

Archaeological Impact Assessment

**ON PORTION 5, 7, 9 & 55 OF THE FARM
KAALFONTEIN 513 & PTN 20 OF THE
FARM RIETFONTEIN 366 JR, RAYTON,
GAUTENG PROVINCE.**

Prepared For

Lokisa Environmental Consultants

By



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RAYTON DEVELOPMENT - AIA

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Executive summary

Site name and location: Mixed land development consisting of residential, commercial and a old age home on portion 5, 7, 9 & 55 of the farm Kaalfontein 513 & portion 20 of the farm Rietfontein 366 JR, Rayton, Gauteng Province.

Provincial district: Gauteng.

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Date of field work: Started on the 28th of May 2008

Date of Report: 3 June 2008

Findings of the Assessment: Eleven sites of heritage significance were found during the field survey; at this point it is not certain what the impact will be on these sites since no final layout plan is available at this point. The information from the various specialists will be used to compile a sensitivity map that will guide the final layout. Therefore, if the recommendations made in Section 9 of the report are adhered by there is from a Heritage point of view no reason why the development can not commence.

How ever low ground visibility is present on portions of the study area due to exceptional high vegetation growth and the possibility of the occurrence of unmarked graves and subsurface finds can not be excluded. If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.

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

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- The results of the project;
- The technology described in any report

RAYTON DEVELOPMENT - AIA

- Recommendations delivered to the Client.

CONTENTS

• 1. INTRODUCTION	7
1.2 TERMS OF REFERENCE	8
1.3 Nature of the development	9
1.4 Description of study area	9
2. APPROACH AND METHODOLOGY	9
2.1 PHYSICAL SURVEYING	9
2.2 Consultation	10
3. Abbreviations and definitions.....	11
3.1 Abbreviations	11
3.2 Definitions	11
4. ARCHAEOLOGICAL LEGISLATION AND BEST PRACTICE	13
• 5. ASSESSMENT CRITERIA	15
5.1 Evaluation of Heritage sites	15
5.1.1 Heritage Site Significance and Mitigation Measures.....	16
• 5. Archaeological Context of study area	17
5.1 Brief Archival background.....	18
5.2 Probability of occurrence of sites	20
• 6. SITES OF SIGNIFICANCE.....	22
6.1 Site.1	22
6.2 Site.2	24
6.3 Site.3	25
6.4 Site.4	26
6.5 Site.5	27
6.6 Site.6	28
6.7 Site.7	29
6.8 Site.8	30
6.9 Site.9	32
6.10 Site.10	33
6.11 Site.11	34
• 7. ASSUMPTIONS AND LIMITATIONS	35
• 9. ASSESSMENT AND RECOMMENDATIONS	35
• 10. LIST OF PREPARES.....	38
• 11. REFERENCES.....	38
11.1 ARCHAEOLOGICAL PAPERS.....	38

ANNEXURE

Annexure A – Locality Map & Site C0-ordinates

FIGURES

Figure 1: <i>Enlarged section of the railroad development map from Bergh 1998</i>	18
Figure 2: <i>Locality map of the Doornhoek / Diamond hill battle from Bergh 1998</i>	18
Figure 3: <i>The battle of Doornhoek, 12 June 1900 from Bergh 1998</i>	19
Figure 4: <i>Historical homestead</i>	22
Figure 5: <i>Associated outbuilding at Site 1</i>	23
Figure 6: <i>Possible historic farmstead</i>	24
Figure 7: <i>Historical Sandstone Bridge</i>	25
Figure 8: <i>Ill defined stone walling</i>	26
Figure 9: <i>Unmarked grave site</i>	27
Figure 10: <i>Rectangular stone structure</i>	28
Figure 11: <i>Rectangular stone structure</i>	29
Figure 12: <i>General view of cemetery</i>	30
Figure 13: <i>Granite headstone</i>	31
Figure 14: <i>Overgrown stone walling</i>	32
Figure 15: <i>Linear stone walling</i>	33
Figure 16: <i>General site conditions</i>	34

.1. INTRODUCTION

Wits Heritage Contracts Unit was contracted by Lokisa Environmental Consultants to conduct an Archaeological Impact Assessment for the proposed mixed land use development on portion 5, 7, 9 & 55 of the farm Kaalfontein 513 & portion 20 of the farm Rietfontein 366 JR, Rayton, Gauteng Province. The report forms part of the EIA for the proposed project.

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

The report outlines the approach and methodology utilized before and during the survey, which includes in Phase 1: Information collection from various sources and consultations; Phase 2: Physical surveying of the area on foot and by vehicle; and Phase 3: Reporting the outcome of the study.

During the survey, 11 cultural heritage sites of significance were identified. General site conditions and features on sites were recorded by means of photos, GPS location, and description. Possible impacts were identified and mitigation measures are proposed in the following report.

This report must also be submitted to SAHRA provincial office for peer review.

1.2 TERMS OF REFERENCE

Conduct brief desktop study to:

Review available literature, previous heritage studies and other relevant information sources. Gather data and compile a background history of the area. Identify all known and recorded archaeological and cultural sites; and determine whether the area is renowned for any cultural and heritage resources, such as Stone Age sites, Iron Age sites, informal graveyards or historical homesteads.

Conduct a field study to:

Consult with locals to gather information on oral history, local history, possible informal graves, cemeteries, and other areas of cultural significance. Systematically survey the proposed project area to locate, identify record, photograph and describe sites of archaeological, historical or cultural interest; and record GPS points of significant areas identified. Determine the levels of significance of the various types of heritage resources recorded in the project area;

Reporting

Identify the anticipated impacts, as well as cumulative impacts, of the operational units of the proposed project activity on the identified heritage resources. Consider alternatives should any significant sites be impacted adversely by the proposed project. Ensure that all requirements of the local South African Heritage Resources Agency (SAHRA) are met. 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).

1.3 Nature of the development

The development consists of mixed land use ranging from commercial, residential, school and an old age home.

1.4 Description of study area

Refer to main EIA report for geographical, environmental and demographic issues. Large parts of the study area are currently used extensively for agricultural purposes. Portions of the study area are also directly impacted upon by previous mining activities.

2. APPROACH AND METHODOLOGY

The aim of the study is to extensively cover all data available to compile a background history of the study area; this was accomplished by means of the following phases.

2.1 PHYSICAL SURVEYING

Due to the nature of cultural remains, the majority that occurs below surface, a physical walk through of the study area was conducted. Wits Heritage Contract Unit was appointed to conduct a survey of the proposed study area of 800ha. Special attention was given to the footprint area of the proposed development of 100ha. The study area was surveyed over a period of two days, by means of vehicle and extensive surveys on foot.

Aerial photographs and 1:50 000 maps of the area were consulted and literature of the area were studied before undertaking the survey. The purpose of this was to identify topographical areas of possible historic and pre-historic activity. All sites discovered both inside and bordering the proposed development area was plotted on 1:50 000 maps and their GPS co-ordinates noted. 35mm photographs on digital film were taken at all the sites.

2.2 Consultation

Local resident Me. N Legemaat was consulted. She indicated that the residential dwellings at Site 1 and Site 2 date between 60 and 100 years. Local farm workers appointed Mr Andries Mashele as spokesperson since he is one of the senior residents on the farm and have an intimate knowledge of the area. He indicated that several informal grave yards and single graves occur through out the property. Some of the grave sites mentioned by him could not be located during the field visit and special attention must be given to this aspect during development.

3. Abbreviations and definitions

3.1 Abbreviations

<i>ASAPA</i> : Association of South African Professional Archaeologists	<i>BPEO</i> : Best Practicable Environmental Option
<i>CRM</i> : Cultural Resource Management	<i>DEA&DP</i> : Department of Environmental Affairs and Development Planning
<i>DEAT</i> : Department of Environmental Affairs and Tourism	<i>DWAF</i> : Department of Water Affairs and Forestry
<i>EIA practitioner</i> : Environmental Impact Assessment Practitioner	<i>EIA</i> : Environmental Impact Assessment
<i>EIA</i> : Early Iron Age	<i>ESA</i> : Early Stone Age
<i>GPS</i> : Global Positioning System	<i>HIA</i> : Heritage Impact Assessment
<i>I&AP</i> : Interested & Affected Party	<i>IDP</i> : Integrated Development Plan
<i>LSA</i> : Late Stone Age	<i>LIA</i> : Late Iron Age
<i>MSA</i> : Middle Stone Age	<i>MIA</i> : Middle Iron Age
<i>NEMA</i> : National Environmental Management Act	<i>NHR Act</i> : National Heritage Resources Act
<i>PHRA</i> : Provincial Heritage Resources Agency	<i>PSSA</i> : Palaeontological Society of South Africa
<i>ROD</i> : Record of Decision	<i>SACLAP</i> : South African Council for the Landscape Architect Profession
<i>SAHRA</i> : South African Heritage Resources Agency	<i>SAIA</i> : South African Institute of Architects
<i>SAPI</i> : South African Planning Institute	<i>SDF</i> : Spatial Development Framework

3.2 Definitions

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;

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;

RAYTON DEVELOPMENT - AIA

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;

Military:

Features, structures and artifacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance:

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

Development:

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

- construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- carrying out any works on or over or under a place;
- subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- constructing or putting up for display signs or hoardings;
- any change to the natural or existing condition or topography of land;
- any removal or destruction of trees, or removal or vegetation or topsoil

Heritage resources:

This means any place or object of cultural significance

Stakeholders:

A subgroup of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term includes the proponent, authorities and all interested and affected parties. (Fransen 2004)

4. ARCHAEOLOGICAL LEGISLATION AND BEST PRACTICE

Phase 1 Archaeological Impact Assessments or Heritage Impact Assessments are a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of a heritage specialist input is to:

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

The AIA or HIA, as a specialist sub-section of the Environmental Impact Assessment [EIA] is required under the National Heritage Resources Act NHRA of 1999 (Act 25 of 1999), Section 38(1), Section 38(8) the National Environmental Management Act (NEMA) and the Mineral and Petroleum Resources Development Act (MPRDA).

The AIA should be submitted, as part of the EIA, BIA or Environmental Management Plan [EMP], to the PHRA if established in the province or to SAHRA. SAHRA will be ultimately responsible for the professional evaluation of Phase 1 AIA reports upon which review comments will be issued. 'Best practice' requires Phase 1 AIA reports and required additional development information, as per the EIA, BIA / EMP, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 AIA reports authored by professional archaeologists, accredited with ASAPA. Minimum accreditation requirements

RAYTON DEVELOPMENT - AIA

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

Minimum standards for reports, site documentation and descriptions are set by the Association of Southern African Professional Archaeologists [ASAPA] in collaboration with SAHRA. ASAPA is a legal body, based in South Africa, representing professional archaeology in the Southern African Development Community [SADC] region. ASAPA is primarily involved in the overseeing of archaeological ethical practice and standards. Membership is based on proposal and secondment by other professional members.

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

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

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

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

After mitigation is conducted on a site, a destruction permit must be applied for from SAHRA before development may proceed.

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36. Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of 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.

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

.5. ASSESSMENT CRITERIA

5.1 Evaluation of Heritage sites

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

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

5.1.1 Heritage Site Significance and Mitigation Measures

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report. ***It must be noted*** that the recommendation listed below must be read in conjunction with section 9 of this report.

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

.5. Archaeological Context of study area

The historical background and timeframe of the study area can be divided into the Stone Age, Iron Age and Historical timeframe. These can be divided as follows:

Stone Age

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

Early Stone Age: The period from ± 2.5 million yrs - $\pm 250\,000$ yrs ago. Acheulean stone tools are dominant.

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

Late Stone Age: The period from $\pm 25\,000$ -yrs before present to the period of contact with either Iron Age farmers or European colonists. This period is associated with *Homo sapiens sapiens*. Material culture from this period includes: microlithic stone tools; ostrich eggshell beads and rock art.

Iron Age

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the Pre-Historic and Historic periods. Similar to the Stone Age it can be divided into three periods:

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

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

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

Historic Timeframe

17th Century to present AD (1600 – 2000)

The historic timeframe intermingles with the later parts of the Stone and Iron Age, and can loosely be regarded as times when written and oral recounts of incidents became available.

5.1 Brief Archival background

Between 1900 and 1910 a railroad was constructed between Rayton and Cullinan. The possibility exists that the railroad cutting the eastern part of the study area can be associated with the historic railroad. Site 1 is in close proximity to the railroad and it can therefore be deducted that the initial information of the dwelling being approximately 100 years old is correct.

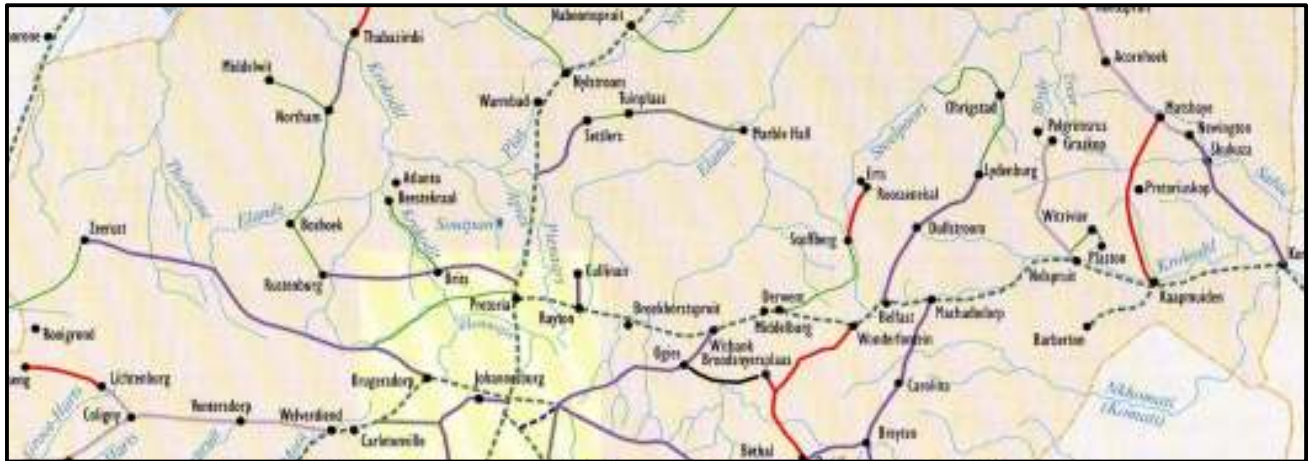


Figure 1: *Enlarged section of the railroad development map from Bergh 1998*

The Rayton area is rich in history; most notable is the Donkerhoek battle between Boer and British soldiers on the 11th and 12th June 1900. The confrontation occurred mainly between genl. Louis Botha and de La Rey on the Boer side and genl. John French and Roberts for the British. The frontline stretch over 40 km and most probably some skirmishes occurred on the study area.



Figure 2: *Locality map of the Doornhoek / Diamond hill battle from Bergh 1998*

RAYTON DEVELOPMENT - AIA

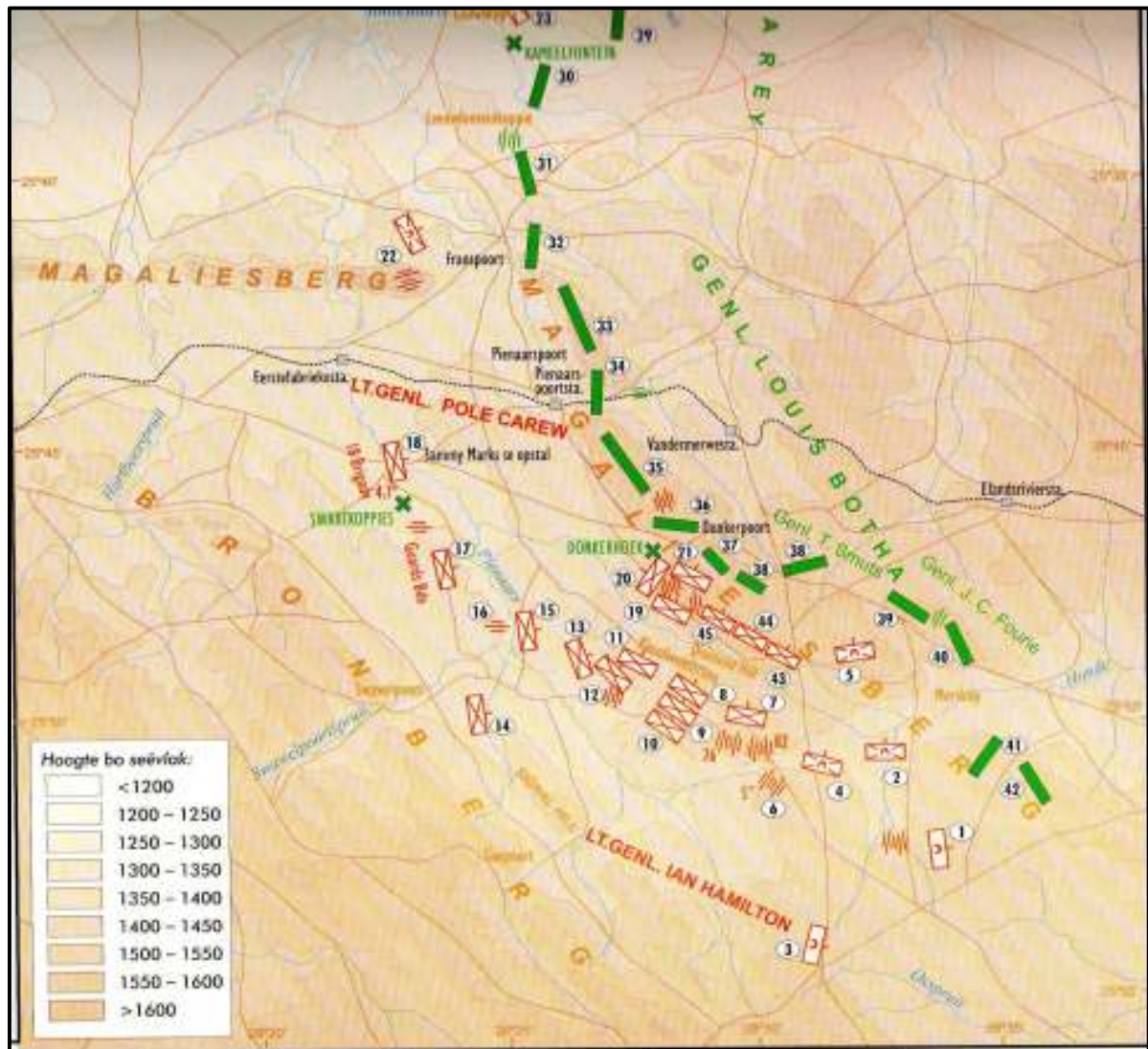


Figure 3: *The battle of Doornhoek, 12 June 1900 from Bergh 1998*

Iron Age and Stone Age sites are also well documented in the area. With various I.A stone walled settlements documented between Mamelodi and Bronkhorstspuit.

5.2 Probability of occurrence of sites

From the above information it is clear that a medium possibility of the occurrence of cultural heritage sites could be expected in the study area.

A. PALAEOONTOLOGICAL LANDSCAPE

CONTEXT

Fossil remains. Such resources are typically found in specific geographical areas, e.g. the Karoo and are embedded in ancient rock and limestone/calcrete formations. Exposed by road cuttings and quarry excavation: *Low Probability*

B. ARCHAEOLOGICAL LANDSCAPE

CONTEXT

NOTE: *Archaeology is the study of human material and remains (by definition) and is not restricted in any formal way as being below the ground surface.*

Archaeological remains dating to the following periods can be expected with in the study area:

Stone Age finds

- ESA: *Medium Probability*
- MSA: *Medium Probability*
- LSA: *Medium Probability*
- LSA –Herder: *Low Probability*

Iron Age Finds

- EIA: *Low Probability*
- MIA: *Medium Probability*
- LIA: *High Probability*

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Historical finds

- Historical period: *High Probability*
- Historical dumps: *High Probability*
- Structural remains: *High Probability*

Military Finds

- Battle and military sites: *High Probability*

Burial/Cemeteries

- Burials over 100 years: *Medium Probability*
- Burials younger than 60 years: *High Probability*

Subsurface excavations including ground leveling, landscaping, and foundation preparation can expose any number of these.

.6. SITES OF SIGNIFICANCE

6.1 Site.1

This is the location of a well preserved historical homestead. The resident Me. Leegemaat also indicated that the structure is 100 years old. During the site visit it was confirmed that the building is older than 60 years and therefore protected by legislation.

The structure is north facing with the main entrance and verandah on the eastern side. Approximately 130 meters to the south of the main building is associated outbuildings. These buildings are in a dilapidated state.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction. Archival study and assessment by conservation architect



Figure 4: *Historical homestead*



Figure 5: *Associated outbuilding at Site 1*

6.2 Site.2

This is the location of a possible historical homestead. The farm resident Me. Leegemaat indicated that the structure is probably older than 60 years. During the site visit it was not possible to confirm if the building is indeed older than 60 years and therefore protected by legislation. The structure is north facing with the main entrance on the eastern side.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected B (GP.B)	-	Possible Medium Significance	Recording before destruction. Determine age of structure and assessment by conservation architect



Figure 6: *Possible historic farmstead*

6.3 Site.3

This is the location of a historical arched sandstone bridge over a small stream. This could have been part of an old wagon route.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected B (GP.B)	-	Medium Significance	Mitigation before destruction. Archival study and assessment by conservation architect



Figure 7: Historical Sandstone Bridge

6.4 Site.4

This is the location of ill defined haphazard stone heaps. Due to the intensive agricultural activities in this area it is possible that these stone heaps is a result of clearing of agricultural fields. How ever with the battle of Doornhoek in this area these stone heaps can also represent redoubts associated with the skirmishes in this area. Until further evidence is obtained the provisional rating for the site is as follows.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected B(GP.B)	-	Low / Medium Significance	Recording before destruction



Figure 8: Ill defined stone walling

6.5 Site.5

This is the location of a single grave site next to the entrance road to the dairy. The grave is aligned east west with a cement headstone. No inscription is visible on the headstone.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction



Figure 9: *Unmarked grave site*

6.6 Site.6

This is the location of a possible historical homestead constructed from stones. The site could probably be older than 60 years and therefore protected by legislation. The site is associated with farm labourer dwellings and consists of at least 6 rectangular structures. Sites like these could contain unmarked graves.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
Generally Protected B (GP.B)	-	Medium Significance	Recording before destruction. Archival research and assessment by conservation architect



Figure 10: *Rectangular stone structure*

6.7 Site.7

This is the location of the foundations of a stone walled historical settlement. The site consists of at least 4 – 5 rectangular structures. The structures are constructed with large stones for foundations that are double packed with rubble filling.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected B (GP.B)	-	Medium Significance	Recording before destruction. Archival research and assessment by conservation architect



Figure 11: *Rectangular stone structure*

6.8 Site.8

This is the location of a large informal cemetery associated with Site 7. The site consists of at least 50 graves that are aligned east to west. Grave dressings consist mostly of stone that are neatly packed, however 1 grave has a granite headstone with the following inscription Ephraim Johannes who passed away in 1959. This grave is of the more recent graves found in the cemetery.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction



Figure 12: *General view of cemetery*



Figure 13: *Granite headstone*

6.9 Site.9

This is the location of large rectangular stone walled enclosures and smaller ill defined linear walling. The site is located at the foot of a small ridge and is highly overgrown. The purpose of these walls is presently unknown. It could be associated with farming activities but also with redoubts as part of the Doornhoek skirmish. If this is indeed the case then the site is of local significance. Till proven otherwise the following significance rating is applicable for these sites.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Local Significance)	Grade 3b	High Significance	Mitigation (part of the site should be retained). Archival study and assessment by specialist)



Figure 14: Overgrown stone walling

6.10 Site.10

This is the location of large rectangular stone walled enclosures and smaller ill defined linear walling. The site is located at the foot of a small ridge and is highly overgrown. The purpose of these walls is presently unknown. It could be associated with farming activities but also with redoubts as part of the Doornhoek skirmish. If this is indeed the case then the site is of local significance. Till proven otherwise the following significance rating is applicable for these sites. Site 10 is associated with Site 9.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Local Significance)	Grade 3b	High Significance	Mitigation (part of the site should be retained). Archival Study and assessment by specialist



Figure 15: *Linear stone walling*

6.11 Site.11

This is the location an informal cemetery. The site is overgrown and consists of at least 20 graves that are aligned east – west. Grave dressings consist mostly of stone packed graves.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
Generally Protected A (GP.A)	-	High / Medium Significance	Mitigation before destruction



Figure 16: *General site conditions*

.7. ASSUMPTIONS AND LIMITATIONS

Due to the nature of cultural remains that occur, in most cases, below surface, the possibility remains that some cultural remains may not have been discovered during the survey. Low ground visibility is present on site due to exceptional high vegetation growth and the possibility of the occurrence of unmarked graves can not be excluded. Although Wits Heritage Contracts unit surveyed the area as thorough as possible, it is incumbent upon the developer to inform the relevant heritage agency should further cultural remains be unearthed or laid open during the process of development.

.9. ASSESSMENT AND RECOMMENDATIONS

A locality map is provided in **Annexure A**

Eleven sites of heritage significance were found on the property ranging from historical to grave sites. The following recommendations are applicable for the sites:

Grave sites:

According to Mr. Andries Mashale informal graves are located through out the property. It is possible that not all the grave sites was located during the survey, it is therefore recommended that during the social consultation process of the EIA this aspect must be addressed that locals can pin point all the known grave sites.

Sites 5, Site 8 and Site 9: The best option and first prize would be the preservation of the cemeteries/graves *in situ*. If the development is of such a nature that the sites will be severely impacted on the cemeteries/graves will have to be relocated.

If the cemeteries/graves were to be preserved *in situ*, it will have to be fenced of and provided with a gate for access by family members. A buffer zone of at least 10 meters will have to be kept around the cemeteries/graves as to facilitate the protection of the site during development.

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In the instance that the cemeteries/graves need to be relocated, this must be done with adherence to all legal requirements as well as an extensive social consultation process required within the process. It is well advised that a company with a proven record of accomplishment be used to manage and complete such a project. Wits Heritage Unit can facilitate such a process.

Historical dwellings/features

It is recommended that a thorough archival study is conducted on the study area. Information obtained from the study will shed light on the following sites that will also influence the significance rating for the sites.

Site 1, Site 2, Site 6 and Site 7: If these sites are impacted upon by the proposed development it is recommended that the age of the buildings is determined, if it is confirmed that they are older than 60 years a conservation architect needs to reassess the sites and make suitable recommendations. If the sites are proven to be older than 60 years and will be impacted upon by the proposed development a destruction permit will be needed for the sites before development can commence.

Site 3: If this site is impacted upon by the proposed development it is recommended that the age of the bridge is determined, if it is confirmed that the bridge are older than 60 years a conservation architect needs to reassess the site and make suitable recommendations. If the site is proven to be older than 60 years and will be impacted upon by the proposed development a destruction permit will be needed for the site before development can commence.

Sites with a possible link to military history

It is recommended that a thorough archival study is conducted on the study area. Information obtained from the study will shed light on the following sites that will also influence the significance rating for the sites.

Site 4, Site 9 and Site 10: If these sites are impacted upon by the proposed development it is recommended that the nature of the sites is determined by a archival study. If it is confirmed that they are older than 75 years and associated with military activities a historian needs to reassess the sites and make suitable recommendations. If the sites are proven to be older than 75 years and of military origin and will be impacted upon by the proposed development a destruction permit will be needed for the sites before development can commence.

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If these recommendations are adhered to there is from a Heritage point of view no reason why the development can not commence.

General

Low ground visibility is present on portions of the site due to high vegetation growth and the possibility of the occurrence of unmarked graves and subsurface finds can not be excluded. If during construction any possible finds are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find.

.10. LIST OF PREPARES

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.11. REFERENCES

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ANNEXURE A: Locality Map & Site Co-ordinates

Site Number	Co-ordinates
Site1	S25°45.0680' E028°32.3295'
Site2	S25°44.9977' E028°32.2323'
Site3	S25°45.4358' E028°32.6879'
Site 4	S25°46.1268' E028°33.1696'
Site 5	S25°45.4900' E028°31.9352'
Site 6	S25°45.5163' E028°31.4023'
Site 7	S25°45.3633' E028°31.3239'
Site 8	S25°45.3772' E028°31.2877'
Site 9	S25°45.9334' E028°31.1505'
Site 10	S25°45.9511' E028°31.3125'
Site 11	S25°46.0622' E028°31.3572'

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