

THE RAND EN DAL EXT13 PROPOSED DEVELOPMENT ON PORTION 29 OF THE FARM PAARDEPLAATS 177 IQ, KRUGERSDORP, MOGALE CITY DISTRICT, GAUTENG PROVINCE

Phase 1 – Heritage Impact Assessment

Issue Date: 26 January 2015

Revision No.: 1

Project No.:

Declaration of Independence

PGS Heritage, an appointed Heritage Specialist for Singisa Environmental, has compiled the report. The views stipulated in this report are purely objective and no other interests are displayed during the decision making processes discussed in the Heritage Impact Assessment Process.

HERITAGE CONSULTANT: PGS Heritage

CONTACT PERSON: Wouter Fourie

Tel: +27 (0) 12 332 5305

Email: wouter@gravesolutions.co.za

SIGNATURE:

ACKNOWLEDGEMENT OF RECEIPT

CLIENT: Singisa Environmental

CONTACT PERSON: Mr Nico Botha

Tel: (011) 678 4685 Cell: 082 824 2213

Fax: 086 697 1819

E-mail: singisa@global.co.za

SIGNATURE:

HIA – Rand en Dal Ext 13 ii

Date:	26 January 2015		
Document Title:	THE RAND EN DAL EXT13 PROPOSED DEVELOPMENT ON PORTION 29 OF THE FARM PAARDEPLAATS 177 IQ, KRUGERSDORP, MOGALE CITY DISTRICT, GAUTENG PROVINCE		
Control	Name	Signature	Designation
Authors	W. Fourie	A	Heritage Specialists/ Principal Investigator
Reviewed	N Botha		Singisa

EXECUTIVE SUMMARY

PGS Heritage (PGS) was appointed by Singisa Environmental to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Impact Report (BAR) for the proposed development on Portion 29 of the farm Paardeplaats 177 IQ, Krugersdorp, Mogale City District, Gauteng Province.

During the heritage study a total of 13 heritage sites were identified within the proposed development area. Sites associated with the use of the valley as spiritual retreat and ceremonial space (RD01 and RD04) is situated outside the developable land. The remains of mining and prospecting (RD02, RD03, RD05-08 and RD10 and RD13) represent a reminder of the early days of gold discovery and prospecting before the discovery of gold on the Witwatersrand. A single cemetery (RD09) containing two graves is associated with more recent history and still has a strong family link to one of the residents of the property. The main farmstead and dwellings (RD11) dates from the early part of the 20th century, while portions of the main dwelling were constructed with materials taken from an old British fort constructed during the South African War (1899-1901).

The following recommendations are made with regards to the finds:

1.1 Graves

Two graves were identified at site **RD09** and the following is recommended:

- Demarcate the site as a no-go area during the construction phase and preserved in situ;
- The monitoring of the structure must be included in the HMP of the proposed project.

1.2 Historic Farmstead

The original farmstead with main dwelling and outbuildings were identified at **RD11**. Further associated with the site are the remains of a British field hospital. The following mitigation measures as a minimum is required:

- It is recommended that a conservation architect evaluate the farmstead buildings to determine the significance of each building and make recommendations for design and redevelopment of each structure as part of the larger development.
- The monitoring of the structure must be included in the HMP of the proposed project,
- Any alterations to the farmstead will require permission from GPHRA as prescribed under Section 34 of the NHRA.

HIA – Rand en Dal Ext 13 iv

1.3 Remains of prospecting and mining

Seven sites associated with early prospecting and mining were identified on the property (RD03-RD08 and RD10, RD13). The following mitigation measures needs to be implemented at a minimum:

- Demarcate the sites as a no-go area during the construction phase;
- The monitoring of the structures must be included in the HMP of the proposed project, and
- It is recommended that the mining sites be preserved as part of the local history of the area and incorporated in a conservation area in the development.

1.4 Spiritual retreat and ceremonial space

The valley floor and stream is associated with spiritual and religious ceremonies and is seen by some groups as sacred. Two areas (RD01 and RD04) have been identified as examples of such areas. The following mitigation measures area recommended:

- Demarcate the valley and undevelopable area of property as a no-go area during the construction phase;
- Access to the valley should be controlled, through an access register. No access should be unreasonably stopped.

1.5 Palaeontology

The study area is underlain by the Witwatersrand Supergroup does not contain any fossils and has no palaeontological significance. No further mitigation work is required.

1.6 Cultural landscape

The evaluation of the study area and surrounds as demarcated, has shown the general area to be rich in heritage resources spanning the historical as well as spiritual/religious ambit. The cultural landscape associated with the Saronde farm is further bolstered by the academic significant figures of the Tracey family that has a long association with the farm and its history. The heritage significance of the Saronde landscape is rated as of high significance and given a rating of Grade 3A.

The need for a development that is sympathetic towards the cultural and natural heritage of the property cannot be stressed enough. The current state of the property shows the need for such a development and will in the long run aid the conservation of the estate.

1.7 Heritage Management Plan

In 2012 the GPHRA granted provisional protection of the Saronde Estate under Section 29 of the NHRA. This report has confirmed the heritage significance of the property and the need for a heritage sympathetic development. It is recommended that a Heritage Management Plan be developed in conjunction and during the development of the proposed development layout to ensure the incorporation of the heritage aspects of the property.

1.8 General

Further to these recommendations, the general Heritage Management Guidelines in Section 7 need to be incorporated into the EMP for the project.

HIA – Rand en Dal Ext 13 vi

CON	ITENTS	Page	
1.1	Graves	iv	
1.2	Historic Farmstead	iv	
1.3	Remains of prospecting and mining	v	
1.4	Spiritual retreat and ceremonial space	v	
1.5	Palaeontology	v	
1.6	Cultural landscape	v	
1.7	Heritage Management Plan	vi	
1.8	General	vi	
2	INTRODUCTION		1
2.1	Scope of the Study	1	
2.2	Specialist Qualifications	1	
2.3	Assumptions and Limitations	1	
2.4	Legislative Context	2	
2.5	Terminology and Abbreviations	3	
3	TECHNICAL DETAILS OF THE PROJECT		7
3.1	Site Location	7	
3.2	Site Description	8	
3.3	Project Description	10	
4	ASSESSMENT METHODOLOGY		10
4.1	Methodology for Assessing Heritage Site Significance	10	
5	ARCHIVAL AND DESKTOP RESEARCH FINDINGS		16
5.1	Early Stone Age:	17	
5.2	Middle Stone Age:	17	
5.3	Late Stone Age:	17	
5.4	Cartographic findings	17	
5.5	Gold mining and prospecting on Paardeplaats and surrounds	22	
5.6	Farm ownership	30	
5.7	Saronde and it association with Dr Hugh (1903 – 1977), Prof Andrew, Geoffrey	Tracey, AMI	
and	ILAM	30	
5.8	The South African War	31	
5.9	Natural heritage	32	
5.10	SAHRIS Database – Previous Heritage Impact Assessment Reports	32	
5.11	Current heritage status of the property	33	

HIA – Rand en Dal Ext 13 vii

5.12	Palaeontology of the area 34		
6	FIELD WORK FINDINGS		35
6.1	Heritage Findings	36	
6.2	Cultural Landscape	47	
7	CONCLUSIONS AND RECOMMENDATIONS		47
7.1	Graves	48	
7.2	Historic Farmstead	48	
7.3	Remains of prospecting and mining	48	
7.4	Spiritual retreat and ceremonial space	49	
7.5	Palaeontology	49	
7.6	Cultural landscape	49	
7.7	Heritage Management Plan	49	
7.8	General	50	
8	HERITAGE MANAGEMENT GUIDELINES		50
8.1	General Management Guidelines	50	
8.2	All phases of the project	53	
9	REFERENCES		55
9.1	Published Literature Sources	55	
9.2	Unpublished Literature Sources	56	
9.3	Relevant Archival Documents	56	
9.4	Archival Maps	56	
9.5	Historical Maps	57	
9.6	Internet Source Material	57	
List	of Appendices		
Α	Legislative Requirements – Terminology and Assessment Criteria		
В	GPHRA Provisional Protection Letter		
С	Heritage Maps		
List	of Figures		
	re 1 - Human and Cultural Time line in Africa (Morris, 2009)		
_	re 2 – Regional locality		
_	re 3 – Study area locality		ک . د

Figure 5 – Open grassland ridges in north of property	9
Figure 6 -Portion of map dating to 1891 or 1892. The area to the south of the bottom green line	
demarcated by the red circle is the study area in question. Note the area demarcated as a	
"Mijnpacht" (TAB, Maps, S.2/120)	. 18
Figure 7 - Old map from the Anglo Boer War period. Note the blockhouse/fort indicated on the fa	ırm
Paardeplaats in the figure's bottom left-hand corner	. 19
Figure 8 - Map (TAB, MAP, 3/1419) dating from 1913. Note no buildings area located in the study	,
area	. 20
Figure 9 - The 1943 2627BB sheet. Note the single structure indicated in the vicinity of the main	
farm house	. 21
Figure 10 – The 1954 topographical sheet. Note the additional roads on the property	. 22
Figure 11 - Pieter Marais, the discoverer of alluvial gold on the Jukskei River (www.joburg.co.za)	. 24
Figure 12 - Harry (left) and Fred Struben (www.joburg.co.za)	. 26
Figure 13 - Fred Struben's map dating from 1885. (Red circle indicate study area	. 27
Figure 14 - View of Surprise reef viewed from the west toward Portion 29 (the current study area	_
red shaded area) (Red lines indicate reef alignment and yellow arrows shafts and prospecting	
trenches)	. 30
Figure 15 – SAHRIS palaeontological sensitivity map	. 34
Figure 16 – Map of the study area with identified heritage sites	. 36
Figure 17 – View of pool next to old picnic spot	. 36
Figure 18 – View of section of old stone dam wall in lower section close to the King's Kloof area \dots	. 38
Figure 19 – Incline shaft at RD03	. 39
Figure 20 – Shallow incline shaft at RD05	. 39
Figure 21 – Shallow incline shaft at RD13	. 40
Figure 22 – RD08 – Drill testing holes in northern ridge of property	. 40
Figure 23 – Remains of vertical shaft at RD10	. 40
Figure 24 – Hearth used by people visiting the property for religious ceremonies	. 43
Figure 25 – View of the over grown area where the two graves are situated	. 44
Figure 26 – View of main dwelling on farmstead thought to have been constructed in the early	
1900's	. 45
Figure 27 – front door of main house with veranda	. 46
Figure 28 – View of main veranda. Original house is the section on the right hand	. 46
Figure 29 – Dormitories	. 46
Figure 30 – Retaining wall though to have been part of British field hospital	46

HIA – Rand en Dal Ext 13 ix

2 INTRODUCTION

PGS Heritage (PGS) was appointed by Singisa Environmental to undertake a Heritage Impact Assessment (HIA) that forms part of the Basic Environmental Impact Report (BAR) for the proposed development on Portion 29 of the farm Paardeplaats 177 IQ, Krugersdorp, Mogale City District, Gauteng Province.

2.1 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 aims to inform the Environmental Impact Assessment Report (EIR) in the development of a comprehensive EMP to assist the developer in managing the discovered 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).

2.2 Specialist Qualifications

PGS Heritage (PGS) compiled this Heritage Impact Assessment (HIA).

The staff at PGS has a combined experience of nearly 70 years in the heritage consulting industry. PGS and its staff have extensive experience in managing HIA processes and will only undertake heritage assessment work where they have the relevant expertise and experience to undertake that work competently.

Wouter Fourie, Principal Heritage Specialist for this project, is registered as a Professional Archaeologist with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation, as well as being accredited as a Professional Heritage Practitioner with the Association of Professional Heritage Practitioners – Western Cape (APHP).

2.3 Assumptions and Limitations

Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the development area. Various factors account for this, including the subterranean nature of some archaeological sites. As such, should any heritage features and/or objects not included in the present 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. In the event that any graves or burial places are located during the development, the procedures and requirements pertaining to graves and burials will apply as set out below.

2.4 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

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. Environmental Management Plan (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 (Act 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 legally compatible HIA report is compiled.

2.5 Terminology and Abbreviations

2.5.1 Archaeological resources

This includes:

- 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 any area within 10m of such representation;
- 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.

2.5.2 Cultural significance

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

2.5.3 Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and 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

2.5.4 Early Stone Age

The archaeology of the Stone Age, between 400 000 and 2500 000 years ago.

2.5.5 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.

2.5.6 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).

2.5.7 Heritage resources

This means any place or object of cultural significance.

2.5.8 Holocene

The most recent geological time period which commenced 10 000 years ago.

2.5.9 Late Stone Age

The archaeology of the last 30 000 years, associated with fully modern people.

2.5.10 Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800s, associated with people who carried out iron working and farming activities such as herding and agriculture.

2.5.11 Middle Stone Age

The archaeology of the Stone Age between 30-300 000 years ago, associated with early modern humans.

2.5.12 Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of Southern African Professional Archaeologists
CRM	Cultural Resource Management
DEA	Department of Environmental Affairs
EIA practitioner	Environmental Impact Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
I&AP	Interested & Affected Party
LSA	Late Stone Age
LIA	Late Iron Age
MSA	Middle Stone Age
MIA	Middle Iron Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
ROD	Record of Decision
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Agency

Refer to **Appendix A** for further discussions on heritage management and legislative frameworks.

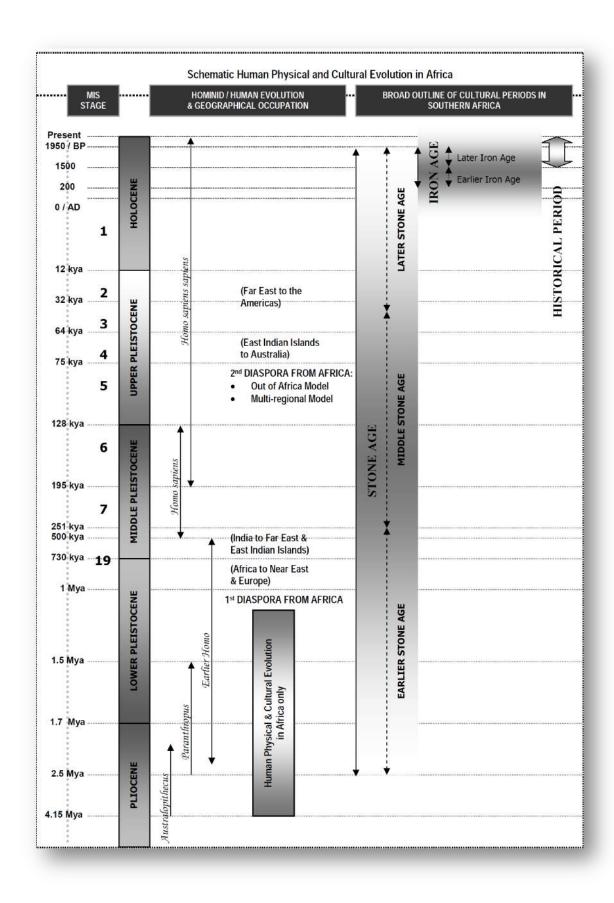


Figure 1 - Human and Cultural Time line in Africa (Morris, 2009).

3 TECHNICAL DETAILS OF THE PROJECT

3.1 Site Location

The site, portions 29 of the farm Paardeplaats 177 IQ, is situated on the northern edge of the Rand en Dal suburb of Krugersdorp, Mogale City District of Gauteng (Figure 2).

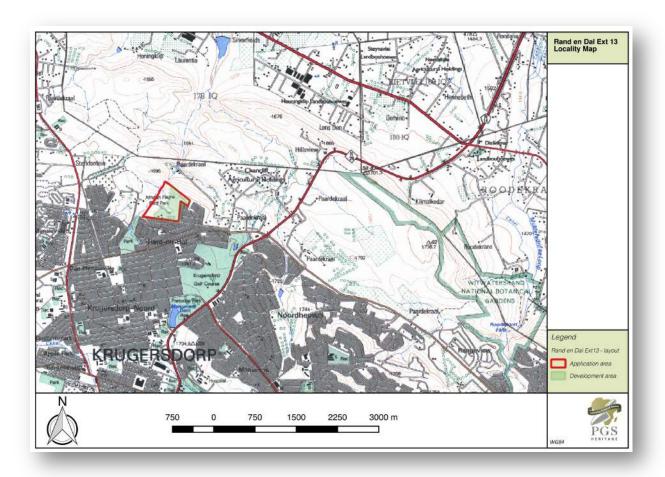


Figure 2 – Regional locality

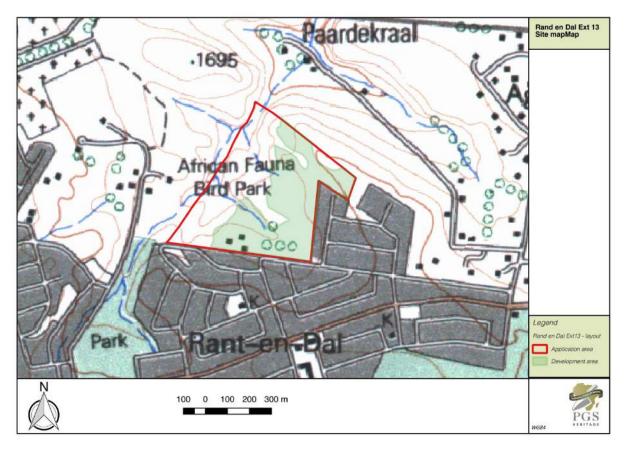


Figure 3 – Study area locality

3.2 Site Description

The site is situated to the north of the Rand-en-Dal residential area. Die site is approximately 20 hectares in extent and characterised by a gentle sloping eastern section and a riverine valley covering 60 % of the study area (predominantly on the western half of the study area. The property rises to the north culminating in the first set of ridges of the Witwatersrand Range running east to west through Gauteng.



Figure 4 – Ridges with river valley to west



Figure 5 – Open grassland ridges in north of property

3.3 Project Description

At this stage the current owners are pursuing the option of the development of the Saronde farm, however no firm proposals are decided on. The specialist studies that include the HIA will provide guidelines on the possible development options considered and which will be most suited for the property.

4 ASSESSMENT METHODOLOGY

The section below outlines the assessment methodologies utilised in the study.

4.1 Methodology for Assessing Heritage Site Significance

PGS Heritage (PGS) compiled this Heritage Impact Assessment (HIA) report for the proposed residential development on Portion 29 of the farm Paardeplaats 177 IQ, Krugersdorp, Mogale City District, Gauteng. 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 relies greatly on the Heritage Background Research.

Step II – Physical Survey: A physical survey was conducted on foot through the proposed project area by a qualified archaeologist, which aimed at locating and documenting sites falling within and adjacent to the proposed development footprint.

Step III – The final step involved the recording and documentation of relevant archaeological resources, the assessment of resources in terms of the HIA criteria and report writing, as well as mapping and constructive recommendations.

The significance of identified heritage sites was based on four 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)
 - o Low <10/50m2
 - Medium 10-50/50m2
 - o 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 activity position;
- D Preserve site, or extensive data collection and mapping of the site; and
- E Preserve site.

Impacts on these sites by the development will be evaluated as follows:

4.1.1 Site Significance

Site significance classification standards prescribed by the SAHRA (2006) and approved by the ASAPA for the Southern African Development Community (SADC) region, were used for the purpose of this report.

Table 1: Site significance classification standards as prescribed by SAHRA.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance	Grade 1		Conservation; National Site
(NS)			nomination
Provincial Significance	Grade 2		Conservation; Provincial Site
(PS)			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	Grade 4A	High / Medium	Mitigation before destruction
(GP.A)		Significance	
Generally Protected B	Grade 4B	Medium Significance	Recording before destruction
(GP.B)			
Generally Protected C	Grade 4C	Low Significance	Destruction
(GP.A)			

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 summarised explanation of each of the qualitative descriptors along with the equivalent quantitative rating scale for each of the aforementioned criteria is given in Table 2.

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

Rating	Significance	Extent Scale	Temporal Scale
1	VERY LOW	Isolated sites / proposed route	<u>Incidental</u>
2	LOW	Study area	<u>Short-term</u>
3	MODERATE	Local	Medium-term
4	HIGH	Regional / Provincial	<u>Long-term</u>
5	VERY HIGH	Global / National	<u>Permanent</u>

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

4.1.2 Significance Assessment

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, the magnitude (i.e. the size) of area affected by atmospheric pollution may be extremely large (1 000 km²) but the significance of this effect is dependent on the concentration or level of pollution. If the concentration is great, the significance of the impact would be HIGH or VERY HIGH, but if it is diluted it would be VERY LOW or LOW. Similarly, if 60 ha of a grassland type are destroyed the impact would be VERY HIGH if only 100 ha of that grassland type were known. The impact would be VERY LOW if the grassland type was common. A more detailed description of the impact significance rating scale is given in Table 3 below.

Table 3: Description of the significance rating scale

Ra	ting	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 are 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.

4.1.3 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 4.

Table 4: Description of the spatial scale

Ra	ting	Description	
5	Global/National	The maximum extent of any impact.	
4	Regional/Provincial	The spatial scale is moderate within the bounds of impacts possible, and will be felt at a regional scale (District Municipality to Provincial Level).	
3	Local	The impact will affect an area up to 10 km from the proposed route.	
2	Study Area	The impact will affect an area not exceeding the Eskom servitude.	
1	Isolated Sites / proposed route	The impact will affect an area no bigger than the power line pylon footing	

4.1.4 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 scale is rated according to criteria set out in Table 5.

Table 5: Description of the temporal rating scale

Ra	ting	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 facility.	
4	Long term	The environmental impact identified will operate beyond the life of operation.	
5	Permanent	The environmental impact will be permanent.	

4.1.5 Degree of Probability

Probability or likelihood of an impact occurring will be described as shown in Table 6 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

4.1.6 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 7. The level of detail for specialist studies is determined according to the degree of certainty required for decision-making. The impacts are discussed in terms of affected parties or environmental components.

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.
Don't know	The consultant cannot, or is unwilling, to make an assessment given available information.

4.1.7 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:

Impact Risk = ((SIGNIFICANCE + Spatial + Temporal) \div 3) X (Probability \div 5)

An example of how this rating scale is applied is shown in Table 8 below.

Table 8: Example of Rating Scale

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
	LOW	Local	Medium-term	Could Happen	
Impact to air	2	3	3	3	1.6

Note: The significance, spatial and temporal scales are added to give a total of 8, that is divided by 3 to give a criteria 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 9 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 air quality above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

4.1.8 Cumulative Impacts

It is a requirement that the impact assessments take cognisance of cumulative impacts. In fulfilment of this requirement the impact assessment will take cognisance of any existing impact sustained by the operations, any mitigation measures already in place, any additional impact to environment through continued and proposed future activities, and the residual impact after mitigation measures.

It is important to note that cumulative impacts at the national or provincial level will not be considered in this assessment, as the total quantification of external companies on resources is not possible at the project level due to the lack of information and research documenting the effects of existing activities. Such cumulative impacts that may occur across industry boundaries can also only be effectively addressed at Provincial and National Government levels.

5 ARCHIVAL AND DESKTOP RESEARCH FINDINGS

The aim of the archival and desktop background research is to identify possible heritage resources that could be encountered during the fieldwork. The archival and desktop research focused on available information sources, which were used to compile a background history of the study area and surrounds, as summarised in **Table 10**. This data then informed the possible heritage resources to be expected during field surveying.

Table 10: Summary of History of the farm and surrounds

DATE DESCRIPTION

2.5 million to

250 000 years

ago

5.1 Early Stone Age:

The Early Stone Age (ESA) dates between 2.5 million to 250 000 years BP, and refers to the earliest occurrences of stone tool manufacturing associated with Homo Sapiens' predecessors. Technological industries associated with the ESA are the Oldowan (2.0-1.7 mya), characterised by large stone tools with minimal retouch, large flakes and hammer stones, followed by the Acheulean (1.5mya-250 000 mya), characterised by large cutting tools such as hand axes and cleavers (Mitchell, 2002).

250 000 to 20

000 years ago

5.2 Middle Stone Age:

The Middle Stone Age (MSA) dates between 250 000 to 20 000 years BP. The MSA dates from around 250 000 BP originate from sites such as Leopards Kopje in Zambia, while the late Pleistocene (125 000 BP) yields a number of important dated sites associated with modern humans (Deacon & Deacon, 1999). The MSA is characterised by flakes and blade industries, the first use of grindstones, wood and bone artefacts, personal ornaments, use of red ochre, circular hearths and a hunting and gathering lifestyle.

40 000 years

ago - to the

historic past

5.3 Late Stone Age:

The period from \pm 22 000-yrs before present to the period of contact with either Iron Age farmers or European colonists.

1820-90's

5.4 Cartographic findings

As heritage impact assessments primarily deal with the locating of heritage resources within a pre-defined geographic landscape, the study of historic and archival maps as part of such a study can be very useful.

Two primary sources for maps were utilised, namely the the National Archives (Pretoria) and the archival section of the Directorate:Surveys & Mapping (Cape Town).

5.4.1 TAB, MAPS, S.2/120

Titled "Plan van de Goudvelden en Aanliggende Plaatsen onder de jurisdictie van den Myncommissaris van Krugersdorp" this map appears to date from either 1891 or 1892.

Again, although the absolute accuracy of the map (Figure 6) is doubtful, a number of features of interest are depicted thereon. These include a farmstead and buildings, the agricultural fields on Honingklip, and importantly an area demarcated as "Mijnpacht". Macdonald (1933:150) defines the term as "m(M)ining ground which the owner of the farm, or holder of the mineral rights, is entitled to select prior to the proclamation of the land by the Government." Cunningham (1987:131) defines the term as "…an agreement whereby one tenth of the claims on an area proclaimed a goldfield was reserved for the use and profit of the owner of the land. This was to protect the owner from interference by diggers."

As can be seen from the map, the area demarcated as a "Mijnpacht" includes those sections of the study area on which evidence of mining and prospecting were found.

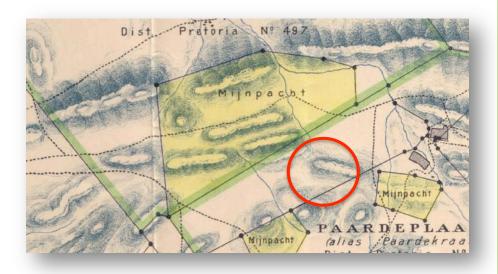


Figure 6 -Portion of map dating to 1891 or 1892. The area to the south of the bottom green line demarcated by the red circle is the study area in question. Note the area demarcated as a "Mijnpacht" (TAB, Maps, S.2/120).

5.4.2 TAB, Maps, 3/1896

The map depicted here forms part of the Major Jackson Series (*Figure 7*). This specific sheet is named "*Johannesburg-Heidelberg*", while the sheet number is 13. It was compiled and drawn in the Surveyor-General's office in Pretoria, and is dated to June 1902 (the third revised edition of the particular sheet). The date of the map indicates that this revised edition was made just after the end of the Anglo Boer War, which lasted from October 1899 to May 1902.

Note as well the indication of a blockhouse or fortification further to the south of the present study area, named Fort Craig.

5.4.3 TAB, Maps, 3/1419

Dating to 1913, this map represents the Krugersdorp sheet of a 1:125 000 scale topographical map series (Figure 8). It was compiled by the Geographical Section, General Staff, Transvaal.

Of interest as well are the two names given for the farm, namely Honingklip and Honingkloof.

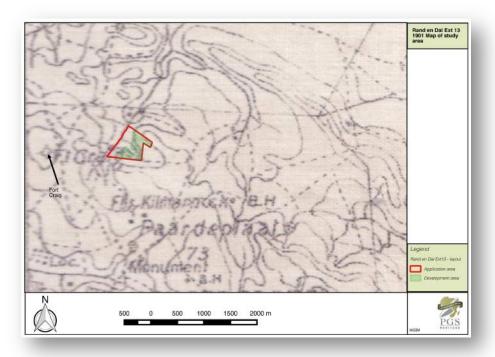


Figure 7 - Old map from the Anglo Boer War period. Note the blockhouse/fort indicated on the farm Paardeplaats in the figure's bottom left-hand corner.

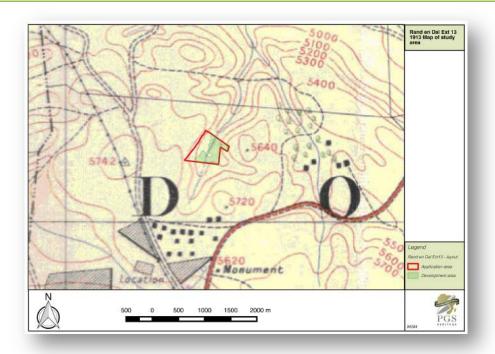


Figure 8 - Map (TAB, MAP, 3/1419) dating from 1913. Note no buildings area located in the study area

5.4.4 2627BB 1:50 000 Topographical Sheet, 1943

A number of significant features are shown on the map (Figure 9), however of importance is the single house indicated inside the study area corresponding with the position of the Saronde farmstead.

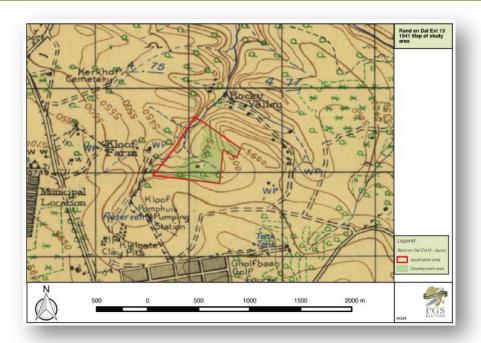


Figure 9 - The 1943 2627BB sheet. Note the single structure indicated in the vicinity of the main farm house

5.4.5 2627BB 1:50 000 Topographical Sheet, 1954

The 1954 1:50 000 topographical sheet (Figure 10) was studied as well. The Saronde farmstead is visible as well as the road down to the picnic site and river pools.

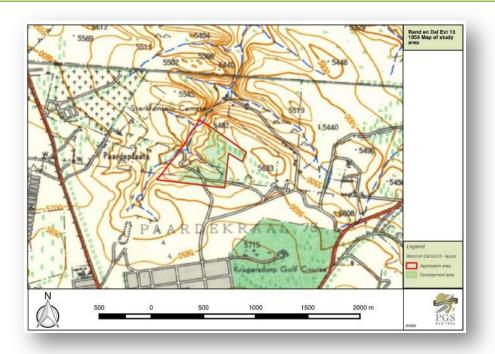


Figure 10 – The 1954 topographical sheet. Note the additional roads on the property

5.5 Gold mining and prospecting on Paardeplaats and surrounds

The farm Paardeplaats formed part of the history of gold mining and prospecting of early Johannesburg and surrounds. Although none of the main discoveries/activities (i.e. first discovery of Confidence Reef on the farm Wilgespruit or alternatively the discovery of the Main Reef on the farm Langlaagte) took place on Paardeplaats, it was certainly prospected and mined during the early years. The fact that the Struben brothers, and especially Fred Struben also worked here provides further value to this farm in terms of the development of gold mining and Johannesburg.

5.5.1 General overview of the history of gold mining and prospecting in the area Using information summarised by Bergh (1999), a chronological timeline can be compiled of the history of gold discoveries on the farms in the area later called the Witwatersrand Gold Fields:

- 1834 Karl Kruger supposedly discovers gold in an unknown location on the Witwatersrand.
- 1852 J.H. Davis discovers gold on the farm Paardeplaats/Groot Paardekraal.

- 9 October 1853 P.J. Marais discovers alluvial gold on the farm Zandfontein.
- End of 1874 Henry Lewis discovers workable gold on Blaauwbank. During this same period gold was also discovered on Zuikerboschfontein and Koesterfontein.
- 1876 Tobias Johannes Mare discovers gold on Wilgespruit and Braamfontein, but no further steps are taken.
- 1881 Discovery of gold on the farm Kromdraai by S.J. Minnaar. This discovery focussed attention back to the Krugersdorp after it had shifted to the region south of Heidelberg. On 8 December 1885 Kromdraai was also proclaimed as public diggings, becoming the first farm in the Witwatersrand to be officially proclaimed as a gold field. According to Erasmus (1944) Jan Bantjes subsequently did some work there. Preller (1935) also indicates that Bantjes discovered gold here in 1882 as well.
- 1882 Gold discovered on Tweefontein, adjacent to Kromdraai. By June
 1885 a stamp battery was working on the farm.
- January 1884 Fred Struben discovers gold on Sterkfontein, which represented the first real discovery of gold in the Witwatersrand Group.
- April 1884 Fred Struben discovers banket formations for the first time on the farm Paardeplaats/Groot Paardekraal.
- September 1884 Fred Struben discovers Confidence Reef on the eastern side of the farm Wilgespruit.
- March 1885 Fred Struben discovers gold bearing conglomerate on Honingklip.
- 1886 Accidental discovery of Main Reef on Langlaagte by George Harrison.



Figure 11 - Pieter Marais, the discoverer of alluvial gold on the Jukskei River (www.joburg.co.za).

5.5.2 Activities on the farm Kromdraai

After the initial discovery of gold on Kromdraai, a syndicate was formed consisting of H.G. van der Hoven, R. Hollins, C.M. Douthwaite, S. Minnaar and Jan Bantjes. The rights on Kromdraai were eventually sold to Henry Nourse, who floated his own company known as the *Kromdraai Gold Mining Company*. S ubsequently the company changed hands. During this time Minnaar's was working on Honingklip, while Bantjes and Douthwaite had earlier moved to other farms (Preller, 1935).

According to Taylor (n.d.) Harry Struben was working on a reef on the farm Kromdraai during the early part of 1886. He indicates that Fred Struben was also there, but that he was prospecting and sampling the surrounding area, and intended to test his samples at their Kromdraai battery.

5.5.3 The role of the Struben brothers in the discovery of gold

The Struben brothers, Harry and Fred, played a considerable role in the discovery of gold in the Witwatersrand area. Although both these brothers were involved, it was especially Fred Struben who undertook most of the

prospecting activities that led to the various discoveries.

During December 1883 Fred Struben paid a visit to his brother, who was staying on the farm "The Willows" near Pretoria. It was here that he was to have a chance meeting with Lourens Geldenhuys, owner of the farm Wilgespruit situated approximately 56 kilometres south of Pretoria on the Witwatersrand.

Lourens Geldenhuys indicated to the Strubens that on a previous visit to Barberton he observed that the gold-bearing rocks in that vicinity seems similar to the ones on his farm. He was therefore interested to investigate the matter further.

Fred Struben, interested by what he heard, was invited to Wilgespruit, where he spent a few days. Struben and Lourens Geldenhuys investigated the wider area as well, riding on horseback from Wilgespruit, through Roodepoort to the Paardekraal Monument, and from there to Sterkfontein and back to Wilgespruit.

On his return to Pretoria, he exclaimed to his brother that "...from a cursory look round he considered the Rand the finest formation he had seen in South Africa." (Luffman, n.d.:11).

During January 1884 Fred Struben returned to Sterkfontein, and on the second day of operations, discovered a gold bearing reef (Luffman, n.d.).

March 1884 saw the formation of a syndicate to obtain Sterkontein and commence working thereon (Preller, 1935). Luffman (n.d.) indicates that the syndicate's name was *Sterkfontein Junction Mining Syndicate*. The members of the syndicate were George Frederick Hudson, Henry William (Harry) Struben, Frederick Pine Theophelus (Fred) Struben and George Pigot Moodie. In the syndicate's "Articles of Association" its first objective is clearly indicated as the acquisition of farms believed to contain gold or other valuable mineral deposits. The properties earmarked in the document for this purpose are a

Portion of the farm Sterkfontein No. 84 and the whole of the farm Swartkrans No. 83. The second stated objective is the undertaking of prospecting activities, while the third objective indicated in the document is the mining of any located minerals (Luffman, n.d.).

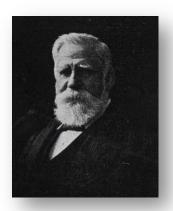




Figure 12 - Harry (left) and Fred Struben (www.joburg.co.za).

The syndicate was immediately fortunate in that both properties earmarked in the formation document happened to be in the market and were soon acquired.

The farm Wilgespruit was also acquired from Louw Geldenhuys, half the mineral right of which was held in joint ownership by the Struben brothers (Luffman, n.d.).

With working continuing on Sterkfontein, the reef located here soon proved to be low yielding. However, during this period Fred Struben also investigated other farms along the line between Sterkonftein and Wilgespruit. By August 1884 he had concentrated his works on Wilgespruit. Although gold was discovered on the farm by August already, September saw Fred Struben discovering a rich vein of gold. He called this reef Confidence Reef (Luffman, n.d.).

Samples of Confidence Reef were taken to London for tests (Luffman, n.d.)

According to the book written by Harry Struben himself, titled Recollections of

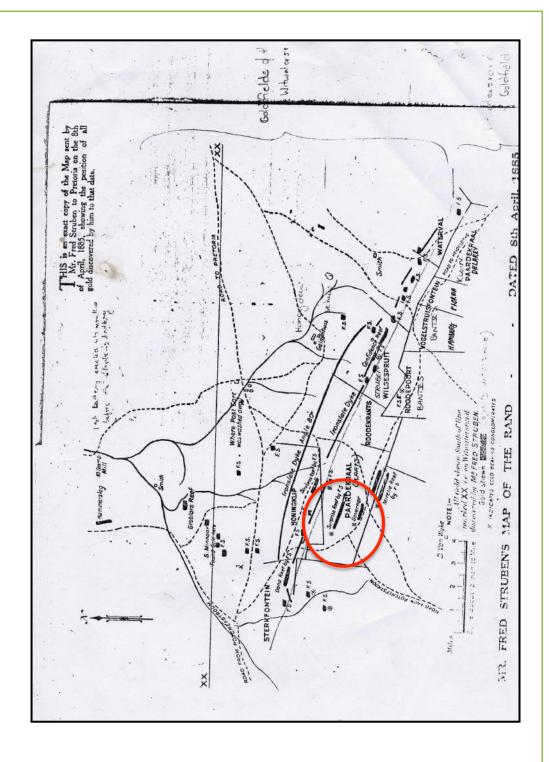


Figure 13 - Fred Struben's map dating from 1885. (Red circle indicate study area.

Adventures: Pioneering and Development in South Africa 1850-1911 (Struben, 1920), he indicates that he had bought both Sterkfontein and Wilgespruit in 1884. Gold found in a shaft on Sterkfontein by Fred Struben was sent to the

company *Johnson, Matthey & Co* in England for testing, the results of which proved favourable. He also indicates that after the discovery of Confidence Reef, Fred Struben had also discovered the Paardekraal conglomerates.

On 5 June 1885 the results of the Strubens brothers' activities and discoveries were presented by Harry Struben to the *Zuid Afrikaansche Republiek* President and Volksraad (Struben, 1920).

Chilvers (1932) provides the following timeline for Fred Struben's activities on the Rand:

- Early 1884 Operations on Sterkfontein
- March 1884 Formation of Sterkontein Junction Mining Syndicate
- August 1884 Operations on Confidence Reef at Wilgespruit
- March 1885 Discovery of gold on Honingklip Confidence Reef extension
- August 1885 Discovery of gold on Paardeplaats Banket Reef

5.5.4 Mining and prospecting activities on the farm Honingklip

During 1882 Stephanus Isaac Minnaar, one of the early prospectors on the Witwatersrand, discovered gold on Honingklip. This is the earliest reference to gold prospecting and mining found in terms of the farm in question (Cunningham, 1987). Macdonald (1933) mentions that Stephanus Minnaar was Hendrik Grobler's son-in-law.

Macdonald (1933) in turn indicates that Minnaar only started prospecting on Honingklip after Fred Struben's discovery on Wilgespruit (Confidence Reef was discovered on 18 September 1884), and before this time had been prospecting on a reef close to the Crocodile River were some gold were found.

Macdonald (1933) mentions that when Struben's attention was drawn to Honingklip during 1884, the farm had already been prospected by a Potchefstroom syndicate without success. Upon hearing of their failure, Struben contacted the syndicate and indicated that he was certain that he would be able to locate a new gold-bearing reef on Honingklip, in

exchange for shares in the company for him and his brother. Although the company initially refused, they subsequently invited him to join them on his own terms

Charles Andries Celliers also acquired a five year lease in the form of "the full and sole right to dig and mine for gold" on Honingklip. The lease commenced on 11 May 1884 and its annual rental was £50. Seven months after the commencement of the lease, Celliers asked Fred Struben to prospect the farm (Cunningham, 1987).

During March 1885 Fred Struben opened a bed at Honingklip to a depth of ten feet. It is stated in one of his publications that "this was the first work ever done on banket formation" (Cunningham, 1987).

He subsequently discovered a continuation of Confidence Reef on Honingklip, which was named Struben's Reef. In a letter written from Honingklip and dated 18 March 1885, Fred Struben describes his discovery of the Confidence Reef on Honingklip to his sister-in-law (Macdonald, 1933).

Further in the same year Fred Struben identified another reef to the south on the farm Paardeplaats and called it Surprise Reef. This is in the area of the current proposed development area.

5.5.5 Mining and prospecting on Saronde

The document prepared for the declaration of Saronde as a heritage property notes the following on the discovery of gold on the Saronde property:

"Numerous trenches, shafts and drilling testing sites are to be seen on Saronde. A written record by Hugh Tracey records that a Mr Humphries, the brother in law of Mr C Wulf, was responsible for most of the prospecting trenches along the ridge. This was at the same time prior to the discovery of the main reef that the Struben brothers were also prospecting in the area. Hugh's record also reports that gold was discovered on Saronde, the ore of which was taken to the next property, Van Achterberg in Rocky Valley for crushing as there was not enough water on Saronde for this job. Due to jealousy and disagreements the yielding shafts were covered and hidden..."

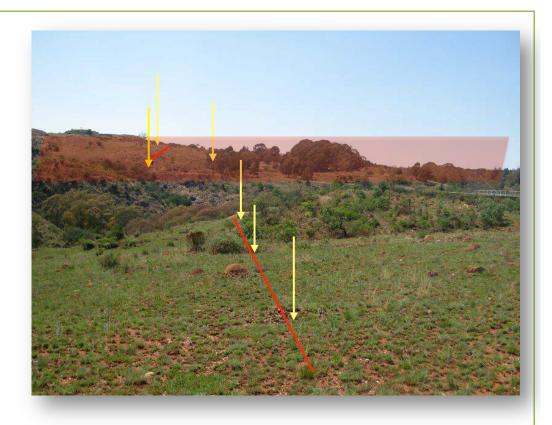


Figure 14 - View of Surprise reef viewed from the west toward Portion 29

(the current study area – red shaded area) (Red lines indicate reef

alignment and yellow arrows shafts and prospecting trenches)

5.6 Farm ownership

Tracey (2011) note that the farm was first subdivided in 1903 at which time it was bought by Mr C.S. Wulf, a retired Danish Naval Captain. *Following owners included a Mr Van der Heever (1943), a Colonel Bellairs, and the Old Apostolic church before Dr Hugh Tracey bought it in 1955. From 1976 until the present, the farm has been owned by Dr Tracey's two sons, Paul and Andrew Tracey.*

5.7 Saronde and it association with Dr Hugh (1903 – 1977), Prof Andrew, Geoffrey Tracey, AMI and ILAM

The following extract is taken from the Presentation document submitted to GPHRA for the provisional declaration of Saronde as heritage site (Tracey, 2011):

"Over a period of 50 years Dr Tracey researched and recorded more than 10 thousand examples of traditional African music across the continent from Cape Town as far north as Sudan, in a series of major field trips. He also collected over three hundred

traditional instruments and took thousands of photographs. He stored this collection in the library he started called The International Library of African Music (ILAM) originally housed in Roodepoort, where that old building is presently occupied by a security company.

ILAM is the largest collection of its kind in the world and is now a permanent institution of Rhodes University. Many of the musics (sic) recorded are no longer present in the countries where he recorded due to political upheavals and other social changes over the last century.

It was Hugh's intention to save the oral heritage of Africa to give it back to Africa in a form which could be part of teaching curricula, where it could be given the attention and respect he felt it deserved. This vision was never fully realised and it will be the continued intention of Geoffrey Tracey (Hugh's grandson) and The Saronde Centre (see detail below) to implement this vision by creating teaching materials, teaching and doing further research from this base. Hugh undertook international lecture tours to promote his cause and educate about the beauty and complexity of the African Music he had seen and heard. Most major Universities in the UK and the US have the full collection of his Music of Africa LPs thanks to a grant by the Ford Foundation at that time.

Hugh also started the instrument factory African Musical Instruments (AMI), originally only making Kalimba 'thumb piano' instruments with western tuning, as a way to make African instruments and music more accessible to the West. The factory is still a steady business based in Grahamstown, which makes a large range of different kinds of instruments from Africa and supports mostly schools and professional musicians all around the world.

After Hugh's death in 1977, his son Andrew took over directorship of ILAM until his retirement in 2007. Geoffrey grew up in the vibrant musical environment of the family and studied music at school and University. Geoffrey has spent eight years training with Zulu sangomas and brings this additional perspective and experience to the work of his family, which he is planning to continue through the proposed development of Saronde."

1899-1902

5.8 The South African War

Tracey (2011) notes that the foundation of the main house on the Saronde farmstead

was constructed from the stones taken from the original stone build blockhouse constructed by the British during the South African War. A retaining wall on the western side of the main house was part of the original British field hospital that was presumably situated on the farm.

Natural

heritage and spiritual

significance

5.9 Natural heritage

Viljoen (1999) notes that he King's Kloof holds a rich natural heritage with an "excellent exposures of the West Rand Group of strata, outstanding examples of the Contorted Bed, Ripple Marked Quartzite and Water Tower Shale." Along with apparent high biodiversity in the area provide for a significant natural heritage area.

5.10 SAHRIS Database - Previous Heritage Impact Assessment Reports

A search of the South African Heritage Resources Information System (http://www.sahra.org.za/sahris) database identified previous HIA's undertaken within the wider area:

- Birkholtz, P.D. 2005. Cultural heritage impact assessment of the area to be impacted upon by the proposed development on Portion 115 of the farm Honingklip 178 IQ. .Archaeology Africa
- Fourie, W. 2008. Heritage Assessment: Rantendal Extension 10 Portion 77 (a Portion of Portion 28) of the Farm Paardeplaats 177 IQ, Portion 373 of the Farm Paardeplaats 177 IQ and the Remaining Extent of Portion 28 (a Portion of Portion 1) of the Farm Paardeplaats 177 IQ, PGS Heritage and Grave Relocation Consultants.
- Huffman, T.N. 2000. Investigations at Pretorius Park Krugersdorp. University of the Witwatersrand - Archaeological Resources Management.
- Kusel, Udo. 2004 Cultural Heritage Resource Scoping Report on the Proposed Development Area Paardeplaats, Krugersdorp. African Heritage Consultants cc.
- Pelser, A.J. and Van Vollenhoven, A.C. 2011. Heritage Impact Assessment for the proposed establishment of the Noordheuwel Extension 22 Township on Portion 138 of the farm Paardeplaats 177 IQ, in Krugersdorp, Gauteng. Archaetnos.
- Rubidge, B. 2008 Paleontological assessment for the development on Portion 77 a portion of portion 28 of the farm Paardeplaats 177IQ.

 Van Schalkwyk J. 2007. Heritage Impact Assessment for the Planned Rietvallei 180 IQ Development, Krugersdorp Municipal District, Gauteng Province. National Cultural History Museum.

Only the Fourie (2008) and Birkholtz (2005) reports provided direct bearing on the study area and added to the findings of remains on the property. Both reports focused strongly on the mining heritage of the area..

5.11 Current heritage status of the property

In 2011 Geoffrey Tracey submitted a presentation to the Gauteng Provincial Heritage Agency (GPHRA) with the aim of having the Saronde farm declared as a Provincial Heritage site. The submission outlined the unique and significant heritage features on and associated with the farm. These include:

- The farms association with the early discovery of gold and the Struben brothers;
- The association and ownership of the farm by Dr Hugh Tracey and Professor Andrew Tracey, both renowned researchers of traditional African music;
- The significant biodiversity of the valley;
- King's Kloof as a natural heritage area;
- The association with the South African War;
- The use of the valley by church groups and traditional healers; and
- The proposed Saronde Centre as a development node for the farm.

GPHRA responded in October 2011 by granting provisional protection of the Saronde property and its structures under Section 29 of the NHRA (**Appendix B**). This protection has however lapsed in April 2012.

5.12 Palaeontology of the area

5.12.1 Geological setting

The entire development will take place on ground underlain by rocks of the Hospital Hill and Government subgroups of the West Rand Group of the lower Witwatersrand Supergroup.

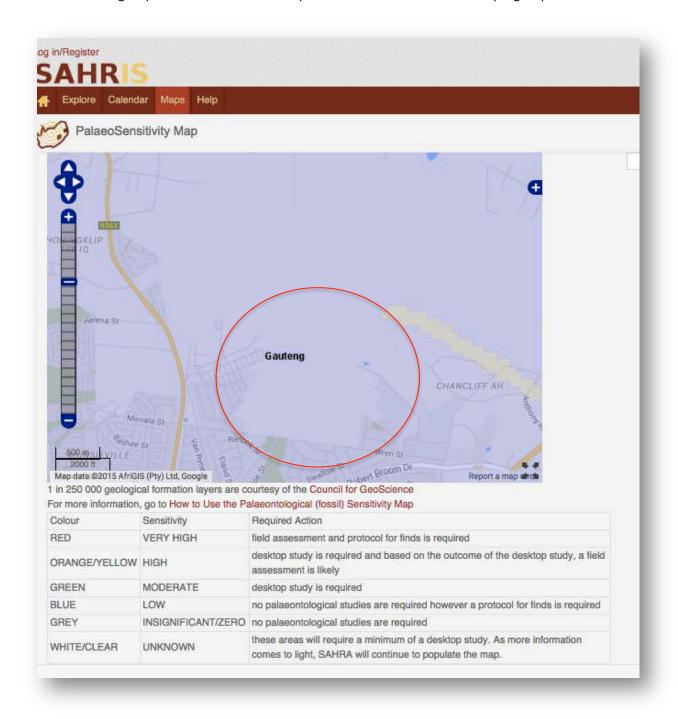


Figure 15 – SAHRIS palaeontological sensitivity map

5.12.2 Palaeontology of the area

Rudbige (2008) notes that the Witwatersrand Supergroupp does not contain any fossils and has no palaeontological significance. This finding is backed by the SAHRIS palaeontological sensitivity map (Figure 15).

6 FIELD WORK FINDINGS

Due to the nature of cultural remains, with the majority of artefacts occurring below the surface, a controlled-exclusive surface survey was conducted over a period of a day by vehicle and on foot by an archaeologist and field technician from PGS. The fieldwork was conducted in the week of 21 January 2015.

During the survey a total of 13 heritage sites were identified of which the main Saronde farmstead (RD11), 1 cemetery (RD9) and prospecting and mining remains (RD02-RD08 and RD10) make up the bulk of the finds. Each identified heritage site will be discussed below.

The identified heritage sites and the track logs (in black) for the survey are indicated on the map below (Figure 16).

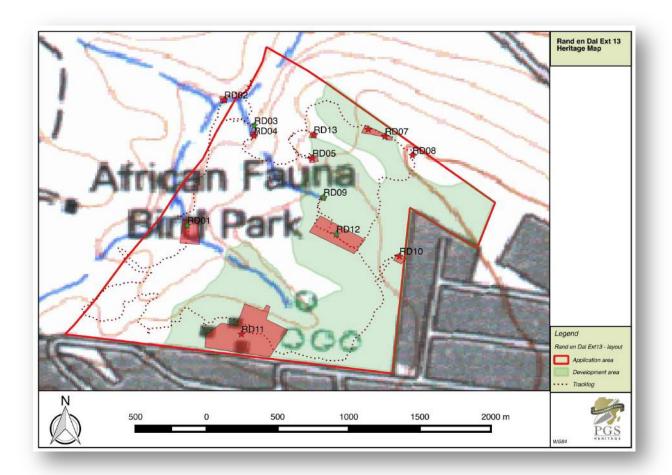


Figure 16 – Map of the study area with identified heritage sites

6.1 Heritage Findings

6.1.1 Site RD01

GPS: S26° 04' 17.0" E27° 46' 32.1"

The site is characterised by a pool at the bottom of a waterfall in the Kings Kloof (Figure 17). Just to the east of the pool is the remains of a picnic area and large concrete build pool. The 1954 map indicates a road providing access to the area (Figure 10). The picnic area is not seen as significant, however the pool and river is utilised by Zionist churches for the collection of water utilised in religious ceremonies. Numerous other collection point occur down river, but have not been marked as no development is planned in the Kloof itself.

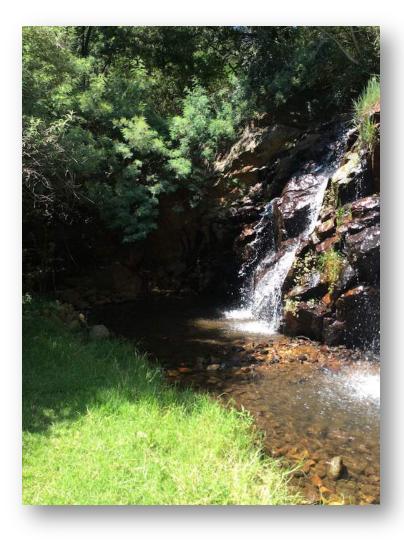


Figure 17 – View of pool next to old picnic spot

The site is of medium heritage significance and graded as Local significant Grade 3B, and protected under Section 3 of the NHRA.

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	HIGH	Isolated Sites / proposed site	Short-term	Unlikely	
Impact on religious sites	4	1	2	2	0,93

Mitigation:

Demarcate the valley and undevelopable area of property as a no-go area during the construction phase;

Access to the valley should be controlled, through an access register. No access should be unreasonably stopped.

6.1.2 Site RD02

GPS: S26° 04' 08.0" E27° 46' 34.7"

Site RD02 is the remains of a dam wall constructed in the run of the river on the edge of access to King's Kloof (Figure 18). The dam wall was mots probably constructed as part of mining operations at the turn of the 20th century. This is however only speculation. Only a section on the eastern bank of the river is still intact, while the rest of the stones and cement from the wall lies down stream after washed away. The site measures approximately 15m x 20m in size.



Figure 18 – View of section of old stone dam wall in lower section close to the King's Kloof area

The site is of low heritage significance and graded as Grade 4A

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	HIGH	Isolated Sites / proposed site	Short-term	Unlikely	
Impact on site	4	1	2	2	0,93

Mitigation:

- Demarcate the kloof and undevelopable area of property as a no-go area during the construction phase;
- The monitoring of the structures must be included in the HMP of the proposed project, and
- If at any stage the site is disturbed, a qualified archaeologist must be contracted to evaluate the damage and make recommendations on the appropriate mitigation measures.

Destruction of the site will require a permit issued under Section 34 of the NHRA and will
only be issued with the backing of research documentation.

6.1.3 Site RD03-RD08 and RD10, RD13

GPS:

RD03 - S26° 04' 09.9" E27° 46' 36.9" RD05 - S26° 04' 12.2" E27° 46' 41.1" RD06 - S26° 04' 10.1" E27° 46' 45.1" RD07 - S26° 04' 10.6" E27° 46' 46.3" RD08 - S26° 04' 12.0" E27° 46' 48.3" RD10 - S26° 4'19.25" E 27°46'47.35"

The study area is scattered with the remains of prospecting and small-scale mining as noted in the archival research. The bulk of the incline shafts identified (RD03, RD05, RD13) are situated in side the conservation section of the development or on the periphery, just inside the developable areas. The remains of the vertical shafts at RD10 are situated in side the developable area and will be impacted by development.

A set of prospecting trenches (RD06-RD07) and drill testing positions (R08) situated on the northern most ridge of the property are situated inside the developable area.



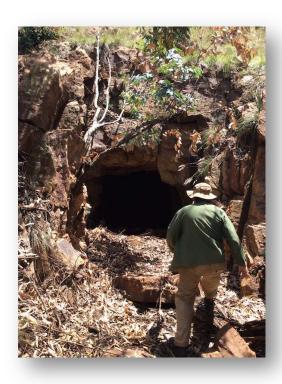


Figure 19 – Incline shaft at RD03

Figure 20 – Shallow incline shaft at RD05



Figure 21 – Shallow incline shaft at RD13

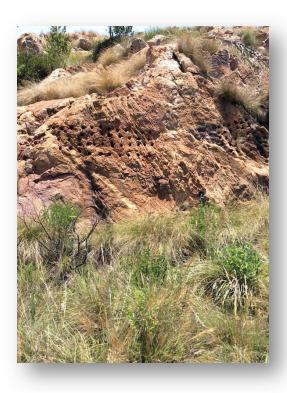


Figure 22 – RD08 – Drill testing holes in northern ridge of property



Figure 23 – Remains of vertical shaft at RD10

The sites are of medium heritage significance and graded as Locally significant Grade 3A, and protected under Sections 35 and 35 of the NHRA. It is envisaged that the incline shafts (RD03, RD05, RD13) will not be directly impacted by the development. However micro design around RD05 and RD13 will be required to ensure their preservation.

RD06, **RD07** and **RD08** are situated inside the developable area and it is recommended that these sites be incorporated in to a conservation corridor as far as possible. The possibility of keeping 2 out of the 3 trenches as part of an overall conservation effort for the mining heritage can be considered.

Site **RD10** needs to be evaluated for safety and can be demolished after documentation of the site in relation to the other mining structures.

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	VERY HIGH	Local	Long term	Very Likely	
Impact on site	5	3	4	4	3,20

Mitigation:

- Demarcate the sites as a no-go area during the construction phase;
- The monitoring of the structures must be included in the HMP of the proposed project, and
- It is recommended that the mining sites be preserved as part of the local history of the area and incorporated in a conservation area in the development.

6.1.4 Site RD04

GPS: S26° 04' 10.6" E27° 46' 36.9"

Tracey (2011) notes that the stream and Kloof has been utilised as religious gathering place since the 1960's. All though these gatherings were reserved to a few per year in the 1970' to 1990's, Mr Joe Hugill, the current caretaker of the farm notes that that an increase in the utilisation of the Kloof was evident in the mid 2000's. The groups using the area for religious and spiritual ceremonies include the Zionist Church as well as traditional healers.

Tracey (2011) notes that the valley "have long attracted traditional spiritual practitioners and various church groups to pray at and be cleansed by the waters of the valley's watercourse at numerous of the pools, rapids and waterfalls along its course."

The valley as a placed of spiritual and religious significance is rate as locally significant and having a Grading of 3B and protected under Section 3 of the NHRA.

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	MODERATE	Local	Long term	Could happen	
Impact on site	3	3	4	3	2,00

Mitigation:

- Demarcate the kloof and undevelopable area of property as a no-go area during the construction phase;
- It is recommended that the management and access to the valley be included in a HMP that must developed for the whole estate.



Figure 24 – Hearth used by people visiting the property for religious ceremonies

6.1.5 Site RD09

GPS: \$26° 04' 15.0" E27° 46' 41.9"

The site RD09 is situated just northwest of the current shed that is part of the campsite on the property. Mr Jo Hugill pointed out the position of the two graves. Mr Geoffrey Tracey also mentioned the two graves, and it is understood that the one grave is a child of Mr Abel Kgari who still resides on the property, while the other grave is that of an unknown man that work for a short time on the property.

The site is of high heritage significance and graded as Grade 3B, and protected under Sections 36 of the NHRA.



Figure 25 – View of the over grown area where the two graves are situated

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	HIGH	Study Area	Permanent	Very Likely	
Impact on site	4	2	5	4	2,93

Mitigation:

- Demarcate the site as a no-go area during the construction phase and preserved in situ;
- The monitoring of the structure must be included in the HMP of the proposed project.

6.1.6 Site RD11

GPS: S26° 04' 15.0" E27° 46' 41.9"

Site RD011 is the position of the original farmstead of the Saronde farm, the farmhouse is indicated on the 1943 topographical map (Figure 9), but is absent from the 1913 map (Figure 8). The farmstead consists of a main house with outbuildings, a barn and labourers cottages that were converted in to dormitories as part of the Christian campsite ran by the Hugills.

Tracey (2011) notes that the foundation of the main house on the Saronde farmstead was constructed from the stones taken from the original stone build blockhouse constructed by the British during the South African War. A retaining wall on the western side of the main house was part of the original British field hospital that was presumably situated on the farm.



Figure 26 – View of main dwelling on farmstead thought to have been constructed in the early 1900's





Figure 27 – front door of main house with veranda

Figure 28 – View of main veranda. Original house is the section on the right hand



Figure 29 – Dormitories



Figure 30 – Retaining wall though to have been part of British field hospital

The site is of high local heritage significance and graded as Grade 3B, and protected under Sections 36 of the NHRA.

Impact rating

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	HIGH	Study Area	Permanent	Very Likely	
Impact on site	4	2	5	4	2,93

Mitigation:

- It is recommended that a conservation architect evaluate the farmstead buildings to determine the significance of each building and make recommendations for design and redevelopment of each structure as part of the larger development.
- The monitoring of the structure must be included in the HMP of the proposed project,
- Any alterations to the farmstead will require permission from GPHRA as prescribed under Section 34 of the NHRA.

6.2 Cultural Landscape

Heritage significance of the cultural landscape is derived from the interaction between the natural landscape, and that landscape as created and changed by man and influenced by his construction of roads, bridges, farming landscapes (such as grazing fields, farmsteads, etc.) and townscapes. Also interacting with these physical entities are intangible and historic landscapes and events that are known to have added to the cultural fabric of a place or area.

The evaluation of the study area and surrounds as demarcated, has shown the general area to be rich in heritage resources spanning the historical as well as spiritual/religious ambit. The cultural landscape associated with the Saronde farm is further bolstered by the academic significant figures of the Tracey family that has a long association with the farm and its history.

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	HIGH	Regional/Provincial	Long term	Very Likely	
Impact on site	4	4	4	4	3,20

The heritage significance of the Saronde landscape is rated as of high significance and given a rating of Grade 3A. Although the development of the estate will have a negative impact on the cultural landscape the culturally simpathic development of the estate is needed. The buildings and infrastructure is not in a good condition and is in need of up keep.

7 CONCLUSIONS AND RECOMMENDATIONS

During the heritage study a total of 13 heritage sites were identified within the proposed development area. Sites associated with the use of the valley as spiritual retreat and ceremonial

space (**RD01** and **RD04**) is situated outside the developable land. The remains of mining and prospecting (**RD02**, **RD03**, **RD05-08** and **RD10** and **RD13**) represent a reminder of the early days of gold discovery and prospecting before the discovery of gold on the Witwatersrand. A single cemetery (**RD09**) containing two graves is associated with more recent history and still has a strong family link to one of the residents of the property. The main farmstead and dwellings (**RD11**) dates from the early part of the 20th century, while portions of the main dwelling were constructed with materials taken from an old British fort constructed during the South African War (1899-1901).

The following recommendations are made with regards to the finds:

7.1 Graves

Two graves were identified at site **RD09** and the following is recommended:

- Demarcate the site as a no-go area during the construction phase and preserved in situ;
- The monitoring of the structure must be included in the HMP of the proposed project.

7.2 Historic Farmstead

The original farmstead with main dwelling and outbuildings were identified at **RD11**. Further associated with the site are the remains of a British field hospital. The following mitigation measures as a minimum is required:

- It is recommended that a conservation architect evaluate the farmstead buildings to determine the significance of each building and make recommendations for design and redevelopment of each structure as part of the larger development.
- The monitoring of the structure must be included in the HMP of the proposed project,
- Any alterations to the farmstead will require permission from GPHRA as prescribed under Section 34 of the NHRA.

7.3 Remains of prospecting and mining

Seven sites associated with early prospecting and mining were identified on the property (RD03-RD08 and RD10, RD13). The following mitigation measures needs to be implemented at a minimum:

- Demarcate the sites as a no-go area during the construction phase;
- The monitoring of the structures must be included in the HMP of the proposed project, and
- It is recommended that the mining sites be preserved as part of the local history of the area and incorporated in a conservation area in the development.

7.4 Spiritual retreat and ceremonial space

The valley floor and stream is associated with spiritual and religious ceremonies and is seen by some groups as sacred. Two areas (RD01 and RD04) have been identified as examples of such areas. The following mitigation measures area recommended:

- Demarcate the valley and undevelopable area of property as a no-go area during the construction phase;
- Access to the valley should be controlled, through an access register. No access should be unreasonably stopped.

7.5 Palaeontology

The study area is underlain by the Witwatersrand Supergroup does not contain any fossils and has no palaeontological significance. No further mitigation work is required.

7.6 Cultural landscape

The evaluation of the study area and surrounds as demarcated, has shown the general area to be rich in heritage resources spanning the historical as well as spiritual/religious ambit. The cultural landscape associated with the Saronde farm is further bolstered by the academic significant figures of the Tracey family that has a long association with the farm and its history. The heritage significance of the Saronde landscape is rated as of high significance and given a rating of Grade 3A.

The need for a development that is sympathetic towards the cultural and natural heritage of the property cannot be stressed enough. The current state of the property shows the need for such a development and will in the long run aid the conservation of the estate.

7.7 Heritage Management Plan

In 2012 the GPHRA granted provisional protection of the Saronde Estate under Section 29 of the NHRA. This report has confirmed the heritage significance of the property and the need for a heritage sympathetic development. It is recommended that a Heritage Management Plan be developed in conjunction and during the development of the proposed development layout to ensure the incorporation of the heritage aspects of the property.

7.8 General

Further to these recommendations, the general Heritage Management Guidelines in Section 7 need to be incorporated into the EMP for the project.

8 HERITAGE MANAGEMENT GUIDELINES

8.1 General Management Guidelines

- 1. The National Heritage Resources Act (Act 25 of 1999) states that, any person who intends to undertake a development categorised as-
 - (a) the construction of a road, wall, transmission line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv)the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

In the event that an area previously not included in an archaeological or cultural resources survey is to be disturbed, the SAHRA needs to be contacted. An enquiry must be lodged with them into the necessity for a Heritage Impact Assessment.

2. In the event that a further heritage assessment is required it is advisable to utilise a qualified heritage practitioner, preferably registered with the Cultural Resources Management Section (CRM) of the Association of Southern African Professional Archaeologists (ASAPA).

This survey and evaluation must include:

(a) The identification and mapping of all heritage resources in the area affected;

- (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7 of the National Heritage Resources Act;
- (c) An assessment of the impact of the development on such heritage resources;
- (d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- (e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
- 3. It is advisable that an information section on cultural resources be included in the SHEQ training given to contractors involved in surface earthmoving activities. These sections must include basic information on:
 - a. Heritage;
 - b. Graves;
 - c. Archaeological finds; and
 - d. Historical Structures.

This module must be tailor made to include all possible finds that could be expected in that area of construction.

- 4. In the event that a possible find is discovered during construction, all activities must be halted in the area of the discovery and a qualified archaeologist contacted.
- 5. The archaeologist needs to evaluate the finds on site and make recommendations towards possible mitigation measures.
- 6. If mitigation is necessary, an application for a rescue permit must be lodged with SAHRA.
- 7. After mitigation, an application must be lodged with SAHRA for a destruction permit. This application must be supported by the mitigation report generated during the rescue excavation. Only after the permit is issued may such a site be destroyed.
- 8. If during the initial survey sites of cultural significance are discovered, it will be necessary to develop a management plan for the preservation, documentation or destruction of such a site. Such a program must include an archaeological/palaeontological monitoring programme, timeframe and agreed upon schedule of actions between the company and the archaeologist.

- In the event that human remains are uncovered, or previously unknown graves are discovered, a qualified archaeologist needs to be contacted and an evaluation of the finds made.
- 10. If the remains are to be exhumed and relocated, the relocation procedures as accepted by SAHRA need to be followed. This includes an extensive social consultation process.

The purpose of an archaeological/palaeontological monitoring programme¹ is:

- To allow, within the resources available, the preservation by recording of archaeological/palaeontological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works
- To provide an opportunity, if needed, for the watching archaeologist to signal to all interested
 parties, before the destruction of the material in question, that an
 archaeological/palaeontological find has been made for which the resources allocated to the
 watching brief itself are not sufficient to support treatment to a satisfactory and proper
 standard.
- A monitoring programme is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.
- The objective of the monitoring programme is to establish and make available information about the archaeological resource existing on a site.

PGS can be contacted on the way forward in this regard.

Table 11: Roles and responsibilities of archaeological and heritage management

ROLE	RESPONSIBILITY	IMPLEMENTATION
A responsible specialist needs to be allocated	The client	Archaeologist and a
and should attend all relevant meetings,		competent archaeology
especially when changes in design are		support team

¹ The definition of an archaeological/palaeontological monitoring programme is a formal program of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, in the inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

discussed, and liaise with SAHRA.		
If chance finds and/or graves or burial	The client	Archaeologist and a
	The chefft	
grounds are identified during construction or		competent archaeology
operational phases, a specialist must be		support team
contacted in due course for evaluation.		
Comply with defined national and local	The client	Environmental Consultancy
cultural heritage regulations on management		and the Archaeologist
plans for identified sites.		
Consult the managers, local communities and	The client	Environmental Consultancy
other key stakeholders on mitigation of		and the Archaeologist
archaeological sites.		
Implement additional programs, as	The client	Environmental Consultancy
appropriate, to promote the safeguarding of		and the Archaeologist,
our cultural heritage. (i.e. integrate the		
archaeological components into the		
employee induction course).		
If required, conservation or relocation of	The client	Archaeologist, and/or
burial grounds and/or graves according to the		competent authority for
applicable regulations and legislation.		relocation services
Ensure that recommendations made in the	The client	The client
Heritage Report are adhered to.		
Provision of services and activities related to	The client	Environmental Consultancy
the management and monitoring of		and the Archaeologist
significant archaeological sites.		
After the specialist/archaeologist has been	Client and Archaeologist	Archaeologist
appointed, comprehensive feedback reports		
should be submitted to relevant authorities		
during each phase of development.		

8.2 All phases of the project

Based on the findings of the HIA, all stakeholders and key personnel should undergo an heritage induction course during this phase. Induction courses generally form part of the employees' overall training and the heritage component can easily be integrated into these training sessions. Two courses should be organised – one aimed more at managers and supervisors, highlighting the value of this exercise and the appropriate communication channels that should be followed after chance finds, and the second targeting the actual workers and getting them to recognize artefacts, features

and significant sites. This needs to be supervised by a qualified archaeologist. This course should be reinforced by posters reminding operators of the possibility of finding archaeological sites.

The project will encompass a range of activities during the construction phase, including ground clearance, establishment of construction camps area and small scale infrastructure development associated with the project/operations.

It is possible that cultural material will be exposed during operations and may be recoverable, but this is the high-cost front of the operation, and so any delays should be minimised. Development surrounding infrastructure and construction of facilities results in significant disturbance, but construction trenches do offer a window into the past and it thus may be possible to rescue some of the data and materials. It is also possible that substantial alterations will be implemented during this phase of the project and these must be catered for. Temporary infrastructure is often changed or added to during the subsequent history of the project. In general these are low impact developments as they are superficial, resulting in little alteration of the land surface, but still need to be catered for.

During the construction/operational phase, it is important to recognise any significant material being unearthed, and to make the correct judgment on which actions should be taken. A responsible archaeologist/palaeontologist must be appointed for this commission. This person does not have to be a permanent employee, but needs to attend relevant meetings, for example when changes in design are discussed, and notify SAHRA of these changes. The archaeologist would inspect the site and any development on a recurrent basis, with more frequent visits to the actual workface and operational areas.

In addition, feedback reports can be submitted by the archaeologist to the client and SAHRA to ensure effective monitoring. This archaeological monitoring and feedback strategy should be incorporated into the Environmental Management Plan (EMP) of the project. Should an archaeological/palaeontological site or cultural material be discovered during construction (or operation), such as burials or grave sites, the project needs to be able to call on a qualified expert to make a decision on what is required and if it is necessary to carry out emergency recovery. SAHRA would need to be informed and may give advice on procedure. The developers therefore should have some sort of contingency plan so that operations could move elsewhere temporarily while the material and data are recovered. The project thus needs to have an archaeologist/palaeontologist available to do such work. This provision can be made in an archaeological/palaeontological monitoring programme.

8.2.1 Graves

In the case where a grave is identified during construction the following measures must be taken:

- Upon the accidental discovery of graves, a buffer of at least 20 meters should be implemented.
- If graves are accidentally discovered during construction, activities must cease in the area and a qualified archaeologist be contacted to evaluate the find. To remove the remains a permit must be applied for from SAHRA and other relevant authorities. The local South African Police Services must immediately be notified of the find.
- Where it is recommended that the graves be relocated, a full grave relocation process that includes comprehensive social consultation must be followed.

The grave relocation process must include:

- A detailed social consultation process, that will trace the next-of-kin and obtain their consent for the relocation of the graves, that will be at least 60 days in length;
- ii. Site notices indicating the intent of the relocation;
- iii. Newspaper notices indicating the intent of the relocation;
- iv. A permit from the local authority;
- v. A permit from the Provincial Department of Health;
- vi. A permit from the South African Heritage Resources Agency, if the graves are older than 60 years or unidentified and thus presumed older than 60 years;
- vii. An exhumation process that keeps the dignity of the remains intact;
- viii. The whole process must be done by a reputable company that is well versed in relocations;
- ix. The exhumation process must be conducted in such a manner as to safeguard the legal rights of the families as well as that of the developing company.

9 REFERENCES

9.1 Published Literature Sources

Amery, L.S., 1906: The Times History of the War in South Africa 1899 – 1906, London, Sampson, Law, Marston and Company Ltd., IV, 1906.

Bergh, J.S. (ed.), 1999: Geskiedenis Atlas van Suid Afrika, Die Vier Noordelike Provinsies, J.L. van Schaik Uitgewers, Pretoria.

Chilvers, H.A., 1932: Out of the Crucible, Cassell and Company, London.

Cunningham, A., 1987: The Strubens and Gold, University of the Witwatersrand Library, Johannesburg.

Erasmus, J.L.P., 1944: Die Rand en Sy Goud, J.L. van Schaik Beperk, Pretoria

Hall, S.L., 1981: Iron Age sequence and settlement in the Rooiberg, Thabazimbi Area, M.A. Thesis, University of the Witwatersrand.

Luffman, W.W., n.d.: The World's Greatest Goldfield, London.

Macdonald, W., 1933: The Romance of the Golden Rand, Cassell and Company, London.

Mason, R., 1962: Prehistory of the Transvaal, Witwatersrand University Press, Johannesburg.

Mason, R., 1986: Origins of Black People of Johannesburg and the Southern Western Central Transvaal AD350-1880, Witwatersrand University Press, Johannesburg.

Mason, R., 1987: Origins of the African People of the Johannesburg area, Skotaville Educational Division, Johannesburg.

Morris, D. 2009. Archaeological Impact Assessment on Portion of Erf 2003, Erf 1, Windsorton, Northern Cape. Department of Archaeology. McGregor Museum.

Preller, G., 1935: Argonauts of the Rand, Wallachs Drukkery en Uitgewers, Pretoria.

Rosenthal, E., 1970: Gold! Gold! Gold!, AD. Donker, Johannesburg.

Struben, H.W., 1920: Recollections of Adventures, T. Maskew Miller, Cape Town.

Taylor, J.B., n.d.: Recollections of the Discovery of Gold on the Witwatersrand and the Early

Tracey, G. 2011. Presentation for GPHRA, re: provisional declaration of Saronde Rem ext of portion 29, Paardeplaats 177 IQ.

Viljoen, M.J. 1999. An introduction to South Africa's geological and mining heritage. Mintek

9.2 Unpublished Literature Sources

Development of the Gold Mines.

Louw Geldenhuys Investments (Pty) Ltd, Undated Information Booklet

9.3 Relevant Archival Documents

National Archives, TAD, OR1965/95

9.4 Archival Maps

National Archives, Maps, TAB: 3/3488

National Archives, Maps, TAB: S.2/120

National Archives, Maps, TAB: 3/1896

National Archives, Maps, TAB: 3/1419

9.5 Historical Maps

Directorate: Surveys and Mapping, 2627BB 1:50 000 Topographical Sheet, 1943

Directorate: Surveys and Mapping, 2627BB 1:50 000 Topographical Sheet, 1954

9.6 Internet Source Material

www.joburg.co.za

1 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 the NHRA, permits are required to damage, destroy, alter, or disturb them. People who already possess 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 in a formal cemetery (such as ancestral graves in rural areas), are protected. The legislation 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 resource 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 pre-historic cultural remains, including graves and human remains.

2 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 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. 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 Resource 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 administrated by a local

authority. Graves in the category located inside a formal cemetery administrated 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.

GPHRA Provisional Protection Letter



PROVINCIAL HERITAGE RESOURCES AUTHORITY - GAUTENG

PETVATE BALLX31, MBRANSESBURG, 2006 39 RUSSIK, SURELT, NISS BURG, 2006 DIBRANSESBURG, 2006 TER, 41, 455–2500 - PAX, 321–359–2524

Ref: D02/11

Erf: Rem Ext of Portion 29, Paardeplaats 177 IQ

Enquiries: Maphata Ramphele

Date: 2011-10-18

Att: Mr. Geoffrey Tracey

Fax: (011) 665 4350 Cc: Mr. K Nzolo

Mogale City Municipality

(011) 953 6139

Email: gogohugh@gmail.com

Dear Sir/ Madam

NOTIFICATION OF PROVISIONAL PROTECTION OF SARONDE STRUCTURE LOCATED ON ERF: REM EXT OF PORTION 29, PAARDEPLAATS 177 IQ, KRUGERSDORP, GAUTENG.

- The Provincial Heritage Resources Authority Gauteng (PHRA-G) hereby notifies you about the provisional protection of the site and structure as indicated above.
- The PHRA-G has the responsibility of protecting heritage resources by protecting the resources or resources as provincial heritage sites. These sites are protected according to their heritage, cultural and social significance in terms of Section 29 of the National Heritage Resources Act No.25 of 1999. Section 29 (a) affords
 - " a provincial heritage resources authority has the power to provisionally protect for a maximum period of two years any-

- i) Protected area
- Heritage resource, the conservation of which it considers to be threatened and which threat it believes can be alleviated by negotiation and consultation; or
- iii) Heritage resource, the protection of which SAHRA or the provincial heritage resources authority wishes to investigate in terms of this Act".
- 3. You are called upon to lodge any objections you may have to the aforesaid provisional protection with the PHRA-G within 60 days of receipt of this notification. Section 34 National Heritage Resources Act NO: 25 of 1999 provides that:
 - No person may alter or demolish any structure or part if a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
 - 2) Furthermore section 29 (10) provides that, "No person may damage, deface, excavate, alter, remove from its original, subdivide or change the planning status of a provincial protected place or object without a permit issued by a heritage resources or local authority responsible for the provincial protection.
- If no objections are received, it will be assumed that you are in agreement with the provisional protection.
- 5. Please note that the immediate effect of this notice is to protect the property temporarily for a period of six months. The PHRA-G hopes that you will consider this notification favourably and looks forward to working with you to conserve our heritage.
- Please contact the PHRA-G at (011) 355 2572/ 74 for any enquiries in this regard.

M. Ramphete DD/PHRA-G

Date: /8/10/2011

ours Faithfully

Appendix C

HERITAGE MAP

