

**A SURVEY OF CULTURAL RESOURCES IN THE  
NELMAPIUS EXTENSION 3 DEVELOPMENT,  
EAST OF PRETORIA, GAUTENG PROVINCE**

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## SUMMARY

### **A survey of cultural resources in the Nelmapius Extension 3 development, east of Pretoria, Gauteng Province**

A variety of structures and sites of cultural significance were identified during a survey of the above area. From this it is deduced that human habitation of this area has taken place intermittently over at least the last 150 000 years. This has left a legacy of cultural resources which will have to be considered before development takes place. It is judged that all the identified sites and structures would be impacted upon to various degrees by the proposed development. It is therefore recommended that the development can continue only after suitable mitigation measures were implemented.

However, after development has taken place, these resources will have to be managed in a responsible and creative manner in order to ensure their continued existence. To this end, a management plan for the sustainable conservation and use of these resources must be drawn up.

The various recommendations are put forward in section 7 of this report.

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## 1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Urban Dynamics** to survey a portion of the farm Hatherley 331JR. It is planned to develop this area for urban housing. The aim of the survey was to locate, identify, evaluate and document the sites, objects and structures of cultural importance found within the boundaries of the area that is to be developed.

## 2. TERMS OF REFERENCE

The **Terms of Reference** for the study were to:

- 2.1 Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural resources) located in the area of the proposed development.
- 2.2 Assess the significance of the cultural resources in terms of their historical, social, religious, aesthetic and scientific value.
- 2.3 Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
- 2.4 Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources. This can include recommendations for the sustainable development and use of the identified cultural resources.
- 2.5 Develop procedures to be implemented if previously unidentified cultural resources are uncovered during construction phase.

## 3. CONDITIONS AND ASSUMPTIONS

The following aspects have a direct bearing on the survey and the resulting report:

- **Cultural resource** is a broad, generic term covering any physical, natural and spiritual properties and features adapted, used and created by humans in the past

and present. Cultural resources are the result of continuing human cultural activity and embody a range of community values and meanings. These resources are non-renewable and finite. They can be, but are not necessarily identified with defined locations.

- The **significance** of the sites and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of a site is done with reference to any number of these.
- Significance is site-specific and relates to the content and context of the site. Sites regarded as having low significance have already been recorded in full and require no further mitigation. Sites with medium to high significance require further mitigation.
- The latitude and longitude of an archaeological site are to be treated as sensitive information by the developer, and should not be disclosed to members of the public.
- All recommendations are made with full cognisance of the relevant legislation, in this case the **National Monuments Act (No 28 of 1969, as amended)**.

## 4. METHODOLOGY

### 4.1 Preliminary investigation

#### 4.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological and historical sources were consulted - see list of references below.

#### 4.1.2 Data sources

The **Archaeological Data Recording Centre (ADRC)**, housed at the National Cultural History Museum, Pretoria, was consulted.

#### 4.1.3 Other sources

The relevant Deeds of Transfer was studied at the Deeds Office in Pretoria. The topocadastral and other maps were also studied - see list of references below.

### 4.2 Field survey

The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area was divided into blocks, making use of natural and human-made topographical elements. These blocks were then surveyed in detail by walking across it. In each block, areas with a potential for human use were investigated. Special attention was given to outcrops, cliffs were inspected for rock shelters, while stream beds and unnatural topographical occurrences such as trenches, holes and clusters of trees were investigated.

#### **4.3 Documentation**

All sites, objects and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities were determined by means of the **Global Positioning System (GPS)**<sup>1</sup> and plotted on a map. This information was added to the description in order to facilitate the identification of each locality.

#### **4.4 Presentation of the information**

In discussing the results of the survey, a chronological rather than a geographical approach was followed in the presentation of an overview of human occupation and land use in the area. This helps the reader to better understand the potential impact of the proposed development. Information on the individual objects, sites, occurrences and structures is presented in Appendix 2 and summarised in Table 1.

### **5. DESCRIPTION OF THE AREA SURVEYED**

The area that was surveyed is located on a portion of the farm Hatherley 331JR in the Pretoria district and is indicated in Figure 1, added at the end of the report.

The topography of the area is, basically, gently rolling plains, with the most dominant geographical feature being a series of low hills located on the south western side of the area, with the Pienaars River forming the western border.

The geology of the area is made up of shale of the Magaliesberg Formation of the Pretoria Group of the Transvaal Sequence. Some later intrusions of diabase and syenite occur as outcrops in the area. This is not the type of material preferred by Stone Age people in tool making, but was used extensively by Iron Age people in constructing of their settlements.

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<sup>1</sup> According to the manufacturer a certain deviation may be expected for each reading. Care was, however, taken to obtain as accurate a reading as possible, and then correlate it with reference to the physical environment before plotting it on the map.

The original vegetation of the area is classified as Bankenveld (Acocks 1975:99). This is open savanna with **Acacia caffra** and **Celtis africana** trees dominating. A large variety of grass species occurs. Acocks indicate that intensive cultivation of this type of veld by Iron Age people resulted in **Hyparrhenia hirta** (blougras/steekgras) becoming very dominant in the disturbed areas. The next veld type, Sourish Mixed Bushveld (Acocks 1975:48), occurs just to the north of this and the change over is sometimes indistinct. This latter veldtype is sometimes found in the Bankenveld on rocky outcrops. It includes **Acacia karroo**, **Acacia caffra** and **Rhus sp** as some of the principal trees, with **Cymbopogon plurinades** and **Themeda trianda** as dominant grasses.

Large sections of the area have been cultivated in the past, with the result that any cultural resources that might have occurred here, have been destroyed or displaced out of original context.

## 6. DISCUSSION

A large number of sites and structures of cultural significance were identified in the area and can be categorised as follows.

### 6.1 Stone Age

No Stone Age sites of significance were identified. However, during the survey stone tools dating to the Middle Stone Age was noted to be scattered all over the area. They are all made from quartzite or chert, both materials that had to be “imported” into the area. The stone tools were without exception surface finds, and as such they are considered to be disturbed out of context, especially in the area that were previously cultivated. These objects are therefore judged not to pose any obstacle to the proposed development.

### 6.2 Iron Age

The Iron Age sites that were identified, probably all dates to the Late Iron Age. As such, they can be related to the settlement of the Manala section of the Ndebele-speaking people in the area. Compared to other similar sites in the larger geographical region, these particular sites are judged not to have much significance. This is based on their relative size and the amount of cultural material found here. Research on other sites has generated much information, which will only be duplicated by these smaller sites. Test excavation,

**Table 1: Summary of impact description and assessment of the Nelmapius X3 urban development area** (see Appendix 2)



Site no. Legal	Type of site	Significance of impact	Certainty of prediction	Status of impact	Recommended management action requirement
2528CB15 NMC permit	Iron Age	Low	Definite	Negative	2 = controlled sampling/mapping necessary
2528CB16	Historic	Low	Definite	Neutral	1 = no further investigation necessary   none
2528CB17 T.O.	Historic	Medium	Definite	Negative	Relocate   NMC &
2528CB18 NMC permit	Iron Age	Low	Definite	Negative	2 = controlled sampling/mapping necessary
2528CB19	Undeterm	Low	Definite	Neutral	1 = no further investigation necessary   none
2528CB20 NMC permit	Historic	Medium	Definite	Negative	4 = preserve site or extensive excavation
2528CB21	Historic	Low	Definite	Negative	5 = preserve site at all cost
2528CB22	Historic	Medium	Definite	Negative	5 = preserve site at all cost
2528CB23 NMC permit	Iron Age	Low	Definite	Negative	2 = controlled sampling/mapping necessary
2528CB24	Historic	Low	Definite	Neutral	5 = preserve site at all cost
2528CB25 NMC permit	Historic	Low	Definite	Negative	2 = controlled sampling/mapping necessary
2528CB26 NMC permit	Historic	Low	Definite	Negative	2 = controlled sampling/mapping necessary

2528CB27	Historic	Low	Probable	Negative	2 = controlled sampling/mapping necessary	NMC permit
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documentation and mapping should be sufficient to record any information contained in these sites and they do not necessarily have to be conserved.

### 6.3 Historic

A variety of sites and structures relating to the historical period were located in the area. Some of these seem to be quite old and can be related to early white settlement. It does not only include architecture, but also infrastructure elements such as roads, bridges and irrigation canals. All of these are protected by law and will have to be considered during the development. The same can be said for the structures that are preliminary identified as have belonged to farm labourers.

Also, very important are the structures relating to the First War of Independence. These relate to the Siege of Pretoria and more specifically the so-called Battle of Zwartkoppies (see Appendix 4). Some of these structures do not fall in the area to be developed, but, as it forms an integrated whole with the other structures, and because it will also be impacted upon in a derived manner by the proposed development, it should also be conserved. Though not very impressive, the significance of these sites increases if it is considered that of all that remains of them, only the Rooihuiskraal site in Centurion is conserved and made accessible to the public.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Human habitation of this area has taken place intermittently over at least the last 150 000 years. This has left a legacy of cultural resources which will have to be managed in a responsible and creative manner in order to make it a sustainable action.

Though all sites and structures of cultural significance are deemed important, it is realised that some can be forfeited in the face of development, but only after comprehensive research and documentation was done. This, however, should be seen as a last option and although it is recommended here in some cases, alternatives should be considered in all cases.

Fortunately, few of the sites are located in the area which will be impacted upon most by the proposed development. They cannot be ignored, however, as they might be impacted upon in a number of ways in the future. Being located where they are, it should not be too difficult to accommodate them in a revised development plan.

The following recommendations are made

- 7.1 Mitigation measures must be implemented on all sites indicated as having a management factor of higher than two (see Table 1, or Appendix 2). This is not so much a recommendation as a prerequisite of the relevant legislation.

- 7.2 It is recommended that mitigation also involve the collection of the stone tools found in the area. The collected material can be used in educational programmes. For this, a permit would have to be obtained from the National Monuments Council.
- 7.3 It is recommended that the whole area be developed in an open space system (see the report on the **Strategic Metropolitan Development Framework** 1997:44). In this area, which can be either a proclaimed nature reserve, or a regional open space, the cultural resources can then be developed, conserved and used in a sustainable manner.
- 7.4 It is suggested that the conservation and development of these sites be part of a project that involve the community. For example, the archaeological investigations can be done by professionals, assisted by local school children.
- 7.5 People forming part of this community should be involved in the management and presentation of the cultural resources as educational and tourist attractions, thereby also possibly generating income for themselves.
- 7.6 Training of the local people by professionals associated with organisations such as museums and universities, tourism operators and such, is a prerequisite in the development of these sites.
- 7.7 The sites at Nelmapius should not be viewed in isolation. The Sammy Marks Museum, as satellite museum of the National Cultural History Museum, is located just to the east, also on the farm Zwartkoppies. With this as base (because of existing infrastructure), a tourism route can be developed that include the sites at Nelmapius, as well as other sites in the larger geographical region (ie. Eastern parts of Pretoria). This would make the development of the sites on Nelmapius a more viable proposition. These other sites include Stone Age and Iron Age sites, rock engravings, Second War of Independence sites, etc.
- 7.7 It is recommended that the developers be notified that archaeological sites might be exposed during the construction work. If anything is noticed, it should be reported immediately to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

## 8. REFERENCES

### 8.1 Unpublished data

#### 8.1.1 Data base

Archaeological Data Recording Centre (ADRC), National Cultural History Museum, Pretoria.

Deeds Office, Pretoria

### 8.2 Published sources

#### 8.2.1 Books and journals

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### 8.2.2 Maps

1: 50 000 Topocadastral map - 2528CB

1: 50 000 Geological map - 2528CB

## 9. PROJECT TEAM

J van Schalkwyk - project leader

R de Jongh - reviewer

## **APPENDIX 1: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON CULTURAL RESOURCES**

### **Significance of impact:**

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a "no-go" implication on the project regardless of any mitigation

### **Certainty of prediction:**

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% 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

### **Status of the impact:**

With mitigation and the resultant recovery of material, a negative impact can be turned positive. Describe whether the impact is positive (a benefit), negative (a cost) or neutral

### **Recommended management action:**

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = test excavation to determine if further work is necessary
- 4 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 5 = preserve site at all costs

### **Legal requirements:**

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.



## APPENDIX 2: SURVEY RESULTS

[See Appendix 1 for an explanation of the conventions used in assessing of the cultural remains]

### 1. Site number: 2528CB15<sup>2</sup>

Location: Hatherley 331JR: 25°44'20.6"S; 28°22'34.7"E [X 2847840.919; Y 62582.743]

Description: Rudimentary stone walling located amongst a natural outcrop of boulders. Most of the structures are circular in plan, although one rectangular one was noticed.

Discussion: This is in all probability a Late Iron Age settlement, with the rectangular structure an intrusion dating to early historical times. The Iron Age structures are similar to that found in other parts of the larger geographical region. As this area is earmarked as "public open space" (see Fig. 1), conservation of these structures would not be difficult. They are, however, not judged to be significant.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These structures are older than 50 years and are therefore protected by the National Monuments Act. Their destruction would require a permit from the Monuments Council.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

### 2. Site number: 2528CB16

Location: Hatherley 331JR: 25°44'18.3"S; 28°22'40.9"E [X 2847769.326; Y 62410.261]

Description: A number of small heaps of stone.

Discussion: These feature actually falls outside the area that is to be developed. They are recorded, however, as their origin is uncertain. They might either be graves, which is very unlikely, or, more probable, are heaps of stones that was created when the area was cleared to make agricultural fields.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Legal requirements: None at present

Recommended management action: 1 = no further investigation necessary.

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<sup>2</sup> Numbers 2528CB1-14 relate to other known sites on this particular ¼ degree sheet already documented in the ADRC, and does not necessarily refer to sites occurring on or close to the specific area of development.

3. Site number: 2528CB17

Location: Hatherley 331JR: 25°44'18.4"S; 28°22'18.2"E [X 2847775.388; Y 63040.191]

Description: An informal cemetery (ie, without fences, maintenance, etc.) containing up to 23 graves, although there might be more which are not clearly marked.

Discussion: The decision would be to either turn this into a formal cemetery, or to relocate the graves to an existing formal cemetery. Relocation of the contents of these graves becomes a matter of obtaining permission from descendants (directly), or by advertising in the newspapers about the pending move. This is followed by permission from the Department of Health of the relevant province, as well as permission from the premier of that province. A commercial firm of undertakers then relocates the graves to a mutually agreed site.

Significance of impact: Medium

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These are not war graves, but some do have headstones older than 50 years. As such they do not fall under the jurisdiction of the War Graves Commission, but under the National Monuments Act. The relocation of the graves will therefore have to be done in accordance with **Transvaal Ordinance (No. 7 of 1925)** and the **National Monuments Act (Act No. 28 of 1969)**. However, the local Authority might also have its own requirements concerning this matter, which will have to be pursued by the developer self.

Recommended management action: Relocation is suggested.

4. Site number: 2528CB18

Location: Hatherley 331JR: 22°44'22.6"S; 28°22'21.0"E [X 2847904.275; Y 62964.318]

Description: Six half moon shaped structures built of stone. The walls are very low and in some cases nearly undistinguishable. Some undecorated pieces of pottery were found here.

Discussion: These structures probably date to the Late Iron Age and can be related to similar ones found all over the larger geographical region. Within the context of other sites in the larger geographical area, these are judged not to be significant.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These structures are protected by the National Monuments Act. Their destruction would require a permit from the Monuments Council.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

5. Site number: 2528CB19

Location: Hatherley 331JR: 25°44'23.3"S; 28°22'18.7"E [X 2847926.121; Y 63028.324]

Description: Very rudimentary stone walling and earth works.

Discussion: Probably an old cattle kraal. Not enough evidence has remained to make a

definite statement on its origin and it is doubtful if further investigation will reveal more.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Legal requirements: None

Recommended management action: 1 = no further investigation necessary

#### 6. Site number: 2528CB20

Location: Hatherley 331JR: 25°44'22.5"S; 28°22'22.7"E [X 2847900.972; Y 62916.948]

Description: The ruins of a number of structures, mostly rectangular in shape. One circular structure, located on the eastern side, seems to have been used as an initiation site.

Discussion: This might be an old farmstead. Structures are indicated in this position on the old deed of transfer (see Appendix 5), implying that they might be quite old. The relationship of the initiation structure to the rest of the complex, is unclear. It probably dates to a later period than the homestead, and was erected after the former was abandoned. This is deduced from the large quantity of ash noticeable in the hearth of the structure.

Significance of impact: Medium

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: As these structures are older than 50 years, they are protected by the National Monuments Act. A permit would be required from the Monuments Council if they are going to be demolished.

Recommended management action: 4 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary.

#### 7. Site number: 2528CB21

Location: Hatherley 331JR: 25°44'29.1"S; 28°22'27.0"E [X 2848103.502; Y 62796.128]

Description: A "fort", circular in plan and built of loosely packed stone. It is approximately 12 m in diameter. A second, smaller fortification is located approximately 50 m to the south east on a second hill. It is also circular in plan and built in the same manner as the large structure. It is approximately 4 m in diameter.

Discussion: These structures date to the First War of Independence (1880-1881) and are associated with the so-called Battle of Zwartkoppies (see Appendix 4). They probably form part of a system which include the defence works situated more to the north east (see no. 10 below). These structures are located in an area for which the use is currently indicated as "undetermined" and would not be impacted much by the development. However, future development and actions of large numbers of new inhabitants might impact negatively on them.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These structures are protected by the National Monuments Act. If they are demolished, a permit would be required from the Monuments Council.

Recommended management action: 5 = preserve site at all costs.

8. Site number: 2528CB22

Location: Hatherley 331JR: 25°44'27.2"S; 28°22'34.6"E [X 2848044.031; Y 62584.570]

Description: Bridge of stone, brick and cement, forming part of an old road. The latter is identified by a lane of pine trees, of which only a few remains.

Discussion: This form part of the road built by Sammy Marks from his home on the farm Zwartkoppies, to his factories at Eerste Fabrieken. From a historical perspective, therefore, this is a very important structure.

Significance of impact: Medium

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: As the bridge and road is older than 50 years, it is protected under the National Monuments Act. A permit will therefore have to be obtained before it can be demolished.

Recommended management action: 5 = preserve site at all cost.

9. Site number: 2528CB23

Location: Hatherley 331JR: 25°44'25.5"S; 28°22'30.2"E [X 2847992.298; Y 62707.460]

Description: A few half moon shaped structures built of stone. The walls are very low. A few smaller heaps of stones occur amongst them.

Discussion: These are probably Late Iron Age in origin and possibly relate to the Manala Ndebele. They are similar to other structures found in the larger geographical area. These structures are judged not to be of much significance.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: These structures are protected by the National Monuments Act. A permit will have to be obtained before their destruction.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

10. Site number: 2528CB24

Location: Hatherley 331JR: 25°44'11.1"S; 28°22'59.2"E [X 2847542.291; Y 61901.224]

Description: A circular structure packed of loose stone. It is approximately 12 m in diameter. Smaller structures occur 50 to 100 m in all directions from the larger one.

Discussion: This formed part of the fortifications used during the Siege of Pretoria and the Battle of Zwartkoppies (see Appendix 4). Although located far from the other two structures (see no. 7 above), and falls outside of the area to be developed, it forms an integral part of the defence system. The danger that high density development holds for

the sites located within the area to be developed is the same as for this site.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Legal requirements: As this structure is older than 50 years, it is protected by the National Monuments Act.

Recommended management action: 5 = preserve site at all costs.

11. Site number: 2528CB25

Location: Hatherley 331JR: 25°44'01.3"S; 28°22'11.1"E [X 2847250.147; Y 63246.183]

Description: Remains (foundation) of a rectangular structure, made from clay, stone and brick.

Discussion: This possibly is the remains of a structure used by farm labourers as a house.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: If this structure is older than 50 years, a permit from the National Monuments Council will be needed for it to be demolished.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

12. Site number: 2528CB26

Location: Hatherley 331JR: 25°43'56.0"S; 28°22'12.9"E [X 2847086.799; Y 63193.999]

Description: Remains (foundation) of rectangular structure, made from clay, stone and brick. Approximately 250 m to the north west a possible third such structure occurs. In this latter case, however, it is difficult to determine its size and origin as it is currently very overgrown with grass.

Discussion: These possibly are the remains of structures used by farm labourers as houses.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Negative

Legal requirements: If it is older than 50 years, a permit from the National Monuments Council will be needed for it to be demolished.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

13. Site number: 2528CB27

Location: Hatherley 331JR

Description: An old irrigation canal. It consists of a ditch that was excavated and which is basically following the flood line of the river.

Discussion: This feature most probably dates to the same time as the old homestead on this section of the farm.

Significance of impact: Low

Certainty of prediction: Probable

Status of impact: Negative

Legal requirements: As this qualifies as a structure, and as it is most probably more than 50 years old, it is protected by the National Monuments Act. A valid permit is therefore necessary if going to be destroyed.

Recommended management action: 2 = controlled sampling and/or mapping of the site necessary.

### APPENDIX 3: GLOSSARY AND ABBREVIATIONS

This section is included to give the reader some necessary background. It must be kept in mind, however, that these dates are all relative and serve only to give a very broad framework for interpretation.

#### STONE AGE

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

#### IRON AGE

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

#### HISTORICAL PERIOD

Since the arrival of the white settlers - c. AD 1830 in this part of the country

**APPENDIX 4: THE SIEGE OF PRETORIA**

A summary of the so-called Siege of Pretoria, explaining the role and function of the sites under consideration.















**APPENDIX 5: MAP ON THE DEED OF TRANSFER**

Copy of the Deed of Transfer for **Gedeelte van Swarte Koppies**, dated October 2nd, 1875. Some unidentifiable structures can be seen on the site of the development. On the original this is more noticeable as the various features are added in different colours.