



SEBOKENG EXT. 38

**Proposed Establishment of a New Residential Township on Portion 228
of the farm Houtkop 594 IQ, Sebokeng, Emfuleni Local Municipality,
Gauteng Province**

Heritage Impact Assessment

Issue Date: 10 October 2013
Revision No.: 1
Client: Enkanyini Projects (Pty) Ltd

DECLARATION OF INDEPENDENCE

The report has been compiled by PGS Heritage, an appointed Heritage Specialist for Enkanyini Projects (Pty) Ltd. The views stipulated in this report are purely objective and no other interests are displayed in the findings and recommendations of this Heritage Impact Assessment.

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A handwritten signature in black ink, appearing to read 'Birkholtz', is written over a horizontal line.

ACKNOWLEDGEMENT OF RECEIPT

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EXPLANATION OF ABBREVIATIONS USED IN THIS DOCUMENT

<i>Abbreviations</i>	<i>Description</i>
AIA	Archaeological Impact Assessment
ASAPA	Association of Southern African Professional Archaeologists
CMP	Conservation Management Plan
CRM	Cultural Resource Management
EIA	Environmental Impact Assessment
EMPR	Environmental Management Programme Report
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
LIA	Late Iron Age
LSA	Later Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PGS	PGS Heritage
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System

EXECUTIVE SUMMARY

PGS Heritage was appointed by Enkanyini Projects to undertake a Heritage Impact Assessment (HIA) which forms part of the Environmental Impact Assessment (EIA) for the proposed establishment of a new residential township on Portion 228 of the Farm Houtkop 594 IQ, Emfuleni Local Municipality, Gauteng Province.

An archival and historical desktop study was undertaken which was used to compile a historical layering of the study area within its regional context. This component indicated that the landscape within which the project area is located has a rich and diverse history. However, the desktop study did not reveal any historic or heritage sites from within the study area.

The desktop study work was followed by a fieldwork component which comprised a walkthrough of the study area. **No heritage sites were identified within the study area.**

The development is not expected to have any impact on heritage sites. As such no heritage reasons can be given for the development not to continue.

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1 INTRODUCTION

PGS Heritage was appointed by Enkanyini Projects to undertake a Heritage Impact Assessment (HIA) which forms part of the Environmental Impact Assessment (EIA) for the proposed establishment of a new residential township on Portion 228 of the Farm Houtkop 594 IQ, Emfuleni Local Municipality, Gauteng Province.

1.1 Scope of the Study

The aim of the study is to identify possible heritage sites and finds that may occur in the proposed development area. The Heritage Impact Assessment (HIA) aims to inform the Environmental Impact Assessment (EIA) in the development of a comprehensive Environmental Management Plan (EMP) to assist the developer in managing the identified heritage resources in a responsible manner in order to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

1.2 Specialist Qualifications

This Heritage Impact Assessment was compiled by PGS Heritage, the staff of which has a combined experience of nearly 40 years in the heritage consulting industry and have extensive experience in managing Heritage Impact Assessment (HIA) processes. Mr. Polke Birkholtz, project manager and heritage specialist, is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a professional archaeologist and is also a registered member of the Cultural Resource Management (CRM) Section of ASAPA. He has more than 15 years experience in the industry. Mr. Marko Hutten, heritage specialist and project archaeologist, has 15 years experience in the industry and is registered with the Association of Southern African Professional Archaeologists (ASAPA) as a Professional Archaeologist and is accredited as a Field Director.

1.3 Assumptions and Limitations

- Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage sites located during the fieldwork do not necessarily represent all the heritage sites present within the area. Should any heritage features or objects not included in the inventory be located or observed, a heritage

specialist must immediately be contacted. Such observed or located heritage features and/or objects may not be disturbed or removed in any way, until such time that the heritage specialist has been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and cemeteries as well.

1.4 Legislative Context

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

- i. National Environmental Management Act (NEMA) Act 107 of 1998
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
- iv. Development Facilitation Act (DFA) Act 67 of 1995

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

- i. National Environmental Management Act (NEMA) Act 107 of 1998
 - a. Basic Environmental Assessment (BEA) – Section (23)(2)(d)
 - b. Environmental Scoping Report (ESR) – Section (29)(1)(d)
 - c. Environmental Impacts Assessment (EIA) – Section (32)(2)(d)
 - d. EMP (EMP) – Section (34)(b)
- ii. National Heritage Resources Act (NHRA) Act 25 of 1999
 - a. Protection of Heritage Resources – Sections 34 to 36; and
 - b. Heritage Resources Management – Section 38
- iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
 - a. Section 39(3)

The NHRA stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. Section 34(1) of the NHRA states that “no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority...”. The NEMA (No 107 of 1998) states that an integrated EMP should (23:2 (b)) “...identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage”. In accordance with legislative requirements and EIA rating criteria, the

regulations of SAHRA and ASAPA have also been incorporated to ensure that a comprehensive and legally compatible HIA report is compiled.

1.5 Terminology and Abbreviations

Archaeological resources

- i. material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- ii. rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including a 10m buffer area;
- iii. wrecks, being any vessel or aircraft, or any part thereof which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- iv. features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Development

This means any physical intervention, excavation or action other than those caused by natural forces, which may according to the heritage agency result in a change to the nature, appearance or physical nature of a place or influence its stability & future well-being, including:

- i. construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- ii. carrying out any works on or over or under a place;
- iii. subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- iv. constructing or putting up for display signs or boards;
- v. any change to the natural or existing condition or topography of land; and

- vi. any removal or destruction of trees, or removal of vegetation or topsoil

Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means any place or object of cultural significance

Later Stone Age

The archaeology of the last 20 000 years, associated with fully modern people.

Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's associated with ironworking and farming activities such as herding and agriculture.

Middle Stone Age

The archaeology of the Stone Age, dating to between 20 000-300 000 years ago, associated with early modern humans.

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past and any site which contains such fossilised remains or trace.

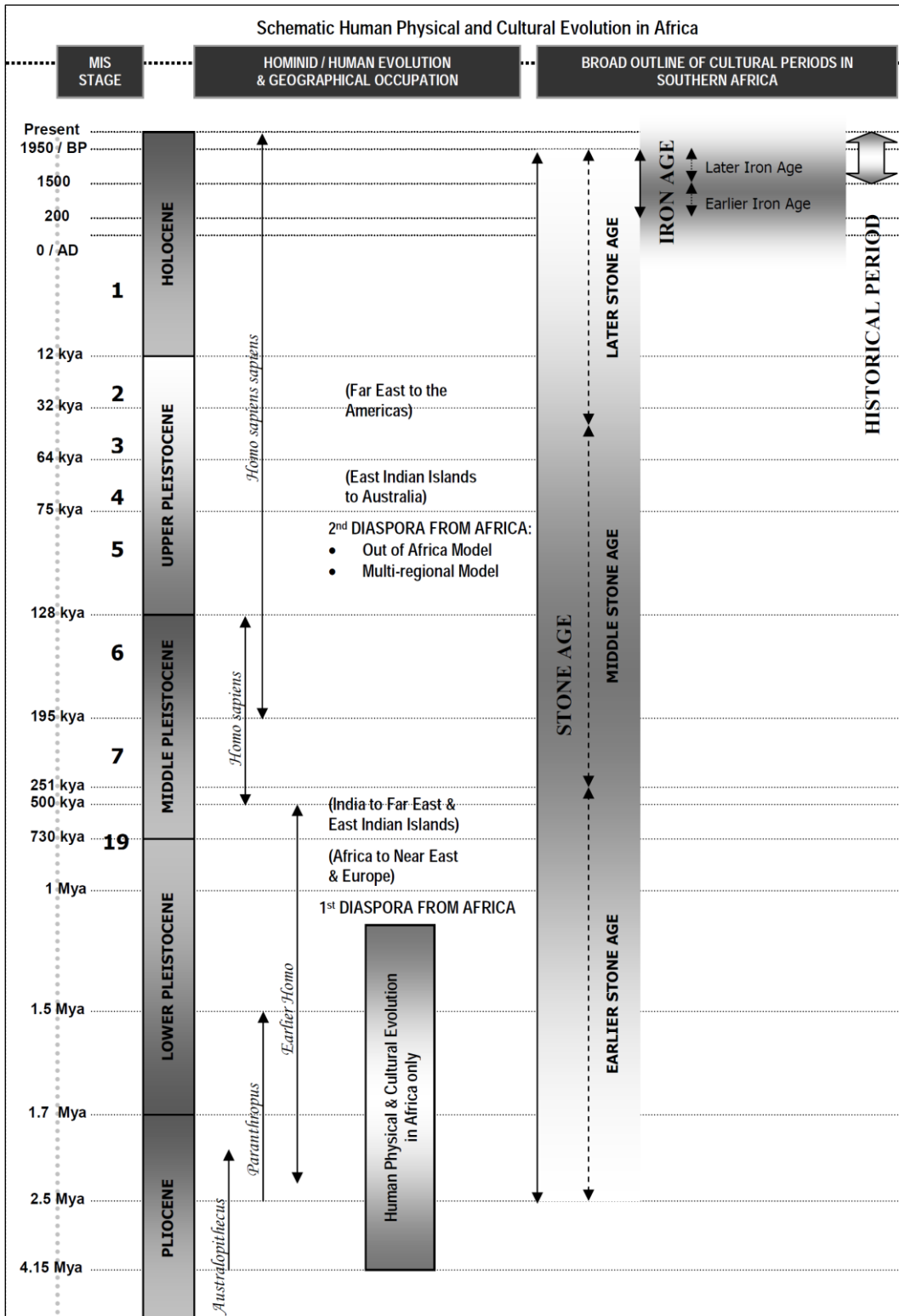


Figure 1–Human and Cultural Time line in Africa (Morris, 2008)

2 TECHNICAL DETAILS OF THE PROJECT

2.1 Site Location and Description

Coordinates	North: S26° 36' 29.8" E27° 51' 07.9" NE 2: S26° 36' 33.6" E27° 51' 13.8" East 1: S26° 36' 45.3" E27° 51' 14.6" East 3: S26° 37' 05.8" E27° 51' 11.5" SE 2: S26° 37' 17.8" E27° 51' 08.1" SE 4: S26° 37' 11.0" E27° 51' 04.6" West 1: S26° 36' 55.6" E27° 50' 56.6" West 3: S26° 36' 33.8" E27° 51' 05.4"	NE 1: S26° 36' 31.6" E27° 51' 11.9" NE 3: S26° 36' 36.4" E27° 51' 14.4" East 2: S26° 36' 53.3" E27° 51' 13.1" SE 1: S26° 37' 11.8" E27° 51' 10.8" SE 3: S26° 37' 14.1" E27° 51' 06.8" SW: S26° 37' 03.3" E27° 50' 53.6" West 2: S26° 36' 53.1" E27° 50' 52.7" See red line in Figure 3 below.
Property	Portion 228 of the Farm Houtkop 594 IQ.	
Location	The study area is located between Moshoeshoe Street (defining its southern boundary) and a railway line (defining its northern boundary) directly south-east of the Sebokeng Police Station and Sebokeng Hospital. It is located near Sebokeng, Emfuleni Local Municipality, Gauteng Province.	
Extent	The extent of the study area is roughly 51.1 hectares.	
Land Description	The land is not utilised currently and consists of fairly flat terrain that was previously used as ploughed fields and farm land. The site is partially open and other parts are covered with pioneer vegetation such as Sweet Thorn and Sickie Bush.	

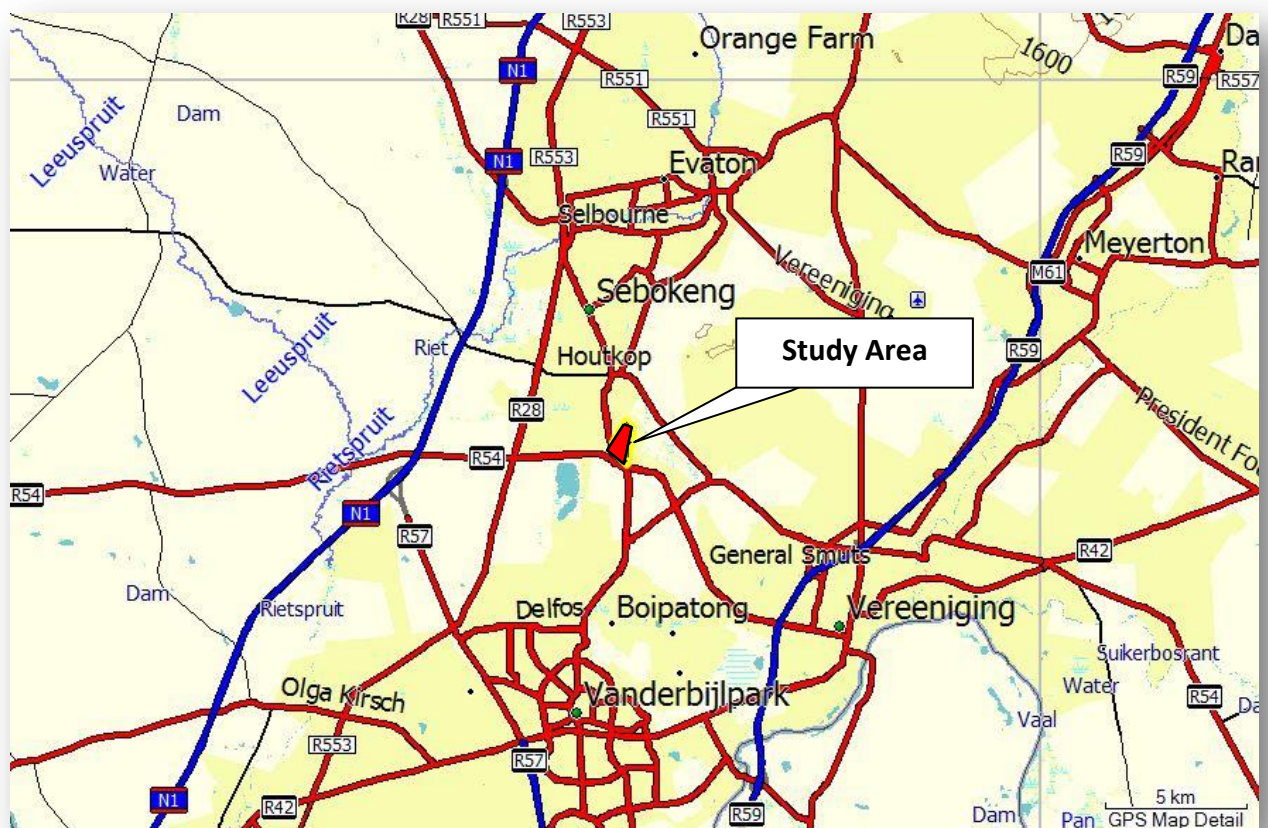


Figure 2–The study area within its regional context.



Figure 3

This image provides an overlay of the development layout plan in correlation with the study area boundaries provided by the client and surveyed in the field.

2.2 Technical Project Description

The client proposes to establish a new mixed housing development known as Sebokeng Ext. 38 on Portion 228 of the Farm Houtkop 594 IQ. This development will comprise a total of 789 erven designated as follows:

- High Density Residential – 335 erven
- Low Cost Housing – 346 erven
- Credit Linked – 89 erven
- Rental – 5 erven
- Commercial – 1 erven
- Educational – 1 erven
- Institutional – 2 erven
- Business - 2 erven
- Creche – 1 erven
- Church – 2 erven
- Public Open Space – 5 erven

Access to the development will be from Moshoeshoe Street on the south-western end of the development. A sufficient road network will service all the planned stands. The road widths will range from 16m for the major arteries to 13m for the intermediate roads and 10.5m for the smallest roads.

The numbers and sizes of the different stands may change as a result of inputs and comments during the township application process.

The project is envisaged to have a number of benefits, namely:

- Assisting in addressing community needs for better quality houses.
- Generating income especially for the unemployed local residents who will be involved in the construction.
- Improvement of local infrastructure and attraction of business to the area.



Figure 4—The development layout plan as supplied by the client.

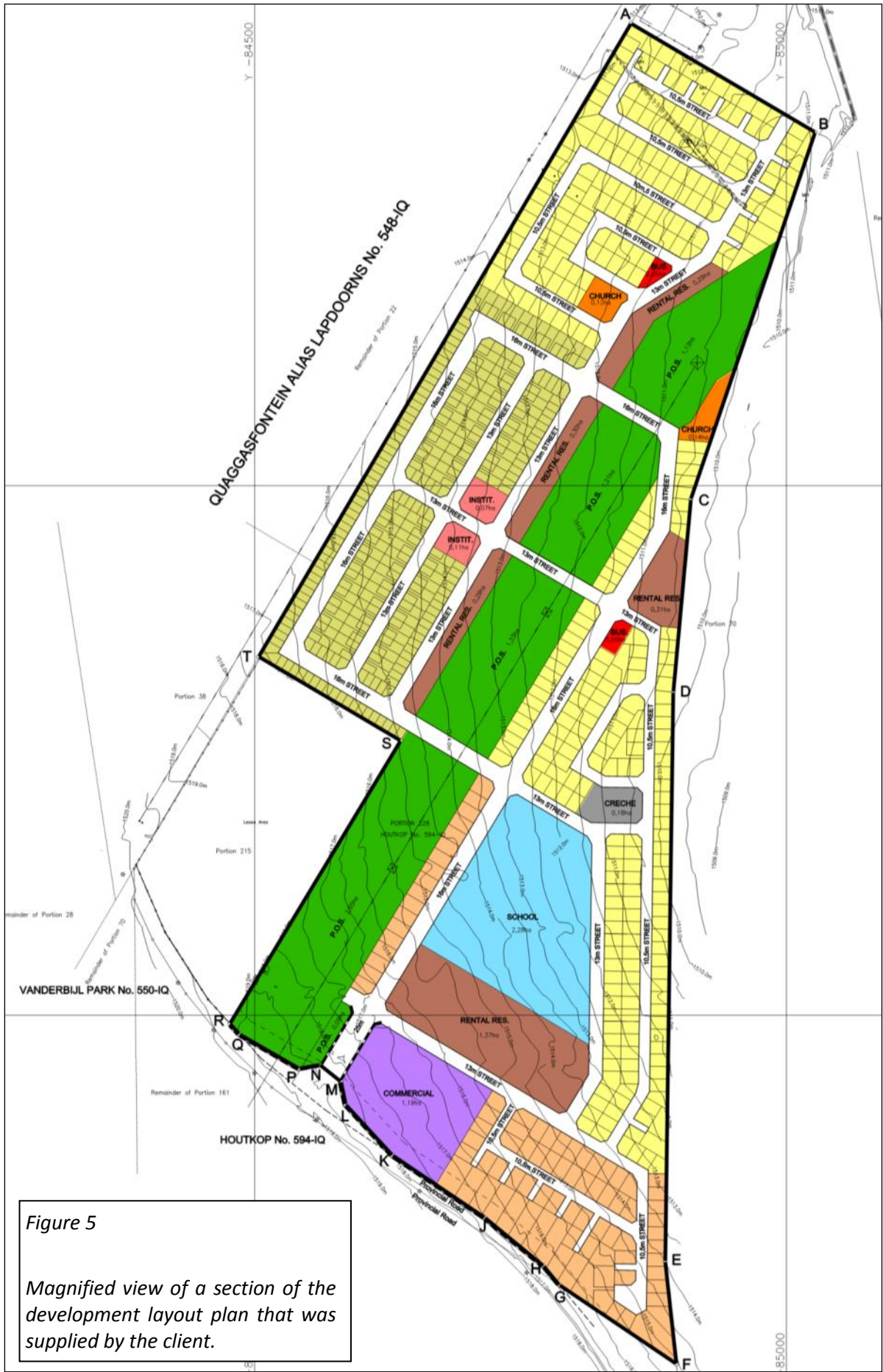


Figure 5

Magnified view of a section of the development layout plan that was supplied by the client.

3 ASSESSMENT METHODOLOGY

3.1 Methodology for Assessing Heritage Site Significance

This report was compiled by PGS Heritage for a proposed mixed housing development known as Sebokeng Ext. 38. The applicable maps, tables and figures are included as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (no 107 of 1998). The HIA process consisted of three steps:

Step I – Literature Review: The background information to the field survey leans greatly on the archival and historical cartographic material assessed as part of the study as well as a study of the available literature.

Step II – Physical Survey: A physical survey was conducted on Friday, 4 October 2013. The survey was undertaken by a team comprising a professional archaeologist (Marko Hutten) and field assistant (John Anderson) and was undertaken on foot.

Step III – Report: The final step involved the recording and documentation of relevant heritage resources, as well as the assessment of resources regarding the heritage impact assessment criteria and report writing, as well as mapping and recommendations.

The significance of heritage sites was based on five main criteria:

- site integrity (i.e. primary vs. secondary context),
- amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter)
 - Low - <10/50m²
 - Medium - 10-50/50m²
 - High - >50/50m²
- uniqueness and
- potential to answer present research questions.

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A - No further action necessary;
- B - Mapping of the site and controlled sampling required;
- C - No-go or relocate development position
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site

Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report (see **Table 3**).

Table 1: Site significance classification standards as prescribed by SAHRA

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	Grade 4A	High/Medium	Mitigation before destruction
Generally Protected B (GP.B)	Grade 4C	Medium	Recording before destruction
Generally Protected C (GP.C)	Grade 4D	Low	Destruction

3.2 Methodology for Impact Assessment

In order to ensure uniformity, a standard impact assessment methodology has been utilised so that a wide range of impacts can be compared. The impact assessment methodology makes provision for the assessment of impacts against the following criteria:

- Significance;
- Spatial scale;
- Temporal scale;
- Probability; and
- Degree of certainty.

A combined quantitative and qualitative methodology was used to describe impacts for each of the aforementioned assessment criteria. A summary of each of the qualitative descriptors, along with the equivalent quantitative rating scale for each of the aforementioned criteria, is given in **Table 4**.

Table 2: Quantitative rating and equivalent descriptors for the impact assessment criteria

RATING	SIGNIFICANCE	EXTENT SCALE	TEMPORAL SCALE
1	VERY LOW	<i>Isolated corridor / proposed corridor</i>	<u>Incidental</u>
2	LOW	<i>Study area</i>	<u>Short-term</u>
3	MODERATE	<i>Local</i>	<u>Medium-term</u>
4	HIGH	<i>Regional / Provincial</i>	<u>Long-term</u>
5	VERY HIGH	<i>Global / National</i>	<u>Permanent</u>

A more detailed description of each of the assessment criteria is given in the following sections.

Significance Assessment

The significance rating (importance) of the associated impacts embraces the notion of extent and magnitude, but does not always clearly define these, since their importance in the rating scale is very relative. For example, 10 structures younger than 60 years might be affected by a proposed development, and if destroyed the impact can be considered as VERY LOW in that the structures are all of Low Heritage Significance. If two of the structures are older than 60 years and of historic significance, and as a result of High Heritage Significance, the impact will be considered to be HIGH to VERY HIGH.

A more detailed description of the impact significance rating scale is given in **Table 5** below.

Table 3: Description of the significance rating scale

RATING		DESCRIPTION
5	VERY HIGH	Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit.
4	HIGH	Impact is of substantial order within the bounds of impacts which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these.
3	MODERATE	Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc.
2	LOW	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these.
1	VERY LOW	Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity is needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale.
0	NO IMPACT	There is no impact at all - not even a very low impact on a party or system.

Spatial Scale

The spatial scale refers to the extent of the impact i.e. will the impact be felt at the local, regional, or global scale. The spatial assessment scale is described in more detail in **Table 6**.

Table 4: Description of the spatial significance rating scale

RATING		DESCRIPTION
5	Global/National	The maximum extent of any impact.
4	Regional/Provincial	The spatial scale is moderate within the bounds of possible impacts, and will be felt at a regional scale (District Municipality to Provincial Level). The impact will affect an area up to 50 km from the proposed site / corridor.
3	Local	The impact will affect an area up to 5 km from the proposed site.
2	Study Area	The impact will affect an area not exceeding the boundary of the study area.
1	Isolated Sites / proposed site	The impact will affect an area no bigger than the site.

Temporal/Duration Scale

In order to accurately describe the impact, it is necessary to understand the duration and persistence of an impact in the environment.

The temporal or duration scale is rated according to criteria set out in **Table 7**.

Table 5: Description of the temporal rating scale

RATING		DESCRIPTION
1	Incidental	The impact will be limited to isolated incidences that are expected to occur very sporadically.
2	Short-term	The environmental impact identified will operate for the duration of the construction phase or a period of less than 5 years, whichever is the greater.
3	Medium-term	The environmental impact identified will operate for the duration of life of the project.
4	Long-term	The environmental impact identified will operate beyond the life of operation of the project.
5	Permanent	The environmental impact will be permanent.

Degree of Probability

The probability or likelihood of an impact occurring will be outlined in **Table 8** below.

Table 6: Description of the degree of probability of an impact occurring

RATING	DESCRIPTION
1	Practically impossible
2	Unlikely
3	Could happen
4	Very likely
5	It's going to happen / has occurred

Degree of Certainty

As with all studies, it is not possible to be 100% certain of all facts, and for this reason a standard “degree of certainty” scale is used, as discussed in **Table 9**. The level of detail for specialist studies is determined according to the degree of certainty required for decision-making.

Table 7: Description of the degree of certainty rating scale

RATING	DESCRIPTION
Definite	More than 90% sure of a particular fact.
Probable	Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring.
Possible	Between 40 and 70% sure of a particular fact, or of the likelihood of an impact occurring.
Unsure	Less than 40% sure of a particular fact or the likelihood of an impact occurring.
Can't know	The consultant believes an assessment is not possible even with additional research.

Quantitative Description of Impacts

To allow for impacts to be described in a quantitative manner, in addition to the qualitative description given above, a rating scale of between 1 and 5 was used for each of the assessment criteria. Thus the total value of the impact is described as the function of significance, spatial and temporal scale, as described below:

$$\text{Impact Risk} = \frac{(\text{SIGNIFICANCE} + \text{Spatial} + \text{Temporal})}{3 \quad 5} \times \text{Probability}$$

An example of how this rating scale is applied is shown below:

Table 8: Example of Rating Scale

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	Low	Local	Medium Term	Could Happen	Low
Impact on heritage structures	2	3	3	3	1.6

Note: The significance, spatial and temporal scales are added to give a total of 8, which is divided by 3 to give a criterion rating of 2.67. The probability (3) is divided by 5 to give a probability rating of 0.6. The criteria rating of 2.67 is then multiplied by the probability rating (0,6) to give the final rating of 1,6.

The impact risk is classified according to five classes as described in the table below.

Table 9: Impact Risk Classes

RATING	IMPACT CLASS	DESCRIPTION
0.1 – 1.0	1	Very Low
1.1 – 2.0	2	Low
2.1 – 3.0	3	Moderate
3.1 – 4.0	4	High
4.1 – 5.0	5	Very High

Therefore, with reference to the example used for heritage structures above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

4 CURRENT STATUS QUO

4.1 Description of Study Area

The proposed development will be known as Sebokeng Extension 38 and is located on Portion 228 of the Farm Houtkop 594 IQ, Emfuleni Local Municipality, Gauteng Province. The property has industrial areas on its south-eastern and north-western sides. A railway line defines the north-eastern end of the study area with an extended informal settlement situated beyond the railway line. Sebokeng Hospital as well as the Sebokeng Police Station is located north-west of the study area. Moshoeshoe road, an artery road to Sebokeng passes the site on its southern and south-western sides. A short distance south of the study area is the R28, a main access route to nearby industries such as Iscor and towns such as Vanderbijlpark and Vereeniging.

The land is not utilised currently and consists of fairly flat terrain that was previously used as ploughed fields and farm land. The site is partially open with other parts covered by pioneer vegetation such as Sweet-Thorn and Sickle-Bush. A large, elongated mound of discarded soil is situated on the eastern extent of the site. This mound is at least two meters high and approximately 15 meters wide. The exact function of this feature is not known but it could have served as a barrier. Discarded building rubble are scattered across the site. A power line is situated along the north-western boundary of the site with another power line crossing east to west across the centre of the site.

It is evident from this description of the study area that it is located in surroundings characterised by industrial, institutional, infrastructural and residential development with the study area itself also bearing evidence of human impacts such as infrastructural developments (i.e. power lines and farm roads) and the discarding of building rubble.



Figure 6 - General view of study area to north-east.



Figure 7 – View of berm along the eastern boundary.



Figure 8 – View of discarded building rubble.



Figure 9 – One of the power lines across the site.

5 DESKTOP STUDY FINDINGS

5.1 Archival and Historic Maps of the Study Area and Surrounding Landscape

5.1.2 Vereeniging Sheet of the Major Jackson Series, 1902

This map forms part of the series of British maps produced under the supervision of Major Jackson of the Royal Engineers by the Mapping Section of the Field Intelligence Department, Army Headquarters. The sheet is the Vereeniging sheet (sheet number 45) of the map series and was originally produced during December 1900. The sheet used for the study is the revised edition of the 1900 map, dated to June 1902. (National Archives, Maps, 3/613). No heritage features are depicted on the map.



Figure 10 – Section from the Vereeniging sheet of the Major Jackson Series which dates to June 1902. The approximate position of the study area is shown in red dotted line.

5.1.2 Vereeniging Sheet of the Transvaal and Orange Free State Series, 1913

The image depicted below is from the Vereeniging sheet of the 1:125 000 Transvaal and Orange Free State Series compiled by the Geographical Section, Transvaal and which dates to 1913 (National Archives, Maps, 3/1421). The following heritage features are depicted within the study area:

- Feature 1

A railway line and bridge are depicted at the northern end of the study area. No evidence for this could be identified in the field. If compared with the other available cartographic data it would seem that the accuracy of this map may be doubtful.

- Feature 2

A secondary road or track is depicted crossing diagonally over the central sections of the study area.



Figure 11 – Section from the Vereeniging sheet of the Transvaal and Orange Free State Series which dates to June 1913. The study area boundaries are depicted in red.

5.1.3 First Edition of the 2627DB Topographical Sheet

The relevant section of the First Edition of the 2627DB Topographical Sheet is depicted below. The map was compiled and drawn by the Survey Depot (Tech.) S.A.E.C. from existing 1:125 000 sheets published in 1941 and was revised in the field by 45 Survey Company S.A.E.C. in March 1943. It was printed by the Government Printing Works for the Union Defence Force in 1945.

It is worth noting that the sheet depicted here was a “Correction Copy” and as a result some inaccuracies might be present on the sheet. Such an inaccuracy appears to be the north-south railway line depicted east of the study area.

No heritage features are depicted within the study area. A road as well as an agricultural field is shown within the study area.

However, three features from the surrounding landscape require further discussion. While these three features are not depicted within the study area or anywhere close to it, it is worthwhile to note their existence here. These two features are as follows:

- Feature 1

Graves are depicted here. If the image overlay and projection used for plotting the boundaries of the study area on the old map are correct, this cemetery is located roughly 411m east of the study area.

- Feature 2

The position of the railway line indicated on this map appears to have been the original position of the Vereeniging-Johannesburg line. This line appears to have been extended further to the west a few years later.

- Feature 3

A ruin is depicted here. If the image overlay and projection used for plotting the boundaries of the study area on the old map are correct, this ruin is located roughly 513m east of the study area.

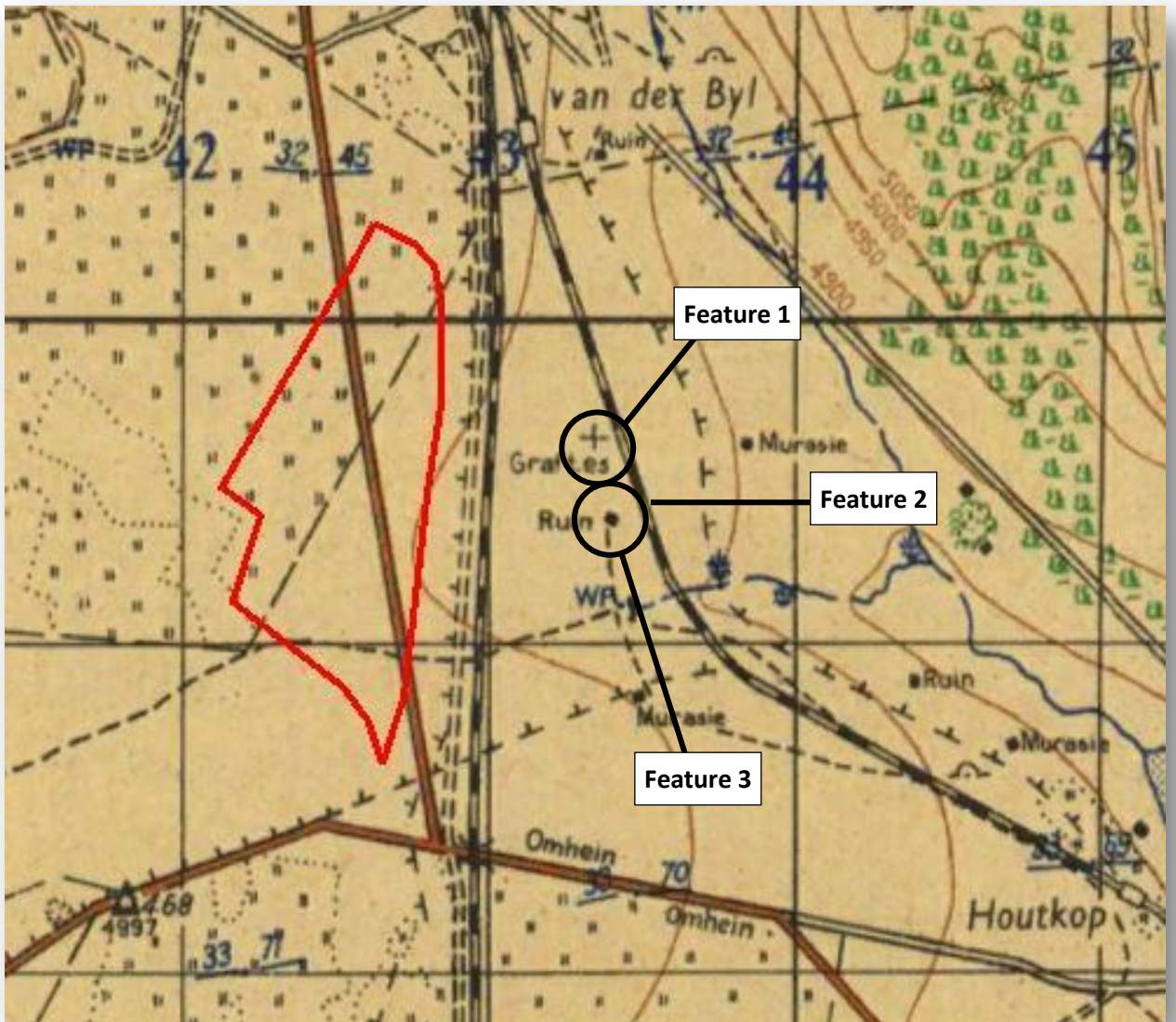


Figure 12 – Section from the First Edition of the 2627DB Topographical Sheet that was first compiled in 1941 and surveyed in 1943. The study area boundaries are shown in red.

5.1.4 Second Edition of the 2627DB Topographical Sheet

The relevant section of the Second Edition of the 2627DB Topographical Sheet is depicted below. The map was based on aerial photography undertaken in 1952. It was surveyed in 1954 and drawn in 1957 by the Trigonometrical Survey Office.

No heritage features are depicted within the study area. The following general features are depicted within the study area:

- Feature 1

A long line of excavations is depicted on the eastern end of the study area. It seems likely that the extensive soil mound observed during the fieldwork is the result of these excavations. This feature does not have any heritage value and will not be discussed further.

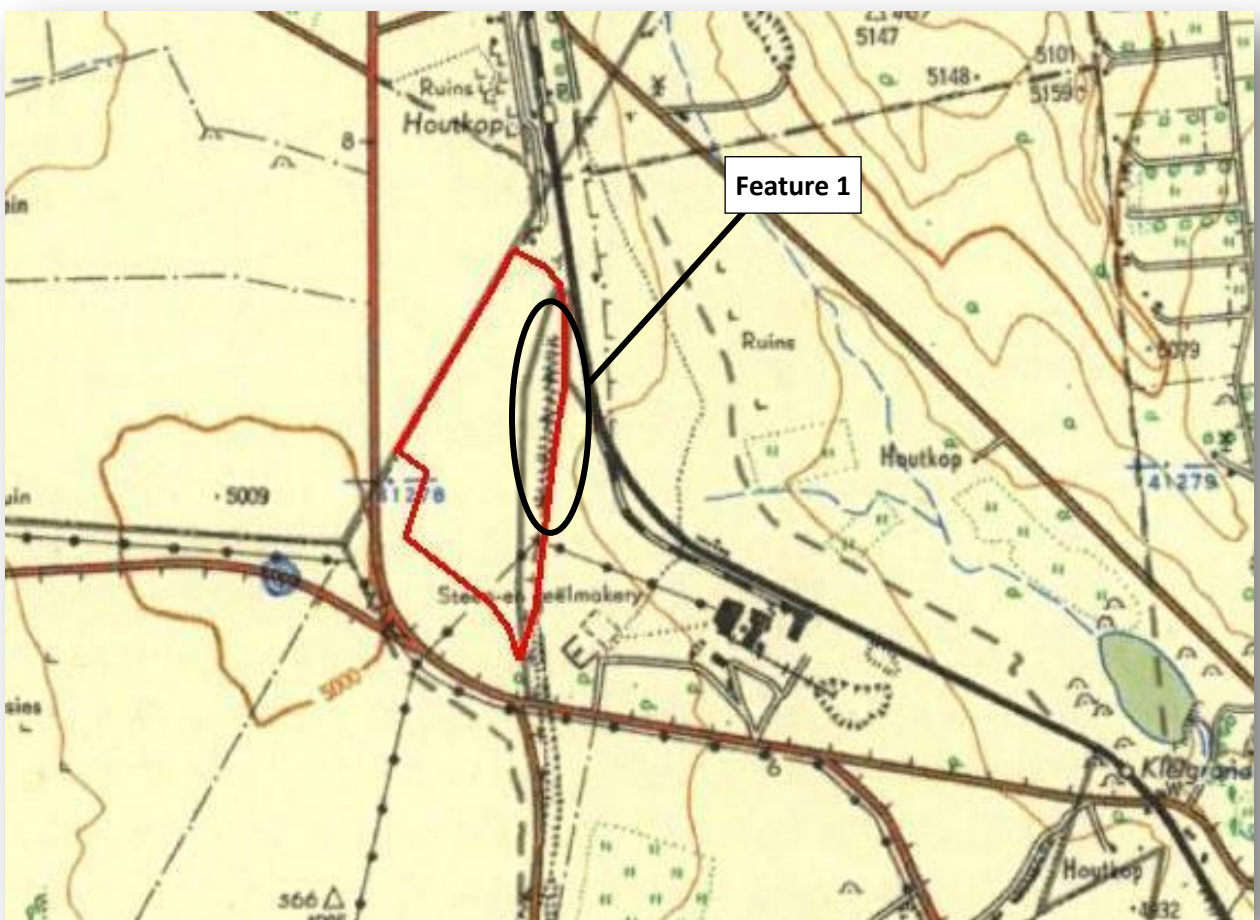


Figure 13 – Section from the Second Edition of the 2627DB Topographical Sheet that was based on aerial photography from 1952 and surveyed in 1954. The site boundaries are shown in red.

5.1.5 Third Edition of the 2627DB Topographical Sheet

The relevant section of the Third Edition of the 2627DB Topographical Sheet is depicted below. The sheet was remapped in 1979 and printed in 1980 by the Government Printer. The following features are depicted within the study area:

- Feature 1

Two buildings are depicted within the northern end of the study area and form part of a cluster of five buildings which appear to be associated with the nearby railway siding. These buildings were not depicted on the second edition that was surveyed in 1954 but are depicted on this sheet that was surveyed in 1979. This indicates that the buildings are between 34 and 59 years old. During the fieldwork two buildings were observed and were believed to be younger than 60 years. It is evident that the cartographic data and fieldwork assessment concur, and as a result these buildings are younger than 60 years and have no heritage value. They will not be discussed further in this report.

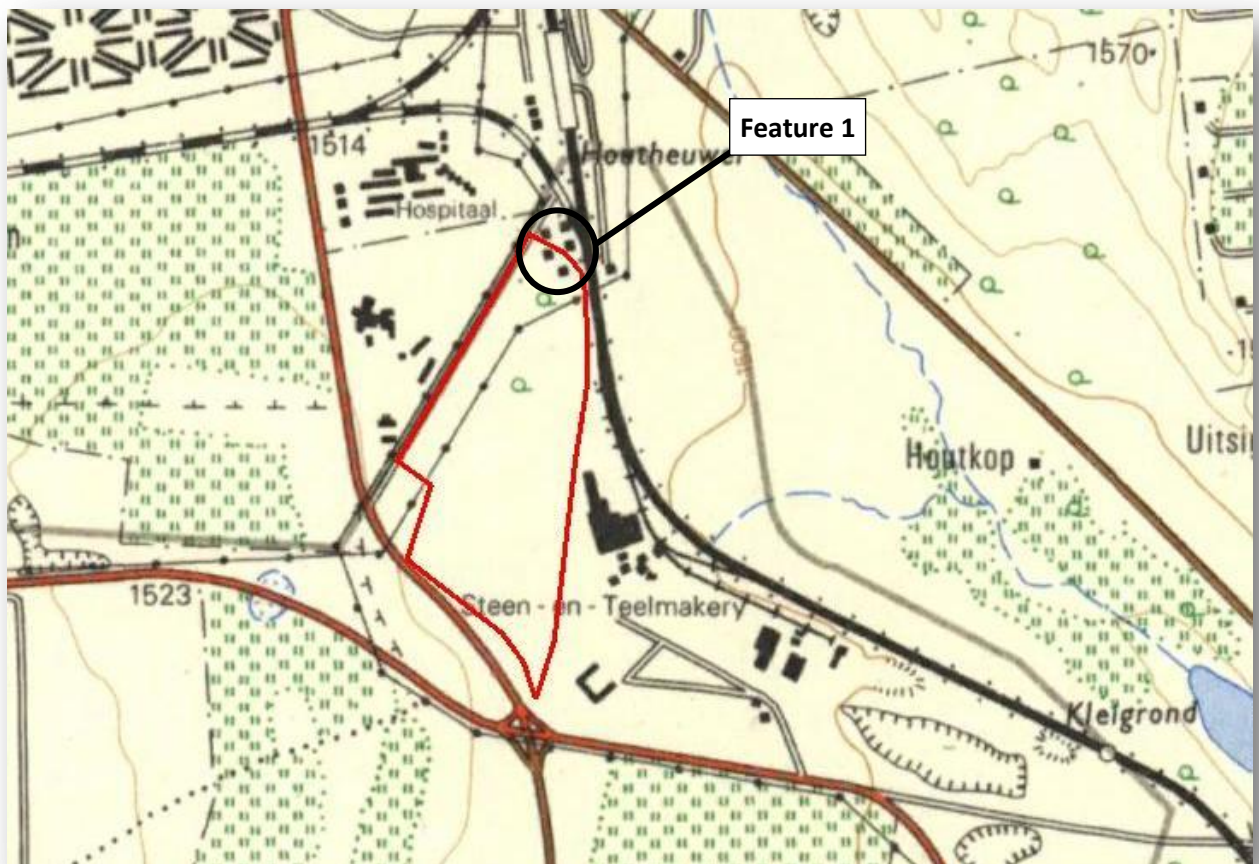


Figure 14 – Section from the Third Edition of the 2627DB Topographical Sheet that was remapped in 1979 and printed in 1980. The site boundaries are shown in red.

5.2 Historic Overview of Study Area and Surrounding Landscape

DATE	DESCRIPTION
2.5 million to 250 000 years ago	<p>The Earlier Stone Age is the first and oldest phase identified in South Africa's archaeological history and comprises two technological phases. The earliest of these is known as Oldowan and is associated with crude flakes and hammer stones. It dates to approximately 2 million years ago. The second technological phase is the Acheulian and comprises more refined and better made stone artefacts such as the cleaver and bifacial hand axe. The Acheulian dates back to approximately 1.5 million years ago.</p> <p>A number of Early Stone Age sites are known from the Vereeniging area. According to Bergh (1999) these include Waldrif, Redan, Drie Riviere, Duncanville, Riverview Estates and Amcor. Duncanville is located approximately 10km south-east of the study area. The Duncanville Archaeological Reserve was proclaimed as a Historical Monument in 1944 (Oberholster, 1972).</p>
250 000 to 40 000 years ago	<p>The Middle Stone Age is the second oldest phase identified in South Africa's archaeological history. This phase is associated with flakes, points and blades manufactured by means of the so-called 'prepared core' technique.</p>
40 000 years ago to the historic past	<p>The Later Stone Age is the third archaeological phase identified and is associated with an abundance of very small artefacts known as microliths.</p>
AD 1450 – AD 1650	<p>The Ntsuanatsatsi facies of the Blackburn Branch of the Urewe Ceramic Tradition represents the earliest known Iron Age period within the surroundings of the study area. The decoration on the ceramics from this facies is characterised by a broad band of stamping in the neck, stamped arcades on the shoulder and appliqué (Huffman, 2007).</p>
AD 1500 - AD 1700	<p>The Olifantspoort facies of the Moloko Branch of the Urewe Ceramic Tradition is the next Iron Age facies to be identified within the surroundings of the study area. The key features of the decoration used on the ceramics from this facies include multiple bands of fine stamping or narrow incision separated by colour (Huffman, 2007).</p>
AD 1650 – AD 1850	<p>The Uitkomst facies of the Blackburn Branch of the Urewe Ceramic Tradition represents the third Iron Age period to be identified for the surroundings of the study area. The decoration on the ceramics associated with this facies is characterised by stamped arcades, appliqué of parallel incisions, stamping as well as cord impressions (Huffman, 2007). Based on the available archaeological and oral evidence from this period, the sixteenth and seventeenth centuries saw the movement of Sotho/Tswana communities from the lower lying Bushveld areas in the north (where they had been settled since AD 1500) toward the higher, predominantly grassland areas to the south. By AD 1650, these communities had successfully settled in these areas (Hall, 2007).</p>
AD 1700 – AD 1840	<p>The Buispoort facies of the Moloko branch of the Urewe Ceramic Tradition is the next phase to be identified within the study area's surroundings. The key features on the decorated ceramics include rim notching, broadly incised</p>

	chevrons and white bands, all with red ochre (Huffman, 2007).
1823 - 1827	During the so-called Difaqane, the Khumalo Ndebele (more commonly known as the Matabele) of Mzilikazi established themselves along the banks of the Vaal River (Bergh, 1999). In c. 1827 the Matabele moved further north and settled along the Magaliesberg Mountain and five years later in 1832 settled along the Marico River.
1836	The first Voortrekker parties started crossing the Vaal River (Bergh, 1999).
1839 - 1840	These years saw the early establishment of farms by the Voortrekkers in the general vicinity of the study area. The district of Potchefstroom was also established in 1839 (Bergh, 1999), of which the study area formed part.
24 August 1869	On this day the grondbrief for the farm Houtkop was registered in the name of its first owners Hendrik Christoffel and Jacobus Christiaan van der Merwe. The farm Houtkop was originally numbered farm 129 of the Potchefstroom district subsequent to which it was renumbered as farm 28 of the Vereeniging district. The farm was first inspected by P. Lindeque on 10 May 1852 and later by C. Dreyer on 28 February 1859.

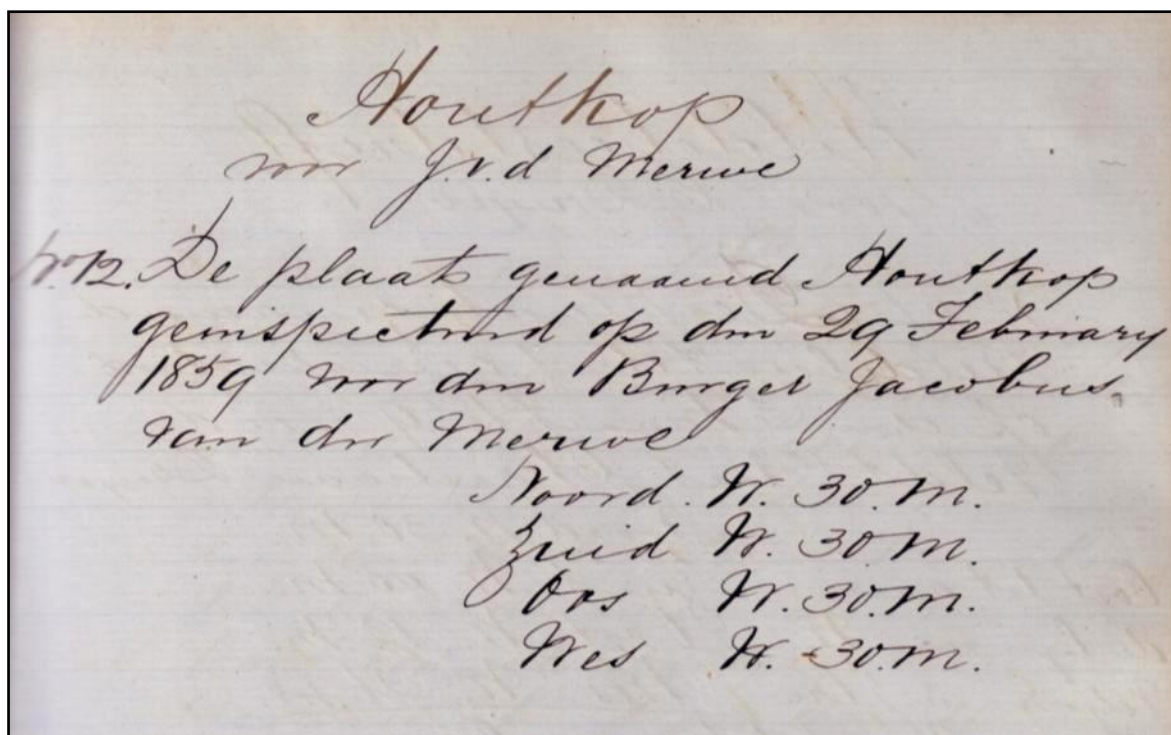


Figure 15 – Original inspection report of the farm Houtkop undertaken for Jacobus van der Merwe on 29 February 1859 (RAK, 2798)

1876	In December 1876 President Brand of the Republic of the Orange Free State acquired authority from his Volksraad "to expend a sum, not exceeding £2,000 to engage the services of Mr Stow, and to have practical experiments made where advisable" (Leigh, 1968:15), aimed at undertaking prospecting surveys. The Mr. Stow referred to here was George William Stow.
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Figure 16

George William Stow (Leigh, 1968)

<p>1878</p>	<p>In 1878 Stow conducted test shafts in the vicinity of the Taaiboschspruit and Vaal River confluence as well as on the farms Maccauvlei and Leeuwspruit. His investigations on both these latter farms indicated the presence of extensive coalfields (Leigh, 1968).</p>
<p>1878 - 1880</p>	<p>During this time Sammy Marks was a diamond magnate in Kimberley. After hearing of Stow's discoveries, he immediately realized the significance of the coal discoveries in that Kimberley, and especially the mines located there, had a tremendous demand for fuel, a demand that was not fulfilled by Kimberley's own firewood supplies. A meeting took place between Stow and Marks, the result of which was the formation in 1880 of "<i>De Zuid Afrikaansche en Oranje Vrijstaatsche Kolen en Mineralen Vereeniging</i>", which was later to become the nucleus of the <i>Vereeniging Estates Limited</i>.</p> <p>With the establishment of a company concluded, Stow and Marks were faced with the logistical problems of transporting the coal from this area all the way to Kimberley. Stow had a plan whereby the mined coal would be transported to Kimberley by boat. Two boats were bought, and Stow was given the assignment of acquiring as many farms as possible on which coal is believed to exist, and to commence development and mining on these farms. Later a flat-bottom boat named the "<i>Cecil Rhodes</i>" was also built as part of this plan. The farms Leeuwkuil, Klipplaatdrift, Maccauvlei and Rietfontein were acquired. The first mining activities were undertaken in the vicinity of the test shaft on Leeuwkuil, which later was to become Bedworth Colliery.</p> <p>Although the idea of transporting coal using boats soon proved impractical, a new plan was proposed by Marks. He attracted transport riders to the area</p>

	by offering favourable conditions. In a short time as many as 200 wagons were daily loading coal from the Bedworth Colliery's pits. By 1884 some 720 tons of coal were annually dispatched to the diamond fields, with each wagon carrying 4 tons (Leigh, 1968).
1882	In 1882 the <i>Vereeniging Estates Limited</i> applied to the Zuid Afrikaansche Republiek to establish a village on the farms Leeuwkuil and Klipplaatdrift. On 4 July 1884 the Volksraad approved both the application and proposed name "Vereeniging", which was derived from the company's name (Leigh, 1968).
1899 - 27 May 1900	<p>During the Anglo Boer War (1899-1902) the town of Vereeniging had a significant role to play. This was largely due to its strategic value in that one of the main entry points from the Republic of the Orange Free State into the Zuid Afrikaansche Republiek was located in this area. The railway link between the two republics had also been established here.</p> <p>During the initial phase of the war, very little military activities took place in this area. Only after the defeat of the Boer forces in various places, and the British advance into the republics, the Vereeniging area became significant.</p> <p>After the annexation of the Republic of the Orange Free State on 24 May 1900, Lord Roberts (the commander in chief of the British forces) was able to travel via railway line from Bloemfontein all the way to the Vaal River (Bergh, 1999). On 25 May 1900 an advance guard under General French crossed the Vaal at Zeekoefontein. During the following day, he crossed over the Rietspruit and pushed the Boer forces in the direction of Houtkop. A skirmish also occurred here (Maurice & Grant, 1910). On 27 May 1900 the crossing of the main army over the Vaal River took place with the cavalry riding to Houtkop. Vereeniging was annexed on the same day (Maurice & Grant, 1910). On 19 September 1900 the official flag ceremony representing the annexation of the Transvaal, took place in Vereeniging.</p>



Figure 17 – Lord Roberts leads his troops across the Vaal River on 27 May 1900 (Leigh, 1968:47).

<p>27 May 1900 - 1902</p>	<p>During the latter period of the war, the Boer forces divided themselves into smaller mobile units (commandos) and fought the British forces in a guerilla war. In response to this tactic, the Boer farms of both republics were destroyed, while black and white men, women and children still residing on the farms were taken to various concentration camps. Such a camp was also established at Vereeniging. The camp was located on the farm Maccauvlei, and was divided into a camp for the Boers and another camp for black people. The Boer camp in turn was divided between the Boer concentration camp (for prisoners-of-war, women and children) and a camp which housed Boers who had surrendered and joined the British forces as part of a Burgher Corps (Leigh, 1968).</p> <p>With time the Boer forces and their leaders started considering negotiating for peace. Sammy Marks offered the opposing sides a site for these negotiations at the Central Mine. Different tented camps were erected for the different participants, such as the Z.A.R leadership, Orange Free State republic leadership and the British leadership. The representatives for the Boer republics were President Steyn of the Orange Free State, as well as Generals Botha, Smuts, Hertzog, De La Rey and De Wet. The British were represented by Lords Milner and Kitchener. The negotiations undertaken here resulted in the eventual signing of the Peace Treaty of Vereeniging at Melrose House, Pretoria on Saturday, 31 May 1902 (Leigh, 1968).</p>
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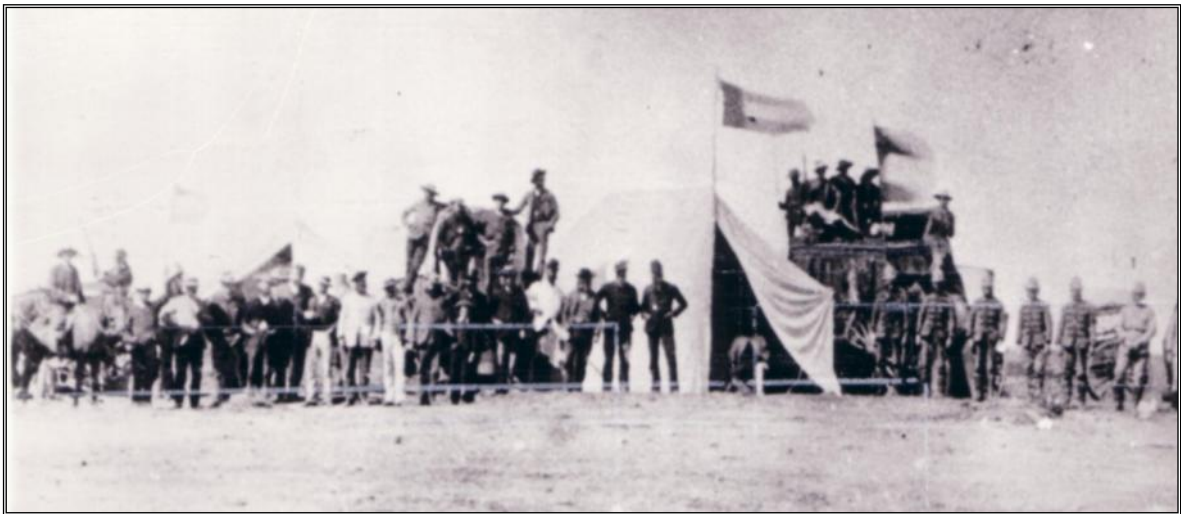


Figure 18 – The Boer deputation at the Vereeniging peace negotiations (Leigh, 1968:52).

<p>21 March 1960</p>	<p>Although a number of important political events took place in the general area, including the massacre at Boipatong on 17 June 1992, the most significant of these was probably the tragedy of Sharpeville, which took place on 21 March 1960.</p> <p>Sharpeville is a township situated near Vereeniging, and is located some 6.3km south-east of the present study area. On 16 March 1960 the Police Commissioner was informed by the head of the Pan Africanist Congress, Robert Sobukwe, that a protest campaign against pass laws will be held on 21 March 1960. The aim of the campaign was for black people to leave their passes at home and to report in their thousands at different police stations, thereby forcing the government to make concessions.</p> <p>By 10 am on the morning of 21 March 1960 a group of between 3000 and</p>
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5000 people gathered in the centre of Sharpeville. Similar events also took place in neighbouring areas such as Boiphatong and Evaton. The group from Sharpeville marched to the Sharpeville police station, where a tense situation soon started developing. By one o'clock police reinforcements were called for and started arriving. The police force now consisted of 300 policemen who were supported by armoured vehicles.

At 13:15 a scuffle broke out after which the fence surrounding the police station was trampled and a police officer pushed over. Simultaneously the front ranks of the crowd pushed forward, which resulted in the police opening fire without any order to do so. The crowd panicked and fled. Sixty-seven protesters (including children) were killed, while 186 people were wounded.

The news of the Sharpeville tragedy carried across the world's press, and focused international attention on the political situation and injustices taking place in South Africa (www.sahistory.org.za).

The 21st of March is still annually commemorated in South Africa today as Human Rights Day.



Figure 19 – People running from the violence as shots are fired by the police at Sharpeville (www.sahistory.org.za).

<p>1965</p>	<p>Sebokeng was established during this year and follows on the 1957 announcement of the South African Prime Minister Hendrik Verwoerd that the Vaal area could not have four separate black locations but that a single area further away from the white areas of Vereeniging and Vanderbijlpark would be established (Lubkemann, 2008).</p>
<p>1960s</p>	<p>It is not presently known exactly when the Sebokeng Hospital was built. However, it is depicted for the first time on the third edition topographical sheet that was surveyed in 1979 and printed in 1980. This suggests that the hospital was built before this date but after 1954. As Sebokeng itself was established in 1965 it seems logical for the Sebokeng Hospital to have been established at the same time or shortly thereafter.</p>

6 FIELDWORK FINDINGS

A systematic walkthrough of the study area was undertaken by a fieldwork team comprising an archaeologist and field assistant. Each member of the team carried a hand-held GPS, and their combined track logs are depicted in white below. **No heritage sites could be identified.**



Figure 20 – Google Earth map depicting the following elements: the study area boundaries that were provided by the client (red line), the recorded track logs (white line) and finally the actual development layout plan shown as an overlay.

7 IMPACT OF PROPOSED DEVELOPMENT ON HERITAGE RESOURCES

No heritage sites were identified within the study area. As a result the impact of the proposed development on known heritage resources can be considered to be nil.

8 MITIGATION MEASURES AND GENERAL RECOMMENDATIONS

No heritage sites were identified within the study area and no mitigation measures are required.

9 CONCLUSIONS

PGS Heritage was appointed by Enkanyini Projects to undertake a Heritage Impact Assessment (HIA) which forms part of the Environmental Impact Assessment (EIA) for the proposed establishment of a new residential township on Portion 228 of the Farm Houtkop 594 IQ, Emfuleni Local Municipality, Gauteng Province.

An archival and historical desktop study was undertaken which was used to compile a historical layering of the study area within its regional context. This component indicated that the landscape within which the project area is located has a rich and diverse history. However, the desktop study did not reveal any historic or heritage sites from within the study area.

The desktop study work was followed by a fieldwork component which comprised a walkthrough of the study area. **No heritage sites were identified within the study area.**

The development is not expected to have any impact on heritage sites. As such no heritage reasons can be given for the development not to continue.

10 REFERENCES

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Archival References

3/613

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RAK, 2798

Historic Topographic Maps

The historic topographic maps used in this report were obtained from the Directorate: National Geo-spatial Information of the Department of Rural Development & Land Reform, Cape Town.

Google Earth

All the aerial depictions and image overlays and projections used for the purposes of this report were undertaken with Google Earth.

Internet References

www.sahistory.org.za

LEGISLATIVE REQUIREMENTS – TERMINOLOGY AND ASSESSMENT CRITERIA

General principles

In areas where there has not yet been a systematic survey to identify conservation worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected.

Archaeological and palaeontological sites, materials, and meteorites are the source of our understanding of the evolution of the earth, life on earth and the history of people. In terms of the heritage legislation, permits are required to damage, destroy, alter, or disturb them. Furthermore, individuals who already possess heritage material are required to register it. The management of heritage resources is integrated with environmental resources and this means that, before development takes place, heritage resources are assessed and, if necessary, rescued.

In addition to the formal protection of culturally significant graves, all graves which are older than 60 years and are not located in a cemetery (such as ancestral graves in rural areas), are protected. The legislation also protects the interests of communities that have an interest in the graves: they should be consulted before any disturbance takes place. The graves of victims of conflict and those associated with the liberation struggle are to be identified, cared for, protected and memorials erected in their honour.

Anyone who intends to undertake a development must notify the heritage resources authority and, if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the construction company's cost. Thus, the construction company will be able to proceed without uncertainty about whether work will have to be stopped if an archaeological or heritage resource is discovered.

According to the National Heritage Act (Act 25 of 1999 section 32) it is stated that:

An object or collection of objects, or a type of object or a list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including –

- objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;
- visual art objects;

- military objects;
- numismatic objects;
- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- books, records, documents, photographic positives and negatives, graphic material, film or video 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), or in a provincial law pertaining to records or archives; and
- any other prescribed category.

Under the National Heritage Resources Act (Act No. 25 of 1999), provisions are made that deal with, and offer protection to, all historic and prehistoric cultural remains, including graves and human remains.

Graves and cemeteries

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are under the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning, or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years, fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are under the jurisdiction of the South African Heritage Resources Agency (SAHRA). The procedure

for Consultation regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administered by a local authority. Graves in the category located inside a formal cemetery administered by a local authority will also require the same authorisation as set out for graves younger than 60 years, over and above SAHRA authorisation.

If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.