

**HERITAGE DESKTOP STUDY OF THE PROPOSED  
SKHWAGHLANE SETTLEMENT PLAN, NKOMAZI  
LOCAL MUNICIPALITY, MPUMALANGA**

**FOR NKANIVO DEVELOPMENT CONSULTANTS**

**DATE: 16 FEBRUARY 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 Nkomazi Local Municipality has approved a project for the development of settlement plan for the purpose of creating 843 stands/erven in the area of Skhwahlane situated on the Remainder of the Farm Matabula 701 JU, the project is in response of the request by the Traditional Authority to the Municipality for provision of planned erven/sites in their area. To achieve the intended objectives of the project, processes similar to township establishment will be undertaken. The proposed settlement plan will only utilize a portion of the subject property. The project forms part of several rural housing interventions by the Municipality in partnership with the Traditional Authorities. The settlement plans play a key role in ensuring that erven/sites in rural areas are properly configured and as a result provide the government with an opportunity to facilitate the installation of infrastructure/services in rural areas.

The proposed settlement plan (settlement/township development) is to be situated in the area of Sikhwahlane. The property description of the affected property is the Remainder of the Farm Matabula 701 JU. The project area is situated less than 10 kilometers away from R571 road and sits adjacent to the existing Sikhwahlane village (settlement). The project area is located along the main road connecting Sikhwahlane to the nearest settlements such as the densely populated Mzinti and Tonga areas. The main road also links with the R571 thereby linking the area with regional nodes such as Komatipoort and Swaziland.

The farm portion subject to the proposed settlement plan/development (demarcation) comprises of both vacant portions of land as well as settled portions. The farm portion is currently being utilized for various uses ranging from business, residential, and community facilities etc. However, the portion that is area earmarked for the settlement development is currently vacant. The subject farm portion is also bisected by a seasonal stream making a significant part of

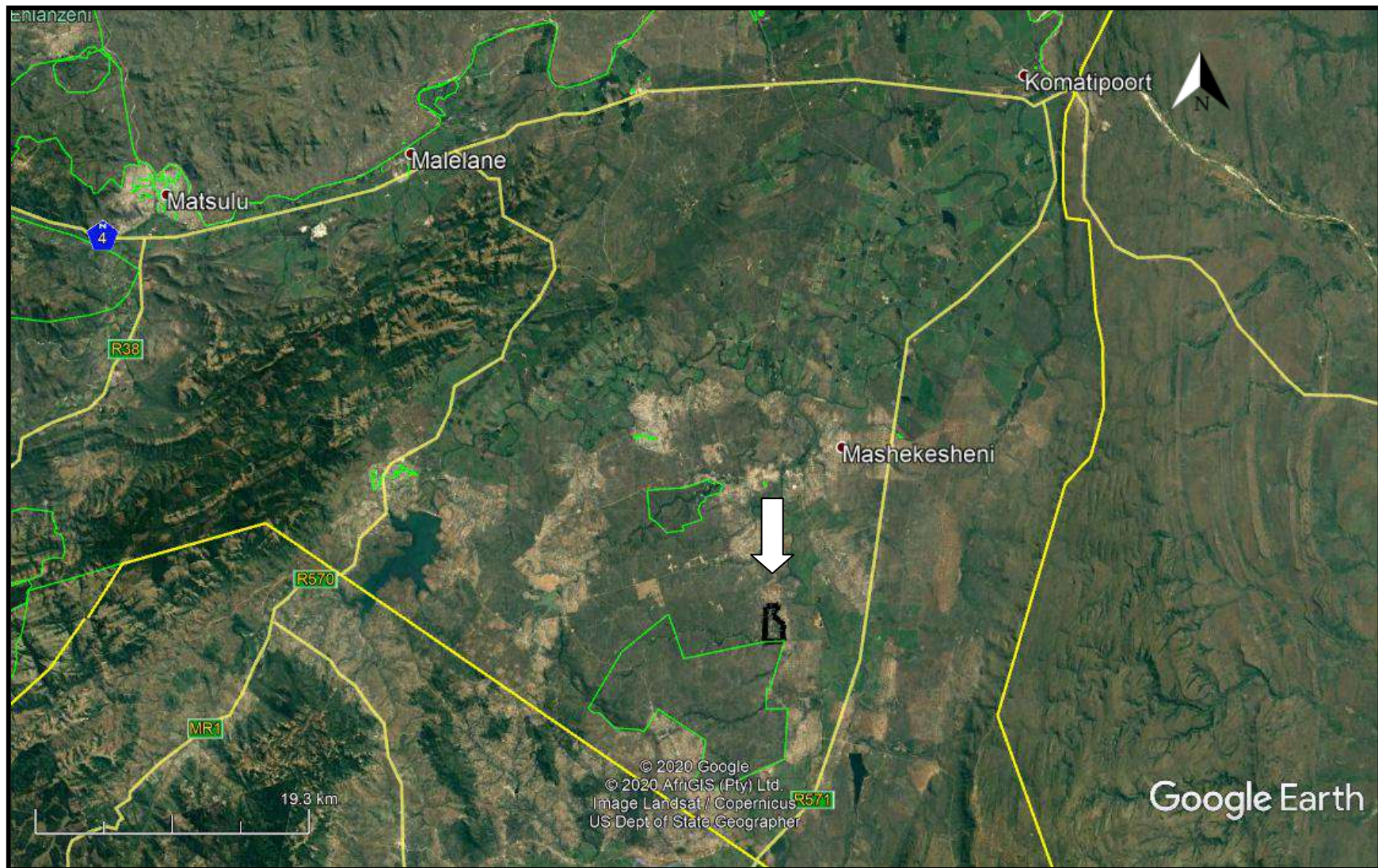
the site to be undevelopable” (Status Qua Report for Nkomazi Local Municipality).

Umlando was requested to undertake the HIA for the development. Umlando suggested a desktop study be submitted first, as staff members had to isolate for Covid-19, when the survey was supposed to be undertaken. Umlando then subcontracted another company to undertake the fieldwork.

Figures 1 – 4 show the location of the proposed 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

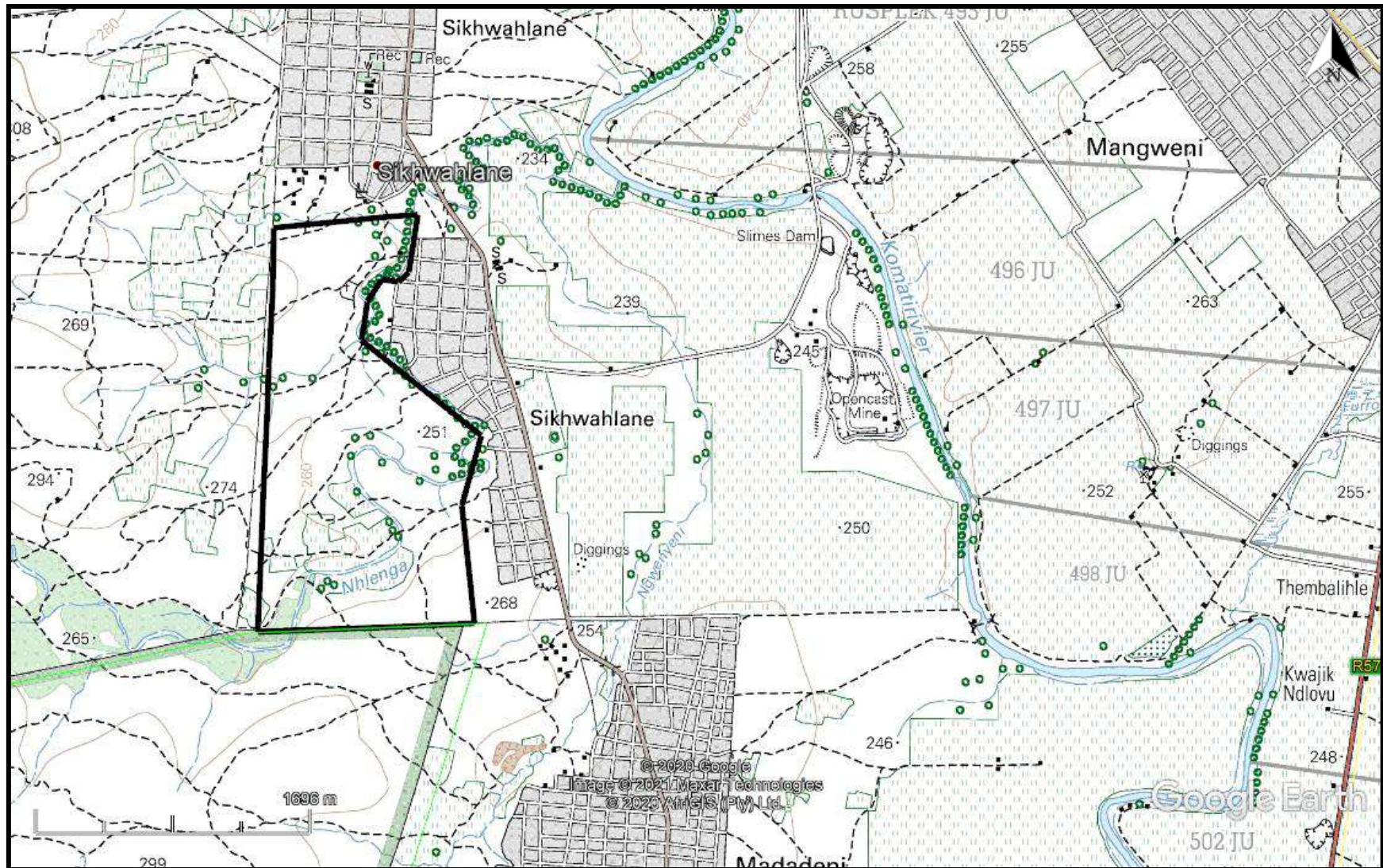
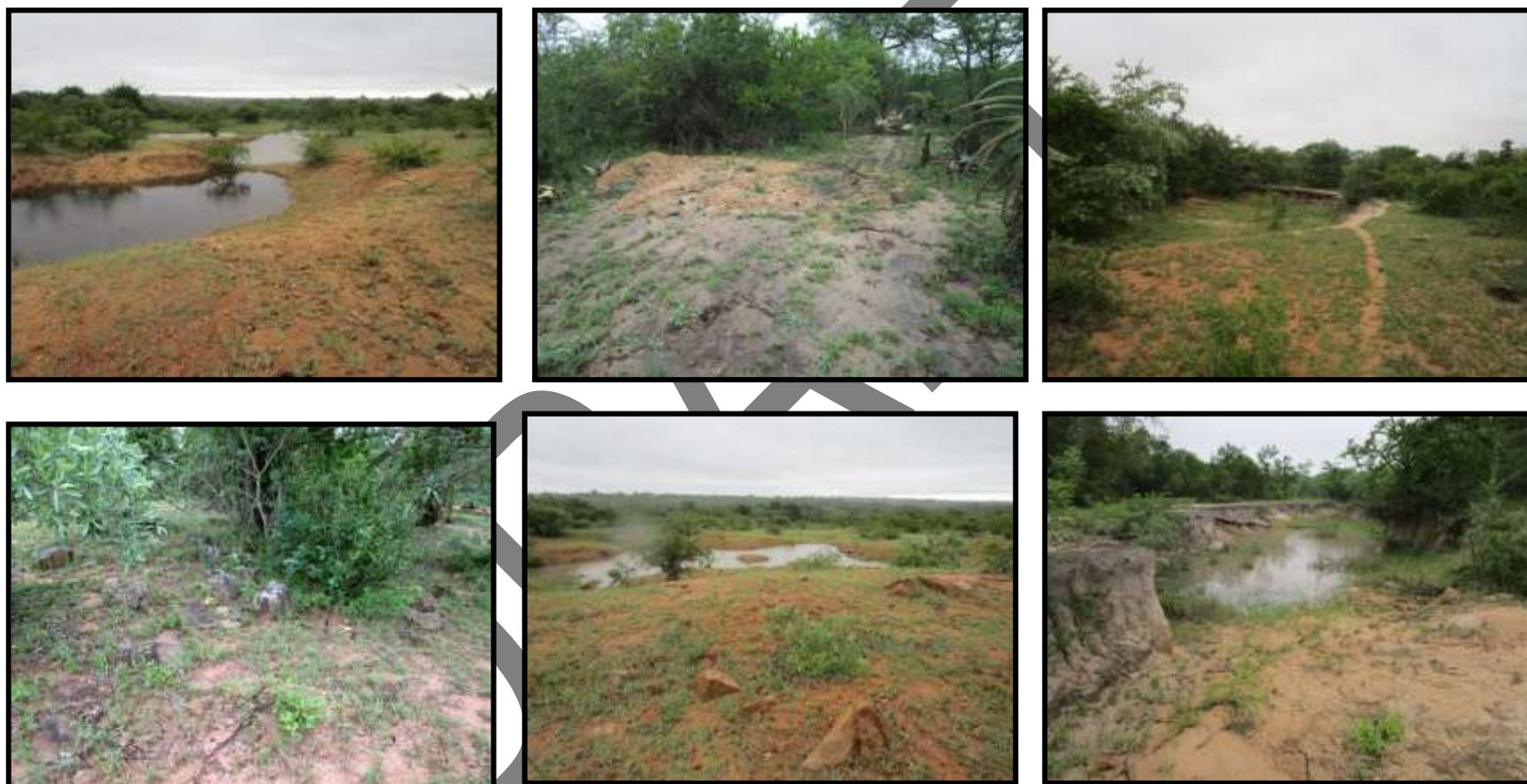




FIG. 4: SCENIC VIEWS OF THE STUDY AREA



**FIG. 5: 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. These 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 1<sup>st</sup> and 2<sup>nd</sup> 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**

<b>SITE SIGNIFICANCE</b>	<b>FIELD RATING</b>	<b>GRADE</b>	<b>RECOMMENDED MITIGATION</b>
<b>High Significance</b>	National Significance	Grade 1	Site conservation / Site development
<b>High Significance</b>	Provincial Significance	Grade 2	Site conservation / Site development
<b>High Significance</b>	Local Significance	Grade 3A / 3B	
<b>High / Medium Significance</b>	Generally Protected A		Site conservation or mitigation prior to development / destruction
<b>Medium Significance</b>	Generally Protected B		Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
<b>Low Significance</b>	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. I also used various sources for historical information.

There are few known heritage sites in the general area (fig. 6). This is probably a case of low development and impact assessments. Pistorius (2008) undertook a field survey near Madadeni for an Eskom powerline. No heritage sites were noted in these reports.

No national monuments, battlefields, or historical cemeteries are known to occur within the study area, or within 100m of its boundaries.

No Surveyor General maps are available for this area.

The 1937 aerial photograph indicates four areas of potential settlements (fig. 7): Skhwa1 – 4. These appear to be human settlements and could have graves. The locations for these sites are:

- Skhwa1: 25°46'18.87"S 31°46'30.51"E
- Skhwa2: 25°47'14.05"S 31°46'42.73"E
- Skhwa3: 25°47'28.36"S 31°46'33.46"E
- Skhwa4: 25°46'20.54"S 31°46'9.85"E

The 1967 topographical map indicates that the area is agricultural fields with no human settlements (fig. 8).



FIG. 6: KNOWN HERITAGE SITES IN THE AREA

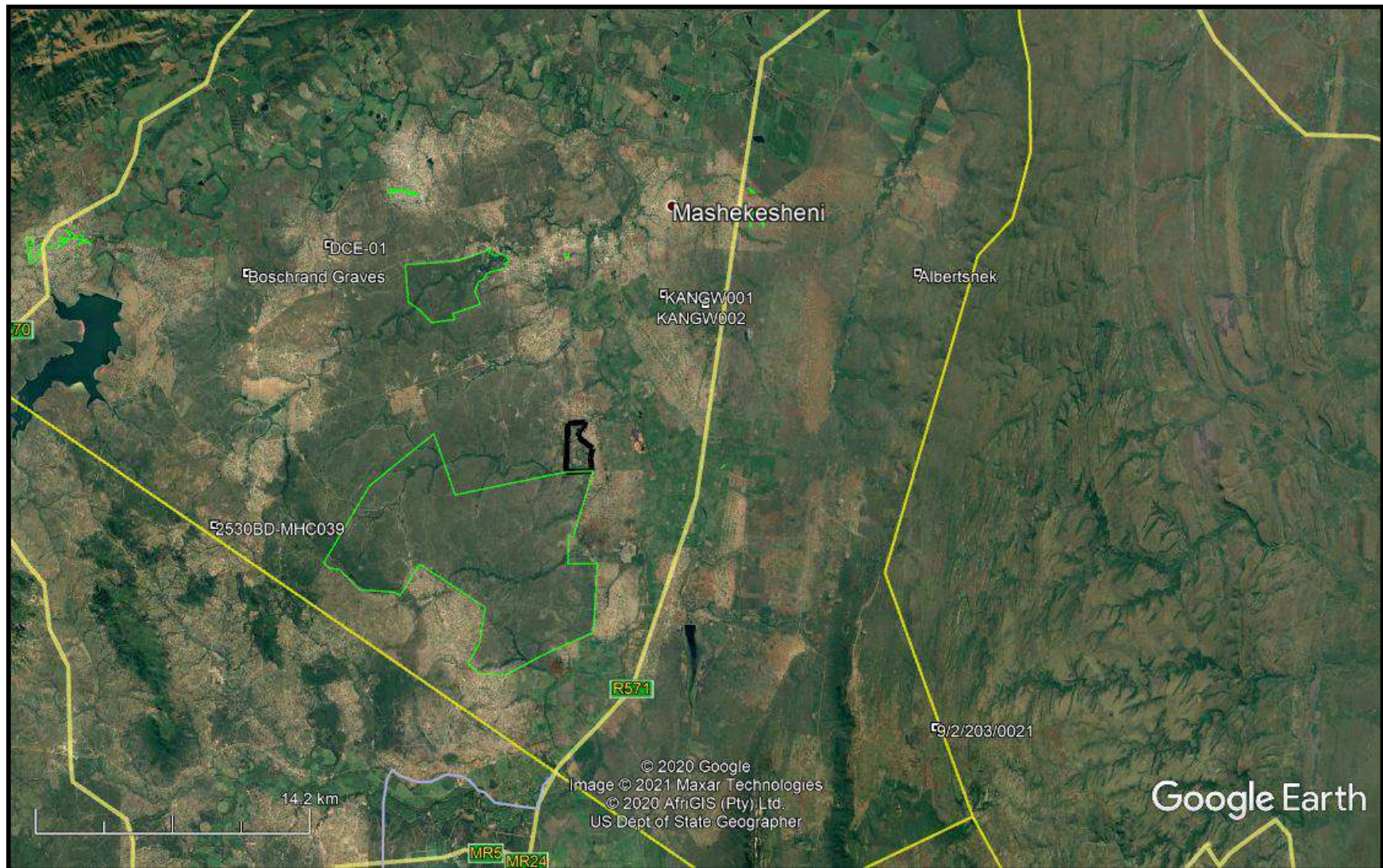


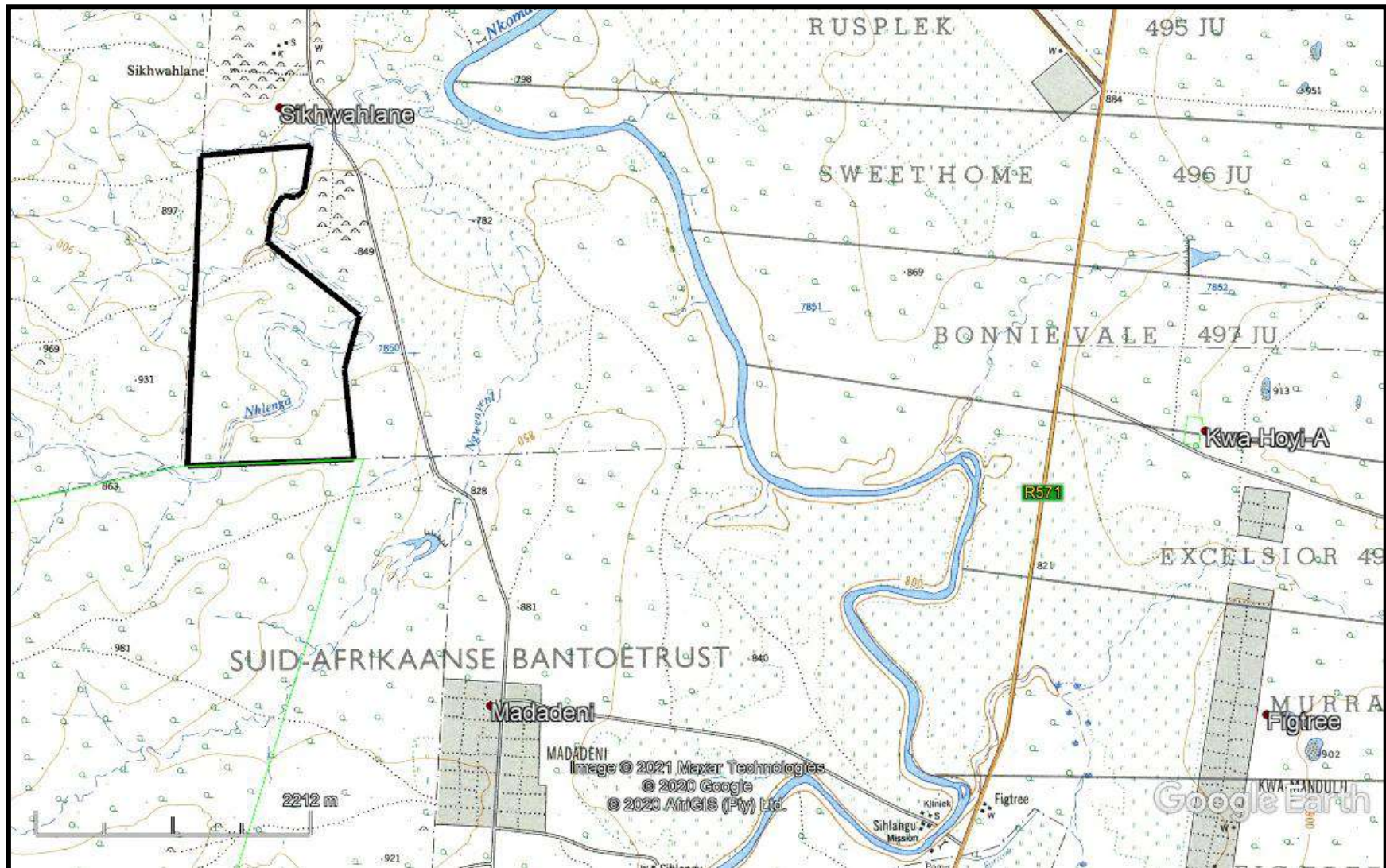


FIG. 7: AERIAL PHOTOGRAPH OF THE STUDY AREA IN 1937





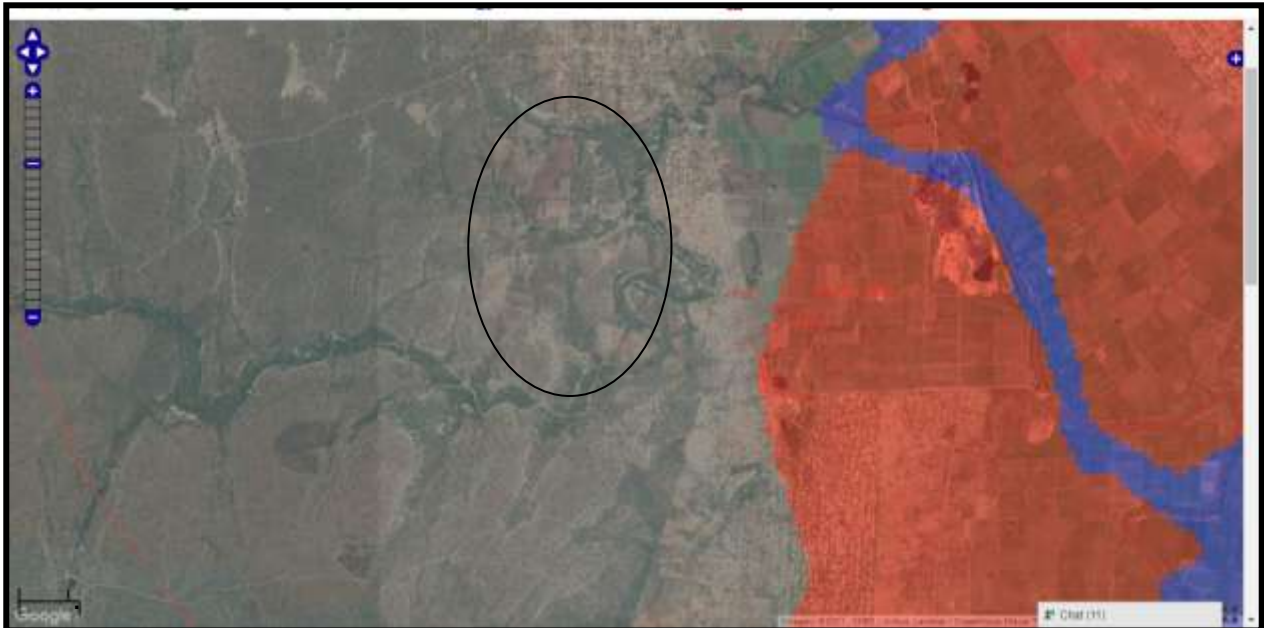
FIG. 8: 1:50 000 TOPOGRAPHICAL MAP OF THE STUDY AREA IN 1967





The area is of no palaeontological significance and no further mitigation is required (fig. 9).

**FIG. 9: 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.

In general, the desktop study indicates that human occupation in the study area was low and that areas adjacent to the river were used for agricultural purposes. There is a low chance of finding pre1970s graves. Since 1967, the area appears to be slightly more utilised, based on the Google Earth imagery

since 2013. Unless human graves, from the last 100 years, were demarcated with gravestones and headstones, it will be very difficult to locate them during a survey. A protocol for human remains can be initiated.

In terms of archaeological sites, I would expect open Stone Age sites of low significance to occur throughout the study area. These will have no impact on the development. Late Iron Age sites may occur in areas above the 100-year flood line. It is unlikely that these sites had stonewalling, since these are not visible in the various aerial images.

My experience suggests that it is unlikely that heritage sites will occur in the study area that cannot be mitigated. There is thus a low chance of heritage sites inhibiting the development.

## **FIELDWORK**

Three days before we were due to undertake the survey, we had to go into Covid-19 isolation. We subcontracted Mr Frans Roodt to undertake the survey. The afternoon of Wednesday 27<sup>th</sup> was used to explore access to the site. The field survey was undertaken on 28 – 29 January 2021.

### **Limitations**

- Dense vegetation limiting visibility and access over large parts. Accessibility mainly determined by farm tracks and cattle paths.
- Steady rain on Thursday 28<sup>th</sup>
- Saturated and muddy soil – unable to distinguish variation in soil colours.

### **Method**

A reconnaissance of the terrain was undertaken by vehicle and walkabout on accessible tracks and cattle paths. Special attention was given to

disturbances, both human-made and natural, for example burrowing animals, erosion, tracks and paths, quarrying and project geo-technical trenches.

### **Terrain description**

The northern portion of the terrain borders the Nhlenga River, a tributary of the Nkomati River, on the east, where after the Nhlenga River meanders through the southern portion in a south-westerly direction. The south-western section has a north-south ridge with some rocky outcrops. The southern portion also has some rocky outcrops near the bend in the Nhlenga River. The terrain is bisected by a seasonal stream running east-west in the lower northern portion.

The terrain is characterised by the large number of informal positioned quarries, either for sand mining or for gravel extraction. Although not distinguishable on Google earth, the terrain is densely covered by trees; brush and undergrowth, which in places are impenetrable. Here one has to rely on old tracks, probably made for wood cutting and for accessing the large number of quarries or cattle paths penetrating the dense undergrowth. Large areas have been used for field cultivation, especially in the southern portion. The north-western portion also seems to have been cultivated in the past – the area bordering it is currently still used for cultivation. These areas of previously cultivated fields and places where quarrying took place over the years were easily accessible.

### **Finds**

The demarcated terrain presented very few cultural finds.

**Stone Age:** only a few MSA flakes and cores were observed (fig. 10). No stone knapping sites were noted. Two locations were recorded by GPS.

1. -25.780867° 31.768823° MSA point

2. -25.779170° 31.771830° MSA core

**FIG. 10: MSA STONE TOOLS IN THE STUDY AREA**



**Iron Age (probable):**

- An isolated potshard (non-diagnostic) was noted in a path cleared by a TLB machine for a geo-technical trench. A piece of burnt clay (dagga) was



noted approximately 20 meters west of the potshard. These were found in a path cleared by a TLB to excavate a nearby geo-technical trench.

1. -25.782230° 31.772800: Potshard (ps1 on Google earth map) (fig. 12).
2. -25.782240° 31.772590: Daga on Google earth map. (fig. 13).

No other features typical of an archaeological site were noticed here. The burnt clay may have been from a veldt fire. There is no change in vegetation to indicate a subterraneous deposit as one would expect at an archaeological site.

**FIG. 12: POTTERY FRAGMENT**



**FIG. 13: POSSIBLE DAGA FRAGMENT**

➤ Isolated single potshards (non-diagnostic) were recorded at the following coordinates:

1. -25.781960° 31.772210° at the site of a geo-technical trench. (ps2 on Google earth map) (fig. 14)
2. -25.781410° 31.772180° - 2 X shards. (ps3 on Google earth map) (fig. 15)

The various finds are shown in Fig. 16 and Table 2.



**FIG. 14: POTTERY SHARD FROM THE STUDY AREA**



**FIG. 15: POTTERY SHARD FROM THE STUDY AREA**

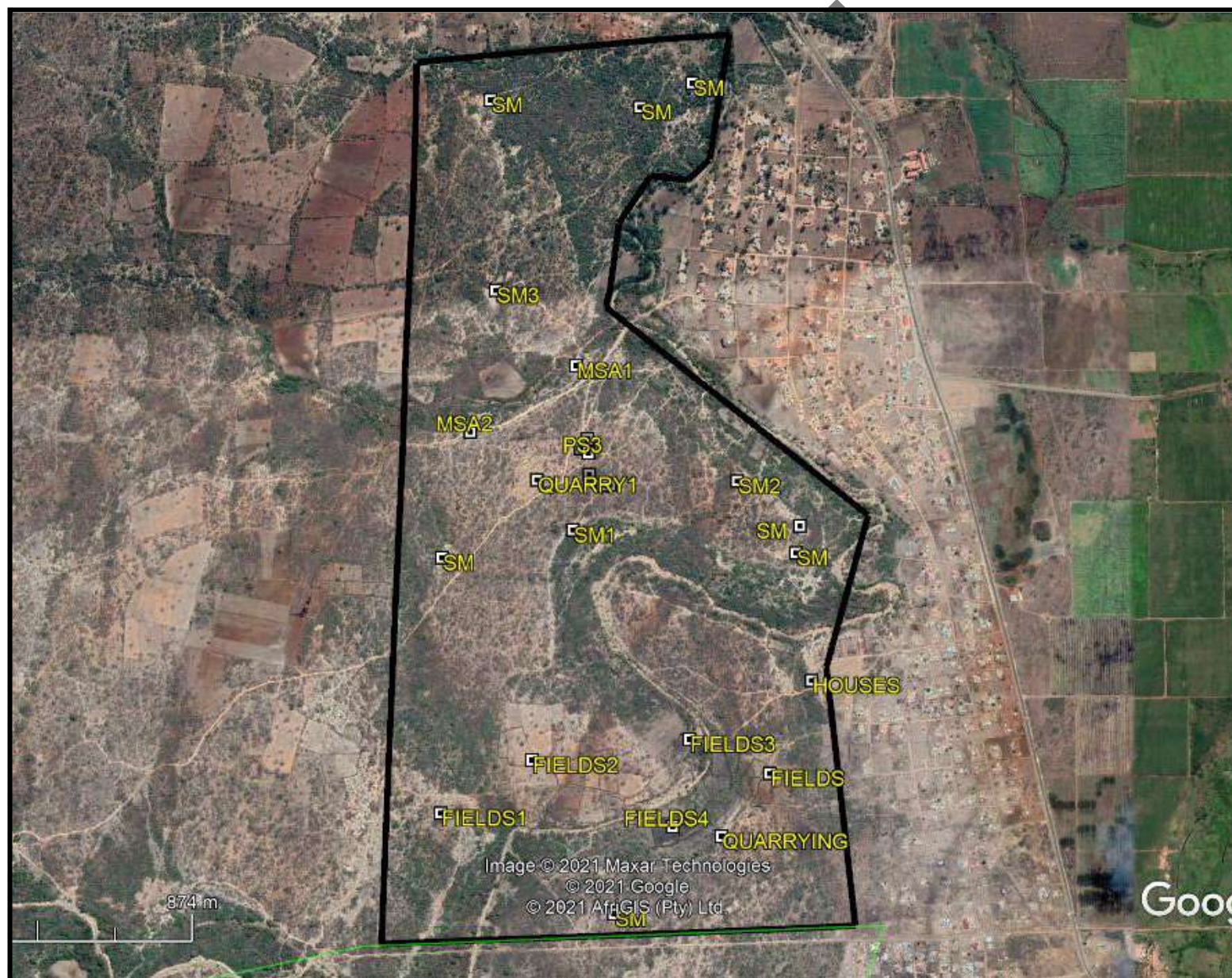


TABLE 2: LOCATION OF VARIOUS FINDS DURING THE SURVEY

NAME	LATTITUDE	LONGITUDE
MSA1	-25.779170°	31.771830°
MSA2	-25.780867°	31.768823°
PS1	-25.782230°	31.772800°
DAGHA	-25.782240°	31.772590°
PS2	-25.781960°	31.772210°
PS3	-25.781410°	31.772180°
MIDDEN/DUMPING	-25.781050°	31.772160°
QUARRY1	-25.782100°	31.770720°
QUARRY2	-25.781295°	31.771966°
QUARRYING	-25.791211°	31.775962°
SM1	-25.783380°	31.771740°
SM2	-25.782130°	31.776420°
SM3	-25.777250°	31.769550°
SM	-25.771908°	31.775142°
SM	-25.772534°	31.773654°
SM	-25.772373°	31.769401°
SM	-25.784085°	31.768031°
SM	-25.783277°	31.778206°
SM	-25.783972°	31.778088°
SM	-25.793183°	31.772913°
FIELDS1	-25.790604°	31.768001°
FIELDS2	-25.789260°	31.770580°
FIELDS3	-25.788736°	31.775050°
FIELDS4	-25.790963°	31.774578°
FIELDS	-25.789603°	31.777342°
HOUSES	-25.787236°	31.778537°



FIG. 16: LOCATION OF FINDS IN THE STUDY AREA



## DISCUSSION

It is unlikely that any significant heritage resources are located on the terrain. The recorded pottery is probably the result of people utilising the available resources over a long period of time or taking food and water to the garden fields where vessels may have broken and were discarded.

If any archaeological finds and/or human graves are noticed during the development phase, then it needs to be reported to the relevant Heritage agency. In this case it needs to be reported to SAHRA.

## RECOMMENDATION

No mitigation measures are recommended. From a heritage resources perspective, the project may continue.

## CONCLUSION

A desktop heritage survey was undertaken for the proposed Sikhwahlane housing project. No heritage sites were observed in the desktop apart from four possible settlements predating 1940s.

I recommend that the field survey is undertaken to verify the results of the desktop study. The field survey was undertaken in February 2021. This survey not isolated artefacts and no specific heritage sites. No graves were noted within the study area.

We recommend that no further heritage mitigation is required for this development.

## REFERENCES

Pistorius, J. 2008. A phase I HIA study for a proposed new 132kV powerline running between the Nkomazi substation and the proposed new Fig Tree substation in the Mpumalanga Province of South Africa. Report for Landscape Dynamics.

Nkomazi Local Municipality Status Quo Report: Skhwahlane Settlement Plan November 2020

2531DD Fig Tree 1967, 2003  
150\_030\_27913

Umlando Database  
SAHRIS 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 was 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