

# **Palaeontological Impact Assessment for the proposed Hotel (Bhundu Inn) upgrade adjacent to the SS Skosana Nature Reserve, Mpumalanga**

**Desktop Study**

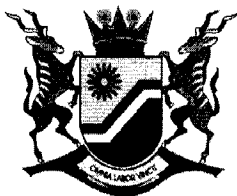
**For**

**NuLeaf Planning and Environmental (Pty) Ltd**

**10 September 2014**

**Prof Marion Bamford**

Evolutionary Studies Institute  
University of the Witwatersrand  
P Bag 3, WITS 2050  
Johannesburg, South Africa



the **dedet**

Department:  
Economic Development, Environment and Tourism  
MPUMALANGA PROVINCIAL GOVERNMENT

**Details of specialist and declaration of interest in respect of an application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010**

**PROJECT TITLE**

Proposed Expansion of the Bhundu Inn Hotel

**Specialist:**

**Nature of specialist study compiled:**

**Contact person:**

**Postal address:**

**Postal code:**

**Telephone:**

**E-mail:**

**Qualifications & relevant experience:**

**Professional affiliation(s) (if any)**

Prof Marion Bamford

Palaeontological Impact Assessment

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PhD (Wits 1990); more than 20 years PIA reports

FRSSAf; ASSAf; PSSA (current President); SASQUA (vice President); INQUA-ICSU rep; IOP African representative.

## The specialist appointed in terms of the Regulations

I, MARION BAMFORD declare that -

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in Regulation 8;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

Signature of specialist:

*MBamford*

Name of company:

*University of the Witwatersrand*

Date:

*30 October 2014*

Signature of Commissioner of Oaths

*30/10/2014*

Date:

*I.T. COORDINATOR*

Designation:

Official stamp (below)

**ANDREW SAM**  
Names.....  
Commissioner of Oaths, District of Johannesburg  
Ex officio Title.....**IT COORDINATOR**  
Faculty/Office.....**DISABLED STUDENTS PROGRAMME**  
University of the Witwatersrand, Johannesburg  
1 Jan Smuts Avenue, Johannesburg 2001

# **Palaeontological Impact Assessment for the proposed Hotel (Bhundu Inn) upgrade adjacent to the SS Skosana Nature Reserve, Mpumalanga**

## **Background**

On behalf of NuLeaf Planning and Environmental (Pty) Ltd for their client Paul Mojapelo, who proposes to expand the Bhundu Inn Hotel, on Portion 174 of the Farm Goederede 60 JS, located in the Thembisile Hani Local Municipality, 37 km southwest of the town of Groblersdal, Mpumalanga (Reference Number: 17/2/3N-388), here is a phase 1 or desktop palaeontological impact assessment.

## **Terms of Reference**

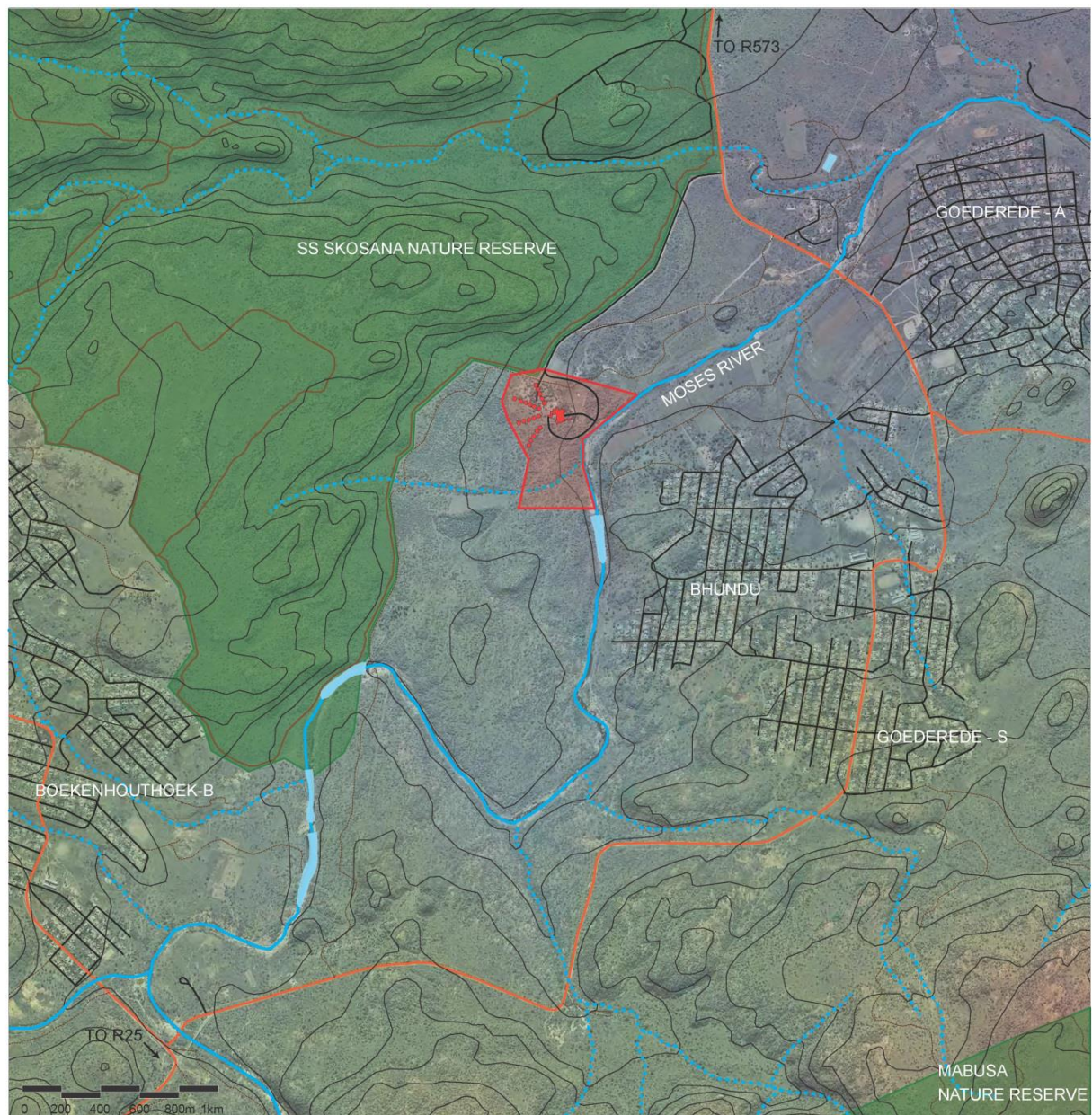
1. In order to determine the likelihood of fossils occurring in the affected area geological maps, literature, palaeontological databases and published and unpublished records must be consulted.
2. If fossils are likely to occur then a site visit must be made by a qualified palaeontologist to locate and assess the fossils and their importance.
3. Unique or rare fossils should either be collected (with the relevant SAHRA permit) and removed to a suitable storage and curation facility, for example a Museum or University palaeontology department or protected on site.
4. Common fossils can be sacrificed if they are of minimal or no scientific importance but a representative collection could be made if deemed necessary.

## **Methods**

The published geological and palaeontological literature, unpublished records and databases were consulted to determine if there are any records of fossils from the sites and the likelihood of any fossils occurring there.

## **Geology and Palaeontology**

The site of the hotel is on ancient Proterozoic rocks (Figs 1 and 2), specifically the Lebowa Granite Suite, comprising a number of types of granites which have been metamorphosed and are part of the Bushveld Complex. The rock type is too old and too altered to contain any fossils, more than 2050 Ma. Although the earliest evidence of life is from about 3500 Ma (Cowan, 1995) these unicellular algae and bacteria formed stromatolites in sedimentary settings. The oldest terrestrial fossils are about 360 Ma. The Bushveld Complex is well known for the platinum group elements which are of economic importance – not fossils.



## LEGEND

- THE BHUNDU INN SITE BOUNDARY
- PRIMARY ROADS
- SECONDARY GRAVEL ROADS
- PERENNIAL RIVERS
- NON-PERENNIAL RIVERS
- 20m CONTOURS
- DAMS
- CONSERVATION AREAS
- PROPOSED UNITS



PROPOSED EXPANSION OF THE BHUNDU INN HOTEL



# BHUNDU INN HOTEL

**Figure 1.** Location of proposed development outlined in red. Map supplied by NuLeaf





recommended that a palaeontologist be called to assess their importance and rescue them if necessary.

As far as the palaeontology is concerned the proposed development can go ahead. A phase 2 study is not necessary.

## References

Cawthorn, R.G., Eales, H.V., Walraven, F., Uken, R., Watleys, M.K., 2006. The bushveld complex. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. pp 261-281.

Cowan, R., 1995. History of Life. 2<sup>nd</sup> Edition. Blackwell Scientific Publications, Boston. 462pp.

Erikssen, P.G., Altermann, W., Hartzer, F.J., 2006. The Transvaal Supergroup and its pre-cursors. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. pp 237-260.

Johnson, M.R., van Vuuren, C.J., Visser, J.N.J., Cole, D.I., Wickens, H.deV., Christie, A.D.M., Roberts, D.L., Brandl, G., 2006. Sedimentary rocks of the Karoo Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 461 – 499.