PROSPECTING RIGHT APPLICATION FOR SALT, NITRATE (NO_3) AND UNSPECIFIED MINERALS, IN THE POSTMASBURG AREA, NORTHERN CAPE PROVINCE
MATSAP SALT (EDMS.) BPK.

DMR Ref. No.: (NC) 30/5/1/1/2/11039 PR MSA Ref. No.: J2798

INFORMATION DOCUMENT

PURPOSE OF THIS DOCUMENT

- To create awareness of the application and proposed prospecting activities;
- To invite and encourage you, as Interested and/or Affected Party (I&AP), to provide input and/or comment on the project;
- To confirm how and when you should participate.

BACKGROUND INFORMATION

Matsap Salt (Pty) Ltd. (the Applicant), submitted an application for a prospecting right to the Department of Mineral Resources (DMR), in order to undertake proposed prospecting work, for salt , nitrate (NO_3) and unspecified minerals, on Portion 1 of the Farm Matsap 81, in the Northern Cape Province.

In terms of the requirements of the Mineral and Petroleum Resources Development Act (MPRDA) (Act No. 28 of 2002), the proposed prospecting activities can only commence once the applicant has received authorisation from the Department of Mineral Resources (DMR), in the form of a prospecting permit.

The prospecting right application was submitted to the Department of Mineral Resources (DMR): Directorate Mineral Regulation, in terms of Section 16 of the Mineral and Petroleum Resource Development Act (Act No. 28 of 2002) (MPRDA). The DMR has subsequently issued a letter of acceptance of the application on 1 November 2013. The DMR instructed the Applicant to consult with Interested and/or Affected Parties (I&APs), and to prepare an Environmental Management Plan (EMP) for the proposed prospecting activities, as per the requirements of Sections 16(4), 17(4) and 29 of the aforementioned Act (MPRDA).

The Applicant appointed the MSA Group (MSA), as independent environmental and mineral tenure consultants, to facilitate the process of consultation with I&APs. The EMP will be compiled by a different independent environmental consultant. The purpose of the EMP is to identify possible environmental risks and impacts, which may occur as a result of the proposed prospecting activities. It will also identify mitigation measures, to ensure that potential negative environmental impacts are reduced and rehabilitated as far as possible.

LOCATION

The proposed area of exploration is located approximately 47 km southwest from the town Postmasburg, within the area of jurisdiction of the Siyancuma Local Municipality. The extent of Portion 1 of the Farm Matsap 81 is 1809.5780 ha. Prospecting will only occur within the salt pan which is situated on the property. The pan is approximately 224.57 ha in extent (refer to the enclosed locality map).

DESCRIPTION OF THE PROPOSED ACTIVITY

The Applicant wishes to prospect for the following minerals on the abovementioned properties:

(a) Salt; (b) Nitrate (NO_3); and (c) Unspecified minerals.

Geological Characteristics of the Site

A considerable body of brine (salt-rich water) was identified during exploration at the Matsap pan in the 1920s. The brine is associated with the sandy clay accumulated on the pan floor and is known to be enriched with sodium, calcium, magnesium and potassium rich salts at concentrations between 12.5 mg/L – 22 mg/L, i.e. sufficient for economic abstraction of salt.

Proposed Prospecting Activities

It is envisaged that the proposed prospecting will be conducted over a five year period, and in phases, with the work program being divided into several sequential sections. At the end of each section, there will be a brief period of compiling and evaluating results. These results will not only determine whether the project proceeds, but also the manner in which it will go forward. Essentially, the Applicant will only action the next stage once satisfied with the results obtained.

The proposed prospecting programme involves both non-invasive and invasive prospecting methods. The programme can be summarised as follows:

Phase	Activity	Timeframe	Outcome
Phase 1 Invasive Non-invasive	Inferred Drilling (Percussion), 5 holes will be drilled at a regular grid within the pan (the hole diameter is approx. 254 mm and drill sites 10 m x 10 m). Depth of drill holes: 50 m Spasing of drill holes 500 m x 1000 m Sampling, analysis/testwork	1.5 years (18 months)	Inferred resource
Phase 2 Invasive Non-invasive	Inferred Drilling (Percussion), 5 holes will be drilled at a regular grid within the pan (hole diameter is approx. 254 mm and drill sites 10 m x 10 m). Depth of drill holes: 50 m Spacing of drill boles: 250 m x 500 m Sampling, analysis/testwork	1.5 years (18 months)	Measured resource
Phase 3 Non-invasive	Pre-feasibility study	2 years (24 months)	Pre-feasibility studies

A. Invasive Activities

- **Drilling**

Drilling will be the most important method of prospecting. The drilling method to be used is referred to as percussion drilling. The latter is a dry drilling method, meaning that no water is required. The drill machine to be used is will be mounted on a 4 x 4 vehicle. The hole diameter is typically 254 mm wide. The salt-rich brine occurrence is present from surface up to a depth of 25 m.

An independent and experienced drilling contractor will be used to complete the drilling in accordance with industry best practice and in compliance with the Mine Health and Safety Act. Plastic lining to prevent oil spillage will be used under the rig.

Bore hole sites are GPS located and pegged. The site is inspected and photographed prior to any disturbance. No drill pads will be cleared, keeping disturbance to vegetation to an absolute minimum. Topsoil will also not be removed.

After the drilling is completed, each borehole collar is surveyed by an independent surveyor using a high-accuracy differential GPS. Thereafter the holes will be cased and capped in preparation of pump testing and brine sampling. Upon completion, drill sites will be rehabilitated, photographed and monitored, as per the specifications contained in the EMP.

Figure 1: Image of a typical drilling operation

- **Sampling and Analyses**

Long term pumping tests will involve pumping brine from the exploration holes at a constant rate and without faults or blockages, over a 30 day period. The consitancy and rate of flow will be recorded and used as base assumptions in the brine resource estmation and to determine if the aquifer can sustain long terms production rates.

The brine will be sampled at regular time intervals and submitted for analysis to determine the average salt content of the pumped water, reflecting the reserve grades and to determine changes in composition thoughout the test.

The sample is logged, halved, bottled and numbered in the field by the geologist and field assistants. The bottled samples are then sent ofr-site to an acreditted laboratory for analysis and the other samples is stored for future reference.

B. Non-Invasive Activities – Resource estimation

The pump rates and analytical results are captured into an electronic database. A geological model is then developed that forms the basis for the resource estimate. The purpose of the resource estimate is to obtain an indication of the volume and salt content of the brine aquifer.The resource estimate will determine whether the resource is feasible for potential future mining.

C. Pre-feasibility study

Should the resource drilling confirm the presence of an economic viable brine resource a pre-feasibility study will be commissioned. Aspects such as resource size, extraction, processing, marketing, environmental impact/mitigation, etc. Will be determined and used to develop an extraction and processing plan, financial model and capital cost estimate.

DESCRIPTION OF THE ENVIRONMENT

The area is generally characterised by a mining and farming community. The biophysical environment is characterised by varying levels of disturbance. Some areas have been modified to accommodate farming and prospecting activities, while others have had very little disturbance.

The site is situated within the Nama-Karoo Biome, an arid biome with most rivers non-perennial. The Nama-Karoo has most rainfall in the summer half of the year, especially in late summer or early autumn.

The site is characterised by two distinct vegetation types (refer to the enclosed vegetation map – Rurtherford & Mucina, 2006):

(a) Northern Upper Karoo (Nku 3- Upper Karoo Bioregion);
(b) Olifantshoek Plains Thornveld (SVk 13 - Eastern Kalahari Bushveld Bioregion).

Matsappan, a non-perennial pan, is located on the western side of the farm. The pan is situated within the Northern Upper Karoo vegetation unit. In terms of conservation status, this vegetation unit is classified as “least threatened” and none of it is currently conserved in statury conservation areas.

Faunal species which may occur in the area include inter alia small mammals such as duiker, rabbits, rodents, squirrels, mongoose, caracal etc.; reptiles, with specific reference to tortoises, geckos, lizards and snakes; as well as ground living and other bird species.

In terms of the Mining and Biodiversity Guidelines, published by SANBI (2013) the pan is considered as being of highest biodiversity importance. The status of the pan will be confirmed during site assessment and described in the EMP.

At present, there is no infrastructure available on site. The pan has been mined historically and remnants of this era are still present on site. This aspect will be investigated by a heritage specialist, and confirmed and described in the EMP.

ANTICIPATED POTENTIAL ENVIRONMENTAL IMPACTS

The proposed prospecting activities will have minimal impact on the environment and hence little rehabilitation should be necessary. There are no foreseen major environmental issues and no expectation of long term impacts remaining. The impacts which may occur would be minimized through proper supervision.

Drill rigs would utilize existing roads as far as possible. Where roads do not exist, the proposed drill line will be accessed via veld. However, due to the low vegetation, road construction and/or vegetation clearance is not required. Likewise, there is also no need for the construction of drill pads.

During drilling and pump tests, the drilling teams (3 – 4 people) will overnight on the property in caravans, in close proximity to the drill rig. The drilling an pump tests should take no longer than 2 – 3 weeks at a time. There will be no more than 4 – 6 people on site at any given time of the day. Mobile chemical toilets will be made available to on-site personnel. If possible, potable water will be sources from the landowner or from adjacent farms, or alternatively, brought in from Postmasburg.

Strong control will be exercised over oil usage. Impervious sheeting will be laid underneath the rig to catch any spills and the contaminated soil removed to an approved disposal site. Disturbance to the water level will be minimal as only small volumes of water will be extracted for sampling and analysis.

The estimated cost associated with the rehabilitation of disturbed areas amounts to approximately R40,000.00 and is included in the applicant's financial provision to fund the proposed prospecting programme.

The following preliminary potential environmental areas of impact have been identified and will be considered during the compilation of the EMP:

- Impacts on fauna and flora (ecology/biodiversity);
- Impacts on soil and/or agricultural resources;
- Impacts on water resources;
- Noise impacts;
- Increased traffic; and
- Impacts on cultural / heritage resources.

Management guidelines will be developed for the abovementioned issues and incorporated in the EMP. You are welcome to comment on the above list and provide additional anticipated environmental issues and possible impacts which should be addressed.

CONSULTATION WITH INTERESTED AND/OR AFFECTED PARTIES (I&APS)

The public consultation process provides people, who may be affected by the proposed prospecting activities, with an opportunity to provide comment or to raise issues of concern. Your involvement will enable the project team to produce a comprehensive Consultation Report (CR) and Environmental Management Plan (EMP) for submission to the DMR, enabling them to make an informed decision about the proposed project.

You can become involved in the project by:

- Registering as an I&AP;
- Proposing ideas during the consultation process;
- Voicing your concerns;
- Assisting with the provision of information that will contribute to the compilation of a comprehensive EMP.

Should you wish to participate, please register as I&AP as soon as possible and forward any comments you may have to MSA, on or before **Thursday, 16 January 2014**. A registration / comment sheet is attached for your convenience.

Please note that your suggestions / contributions will be incorporated into a Consultation Report (CR), which will be submitted to the DMR as per regulatory requirement. Your contributions will then be taken forward into the Environmental Management Plan (EMP), which will be submitted to the DMR on **Thursday, 23 January 2014.**

Please contact Ms. Elmarie van der Walt at the MSA Group, should you have questions or require additional information.

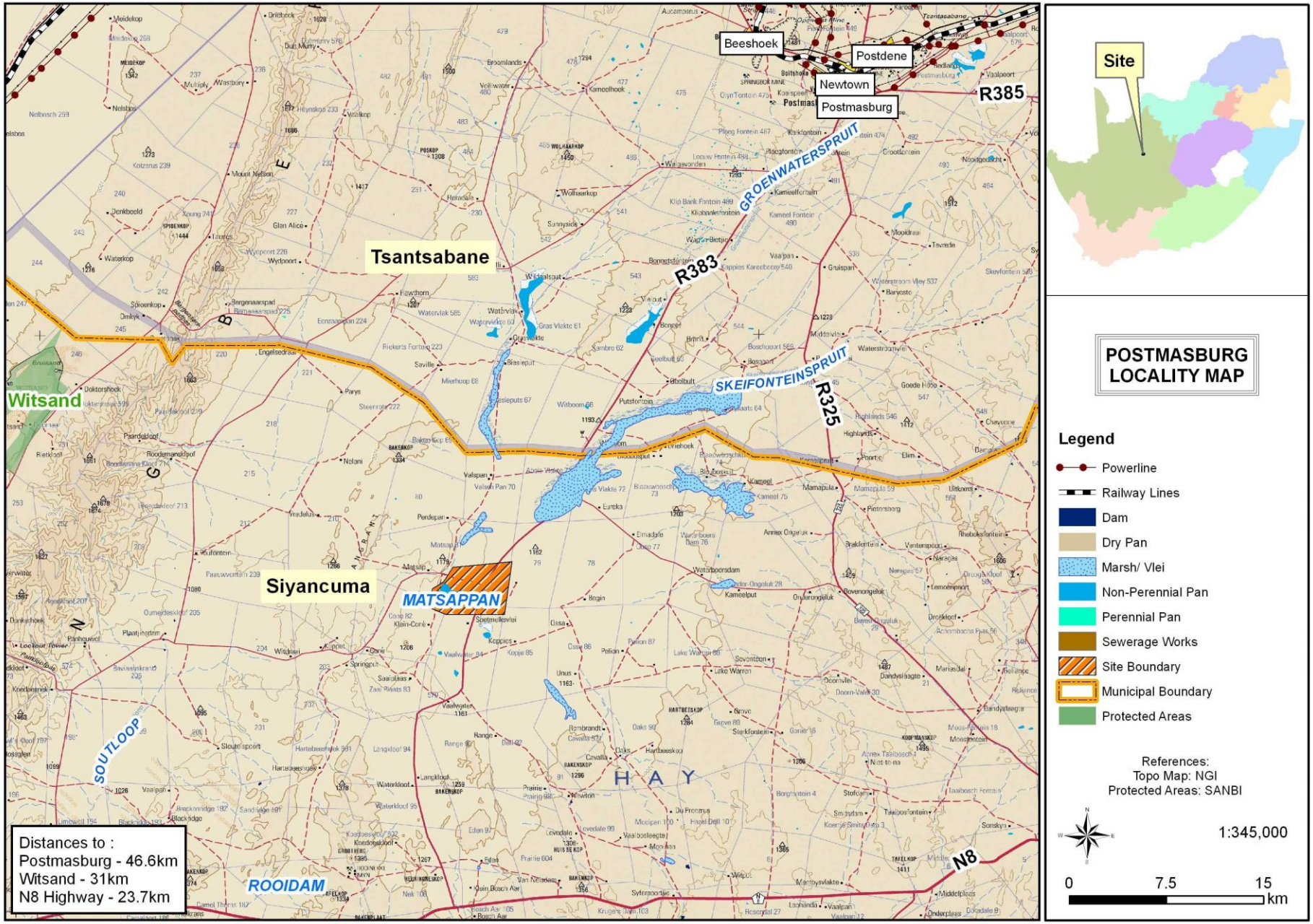
Tel: 073 675 0539
Fax: 011 880 2184
Email: elmarievdw@msagroupservices.com
Postal address:
The MSA Group
P.O. Box 81356
Parkhurst
Gauteng
2120

REGISTRATION AND COMMENT FORM

SURNAME		
FORENAMES		
TELEPHONE	HOME	
	WORK	
	CELLULAR	

PHYSICAL ADDRESS		POSTAL ADDRESS

COMMENTS (Please attach additional pages if required)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Distances to :
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Witsand - 31km
N8 Highway - 23.7km
Site
POSTMASBURG
LOCALITY MAP
Legend
Powerline
Railway Lines
Dam
Dry Pan
Marsh/ Vlei
Non-Perennial Pan
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Sewerage Works
Site Boundary
Municipal Boundary
Protected Areas
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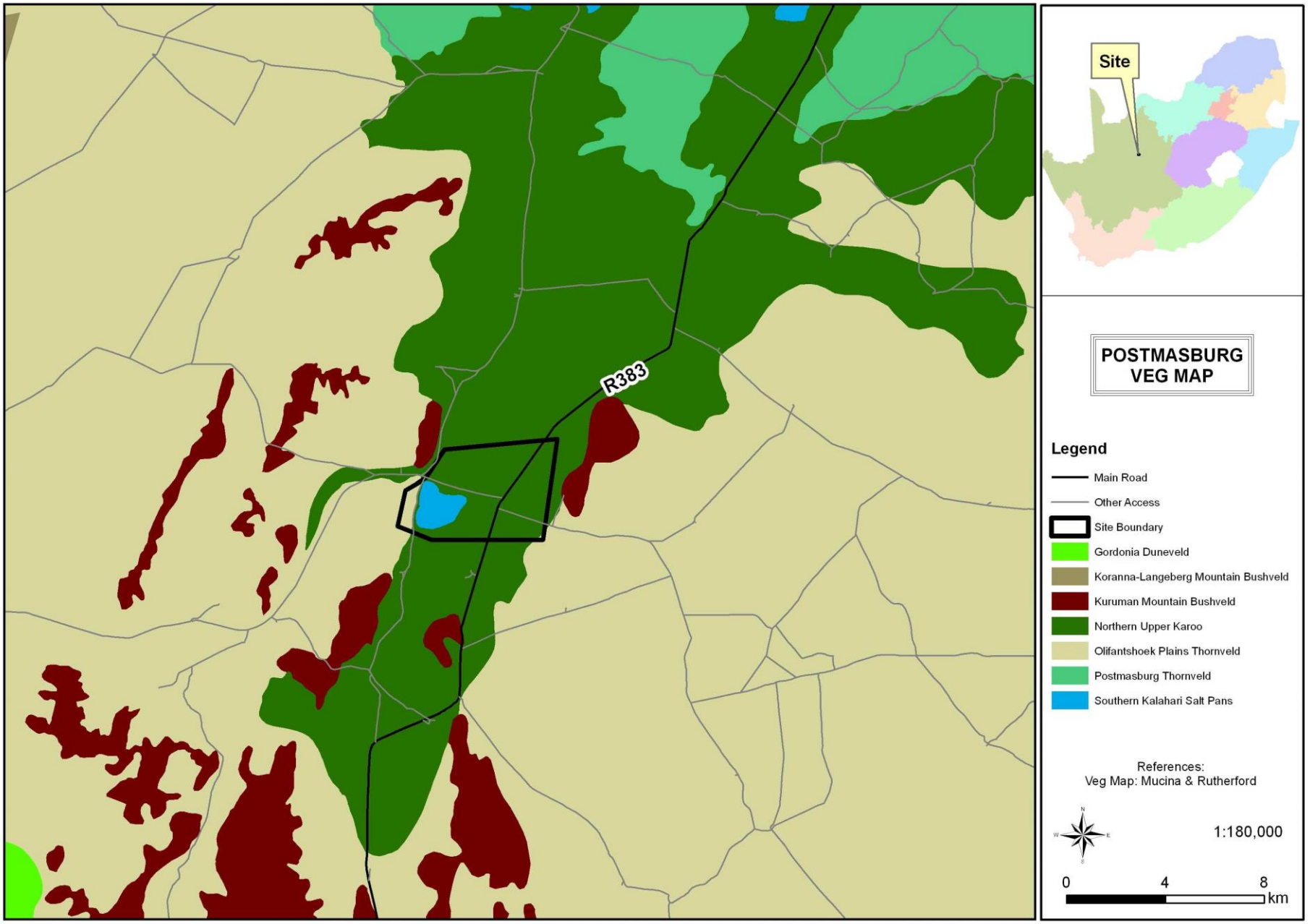
R383
Site
POSTMASBURG
VEG MAP
Legend
Main Road
Other Access
Site Boundary
Gordonia Duneveld
Koranna-Langeberg Mountain Bushveld
Kuruman Mountain Bushveld
Northern Upper Karoo
Olifantshoek Plains Thornveld
Postmasburg Thornveld
Southern Kalahari Salt Pans
References:
Veg Map: Mucina & Rutherford
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