

**A SURVEY OF CULTURAL RESOURCES IN THE
PROPOSED NELLMAPIUS X5 DEVELOPMENT,
PRETORIA DISTRICT, GAUTENG**

For:

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SUMMARY

A survey of cultural resources in the proposed Nelmapius X5 development, Pretoria District, Gauteng

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area in which the proposed development is to take place.

Based on what was found and its evaluation, it is recommended that the proposed development can continue, but only after suitable mitigation measures for the identified sites are implemented. This consists of:

- S All graves should be left alone, or relocated in consultation with the local communities.
- S Mitigation should be implemented for each site as recommended in Appendix 2.
- S The developers should 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.

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**A SURVEY OF CULTURAL RESOURCES IN THE
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PRETORIA DISTRICT, GAUTENG**

1. AIMS OF THE SURVEY

The National Cultural History Museum was contracted by **IRCA Environmental Services** to survey to an area which is earmarked for urban development. The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area that is to be impacted by the 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 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 Determine the possible impacts on the known and potential cultural resources in the area

- of interest.
- 2.4 Develop mitigation or control measures for impact minimization and cultural resources preservation.
- 2.5 Develop procedures to be implemented if previously unidentified cultural resources are uncovered during the construction.

3. DEFINITIONS AND ASSUMPTIONS

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

- C **Cultural resources** are all nonphysical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- C The **significance** of the sites and artifacts are 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 any site is done with reference to any number of these.
- C 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.
- C The latitude and longitude of archaeological sites are to be treated as sensitive information by the developer and should not be disclosed to members of the public.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are mainly dealt within two acts. These are the South Africa Heritage Resources Act (Act 25 of 1999) and the Environmental Conservation Act (Act 73 of 1989).

4.1 South African Heritage Resources Act

Archaeology, palaeontology and meteorites

Section 35(4) of this act states that no person may, without a permit issued by the responsible heritage resources authority:

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assists in the detection or recovery of metals or

archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency.

Human remains:

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old is subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations.

Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925). Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (ie where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

4.2 Environmental Conservation Act

This act states that a survey and an evaluation of cultural resources should be undertaken in areas where development, which will change the face of the environment, is to be made. The impact of the development on the cultural resources should also be determined and proposals to mitigate this impact is to be formulated.

5. METHODOLOGY

5.1 Preliminary investigation

5.1.1 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 the list of references below. Nothing pertaining to the particular area was found, although a number of survey reports from adjacent areas exist.

5.1.2 Data bases

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

5.1.3 Other sources

The topocadastral and other maps were also studied - see the list of references below.

5.2 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 areas that had to be investigated were identified by members of IRCA Environmental Services during a site visit. The area was investigated by driving and walking across it. Special attention was given to natural features such as outcrops and river banks, and unnatural topographical occurrences such as trenches, holes and clusters of trees were investigated.

5.3 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)¹ and plotted on a map. This information was added to the description in order to facilitate the identification of each locality.

6. DESCRIPTION OF THE AREA

The area surveyed is located on a portion of the farm Hatherley 331JR, east of Pretoria and south of Mamelodi.

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 the original vegetation does not exist anymore.

¹ 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.

7. DISCUSSION

7.1 Stone Age

No stone tools were noticed and no sites likely to be inhabited by Stone Age people occur in the area.

7.2 Iron Age

One site that was identified possibly dates to the Late Iron Age. However, this is a very small and insignificant site and furthermore, it is already damaged by illegal dumping.

7.3 Historical period

A few sites dating to recent historical times were identified in the area.

The largest part of these consists of what can be classified as a “farm labourer homesteads”. All of them are damaged to such an extent that little or no information can be derived from them. However, care should be taken as in some cases unmarked graves, especially of young children, are located in or close to these features.

Two fortifications dating to the first South African War (1880-1881) were identified. These should, because of their historical significance, be avoided and preserved.

Some other structures, probably related to the Eerste Fabrieken development also occur. These should also be avoided.

8. RECOMMENDATIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural importance found within the boundaries of the area in which the proposed development is to take place.

Based on what was found and its evaluation, it is recommended that the proposed development can continue, but only after suitable mitigation measures for the identified sites are implemented. This consists of:

- 8.1 All graves should be left alone, or relocated in consultation with the local communities.
- 8.2 Mitigation should be implemented for each site as recommended in Appendix 2.
- 8.3 The developers should 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.

9. REFERENCES

9.1 Unpublished sources

9.1.1 Data base

Archaeological Data Recording Centre, National Cultural History Museum, Pretoria.

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

9.2 Published sources

9.2.1 Books and journals

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

Davey, A.M. 1956. *The siege of Pretoria*. Ongepubliseerde MA-verhandeling. Pretoria: Universiteit van Suid-Afrika.

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Holm, S.E. 1966. *Bibliography of South African Pre- and Protohistoric archaeology*. Pretoria: J.L. van Schaik.

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Van Schalkwyk, J.A. 1995. *A survey of cultural resources in the proposed Pretoria East waste dump site*. Unpublished report, no. 95KH06. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 1997 *A survey of cultural resources in the Nellmapius X3 development, east of Pretoria, Gauteng Province*. Unpublished report, no. 97KH16. Pretoria: National Cultural History Museum.

Van Warmelo, N.J. 1977. *Anthropology of Southern Africa in Periodicals to 1950*. Pretoria: Government Printer.

9.2.2 Maps

1: 50 000 Topocadastral maps - 2528CB

10. PROJECT TEAM

J van Schalkwyk

A Pelser

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

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/action necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 4 = 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 RESULTS²

[Previous site numbers relate to other known sites on a particular 3 degree sheet already documented in the ADRC, and does not necessarily refer to sites occurring on or close to the specific area of development.]

1. Site number: 2528CB24

Location: Hatherley 331JR: S 25E44'10"; E 28E22'59" [Y 61906.942; X 2847511.317]

Description: Circular structure of stone.

² See Appendix 1 for an explanation of the conventions used in assessing the cultural remains.

Discussion: This probably is one of the fortifications built during the siege of Pretoria during the first Anglo-Boer War

Significance of impact: High

Recommended management action: 4 = preserve site at all costs

Legal requirements: None

2. Site number: 2528CB45

Location: Hatherley 331JR: S 25E43'41"; E 28E22'09" [Y 63310.439; X 2846638.056]

Description: Cemetery containing approximately 50 graves

Discussion: Most grave are marked only with stone cairns

Significance of impact: High

Recommended management action: Preserve site if possible, or relocate after community consultation

Legal requirements: Notification, consultation, permits

3. Site number: 2528CB46

Location: Hatherley 331JR: S 25E43'29"; E 28E21'33" [Y 64310.252; X2846261.293]

Description: Location of the Eerste Fabrieken factory complex

Discussion: This site actually falls outside the area of development, but as it is of much historical significance, it is included here

Significance of impact: Low

Recommended management action: 4 = preserve site at all costs

Legal requirements: None

4. Site number: 2528CB47

Location: Hatherley 331JR: S 25E44'19"; E 28E23'25" [Y 61180.934; X 2847785.129]

Description: Small circles of packed stone

Discussion: Part of Iron Age settlement of the area.

Significance of impact: High

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

Legal requirements: SAHRA permit

5. Site number: 2528CB48

Location: Hatherley 331JR: S 25E44'03"; E 28E23'12" [Y 61545.579; X 2847294.448]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

6. Site number: 2528CB49

Location: Hatherley 331JR: S 25E44'02"; E 28E23'08" [Y 61657.221; X 2847264.194]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

7. Site number: 2528CB50

Location: Hatherley 331JR: S 25E44'00"; E 28E23'06" [Y 61713.257; X 2847202.908]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

8. Site number: 2528CB51

Location: Hatherley 331JR: S 25E43'54"; E 28E22'53" [Y 62076.496; X 2847019.967]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

9. Site number: 2528CB52

Location: Hatherley 331JR: S 25E43'37"; E 28E22'38" [Y 62497.093; X 2846498.800]

Description: Circular structure of stone

Discussion: This probably was also a fort dating to the first South African War 1880-1881.

Significance of impact: High

Recommended management action: 4 = preserve site at all costs

Legal requirements: None

10. Site number: 2528CB53

Location: Hatherley 331JR: S 25E43'34"; E 28E22'37" [Y 62514.181; X 2846421.948]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

11. Site number: 2528CB54

Location: Hatherley 331JR: S 25E43'34"; E 28E22'29" [Y 62748.417; X 2846407.669]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

12. Site number: 2528CB55

Location: Hatherley 331JR: S 25E43'32"; E 28E22'06" [Y 63389.872; X 2846349.177]

Description: Rectangular excavation on top of a hill. From that a furrow leads down in the direction of the Eerste Fabrieken site

Discussion: This was probably a water reservoir that supplied water to the factories/farms at Eerste Fabrieken

Significance of impact: High

Recommended management action: 4 = preserve site at all costs

Legal requirements: None

13. Site number: 2528CB56

Location: Hatherley 331JR: S 25E43'33"; E 28E22'01" [Y 63529.108; X 2846380.617]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

14. Site number: 2528CB57

Location: Hatherley 331JR: S 25E43'36"; E 28E22'00" [Y 63556.542; X 2846473.068]

Description: Water furrow

Discussion: Also see no. 12 above

Significance of impact: High

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

Legal requirements: None

15. Site number: 2528CB58

Location: Hatherley 331JR: S 25E43'44"; E 28E22'24" [Y 62875.144; X 2846725.234]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

16. Site number: 2528CB59

Location: Hatherley 331JR: S 25E43'53"; E 28E22'32" [Y 62662.021; X 2846991.951]

Description: Ruins of rectangular structures, with courtyard walls

Discussion: Probably an old farm labourer homestead

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

17. Site number: 2528CB60

Location: Hatherley 331JR: S 25E44'06"; E 28E22'35" [Y 62576.505; X 2847391.599]

Description: Long section on which stones were removed and stacked on both sides

Discussion: This in all probability was an old road, but from where it came and where it led, is difficult to say.

Significance of impact: High

Recommended management action: 1 = no further investigation/action necessary

Legal requirements: None

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 1840 in this part of the country

core - a piece of stone from which flakes were removed to be used or made into tools

SAHRA - South African Heritage Resources Agency