

HERITAGE SURVEY OF THE GEMSBOKSPRUIT HOUSING DEVELOPMENT

FOR NKANIVO DEVELOPMENT CONSULTANTS

DATE: 22 APRIL 2021

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Abbreviations

HP	Historical Period
IIA	Indeterminate Iron Age
LIA	Late Iron Age
EIA	Early Iron Age
ISA	Indeterminate Stone Age
ESA	Early Stone Age
MSA	Middle Stone Age
LSA	Late Stone Age
HIA	Heritage Impact Assessment
PIA	Palaeontological Impact Assessment

INTRODUCTION

The Thembisile Hani Local Municipality has proposed a township to be situated/established in Portions 4, 5, 13, 22 and the Remainder of Portion 12 of the farm Gembokspruit 229 JR to develop sustainable human settlement aimed at addressing the ever-increasing demand for housing. The project is meant to provide residents of Gembokspruit as well as the entire Municipality access to well-configured erven.

The proposed development is to be undertaken on Portions 4, 5, 13, 22 and the Remainder of Portion 12 of the farm Gembokspruit 229 JR. The project area is situated within the Thembisile Hani Local Municipality and forms part of the Gembokspruit area in the Mpumalanga Province as depicted by the Locality Maps (Fig.'s 1 – 4). The proposed development is located adjacent to the existing Gembokspruit – A Township. The site is bordered by a Provincial Road P100 (Absalom Road) which is a Regional Distributor. Additionally, the Provincial Road i.e. D2918 transverse the proposed development and further connects it to the existing Gembokspruit – A Township and Kwaggafontein. As a result, the location of the proposed development is highly accessible through the existing provincial roads which also connect the area to key nodes within the Mpumalanga Province.

Nkanivo Development Consultants has been appointed by the Thembisile Hani Local Municipality to undertake the project of a Township Establishment on Portions 4, 5, 13 and the Remainder of Portion 12 of the farm Gembokfontein 229 JR. The proposed development can be summarised as follows:

- The development is envisaged to yield 750 stands
- The extent of the development area = 90 Hectares
- Minimum Stand Sizes = 800 square meters.

Umlando was requested to undertake the HIA for the development.

FIG. 1 GENERAL LOCATION OF THE STUDY AREA

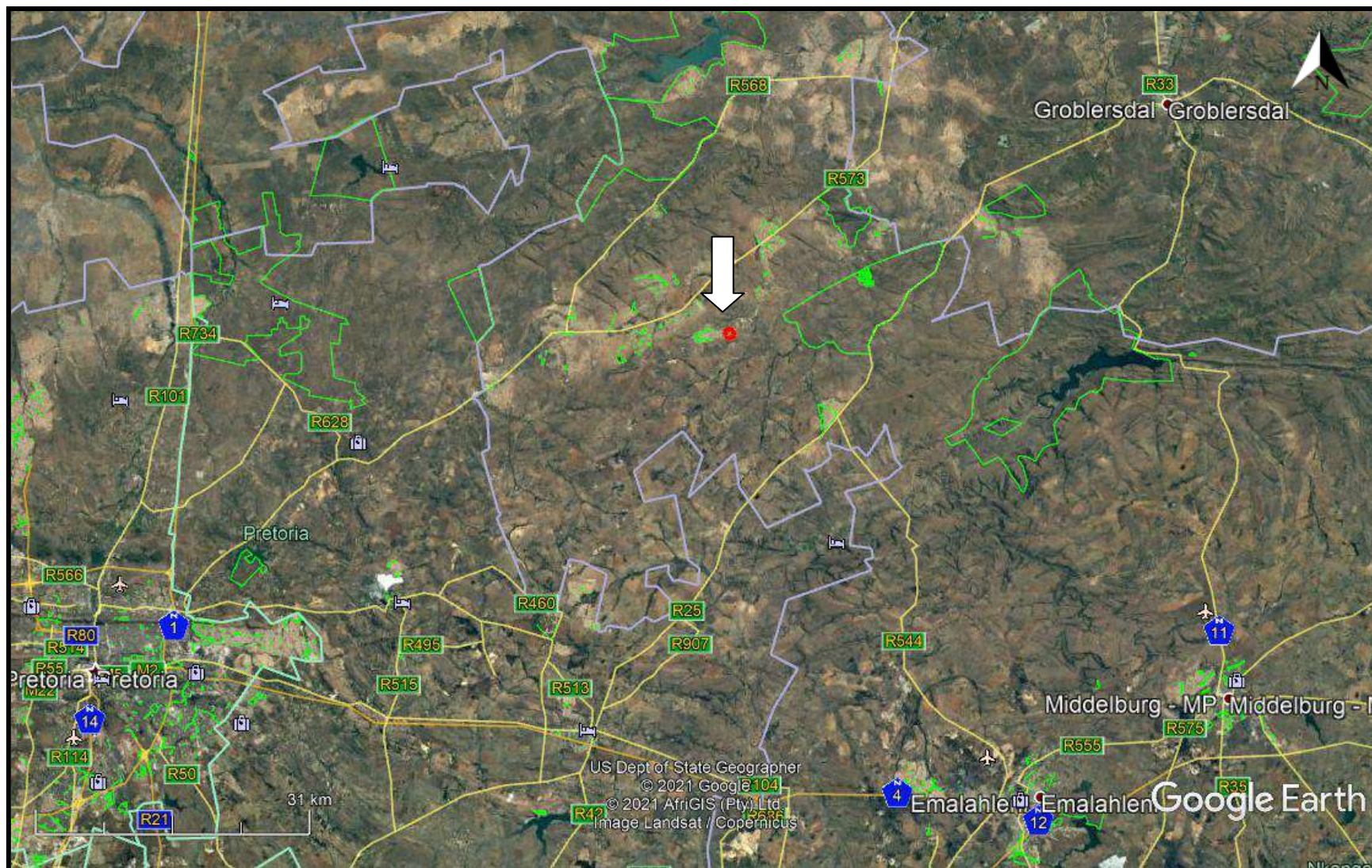


FIG. 2: AERIAL OVERVIEW OF THE STUDY AREA



FIG. 3: TOPOGRAPHICAL MAP OF THE STUDY AREA

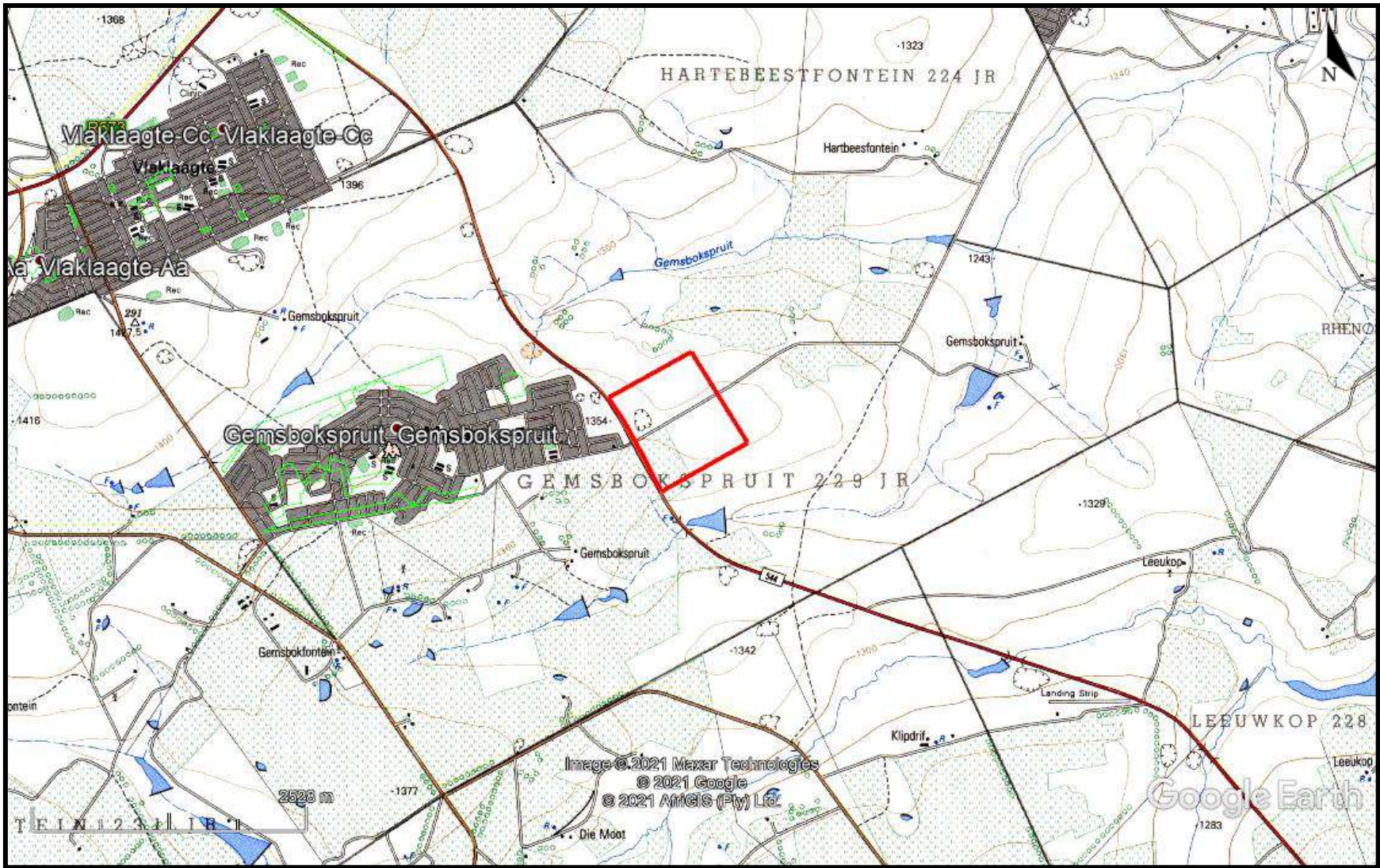


FIG. 4: SCENIC VIEWS OF THE STUDY AREA



NATIONAL HERITAGE RESOURCES ACT OF 1999

The National Heritage Resources Act of 1999 (pp 12-14) protects a variety of heritage resources. These resources are defined as follows:

1. “For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
2. Without limiting the generality of subsection (1), the national estate may include—
 - 2.1. Places, buildings, structures and equipment of cultural significance;
 - 2.2. Places to which oral traditions are attached or which are associated with living heritage;
 - 2.3. Historical settlements and townscapes;
 - 2.4. Landscapes and natural features of cultural significance;
 - 2.5. Geological sites of scientific or cultural importance;
 - 2.6. Archaeological and palaeontological sites;
 - 2.7. Graves and burial grounds, including—
 - 2.7.1. Ancestral graves;
 - 2.7.2. Royal graves and graves of traditional leaders;
 - 2.7.3. Graves of victims of conflict;
 - 2.7.4. Graves of individuals designated by the Minister by notice in the Gazette;
 - 2.7.5. Historical graves and cemeteries; and
 - 2.7.6. Other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
3. Sites of significance relating to the history of slavery in South Africa;
 - 3.1. Movable objects, including—

4. Objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - 4.1. Objects to which oral traditions are attached or which are associated with living heritage;
 - 4.2. Ethnographic art and objects;
 - 4.3. Military objects;
 - 4.4. objects of decorative or fine art;
 - 4.5. Objects of scientific or technological interest; and
 - 4.6. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).
5. Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—
 - 5.1. Its importance in the community, or pattern of South Africa's history;
 - 5.2. Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
 - 5.3. Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
 - 5.4. Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
 - 5.5. Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
 - 5.6. Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
 - 5.7. Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
 - 5.8. Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and

5.9. sites of significance relating to the history of slavery in South Africa”

METHOD

The method for Heritage assessment consists of several steps.

The first step forms part of the desktop assessment. Here we would consult the database that has been collated by Umlando. This database contain archaeological site locations and basic information from several provinces (information from Umlando surveys and some colleagues), most of the national and provincial monuments and battlefields in Southern Africa (<http://www.vuvuzela.com/googleearth/monuments.html>) and cemeteries in southern Africa (information supplied by the Genealogical Society of Southern Africa). We use 1st and 2nd edition 1:50 000 topographical and 1937 aerial photographs where available, to assist in general location and dating of buildings and/or graves. The database is in Google Earth format and thus used as a quick reference when undertaking desktop studies. Where required we would consult with a local data recording centre, however these tend to be fragmented between different institutions and areas and thus difficult to access at times. We also consult with an historical architect, palaeontologist, and an historian where necessary.

The survey results will define the significance of each recorded site, as well as a management plan.

All sites are grouped according to low, medium, and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts or features. Sites of medium significance have diagnostic artefacts or features and these sites tend to be sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips, and decorated sherds are sampled, while bone, stone, and shell are mostly noted. Sampling usually

occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features.

Defining significance

Heritage sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

1. State of preservation of:

- 1.1. Organic remains:
 - 1.1.1. Faunal
 - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
 - 1.5.1. Ash Features
 - 1.5.2. Graves
 - 1.5.3. Middens
 - 1.5.4. Cattle byres
 - 1.5.5. Bedding and ash complexes

2. Spatial arrangements:

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

3. Features of the site:

- 3.1. Are there any unusual, unique or rare artefacts or images at the site?

3.2. Is it a type site?

3.3. Does the site have a very good example of a specific time period, feature, or artefact?

4. Research:

4.1. Providing information on current research projects

4.2. Salvaging information for potential future research projects

5. Inter- and intra-site variability

5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?

5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

6. Archaeological Experience:

6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

7. Educational:

7.1. Does the site have the potential to be used as an educational instrument?

7.2. Does the site have the potential to become a tourist attraction?

7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

8. Other Heritage Significance:

8.1. Palaeontological sites

8.2. Historical buildings

8.3. Battlefields and general Anglo-Zulu and Anglo-Boer sites

8.4. Graves and/or community cemeteries

8.5. Living Heritage Sites

8.6. Cultural Landscapes, that includes old trees, hills, mountains, rivers, etc related to cultural or historical experiences.

The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. This occurs in Phase 2. These test-pit excavations may require further excavations if the site is of significance (Phase 3). Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

The above significance ratings allow one to grade the site according to SAHRA's grading scale. This is summarised in Table 1.

TABLE 1: SAHRA GRADINGS FOR HERITAGE SITES

SITE SIGNIFICANCE	FIELD RATING	GRADE	RECOMMENDED MITIGATION
High Significance	National Significance	Grade 1	Site conservation / Site development
High Significance	Provincial Significance	Grade 2	Site conservation / Site development
High Significance	Local Significance	Grade 3A / 3B	
High / Medium Significance	Generally Protected A		Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B		Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C		On-site sampling monitoring or no archaeological mitigation required prior to or during development / destruction

DESKTOP STUDY

The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys. There have been applications for electrical lines in adjacent areas that were approved without the need for an HIA.

No known heritage sites exist in the study area. No national monuments, battlefields, or historical cemeteries are known to occur within the study area (fig. 5).

The adjacent farms appear to have been surveyed in the 1860s and thus probably granted for farming soon thereafter. The first record on-line for Gembokspruit indicates 1907; however, it is shown to exist on the adjacent farm Vlaklaagte in 1863 (fig. 6). This suggests Gembokspruit was granted at the same time.

The 1939 aerial photograph indicates that there are no built structures in the study area (fig. 7).

The 1964 (fig. 8) and 1984 (fig. 9) 1:50 000 topographical maps indicates that there are no known structures within the study area. However, there are three settlements to the south that border the development, some buildings to the northeast, and a grave to the east. These features are mostly 100m+ away from the study area except for the three settlements.

The area has no palaeontological sensitivity (fig. 10).

FIG. 5: KNOWN HERITAGE SITES IN THE AREA

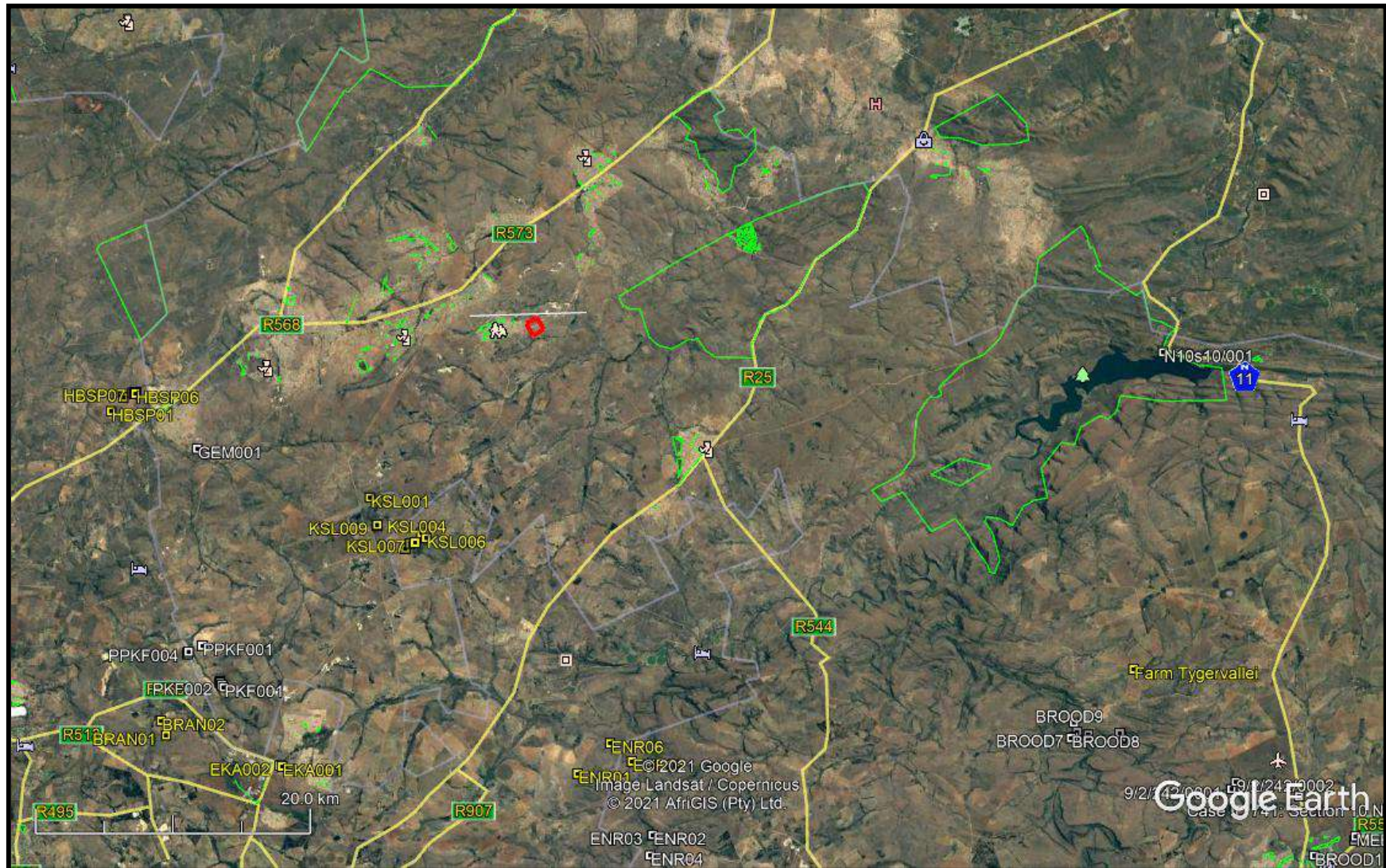


FIG. 6: SG MAP OF FARM VLAKLAAGTE (1863)

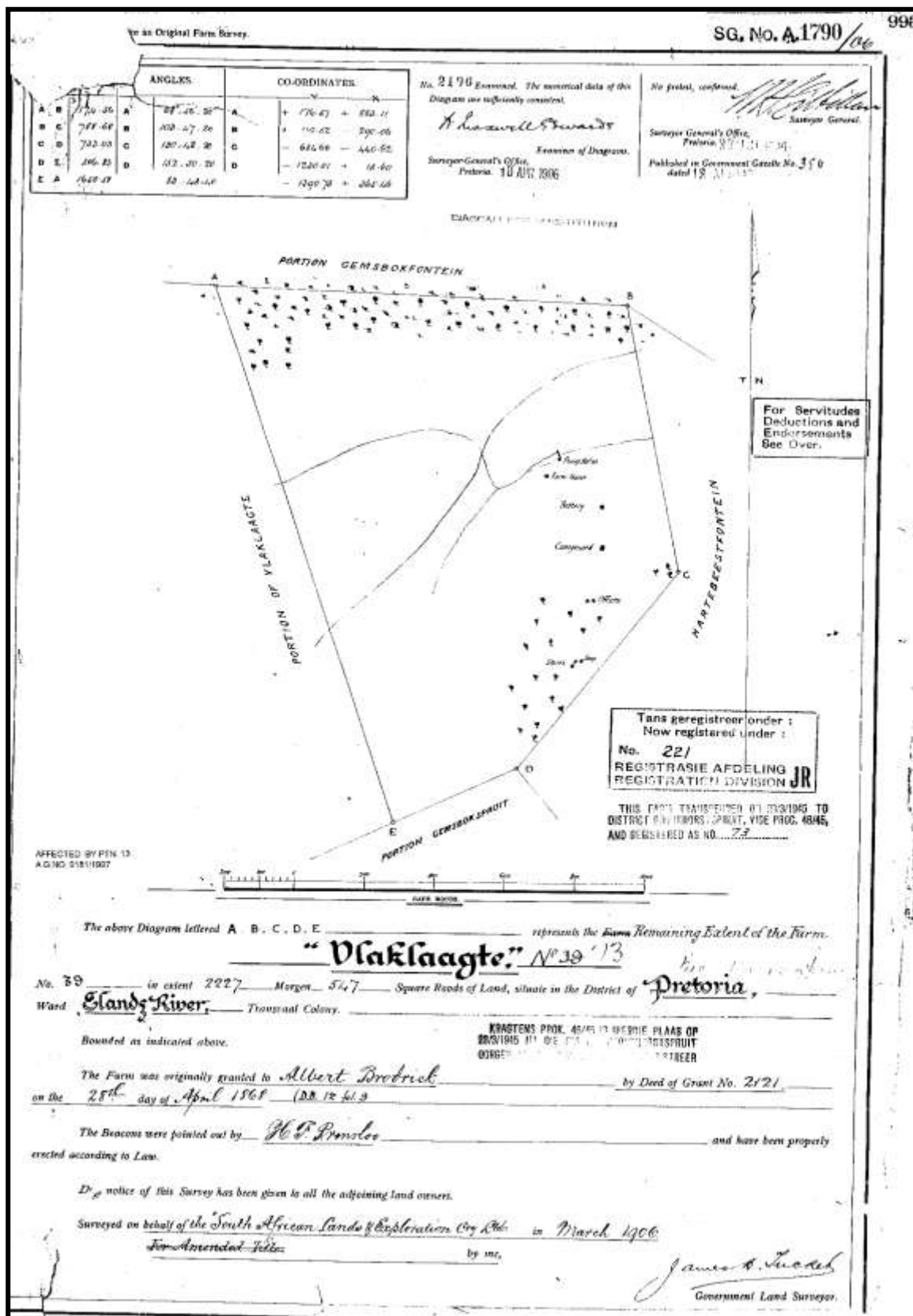


FIG. 7: AERIAL PHOTOGRAPH OF THE STUDY AREA IN 1939¹



¹ 146_013_15406

FIG. 8: 1:50 000 TOPOGRAPHICAL MAP OF THE STUDY AREA IN 1964

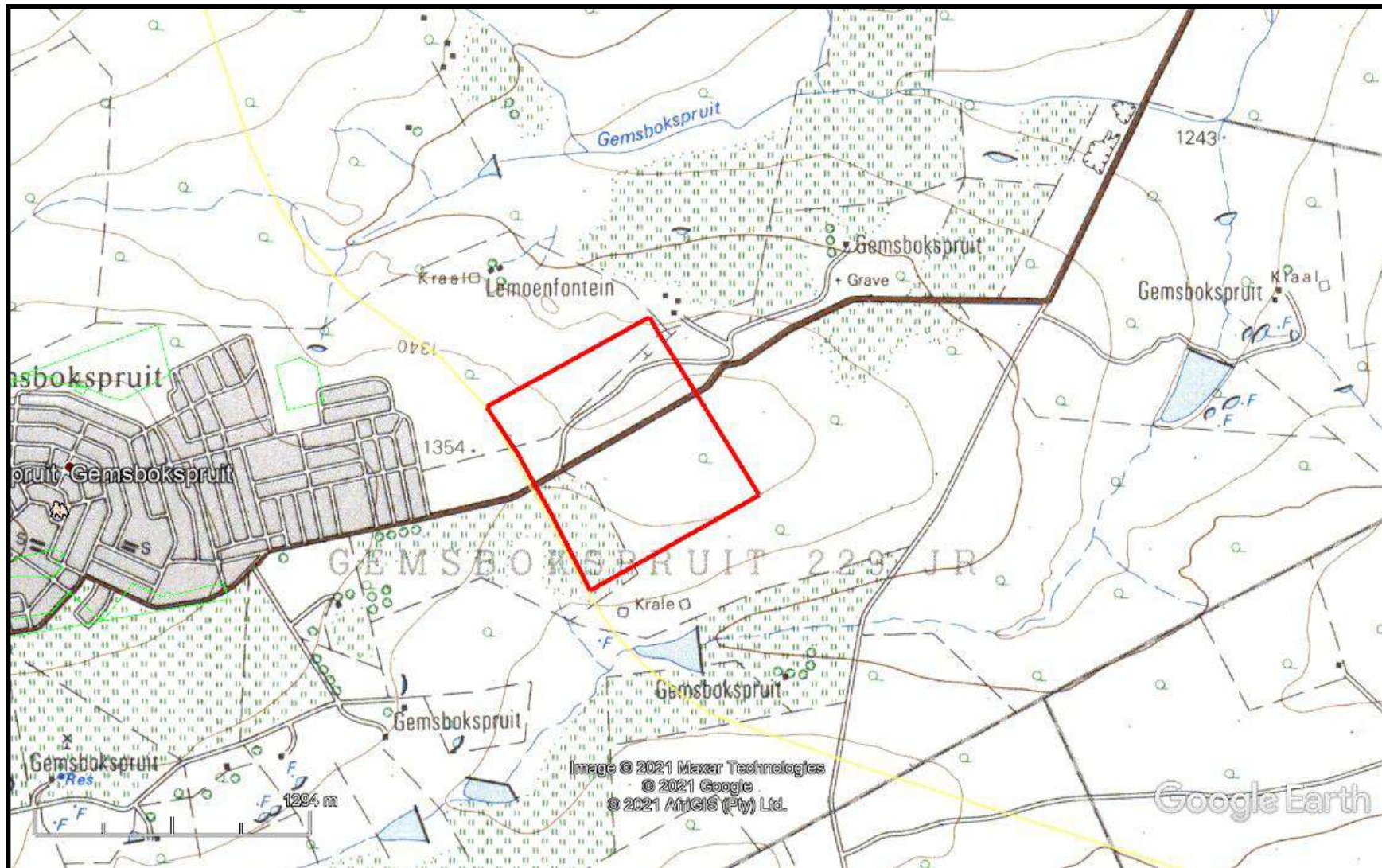


FIG. 9: 1:50 000 TOPOGRAPHICAL MAP OF THE STUDY AREA IN 1984

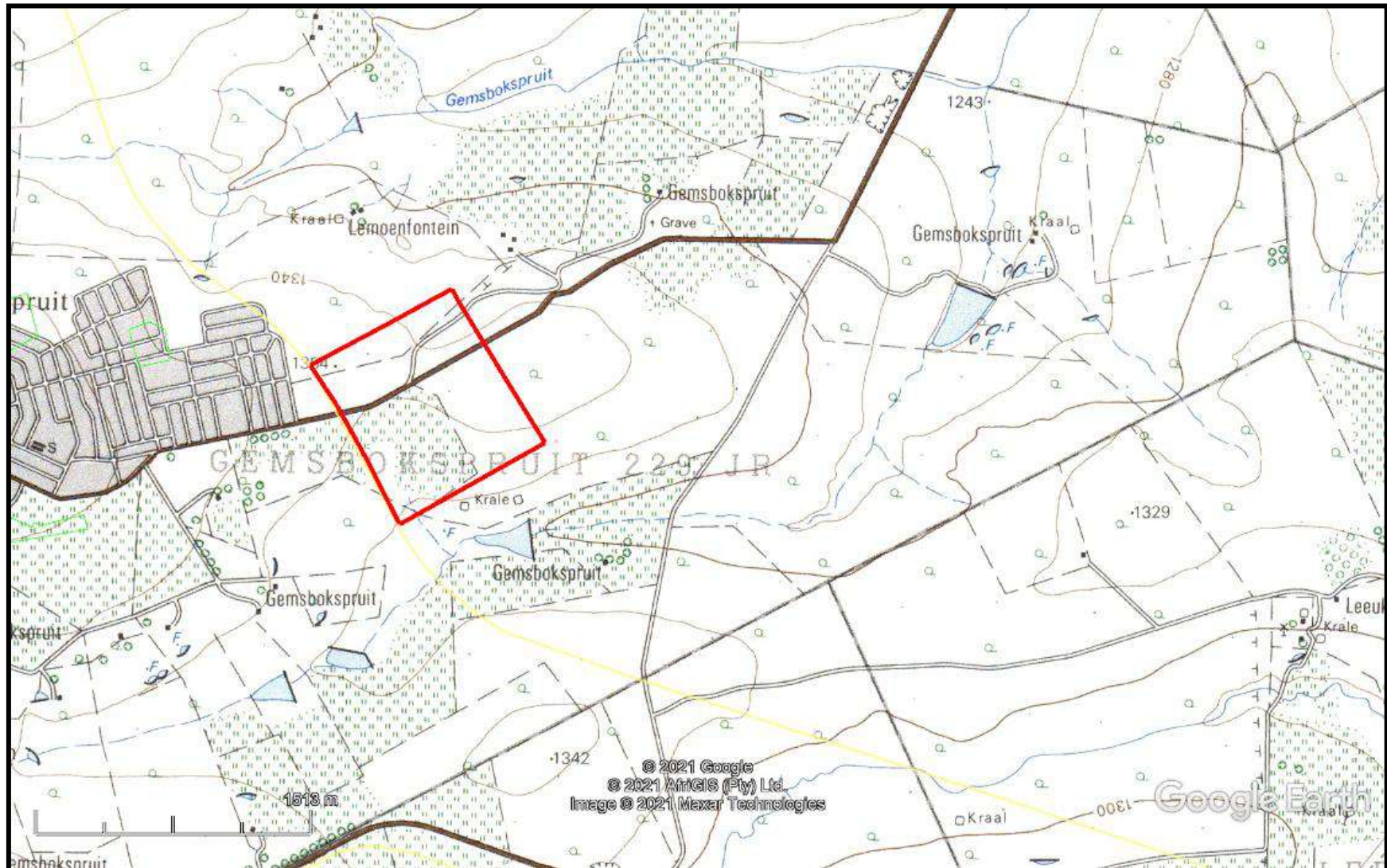


FIG 10: PALAEOLOGICAL SENSITIVITY OF THE STUDY AREA

COLOUR	SENSITIVITY	REQUIRED ACTION
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

FIG. 11: LOCATION OF 20TH CENTURY SETTLEMENTS



FIELD SURVEY

The field survey was undertaken on 20 April 2021. Ground visibility was mostly good with a few areas tall grass. The soil is very thin on the upper slopes that are covered in boulders a quartz rocks. This is normally a sign of low historical human occupation.

No heritage sites were recorded within the study area.

There are three settlements with remnants of stone walling to the south of the study area. They vary from 120m to 165m from the border of the study area, and are thus not directly affected by the development. The settlements consists each of house floor foundations with a rectangular or circular stone walled kraal down slope from it (fig. 12). No human graves were noted, but they could exist. The grass was tall and dense in this area.

The settlements do not occur on the 1939 aerial photographs, but are noted on the 1964 topographical map. They thus date between 1939 and 1964. The settlements are more than 100m away from the development and thus do not need further mitigation. The location of these three settlements must be noted in the management plan for the development to ensure access roads, etc. does not impact on the site.

RECOMMENDATIONS

No heritage sites were noted within the study area. The three settlements may have human graves and should not be affected in any manner, especially by access roads.

The development must ensure that the three settlements are clearly demarcated before construction occurs, since human graves could occur within the settlements.

FIG. 12.1 REMAINS OF CENTRAL HUMAN SETTLEMENT



CONCLUSION

A heritage survey was undertaken for the proposed Gemsbokspruit housing development. While the vegetation was dense in places, it did not hinder the survey. Much of the area is on shallow soils with large boulders and that would not have been a favourable area for settlements. The northern part of the site has better soils that could have been used for agriculture.

No heritage features were noted within the study area. However, there are three settlements, each with their own kraal, 100m – 150m to the south of the study area. Other walling and a grave occur 300m+ to the north and northeast.

No further mitigation is required; however, the development must ensure that the three settlements are clearly demarcated before construction occurs, since human graves could occur here.

REFERENCES

2528BD Witnek, 1964, 1984, 1995 (Kwaggasfontein)
146_013_15406
SARHIS Database

EXPERIENCE OF THE HERITAGE CONSULTANT

Gavin Anderson has a M. Phil (in archaeology and social psychology) degree from the University of Cape Town. Gavin has been working as a professional archaeologist and heritage impact assessor since 1995. He joined the Association of Professional Archaeologists of Southern Africa in 1998 when it was formed. Gavin is rated as a Principle Investigator with expertise status in Rock Art, Stone Age and Iron Age studies. In addition to this, he has worked on both West and East Coast shell middens, Anglo-Boer War sites, and Historical Period sites.

DECLARATION OF INDEPENDENCE

I, Gavin Anderson, declare that I am an independent specialist consultant and have no financial, personal or other interest in the proposed development, nor the developers or any of their subsidiaries, apart from fair remuneration for work performed in the delivery of heritage assessment services. There are no circumstances that compromise the objectivity of my performing such work.



Gavin Anderson
Archaeologist/Heritage Impact Assessor