

# Phase 1 Heritage Impact Assessment for a proposed new township development on farm Vyfhoek 428, Potchefstroom, North West Province.

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January 2023

## Introduction

The application relates to a 3 ha area selected for a new township development in Potchefstroom, North West Province (**Fig. 1**).

The extent of the proposed development (over 5000 m<sup>2</sup>) falls within the requirements for a Heritage Impact Assessment (HIA) as required by Section 38 (Heritage Resources Management) of the South African National Heritage Resources Act (Act No. 25 of 1999). The NHRA identifies what is defined as a heritage resource, the criteria for establishing its significance and lists specific activities for which a heritage specialist study may be required. In this regard, categories relevant to the proposed development are listed in Section 34 (1), Section 35 (4), Section 36 (3) and Section 38 (1) of the NHR Act.

The site is located on Oudebrug Street (farm Vyfhoek 428) and about 1 km east of the NWU Main Campus. (**Fig. 2**).

Map Ref.: 1:50 000 topographical map 2627CA Potchefstroom

1:250 000 geological map 2626 Wes Rand

### Site Coordinates (Fig. 3):

- A) 26°40'57.53"S 27° 6'23.23"E
- B) 26°40'56.23"S 27° 6'28.99"E
- C) 26°41'2.58"S 27° 6'30.57"E
- D) 26°41'3.28"S 26°41'3.28"S

### Methodology

The heritage significance of the affected area was evaluated on the basis of existing field data, database information and published literature. This was followed by a field assessment by means of a pedestrian survey. A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) digital camera and camera drone were used for recording purposes. Maps and aerial photographs (incl. Google Earth) were consulted and integrated with data acquired during the on-site inspection. Site significance classification prescribed by SAHRA, were used to indicate overall significance and mitigation procedures where relevant (**Table 1**).

## Background

Potchefstroom is situated near the northeastern periphery of the 80-90-km-wide Vredefort Dome, a World Heritage Site, which represents the central portion of a 2.02 Ga year old, deeply eroded and complex impact structure that formed in Archaean and Palaeoproterozoic rocks of the Kaapvaal craton (**Fig. 4**). Plentiful signs of Stone Age human occupation are visible on the landscape in and around the Vredefort Dome World Heritage Site. Early to Middle Stone Age artifacts are derived from the Vaal gravels between Vereeniging and Bloemhof and include an abundance of Acheulian (Early Stone Age) hand axes, cleavers and core-axes, primarily made from quartzite. Late Iron Age stonewalled settlements built by Sotho-Tswana speakers also form part of the rich cultural heritage of the area between Klerksdorp and the Vredefort Dome from as early as 1000 to 1800 AD (**Fig. 5**). European settlement occurred from 1836 (Voortrekkers), while establishment of the Boer republics and the discovery of diamonds and gold further contributed to the distinctive historical character of the region. There are plentiful rock art sites with engravings mostly recorded on Precambrian diabase and Mesozoic dolerites in the Lower Vaal River Basin, including the area between Schweizer-Reneke and Parys. There is currently no record of engraving sites in the immediate vicinity of the study area.

## Field Assessment

The study area is underlain by Precambrian diabase and residual soils, degraded by previous (modern) construction and farming activities (see numbering in **Fig. 2**) where no *in situ* Stone Age archaeological material/remains were observed (**Fig. 6 & 7**). There are also no indications of rock art (engravings), prehistoric structures, graves or historically significant buildings older than 60 years within the boundaries of the proposed footprint area.

## Impact Statement & Recommendation

Impact on palaeontological, archaeological or historically significant remains within development footprint is considered very low to non-existent. Founded in November 1838, Potchefstroom has numerous historical heritage sites, none of which will be affected by the proposed development. The proposed development footprint is assigned a rating of Generally Protected C (GP.C) (**Table 1**). As far as the palaeontological and archaeological heritage is concerned, development may proceed provided that all activities are restricted to within the boundaries of the proposed footprint.

## References

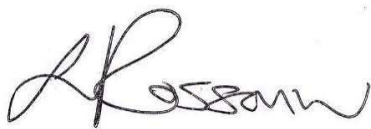
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#### DECLARATION OF INDEPENDENCE

Paleo Field Services act as an independent specialist consultant and do not or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference. Paleo Field Services has no interest in secondary or downstream developments as a result of the authorization of this project.

Yours truly,



17 / 01 / 2023

## Tables & Figures

**Table 1.** Archaeological field rating categories as prescribed by SAHRA.

<b>Field Rating</b>	<b>Grade</b>	<b>Significance</b>	<b>Mitigation</b>
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction



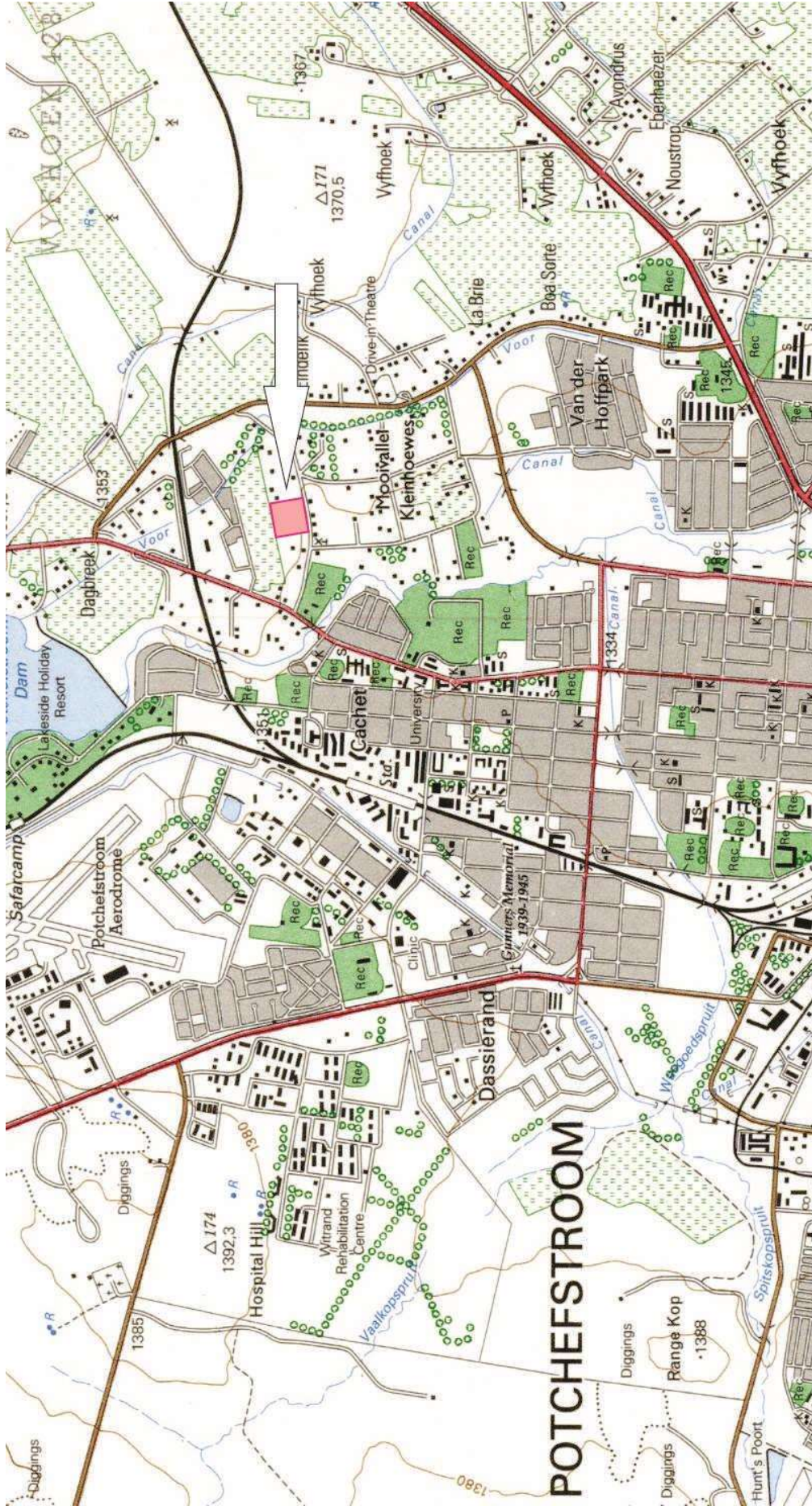


Figure 1. Map of study area marked on portion of 1:50 000 scale topographic map 2627CA Potchefstroom.





Figure 2. General view (drone footage) of the site, looking south towards Oudebrug Street.





Figure 3. Aerial view and layout of study area.



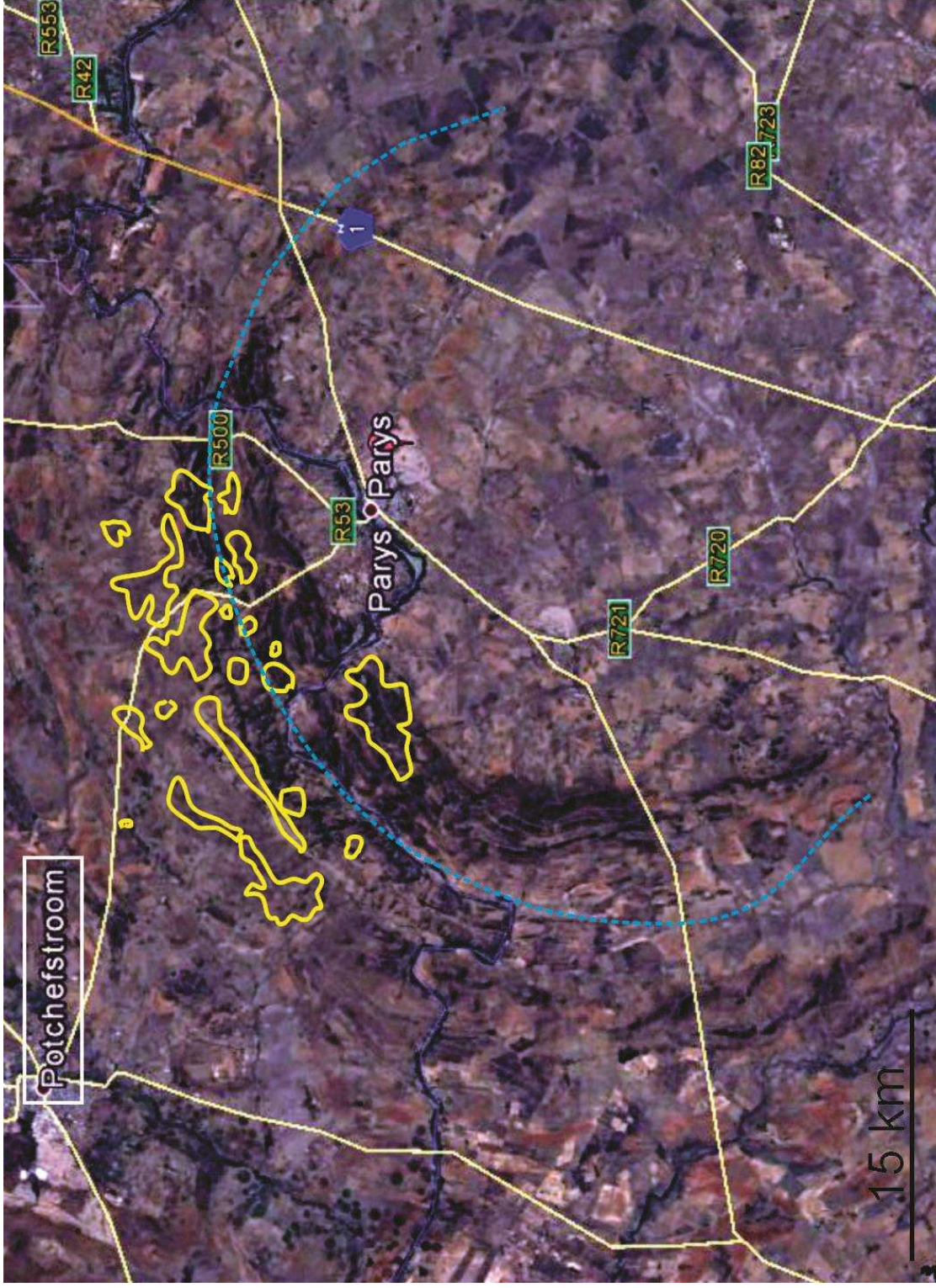


Figure 4. Aerial view of the central portion of the Vredefort Dome impact structure (blue line) and distribution of Late Iron Age stone-walled settlements (yellow polygons) occupied by Sotho-Tswana speakers.



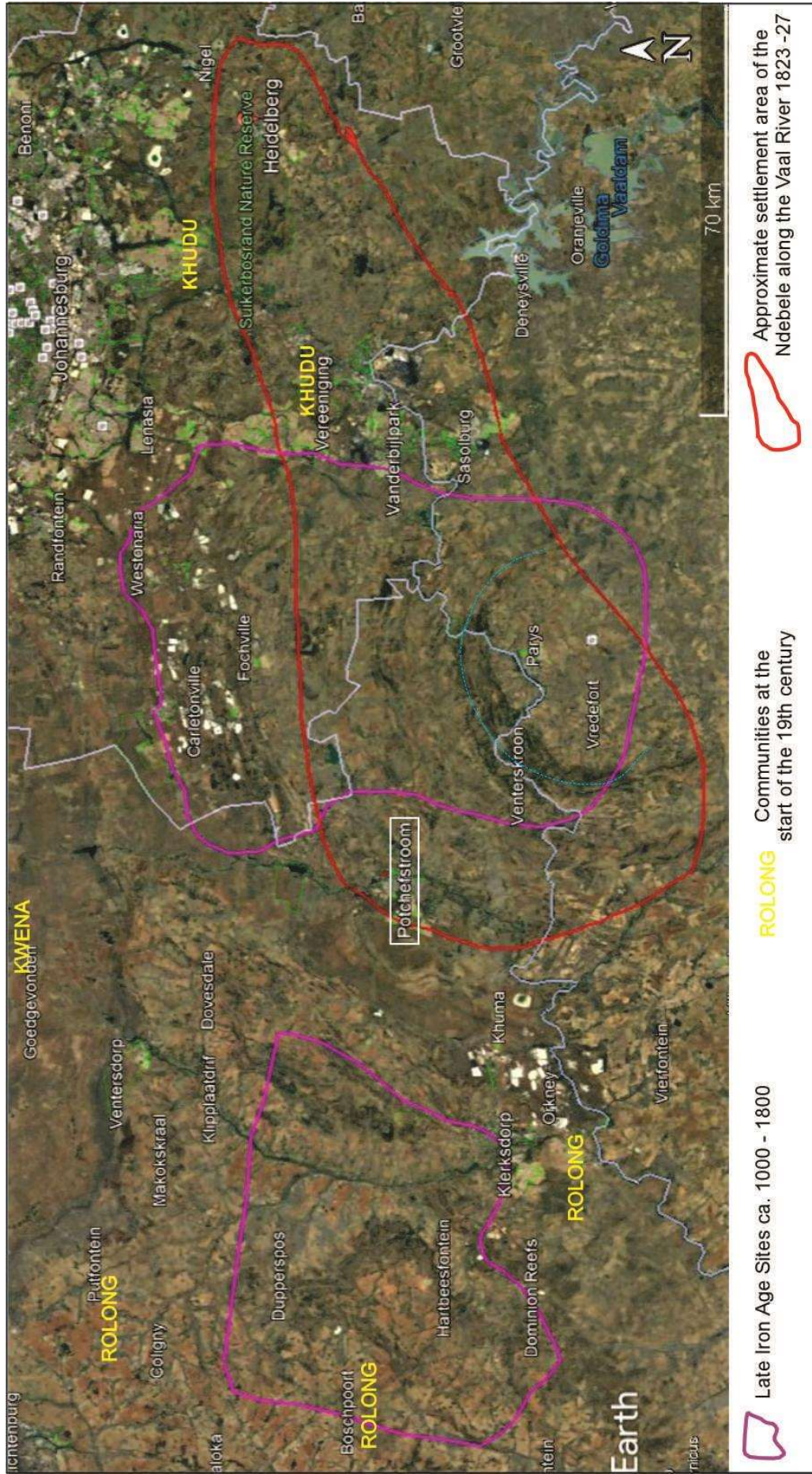


Figure 5. General map of archaeologically and historically significant developments within a 70 km radius around Potchefstroom.







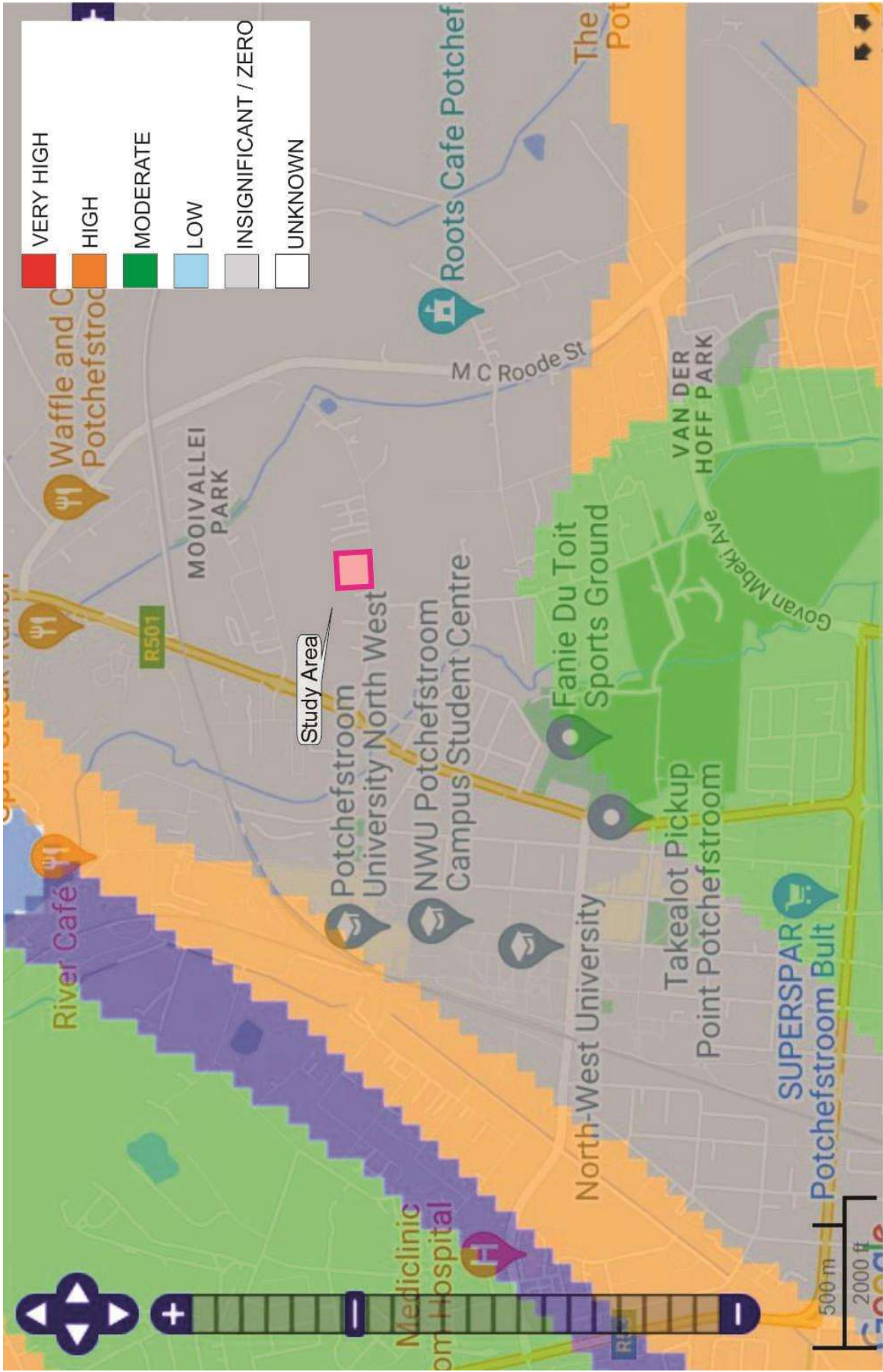


Figure 7. Study area shown on SAHRIS palaeosensitivity map.