	Topography Soil disturbance Ecology Surface water Micro-organisms/fauna	Rehabilitation	Control through the implementation of EMPr mitigation measures	MPRDA In accordance with Rehabilitation plan

Monitoring of rehabilitated sites	• Soil compaction; • Soil and Water contamination; • Erosion; • Disturbance to wildlife; and communities in close vicinity.	Topography Soil disturbance Ecology Surface water	Post-operation	Control through adhering to monitoring requirements	MPRDA and regulations

29 FINANCIAL PROVISION

- Determination of the amount of Financial Provision

Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation

The closure objectives include:

- Ensure that there are no safety risks associated with the pits through pit backfilling;
- Rehabilitate any pollution that occurred through hazardous spills or waste materials and remove the source of the pollution;

29.1 Confirm specifically that the environmental objectives in relation to closure have been consulted with the landowner and interested and affected parties

This Basic Assessment Report and Environmental Management Programme will be subjected to a public consultation period, whereby I&APs are given 30 days to comment.

29.2 Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure

The prospecting activities are dependent on the preceding phase (non-invasive). Prospecting is conducted in phases, where the activities and location of sampling are dependent on the previous phase. Therefore, the specific locations remain proposed. Mapping of prospecting activities can also not be conducted.

Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very low significance. Rehabilitation will be conducted progressively and will include pits /voids backfilling and stockpile leveling

29.3 Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives

Due to the small extent and fairly short-term period of the prospecting activities and as shown in the Environmental Impact Assessment, the impacts will be of a low or very low

significance. Rehabilitation will be conducted progressively and will include pit backfilling. Detailed mitigation measures are provided in the EMPR to ensure the closure objectives are met.

29.4 Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline

CALCULATION OF THE QUANTUM

Chipo Holdings (Pty) Ltd

Applicant:
Evaluator: **Tsedzuluso Mundalamo**

Ref No.: **DMRE REF: LP30/5/1/1/2/(14639) PR**
Date: **Jul-22**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	**Dismantling of processing plant and related structures (including overland conveyors and powerlines)**	**m3**	**0**	**17,14**	**1**	**1**	**0**
2 (A)	**Demolition of steel buildings and structures**	**m2**	**0**	**238,71**	**1**	**1**	**0**
2(B)	**Demolition of reinforced concrete buildings and structures**	**m2**	**0**	**351,79**	**1**	**1**	**0**
3	**Rehabilitation of access roads**	**m2**	**0**	**42,72**	**1**	**1**	**0**
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	414,61	1	1	**0**
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	226,15	1	1	**0**
5	**Demolition of housing and/or administration facilities**	**m2**	**0**	**477,42**	**1**	**1**	**0**
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**242984,15**	**1**	**1**	**0**
7	**Sealing of shafts adits and inclines**	**m3**	**0**	**128,15**	**1**	**1**	**0**
8 (A)	**Rehabilitation of overburden and spoils**	**ha**	**0**	**166847,44**	**1**	**1**	**0**
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	207805,47	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	603565,59	1	1	**0**
9	Rehabilitation of subsided areas	ha	0	139709,6	1	1	**0**
10	**General surface rehabilitation**	**ha**	2,55	32171,31	0,05	1	**4101,842025**
11	River diversions	ha	0	202179,31	1	1	**0**
12	**Fencing**	**m**	**0**	**150,77**	**1**	**1**	**0**
13	**Water management**	**ha**	**0**	**50255,25**	**1**	**1**	**0**
14	**2 to 3 years of maintenance and aftercare**	**ha**	**0**	**17589,34**	**1**	**1**	**0**
15 (A)	**Specialist study**	**Sum**	**0**	**0**	**1**	**1**	**0**
15 (B)	Specialist study	Sum	0	0	1	1	**0**
					Sub Total 1		**4101,842025**

1	Preliminary and General	492,221043	**weighting factor 2** 1	**492,221043**
2	Contingencies	410,1842025		**410,1842025**
			Subtotal 2	**5004,25**
			VAT (15%)	**750,64**
			Grand Total	**5755**

SIGN Tsedzuluso Mundalamo
DATE **Jun-22**

29.5 Confirm that the financial provision will be provided as determined.

Chipo Holdings (Pty) Ltd herewith confirms both its capacity and willingness to make the financial provision required should the prospecting right be granted. Work will be approved on a phase-by-phase basis, dependent on the results obtained in the previous phase i.e. although prospecting work may be provided financially in the budget for a specific year, it will only take place if justified.

30 MECHANISMS FOR MONITORING COMPLIANCE WITH AND PERFORMANCE ASSESSMENT AGAINST THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND REPORTING THEREON, INCLUDING H) MONITORING OF IMPACT MANAGEMENT ACTIONS

- Monitoring of Impact Management Actions
- Monitoring and reporting frequency
- Responsible persons
- Time for implementing impact management actions
- A mechanism for monitoring compliance

Source activity	Impacts requiring monitoring programmes	Functional requirements for monitoring	Roles and responsibilities For the execution of the monitoring programmes	Monitoring and reporting frequency and periods for implementing impact management actions
Desktop studies	N/A	N/A	N/A	N/A
Geophysics	N/A	N/A	N/A	N/A
Mapping	N/A	N/A	N/A	N/A
Site establishment and sampling	Visual impact	All areas exposed will be monitored for erosion	Project Manager	Weekly and after heavy winds and rain
	Dust generated	All areas exposed will be monitored for erosion	Project Manager	Weekly and after heavy winds and rain
	Noise	All areas where machinery will be operating	Operators and Project Manager	Daily
	Water and environmental pollution	All areas of operation	Operators and Project Manager	Daily
Post closure and rehabilitation	Rehabilitated areas	All rehabilitated areas	Environmentalist	Weekly, monthly and after heavy rain

31 INDICATE THE FREQUENCY OF THE SUBMISSION OF THE PERFORMANCE ASSESSMENT/ ENVIRONMENTAL AUDIT REPORT.

A Performance Assessment Review of the EMPr should be conducted annually and the environmental audit report will be submitted annually.

32 ENVIRONMENTAL AWARENESS PLAN

32.1 Manner in which the applicant intends to inform his or her employees of any the environmental risk which may result from their work

The environmental awareness plan will include the following:

- Induction of all staff and workers;
- Monthly 'toolbox' talks (awareness talks);
- Risk assessments for specific tasks with supervisors and staff involved in the task daily, or as often as the task is taking place.

The following principles and training will apply to the Environmental Awareness Plan (safety, health and environmental (SHE) training and the Environmental Management System (EMS) training):

- All personnel, including contractors, will as a minimum undergo general SHE induction and awareness training;
- The Safety, Health, Environmental and Quality (SHEQ) Manager will identify the SHE training requirements for all personnel and contractors. The training requirements will be recorded in a training needs matrix indicating particular training that must be undertaken by identified personnel and contractors. The training matrix will be administered by the Training Department; and the Development of the Training Programme, which will include:

- Job-specific training – training for personnel performing tasks that could cause potentially significant environmental impacts;
- Assessment of the extent to which personnel are equipped to manage environmental impacts;
- Basic environmental training;
- EMS training;
- Comprehensive training – on emergency response, spill management, etc;
- Specialized skills;
- Training verification and record-keeping; and

- Periodic re-assessment of training needs, with specific reference to new developments, newly identified issues and impacts and associated mitigation measures.

32.2 General Awareness Training

- The HR Manager, together with the SHEQ Manager, will be responsible for the development of or facilitating the development of, the required general SHE induction and awareness training. A general environmental awareness training module will be developed and integrated into the general induction programme. The general awareness

- training must include the Environmental Policy, a description of the environmental impacts and aspects and the importance of conformance to requirements, general responsibilities of personnel and contractors with regard to the environmental requirements and a review of the emergency procedures and corrective actions; and
- A Training Practitioner will conduct the general awareness training. The training presenter will keep a record of the details of all persons attending general awareness training. Such attendance registers shall indicate the names of attendants and their organizations, the date and the type of training received.

32.3 Specific Environmental Training

- Specific environmental training will be in line with the requirements identified in the training matrix; and
- Personnel whose work tasks can impact on the environment will be made aware of the requirements of appropriate procedures/work instructions. The SHEQ Manager will communicate training requirements to responsible supervisors to ensure that personnel and contractors are trained accordingly.

32.4 Training Evaluation and Re-training

- The effectiveness of the environmental training will be reflected by the degree of conformance to EMPR requirements, the result of internal audits and the general environmental performance achieved;
- Incidents and non-conformances will be assessed through the Internal Incident Investigation and Reporting System, to determine the root cause, including the possible lack of awareness/training;
- Should it be evident that re-training is required, the SHEQ Manager will inform the managers of the need and take the appropriate actions;
- General awareness training of all personnel shall be repeated every year; and

- The re-induction shall take into consideration changes made in the EMPR, changes in legislation, current levels of environmental performance and areas of improvement.

32.5 Emergency Procedures

- Emergency procedures, as relevant to this project, shall be implemented;
- The SHEQ Manager shall define emergency reporting procedures for the project;
- All personnel shall be made aware of emergency reporting procedures and their responsibilities;
- Any spills will be cleaned up immediately in accordance with relevant legislation; and
- Telephone numbers of emergency services, including the local firefighting service, shall be conspicuously displayed.

33 MANNER IN WHICH RISKS WILL BE DEALT WITH IN ORDER TO AVOID POLLUTION OR THE DEGRADATION OF THE ENVIRONMENT

There are several ways to avoid and minimize pollution, including environmental awareness, training, dust suppression, buffer zones, hunting avoidance and veld fire prevention.

Environmental awareness and training	The sampling team must be trained and any other person who will be based on-site or come to the site for the prospecting project must be briefed and inducted into on-site regulations, especially with regard to health, safety and environmental aspects.
Avoid fishing	Fishing will be strictly prohibited

34 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

(Among others, confirm that the financial provision will be reviewed annually)

No specific information has been required by the Competent Authority at this point in time.

35 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. ☒

Signature of the environmental assessment practitioner:

Singo Consulting (Pty) Ltd

Name of company:

Date: July 2022

APPENDICES

Appendix 1:Acceptance Letter

mineral resources & energy

Department
Minerals Resources and Energy
REPUBLIC OF SOUTH AFRICA

Private Bag X 9467, Polokwane, 0700, Tel: 015-287 4700, Fax: 015-287 4729
101 Dorp Street, Polokwane, 0699
From: Directorate Mineral Regulation: Limpopo Region
Enquiries: Zama Tshabalala Ref: LP30/5/1/1/2/14639PR
Email:Zama.Tshabalala@dmre.gov.za

Registered Mail
The Director
Chipo Holdings (Pty) Ltd
P/Bag X7297
EMALAHLENI
1035

Tel: 0782727839
Fax: 0865144103
Email: kenneth@singoconsulting.co.za

Attention: Kenneth Singo

Sir / Madam

ACCEPTANCE OF AN APPLICATION FOR A PROSPECTING RIGHT: CHIPO HOLDINGS (PTY) LTD ON TEMPELHOF 150 MS, MARYLAND 1 MT, ANTONVILLA 7 MT, VRYHEID 8 MT, BOKVELD 12 MT, MALALA HOEK 13 MT, TWILIGHT 16 MT, LEEUWDRAAI 18 MT, LIMPOPO VIEW 42 MT, GROENPLASS BOERDERY 24 MT, ALETTA 26 MT, HADDON 30 MT, HADDON 27 MT AND ESMEFOUR 29 MT, IN THE MAGISTERIAL DISTRICT OF MUSINA.

I refer to the abovementioned matter and I confirm that your application for a prospecting right of **Diamond (Alluvial)** in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) on the above-mentioned properties has been accepted.

You are advised to consult Smarty (SA) Minerals (Pty) Ltd ref: 10135 MR, P.O. Box 786163, Sandton, Johannesburg, 2146, Tel: 0110502888, Fax: 0110502828, Cell: 0714917849, E-mail: yyao@intl-resources.com and Kimbracento (Pty) Ltd ref: 10719 MP, Roos Tanya, P O Box 846, Musina, 0900, Tel: 0155330324, Fax: 0155330408, Cell: 0825511182, E-mail: tanya@limpopo.co.za. As they are interested and affected parties and submit the results of such consultation on or before 02 August 2022.

In terms of section 16(4) of the Act, you are therefore required to submit the following:

(a) to notify in writing and consult with the landowner or lawful occupier and any other affected party; and

(b) to consult the Department of Land Affairs if it the is state-owned land , in the event the land is subject to land restitution consult office of the Commission of Land Rights and submit the result of such consultation to this office on or before **02 August 2022** (30 days).

(c) You are further required in terms of section 17(4) of the Act to give effect to the object referred to in section 2(d) of the Act. In this regard, you are required to submit by no later than **02 August 2022** the following documents:

a. duly signed shareholders agreement;
b. share certificates and shareholders's register;
c. article and memorandum of association of the company;
d. details relating to funding (all relevant agreements); and
e. any other agreement or documents relating to the agreement.

In light of the minimum requirements as stipulated on Regulation 16 (1) and 16 (2) of the EIA Regulations, your application for an Environmental Authorization was incomplete as it was not accompanied by this acceptance letter as per sub Regulation 16 (1) (ix) and considering that it is now completed by this acceptance letter, you are hereby required to submit the documents as stipulated on Regulation 19 (1) to 19 98) of the EIA Regulations (only in cases where Basic Assessment Report is applicable) or Regulations 21 (Scoping Report) and Regulation 23 (EIR and EMPr) (in case of Scoping and Environmental Impact Report). All timeframes are effective from the date of this letter.

Acceptance of your application does not grant you the right to commence with prospecting operations. Your application will be evaluated / processed and a recommendation on the granting / refusal of the right will be forwarded to the Minister or her delegate. Any person operating without a prospecting / mining right or mining permit will be in contravention of Section 5(4) of the MPRDA and would be guilty of an offence in terms of the relevant Act.

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

Yours faithfully

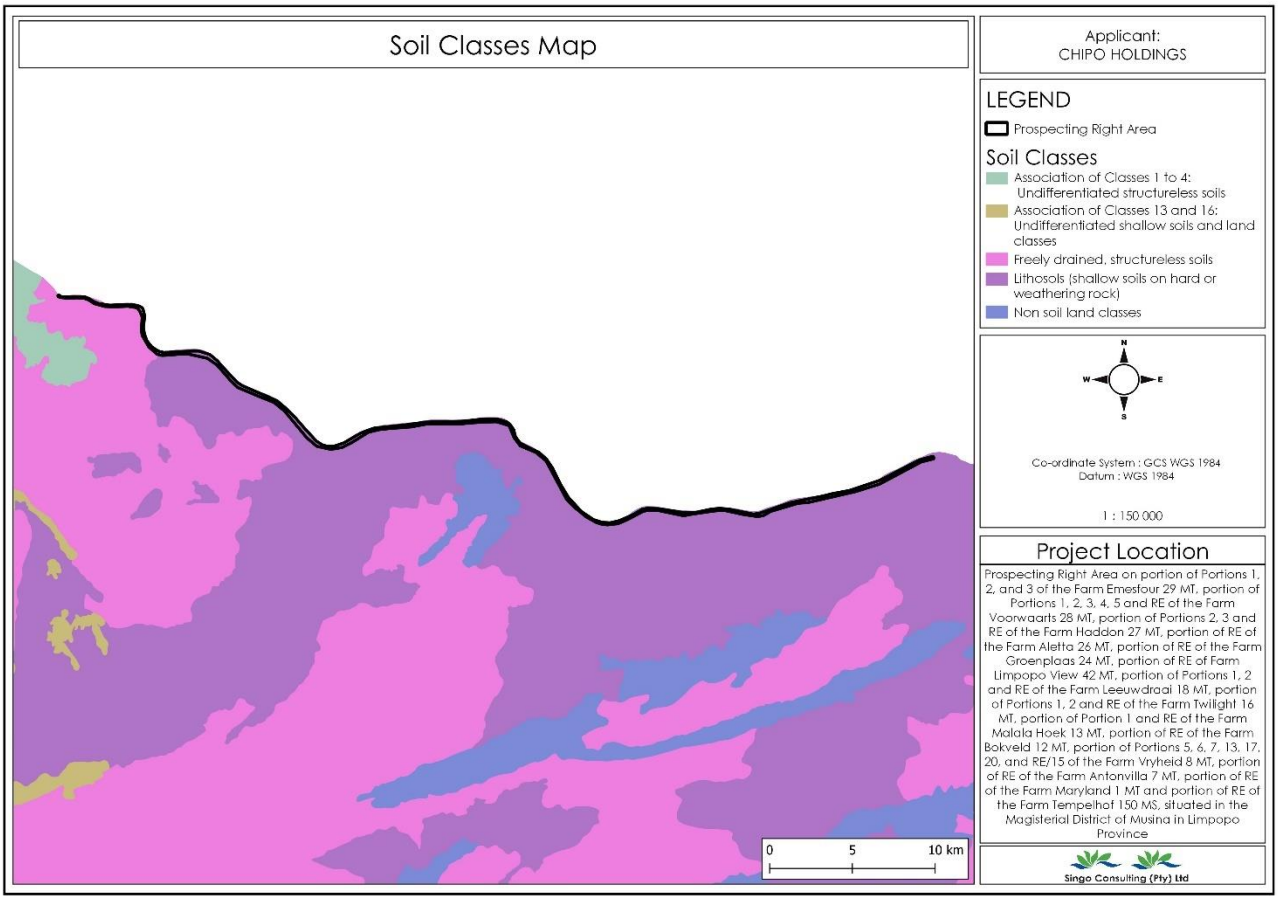
.....
REGIONAL MANAGER
LIMPOPO REGION
DATE: 22/06/2022

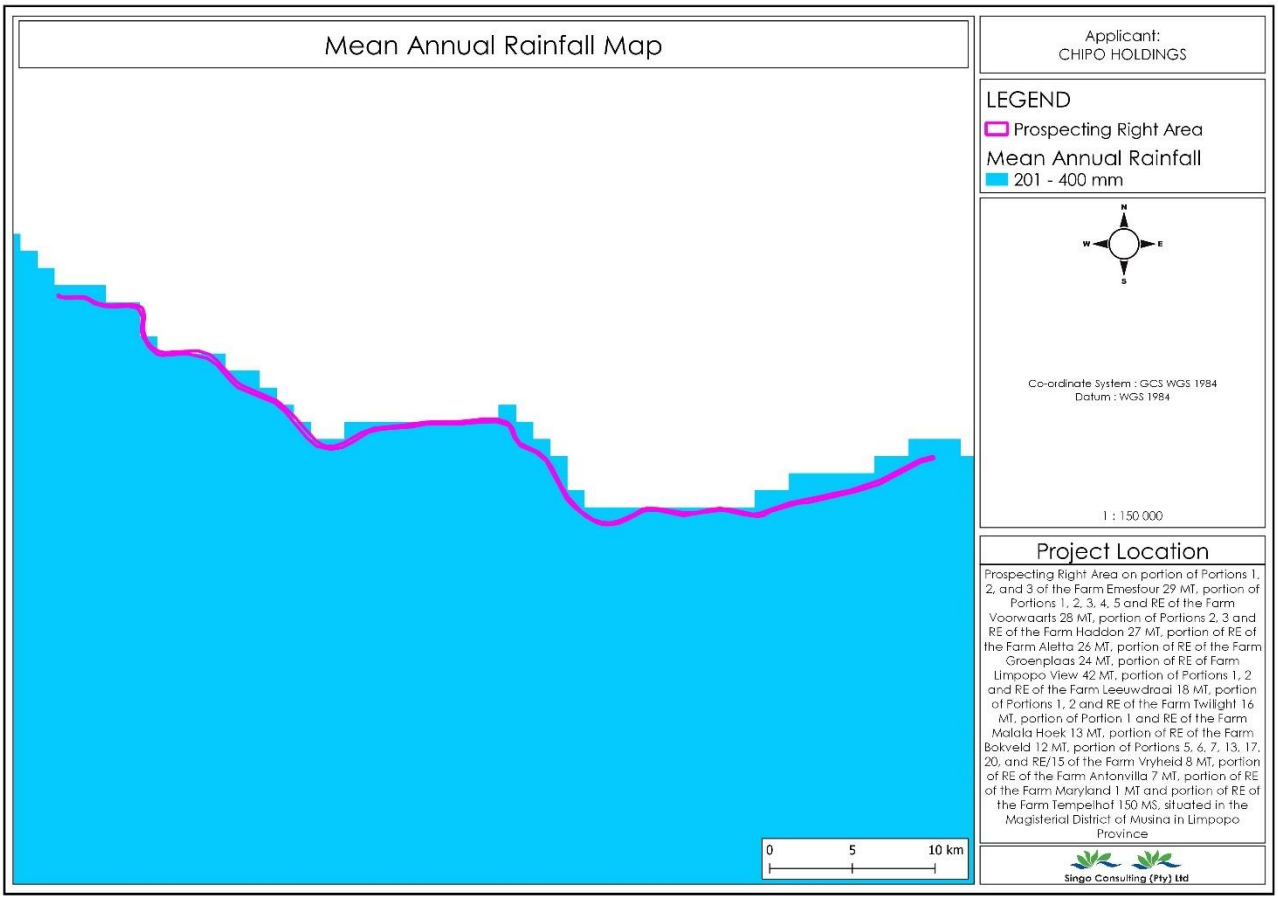
Appendix 2: Screening Report

Appendix 3: EAP Curriculum Vitae
(Available Upon Request)

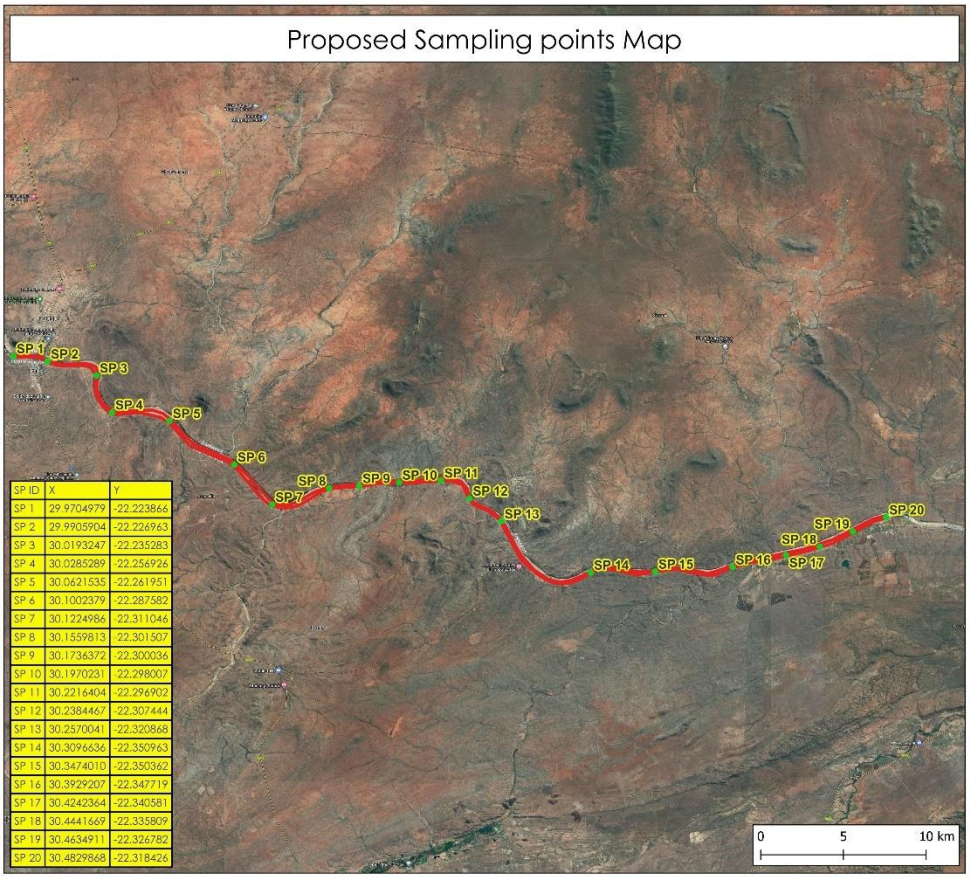
Appendix 4: Baseline Studies

Appendix 5: Project Maps


Soil Classes Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Soil Classes
Association of Classes 1 to 4: Undifferentiated structureless soils
Association of Classes 13 and 16: Undifferentiated shallow soils and land classes
Freely drained, structureless soils
Lithosols (shallow soils on hard or weathering rock)
Non soil land classes
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Mean Annual Rainfall Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Mean Annual Rainfall
201 - 400 mm
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd

Proposed Sampling points Map



SP ID	X	Y
SP 1	29.9704979	-22.223866
SP 2	29.9905904	-22.226963
SP 3	30.0193247	-22.235283
SP 4	30.0285289	-22.256926
SP 5	30.0621535	-22.261951
SP 6	30.1002379	-22.287582
SP 7	30.1224986	-22.311046
SP 8	30.1559813	-22.301507
SP 9	30.1736372	-22.300036
SP 10	30.1970231	-22.298007
SP 11	30.2216404	-22.296902
SP 12	30.2384467	-22.307444
SP 13	30.2570041	-22.320868
SP 14	30.3096636	-22.350963
SP 15	30.3474010	-22.350362
SP 16	30.3929207	-22.347719
SP 17	30.4242364	-22.340581
SP 18	30.4441669	-22.335809
SP 19	30.4634911	-22.326782
SP 20	30.4829868	-22.318426

Applicant:
CHIPO HOLDINGS

LEGEND
- Sampling Point
- Prospecting Right Area

Co-ordinate System : GCS WGS 1984
Datum : WGS 1984

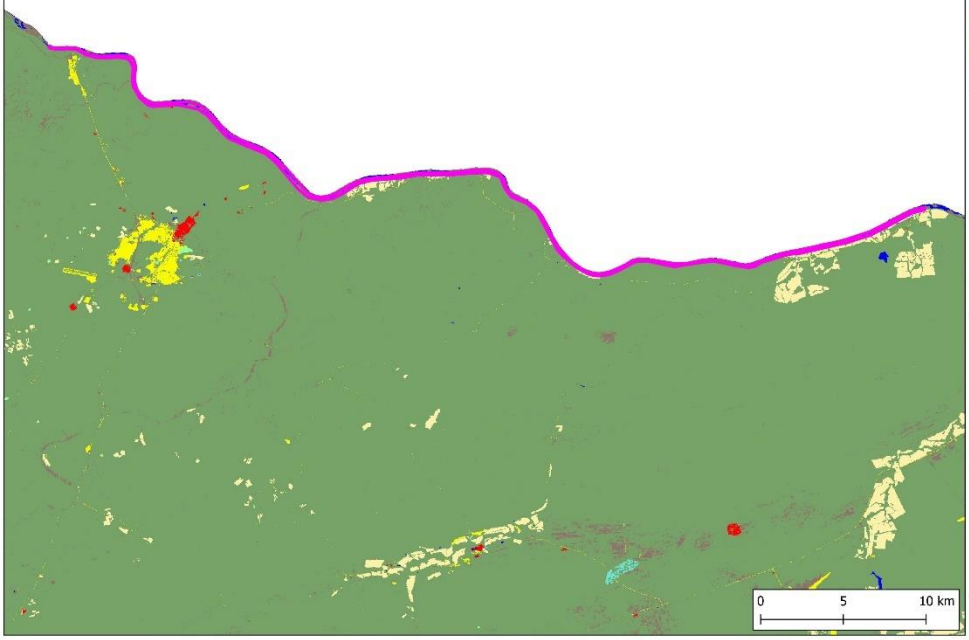
1 : 150 000

Project Location

Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province

Singo Consulting (Pty) Ltd

Land Use and Land Cover Map



Applicant:
CHIPO HOLDINGS

LEGEND
- Prospecting Right Area

Land Use and Land Cover
- Plantation
- Natural Vegetation
- Waterbodies
- Bare Land
- Wetlands
- Cultivated Land
- Built-Up Area
- Mine

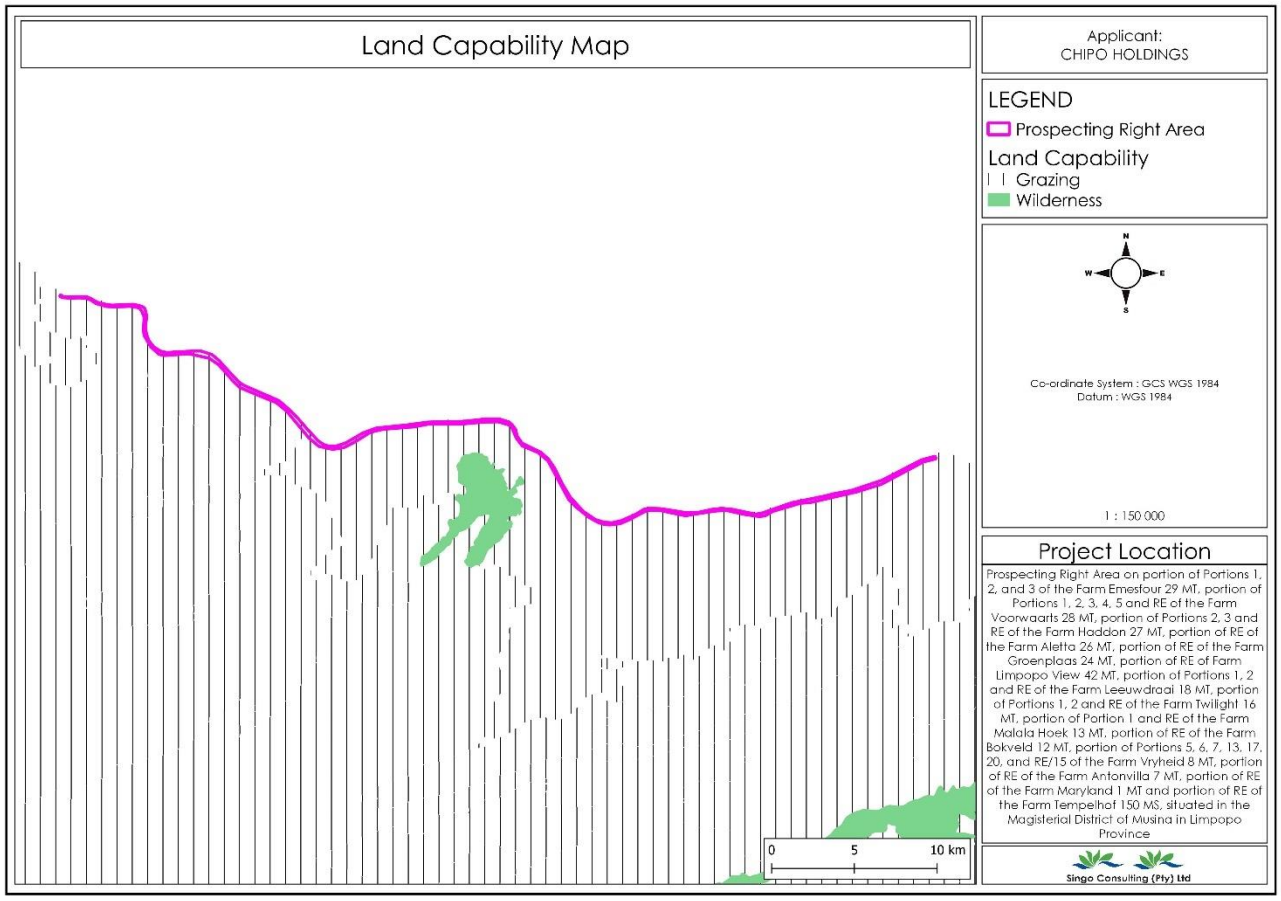
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984

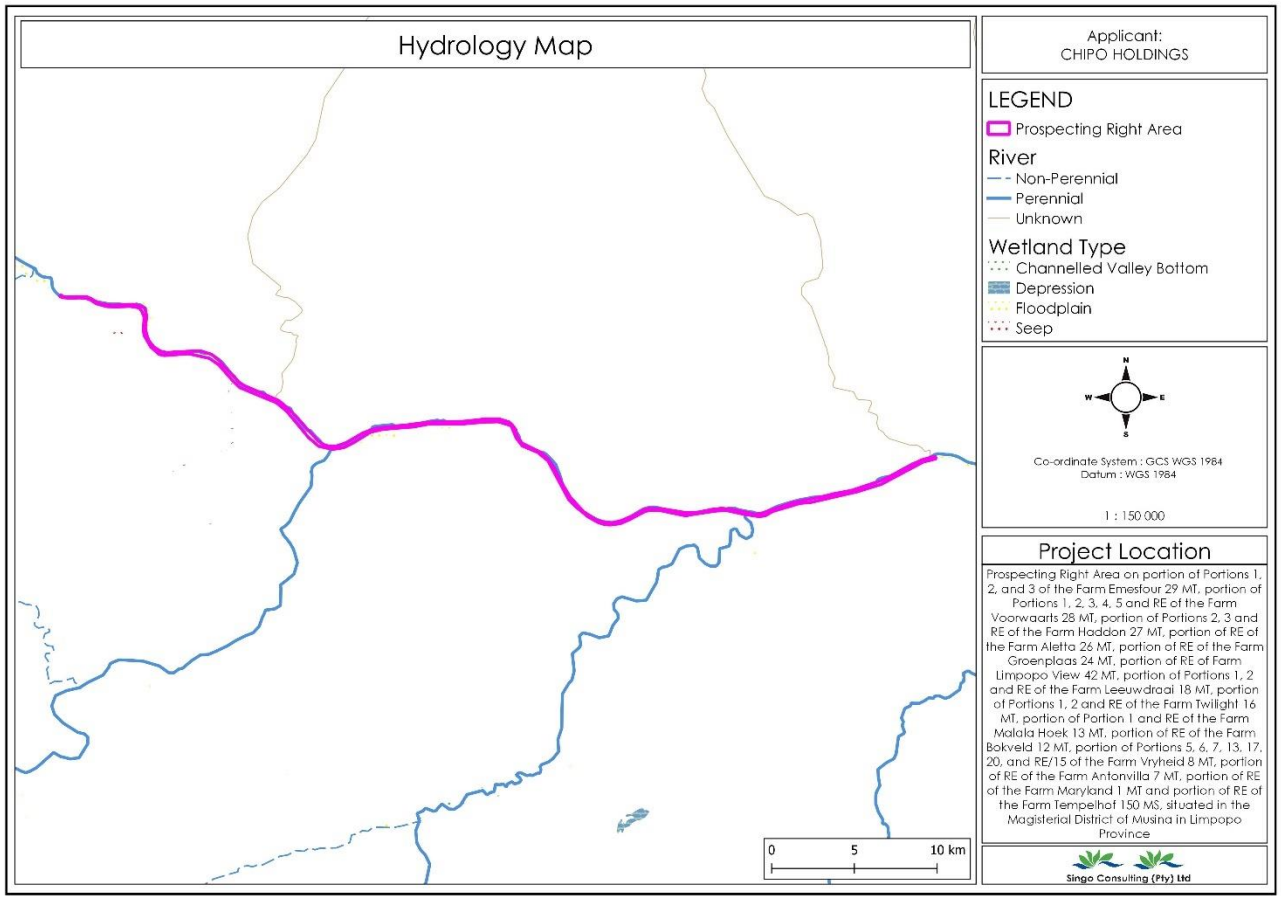
1 : 150 000

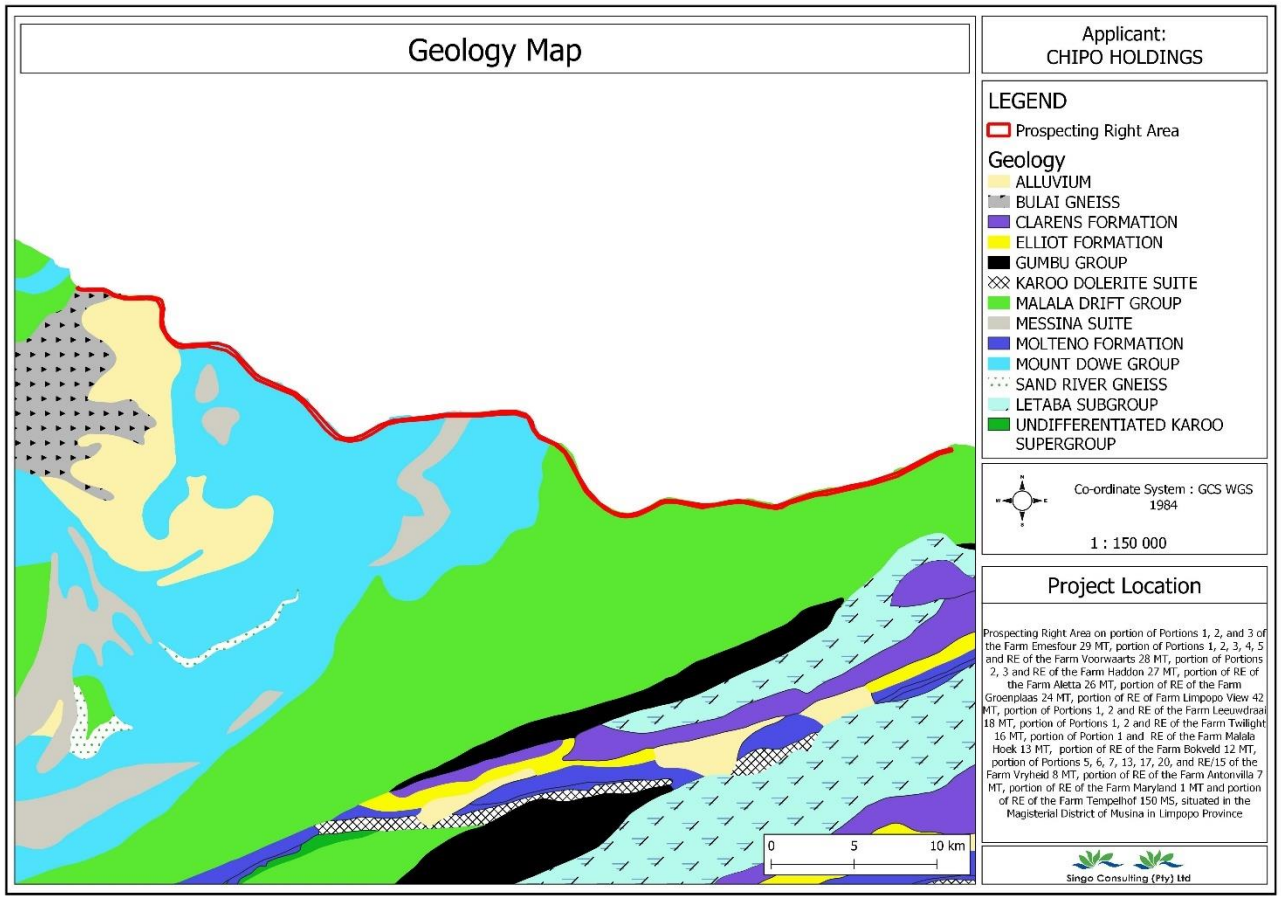
Project Location

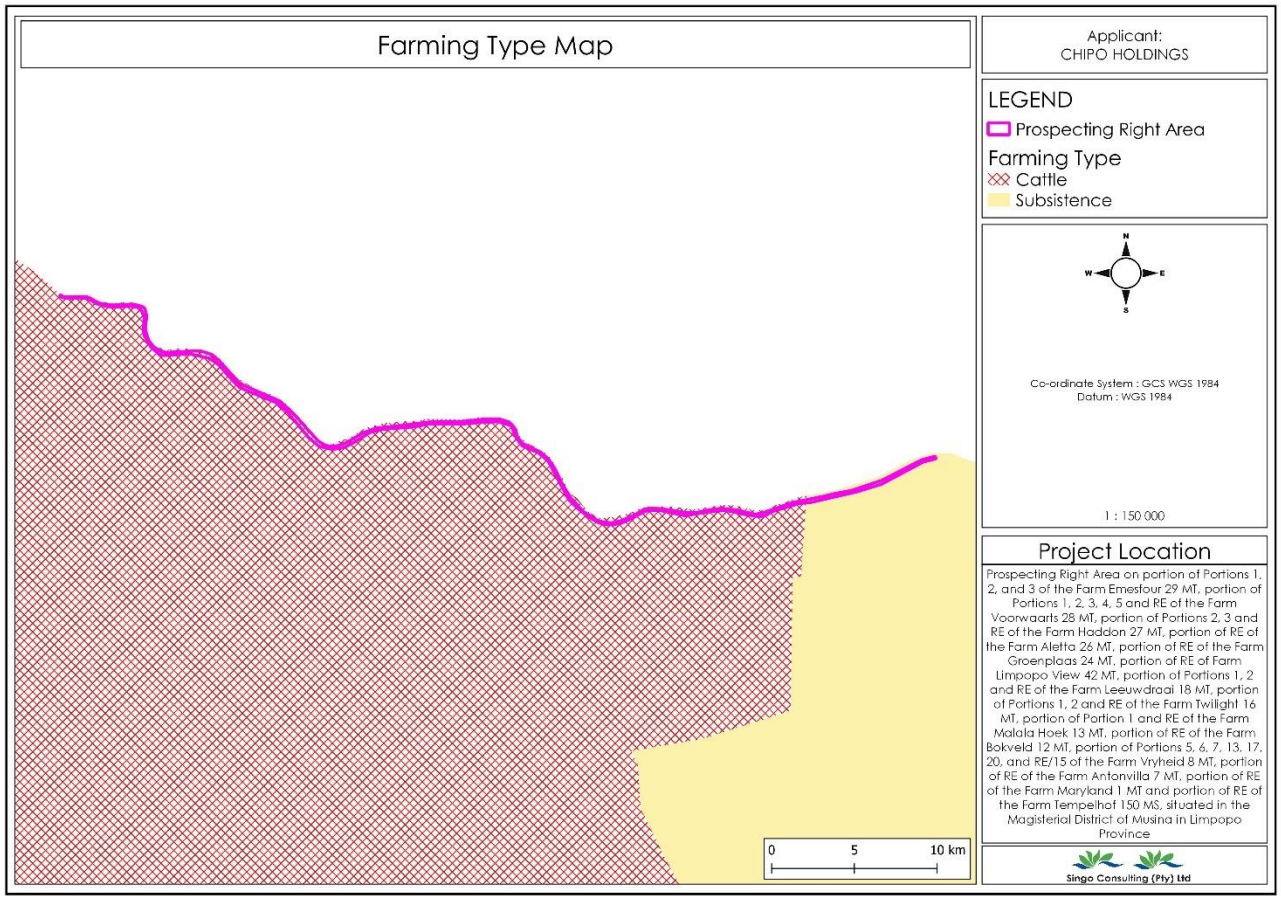
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province

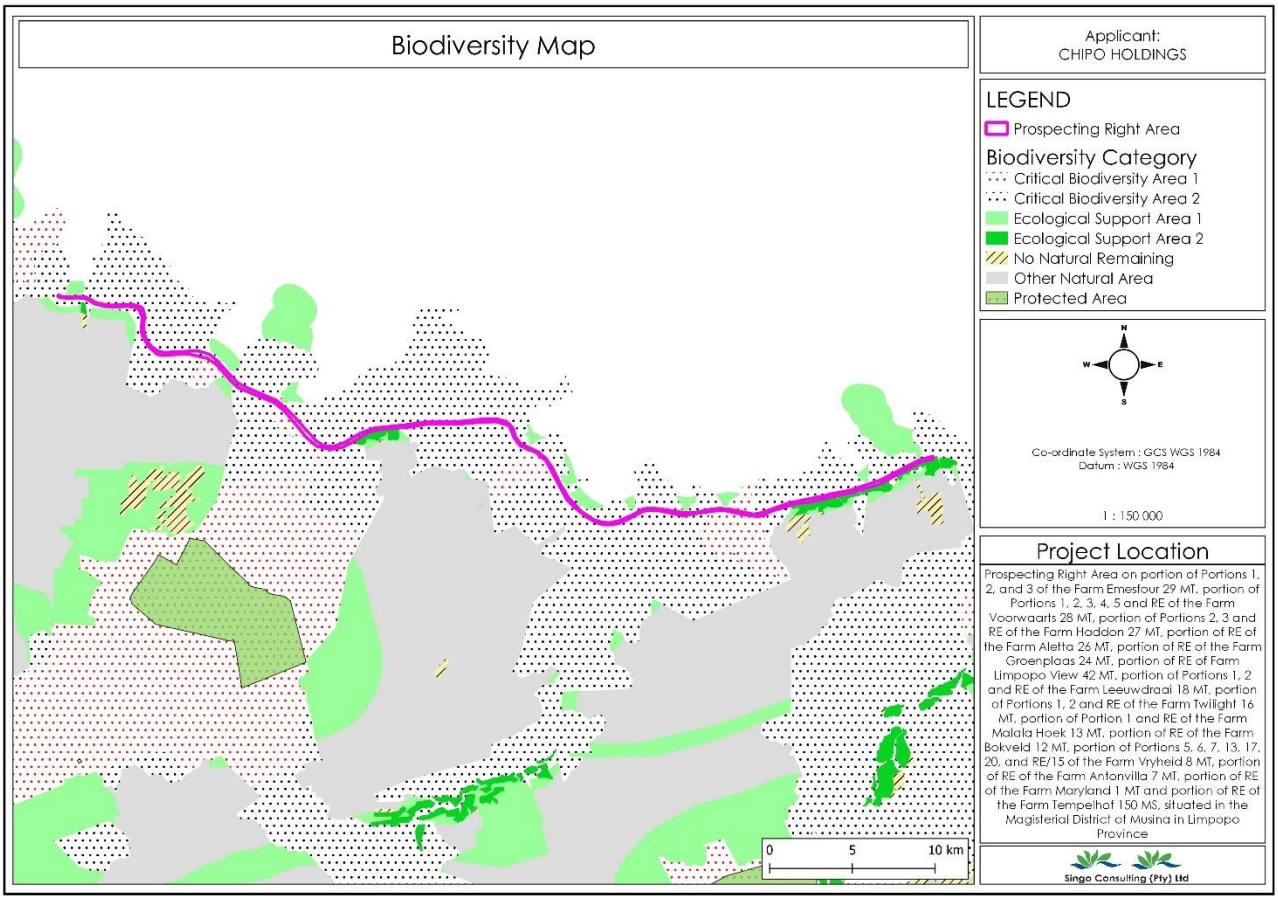
Singo Consulting (Pty) Ltd

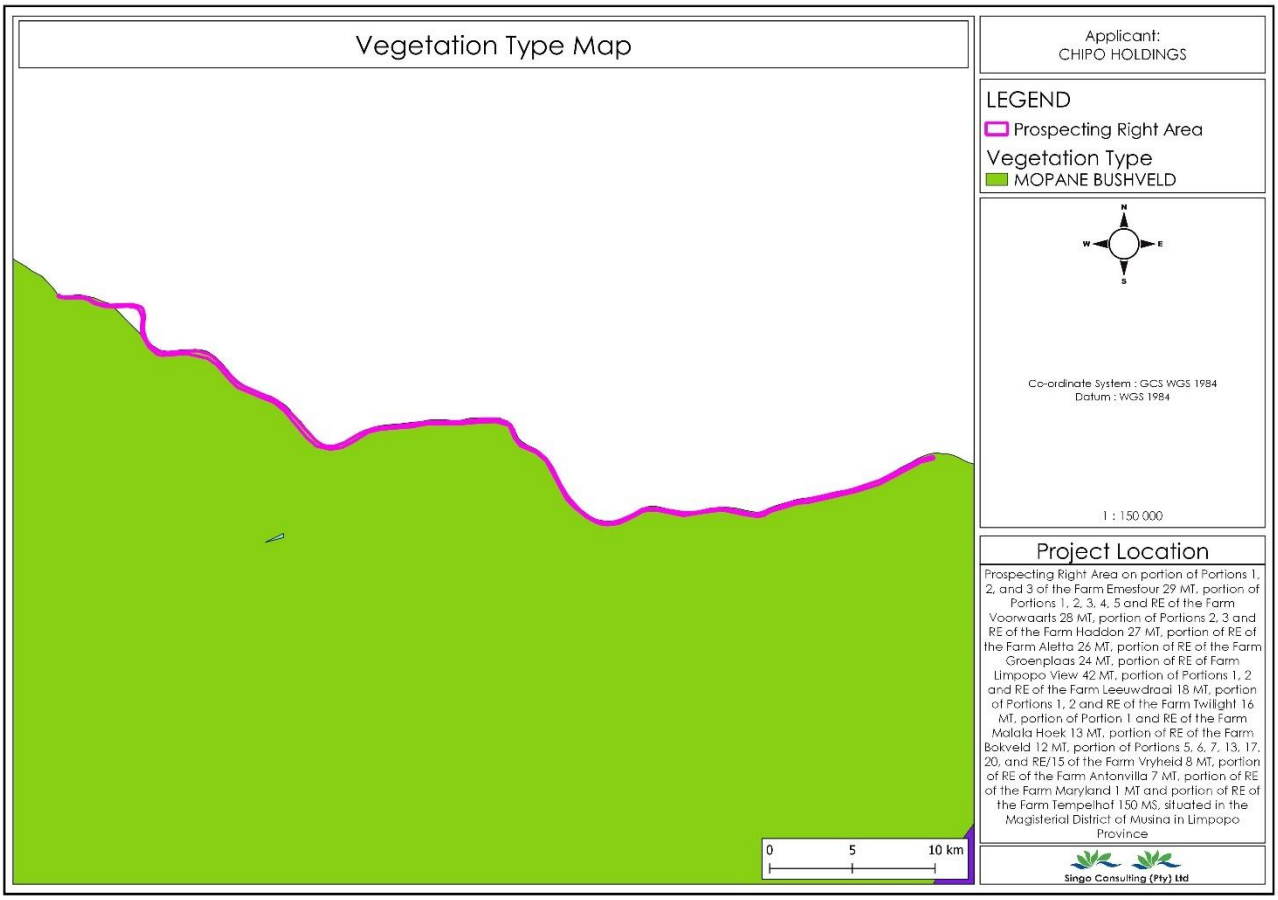

Land Capability Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Land Capability
Grazing
Wilderness
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd

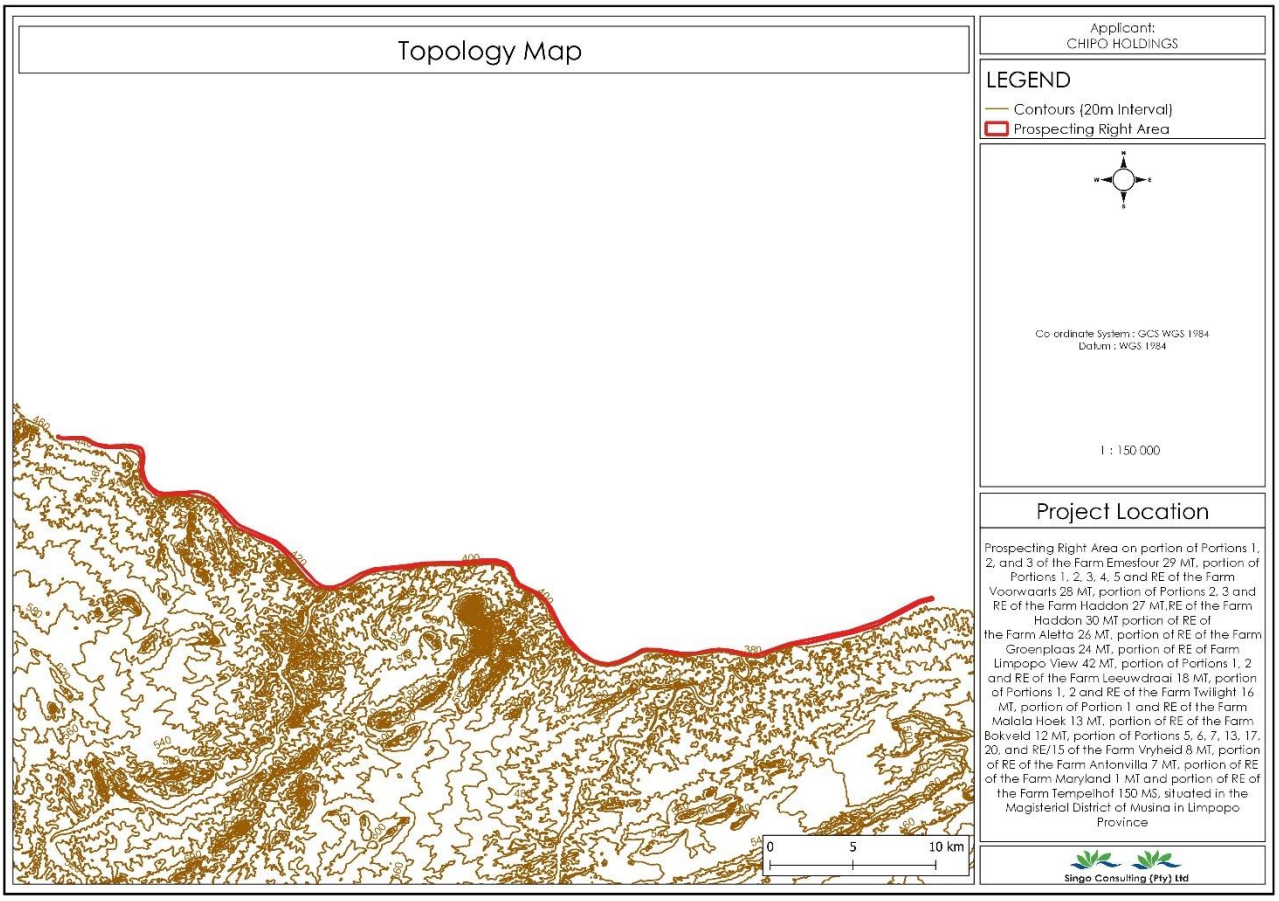

Hydrology Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
River
Non-Perennial
Perennial
Unknown
Wetland Type
Channelled Valley Bottom
Depression
Floodplain
Seep
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Geology Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Geology
ALLUVIUM
BULAI GNEISS
CLARENS FORMATION
ELLIOT FORMATION
GUMBU GROUP
KAROO DOLERITE SUITE
MALALA DRIFT GROUP
MESSINA SUITE
MOLTENO FORMATION
MOUNT DOWE GROUP
SAND RIVER GNEISS
LETABA SUBGROUP
UNDIFFERENTIATED KAROO SUPERGROUP
Co-ordinate System : GCS WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraal 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Farming Type Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Farming Type
Cattle
Subsistence
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraal 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Biodiversity Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Biodiversity Category
Critical Biodiversity Area 1
Critical Biodiversity Area 2
Ecological Support Area 1
Ecological Support Area 2
No Natural Remaining
Other Natural Area
Protected Area
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Vegetation Type Map
Applicant:
CHIPO HOLDINGS
LEGEND
Prospecting Right Area
Vegetation Type
MOPANE BUSHVELD
N
W
E
S
Co-ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT, portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd


Topology Map
Applicant:
CHIPO HOLDINGS
LEGEND
Contours (20m Interval)
Prospecting Right Area
Co ordinate System : GCS WGS 1984
Datum : WGS 1984
1 : 150 000
Project Location
Prospecting Right Area on portion of Portions 1, 2, and 3 of the Farm Emesfour 29 MT, portion of Portions 1, 2, 3, 4, 5 and RE of the Farm Voorwaarts 28 MT, portion of Portions 2, 3 and RE of the Farm Haddon 27 MT,RE of the Farm Haddon 30 MT portion of RE of the Farm Aletta 26 MT, portion of RE of the Farm Groenplaas 24 MT, portion of RE of Farm Limpopo View 42 MT, portion of Portions 1, 2 and RE of the Farm Leeuwdraai 18 MT, portion of Portions 1, 2 and RE of the Farm Twilight 16 MT, portion of Portion 1 and RE of the Farm Malala Hoek 13 MT, portion of RE of the Farm Bokveld 12 MT, portion of Portions 5, 6, 7, 13, 17, 20, and RE/15 of the Farm Vryheid 8 MT, portion of RE of the Farm Antonvilla 7 MT, portion of RE of the Farm Maryland 1 MT and portion of RE of the Farm Tempelhof 150 MS, situated in the Magisterial District of Musina in Limpopo Province
0
5
10 km
Singo Consulting (Pty) Ltd

Appendix 6: Windeed Search Results