

Heritage Opinion

For the Proposed Prospecting Activities on the farm Rooipan 96 IQ, Ventersdorp, North West Province.

Prepared For
Zitholele Consulting

By



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**VERSION 1
4 June 2015**

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I, Jaco van der Walt as duly authorised representative of Heritage Contracts and Archaeological Consulting CC, hereby confirm my independence as a specialist and declare that neither I nor the Heritage Contracts and Archaeological Consulting CC have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which the client was appointed as Environmental Assessment practitioner, other than fair remuneration for work performed on this project.



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EXECUTIVE SUMMARY

Site name and location: The proposed Rooipan Exploration project is located 17km northwest of Carletonville along the N14 National Road in the magisterial district of Venstersdorp.

Purpose of the study: Phase 1 Archaeological Impact Assessment to determine the presence of cultural heritage sites and the impact of the proposed exploration activities on these resources.

1:50 000 Topographic Map: 2627 AC.

Developer: JHB MARKETING CC

Heritage Consultant: Heritage Contracts and Archaeological Consulting CC (HCAC).

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Date of Report: 4 June 2015

Findings of the Assessment:

HCAC was contracted to assess the impact of the proposed prospecting activities on heritage resources on portion 5 of the farm Rooipan 96. The study area of approximately 550ha was visited over a period of one day. The study area was extensively cultivated in the past and large scale mining occurred on the north western portion of the farm. All of these activities would have impacted negatively on surface indications of heritage sites. However, within the study area 4 areas of interest were recorded. These consist of a farm house complex and farm labourer complex, an informal cemetery and two areas where dolomite is exposed.

If the recommendations as made in section 7 of the report are adhered to we are of the opinion that the prospecting activities on portion 5 of the farm Rooipan 96 will have a negligible impact on the heritage resources of the area.

General

It must be noted that due the subsurface nature of archaeological material and graves the possible occurrence of unmarked or informal graves and subsurface finds cannot be excluded.

If during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find.

Disclaimer: *Although all possible care is taken to identify sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. Heritage Contracts and Archaeological Consulting CC and its personnel will not be held liable for such oversights or for costs incurred as a result of such oversights.*

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- The technology described in any report;
- Recommendations delivered to the Client.

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ABBREVIATIONS

AIA: Archaeological Impact Assessment
ASAPA: Association of South African Professional Archaeologists
BIA: Basic Impact Assessment
CRM: Cultural Resource Management
ECO: Environmental Control Officer
EIA: Environmental Impact Assessment*
EIA: Early Iron Age*
EIA Practitioner: Environmental Impact Assessment Practitioner
EMP: Environmental Management Plan
ESA: Early Stone Age
GPS: Global Positioning System
HIA: Heritage Impact Assessment
LIA: Late Iron Age
LSA: Late Stone Age
MEC: Member of the Executive Council
MIA: Middle Iron Age
MPRDA: Mineral and Petroleum Resources Development Act
MSA: Middle Stone Age
NEMA: National Environmental Management Act
PRHA: Provincial Heritage Resource Agency
SADC: Southern African Development Community
SAHRA: South African Heritage Resources Agency

**Although EIA refers to both Environmental Impact Assessment and the Early Iron Age both are internationally accepted abbreviations and must be read and interpreted in the context it is used.*

GLOSSARY

Archaeological site (remains of human activity over 100 years old)

Early Stone Age (~ 2.6 million to 200 000 years ago)

Middle Stone Age (~ 300 000 to 20 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

The Iron Age (~ AD 400 to 1840)

Historic (~ AD 1840 to 1950)

Historic building (over 60 years old)

1 BACKGROUND INFORMATION

<i>Kind of study</i>	Archaeological Impact Assessment
<i>Type of development</i>	Prospecting activities
<i>Developer:</i>	JHB MARKETING CC

Heritage Contracts and Archaeological Consulting CC was contracted by Zitholele Consulting to conduct an Archaeological Impact Assessment/heritage opinion for the proposed exploration on portion 5 of the farm Rooipan 96 IQ, located 17 km North West of Carletonville in the Ventersdorp Magisterial District.

The aim of the study is to identify cultural heritage sites, document, and assess their importance within local, provincial and national context. It serves to assess the impact of the proposed project on non-renewable heritage resources, and to submit appropriate recommendations with regard to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner. It is also conducted to protect, preserve, and develop such resources within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

The report outlines the approach and methodology utilized before and during the survey, which includes: Phase 1, a background study that included information collected from various sources and consultations; Phase 2, the physical surveying of the area on foot and by vehicle; Phase 3, reporting the outcome of the study.

During the survey a cemetery, dolomite outcrops that could contain stromatolites, farm house complex and farm labourer dwellings was documented. General site conditions and features on sites were recorded by means of photographs, GPS locations, and site descriptions. Possible impacts were identified and mitigation measures are proposed in the following report.

This report must also be submitted by the client to the SAHRA for peer review and comment.

1.1 Terms of Reference

Field study

Conduct a field study to: a) systematically survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest; b) record GPS points of sites identified as significant areas; c) determine the levels of significance of the various types of heritage resources recorded in the project area.

Reporting

Report on the identification of anticipated and cumulative impacts the operational units and associated infrastructure of the proposed project activity may have on the identified heritage resources for all 3 phases of the project; i.e., construction, operation and decommissioning phases. Consider alternatives, should any significant sites be impacted adversely by the proposed project. Ensure that all studies and results comply with the relevant legislation and the code of ethics and guidelines of ASAPA.

To assist the developer in managing the discovered heritage resources in a responsible manner, and to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

1.2. Archaeological Legislation and Best Practice

Phase 1, an AIA or a HIA is a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of a heritage specialist input is to:

- » Identify any heritage resources, which may be affected;
- » Assess the nature and degree of significance of such resources;
- » Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- » Assess the negative and positive impact of the development on these resources;
- » Make recommendations for the appropriate heritage management of these impacts.

The AIA or HIA, as a specialist sub-section of the EIA, is required under the National Heritage Resources Act NHRA of 1999 (Act 25 of 1999), Section 23(2) (b) of the NEMA and sections 39(3) (b)(iii) of the MPRDA.

The AIA should be submitted, as part of the EIA, BIA or EMP, to the PHRA if established in the province or to SAHRA. SAHRA will be ultimately responsible for the professional evaluation of Phase 1 AIA reports upon which review comments will be issued. 'Best practice' requires Phase 1 AIA reports and additional development information, as per the EIA, BIA/EMP, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 AIA reports authored by professional archaeologists, accredited with ASAPA or with a proven ability to do archaeological work.

Minimum accreditation requirements include an Honours degree in archaeology or related discipline and 3 years post-university CRM experience (field supervisor level).

Minimum standards for reports, site documentation and descriptions are set by ASAPA in collaboration with SAHRA. ASAPA is a legal body, based in South Africa, representing professional archaeology in the SADC region. ASAPA is primarily involved in the overseeing of ethical practice and standards regarding the

archaeological profession. Membership is based on proposal and secondment by other professional members.

Phase 1 AIAs are primarily concerned with the location and identification of sites situated within a proposed development area. Identified sites should be assessed according to their significance. Relevant conservation or Phase 2 mitigation recommendations should be made. Recommendations are subject to evaluation by SAHRA.

Conservation or Phase 2 mitigation recommendations, as approved by SAHRA, are to be used as guidelines in the developer's decision making process.

Phase 2 archaeological projects are primarily based on salvage/mitigation excavations preceding development destruction or impact on a site. Phase 2 excavations can only be conducted with a permit, issued by SAHRA to the appointed archaeologist. Permit conditions are prescribed by SAHRA and includes (as minimum requirements) reporting back strategies to SAHRA and deposition of excavated material at an accredited repository.

In the event of a site conservation option being preferred by the developer, a site management plan, prepared by a professional archaeologist and approved by SAHRA, will suffice as minimum requirement.

After mitigation of a site, a destruction permit must be applied for from SAHRA by the client before development may proceed.

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36. 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 the jurisdiction of 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 administrated by a local authority. Graves in this age category, located inside a formal cemetery administrated by a local authority, require the same authorisation as set out for graves younger than 60 years, in addition to 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.

Human remains that are less than 60 years old are protected 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 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 reinterment 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. 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).

1.3 Description of Study Area

1.3.1 Location Data

The proposed prospecting activities are located on portion 5 of the farm Rooipan 96 IQ. Rooipan is located approximately 17km northwest of Carletonville along the N14 national road to Ventersdorp. The site is located at 26° 16' 13.2825" S, 27° 14' 45.4507" E. The topography of the area is relatively flat, gently sloping downwards in a southerly direction.

1.3.2. Location Map

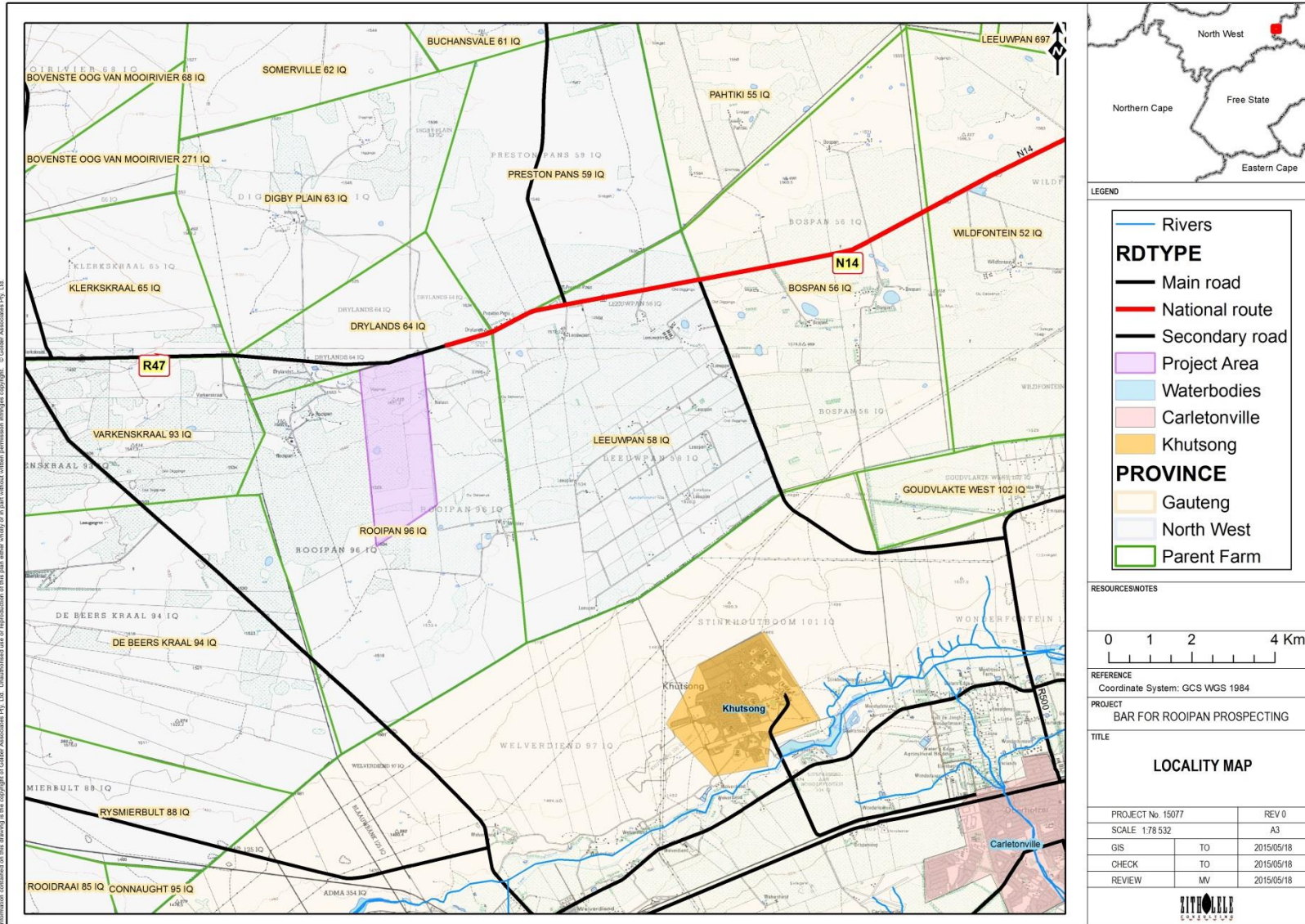


Figure 1: Location map.

2. APPROACH AND METHODOLOGY

The aim of the study is to cover archaeological databases and historical sources to compile a background history of the study area followed by field verification; this was accomplished by means of the following phases.

2.1 Phase 1 - Desktop Study

The first phase comprised a brief desktop study, gathering data to compile a background history of the area in question. It included scanning existing records for archaeological sites, historical sites, graves, and ethnographical information on the inhabitants of the area.

2.1.1 Literature Search

In addition to the background study the actions indicated below were also taken.

2.1.2 Information Collection

The SAHRA report mapping project (Version 1.0) and SAHRIS was consulted to collect data from previously conducted CRM projects in the region to provide a comprehensive account of the history of the study area.

2.1.3 Consultation

Consultation was conducted with the farm owner by the author on the 20th May 2015.

2.1.4 Google Earth and Mapping Survey

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where sites of heritage significance might be located.

2.1.5 Genealogical Society of South Africa

The database of the Genealogical Society was consulted to collect data on any known graves in the area.

2.2 Phase 2 - Physical Surveying

A field survey of the proposed study area was conducted; in addition to random walks and spot surveys focusing on drainage lines, outcrops, high lying areas and disturbances in the topography. The study area was surveyed by means of vehicle and extensive surveys on foot by a professional archaeologist on the 20th of May 2015. All sites discovered inside the proposed development area was plotted on 1:50 000 maps and their GPS co-ordinates noted. Digital photographs were taken at the sites.

2.3. Restrictions

Due to the fact that most cultural remains may occur below surface, the possibility exists that some features or artefacts may not have been discovered/ recorded during the survey. The possible occurrence of unmarked graves and other cultural material cannot be excluded. This study did not assess the impact on the palaeontological component of the project. Although Heritage Contracts and Archaeological Consulting CC surveyed the area as thoroughly as possible, it is incumbent upon the developer to stop operations and inform the relevant heritage agency should further cultural remains, such as stone tool scatters, artefacts, bones or fossils, be exposed during the process of development.

3 NATURE OF THE DEVELOPMENT

Prospecting activities will be undertaken over a period of 30 months and the application is for both invasive and non-invasive methods. Invasive methods are activities that result in land disturbances and comprise of trenching/drilling, sampling and sampling storage. Non-invasive methods are methods that do not cause disturbances to the land and include desktop research and include detailed geophysical surveys.

Prospecting will include the following:

- Bulk sampling from 4 areas
- Access roads
- Trenches

The prospecting does not include mining and or mining related activities.

4. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND OF THE STUDY AREA

4.1 General Information

Only one other study was conducted in the vicinity of the study area by Dreyer (2006). The study was conducted directly north of the current area under investigation. He recorded rectangular stone walled ruins, cemeteries old mine shafts and Late Iron Age Stone walled settlements.

Two sites are on record for the 2627 AD sheet at the archaeological data base at Wits. These sites are not located close to the study area and consist of Stone Age sites, Late Iron Age sites and historic remains.

The archaeological background and timeframe of the study area can be divided into the Stone Age and Iron Age.

4.2.1. Stone Age

The Stone Age is divided in Early; Middle and Late Stone Age and refers to the earliest people of South Africa who mainly relied on stone for their tools.

Early Stone Age: The period from \pm 2.5 million yrs. - \pm 250 000 yrs. ago. Acheulean stone tools are dominant. No Acheulean sites are on record near the project area, but isolated finds may be possible. However, isolated finds have little value.

Middle Stone Age: The Middle Stone Age includes various lithic industries in SA dating from \pm 250 000 yrs. - 25 000 yrs. before present. This period is first associated with archaic Homo sapiens and later Homo sapiens sapiens. Material culture includes stone tools with prepared platforms and stone tools attached to handles.

Late Stone Age: The period from \pm 25 000-yrs before present to the period of contact with either Iron Age farmers or European colonists. This period is associated with Homo sapiens sapiens. Material culture from this period includes: microlithic stone tools; ostrich eggshell beads and rock art. Sites in the open are usually poorly preserved and therefore have less value than sites in caves or rock shelters. Since there are no caves in the study area no LSA sites of significance is expected although isolated finds can be expected around pans.

Stone Age sites have not been recorded in the general area, the closest being Acheul period sites at Amcor, Acacia Rd and Kantienkoppe sites to the South East of the current study area (Bergh 1999). Some rock engravings were recorded close to Carltonville (Bergh 1999).

4.2.2. Iron Age (general)

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the pre-Historic and Historic periods. It can be divided into three distinct periods:

The Early Iron Age: Most of the first millennium AD.

The Middle Iron Age: 10th to 13th centuries AD

The Late Iron Age: 14th century to colonial period.

The Iron Age is characterised by the ability of these early people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living.

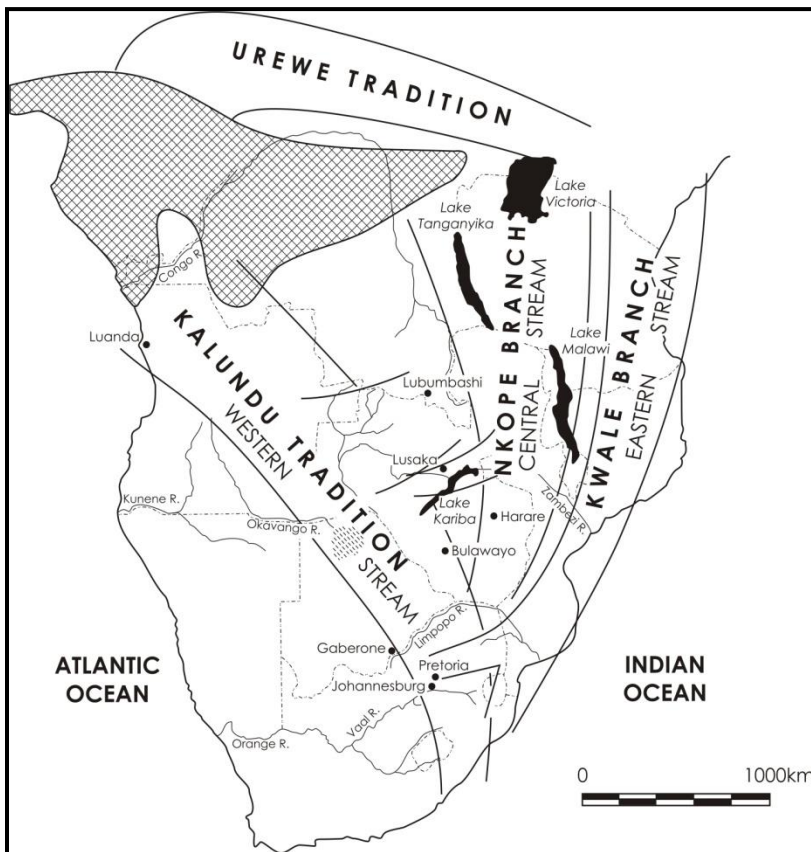


Figure 2: Movement of Bantu speaking farmers (Huffman 2007)

No Sites dating to the Early or Middle Iron Age have been recorded or is expected for the study area. For the Late Iron Age some stone walled settlements are on record North of the study area (Dreyer 2006) and to the South between Carltonville and Parys a large number Later Iron Age sites are on record (Bergh 1999).

4.2.3. Maps of the Area under Investigation

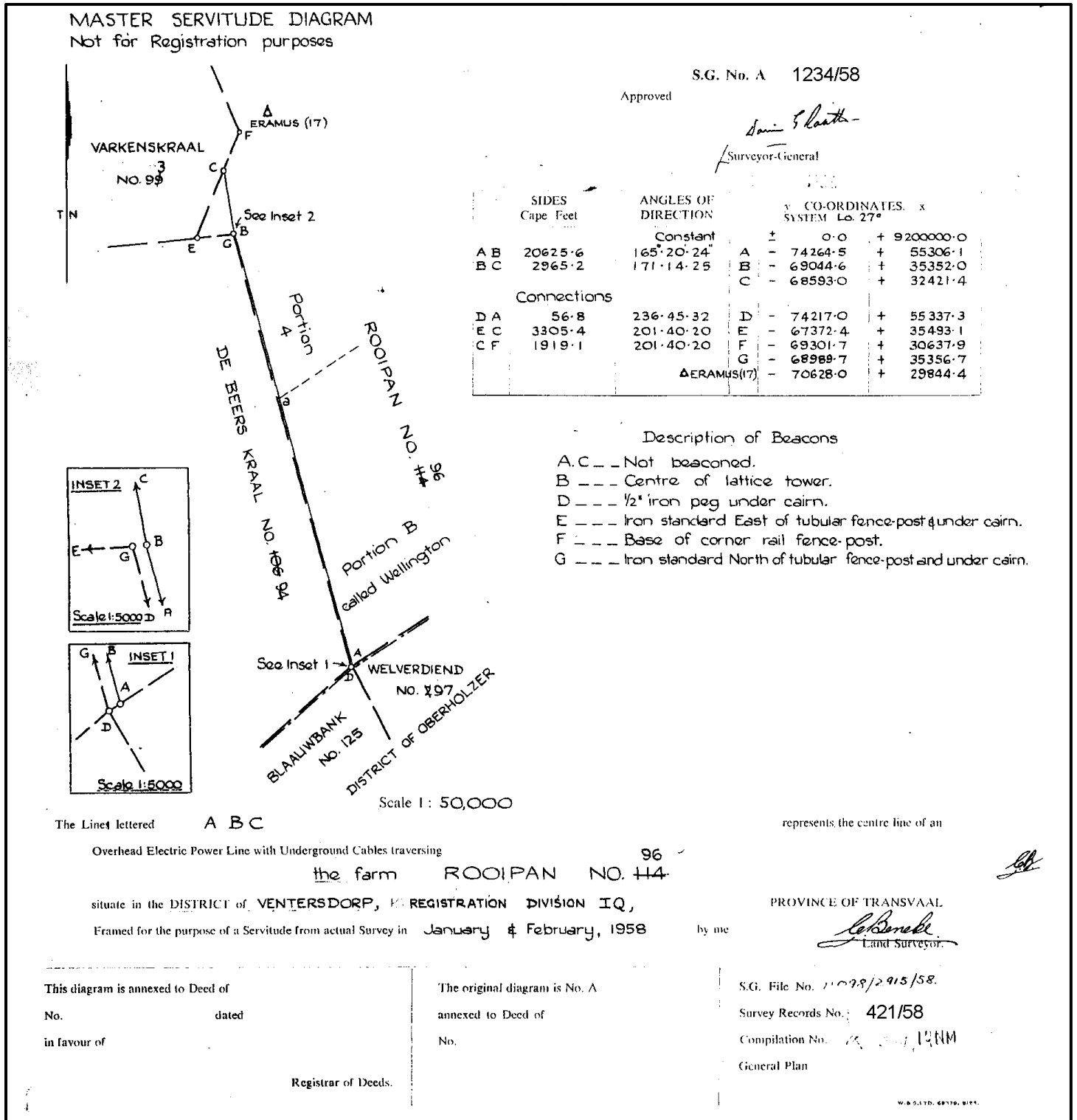


Figure 3: Chief Surveyor General Map of Rooipan drawn up in 1958

5. HERITAGE SITE SIGNIFICANCE AND MITIGATION MEASURES

The presence and distribution of heritage resources define a 'heritage landscape'. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area, or a representative sample, depending on the nature of the project. In the case of the proposed power station and transmission lines the local extent of its impact necessitates a representative sample and only the footprint of the areas demarcated for development were surveyed. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface.

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The following criteria were used to establish site significance:

- » The unique nature of a site;
- » The integrity of the archaeological/cultural heritage deposits;
- » The wider historic, archaeological and geographic context of the site;
- » The location of the site in relation to other similar sites or features;
- » The depth of the archaeological deposit (when it can be determined/is known);
- » The preservation condition of the sites;
- » Potential to answer present research questions.

Furthermore, The National Heritage Resources Act (Act No 25 of 1999, Sec 3) distinguishes nine criteria for places and objects to qualify as 'part of the national estate' if they have cultural significance or other special value.

These criteria are:

- » Its importance in/to the community, or pattern of South Africa's history;
- » Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- » Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- » Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- » Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- » Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- » Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- » Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;
- » Sites of significance relating to the history of slavery in South Africa.

5.1. Field Rating of Sites

Site significance classification standards prescribed by SAHRA (2006), and approved by ASAPA for the SADC region, were used for the purpose of this report. The recommendations for each site should be read in conjunction with section 9 of this report.

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 significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

6. BASELINE STUDY-DESCRIPTION OF SITES

The study did not assess the entire farm Rooipan 96 but focussed on portion 5 where exploration will occur. This area of approximately 550ha were subjected to a walkthrough (Figure 8), the proposed access routes all consist of existing roads and were easily accessible with a vehicle. The study area is characterised by sandy soil and was extensively cultivated in the past (Figure 4) and large stone heaps occur throughout the study area as a result of clearing fields for ploughing (Figure 5). In the north western portion of the study area large scale mining occurred associated with mining activities on the adjacent farm (Figure 6). All of these activities would have impacted negatively on surface indications of heritage sites.

Within the study area 4 areas of interest were recorded (Figure 9). These consist of a farm house complex and farm labourer complex, an informal cemetery and two areas where dolomite is exposed.

The current farmhouse complex where the owner resides is located at 6° 15' 36.1671" S, 27° 15' 09.2880" E. The site consists of residential dwellings, outbuildings and kraals. The farm labourer dwellings are located at 26° 15' 49.5819" S, 27° 15' 12.1824" E. The age of the structures is unknown but no impact is foreseen by exploration activities on either the farm complex or farm labourer dwellings.

A single informal cemetery is located at 26° 15' 42.6815" S, 27° 15' 00.9540" E. The site consists of approximately 28 graves all aligned east to west (Figure 11 -12). Grave dressings consist mostly of stone packed dressings with only one grave having a headstone belonging to Dipuo Lisbeth who passed away in 1994. Graves are of high social significance and should be avoided.

Dolomite outcrops occur in the north western corner of the study area between 26° 15' 25.0380" S, 27° 14' 29.0435" E and 26° 15' 17.1325" S, 27° 14' 30.1129" E. Dolomites in the area is known to contain plant fossils like stromatolites and should be assessed by a palaeontologist prior to mining in the area. According to the SAHRIS palaeontological sensitivity map the study area is of very high sensitivity and field assessment and protocol for finds is required.



Figure 4: Existing agricultural fields



Figure 5: Stone heaps



Figure 6: Previous mining activities



Figure 7: General site conditions



Figure 8: Map indicating track logs of the survey in black.

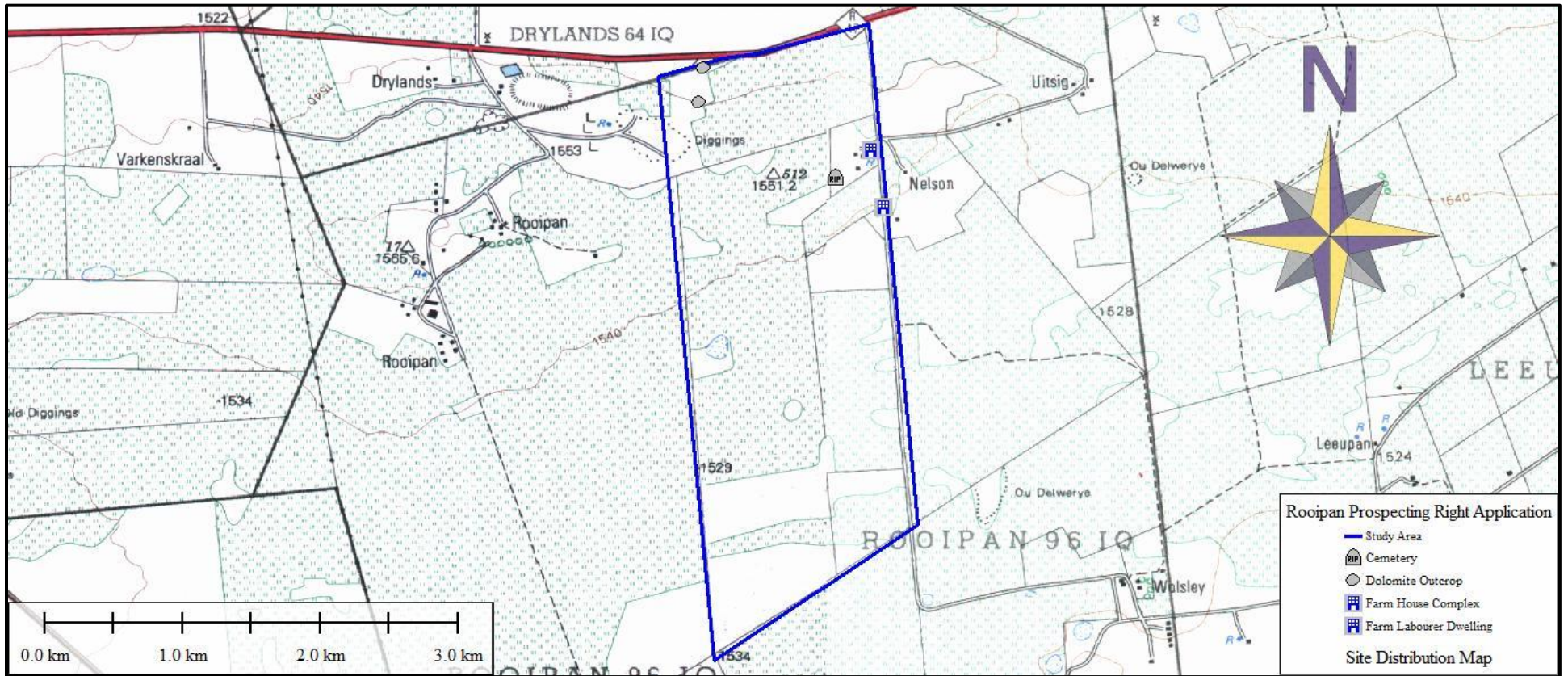


Figure 9: Map indicating recorded features.



Figure 10: Farm labourer dwelling



Figure 11: Grave at cemetery



Figure 12: Grave with headstone

7. CONCLUSIONS AND RECOMMENDATIONS

HCAC was contracted to assess the impact of the proposed prospecting activities on heritage resources on portion 5 of the farm Rooipan 96. The study area of approximately 550ha was visited over a period of one day. The study area was extensively cultivated in the past and large scale mining occurred on the north western portion of the farm. All of these activities would have impacted negatively on surface indications of heritage sites. However, within the study area 4 areas of interest were recorded. These consist of a farm house complex and farm labourer complex, an informal cemetery and two areas where dolomite is exposed.

The following recommendations are applicable for the proposed exploration activities.

- Drilling, trenches and bulk sampling should avoid the recorded sites. Sites must be demarcated during exploration to avoid accidental damage to the sites and operation staff must be informed of the location of heritage sites. A Buffer zone of 20 meters is recommended.
- If the project is feasible and progresses to mining a Phase 1 study is recommended for the study area prior to any earth work being conducted.
- According to the SAHRIS paleontological sensitivity map the study area is of very high sensitivity and should be assessed by a palaeontologist prior to mining occurring in the area.

General

Due to the subsurface nature of archaeological material and graves the possibility of the occurrence of unmarked or informal graves and subsurface finds cannot be excluded. If during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find.

Based on approval from SAHRA there is from an archaeological point of view no reason why the exploration activities should not proceed if the recommendations as made in this report are adhered to.

8. PROJECT TEAM

Jaco van der Walt, Project Manager

9. STATEMENT OF COMPETENCY

I (Jaco van der Walt) am a member of ASAPA (no 159), and accredited in the following fields of the CRM Section of the association: Iron Age Archaeology, Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation. This accreditation is also valid for/acknowledged by SAHRA and AMAFA.

I have been involved in research and contract work in South Africa, Botswana, Zimbabwe, Mozambique and Tanzania as well as the DRC; and have conducted more than 300 AIAs since 2000.

10. REFERENCES

- Berg, J.S. (Ed).,Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies. Edited by J. S. Bergh. 1999. Pretoria: J. L. van Schaik Uitgewers.
- Dreyer, J. 2003. First Phase Archaeological and Cultural Heritage Assessment of the Proposed Developments at the Farms Bovenste Oog 68 IQ (Mooi River), Digby Plain 63 IQ, Sommerville 62 IQ, Preston Pans 59 IQ and Dryland 64 IQ, Ventersdorp, North West Provinc
- Mucina, L. & Rutherford,M.C. 2006. The vegetation map of South Africa, Lesotho and Swaziland. SANBI, Pretoria.
- National Heritage Resources Act NHRA of 1999 (Act 25 of 1999)
- Ross, R. 2002. A concise history of South Africa.Cambridge: Cambridge University Press.
- SAHRA Report Mapping Project Version 1.0, 2009
- SAHRIS (Cited 4 June 2015)
- WITS Archaeological Database 2009

MAPS

www.Csg.gov.za (Cited 3 June 2105)