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Geagte Mev van Achterbergh

Met verwysing na ons telefoongesprek van gister, stuur ek vir u 'n afskrif van 'n kaart van die gebied. Die swart lyn toon die belyning van die beoogde rioolpyp aan. Die pyp is klaarblyklik 2 meter in deursnee. Die twee swart kolle is gebiede wat oorweeg word om die rioolwerke op te rig.

Ek sal dit op prys stel as u vir my kan laat weet van enige kultuurhulpbronne (grafte, ens.) in die gebied wat na u oordeel deur die insit van die pyplyn, of oprigting van die rioolwerke, bedreig sal word.

Die uwe

J A VAN SCHALKWYK

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Geagte Mnr Dry

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Die uwe

J A VAN SCHALKWYK

**A SURVEY OF CULTURAL RESOURCES IN THE
PROPOSED ERWAT SEWER OUTFALL ROUTE, NORTH OF
SPRINGS, GAUTENG PROVINCE**

For:

AFROSEARCH INDEX

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Survey conducted and report prepared by the:

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REPORT: 97KH05

Date of survey: March 1997

Date of report: March 1997



SUMMARY

A survey of cultural resources in the proposed Erwat Sewer outfall route, north of Springs, Gauteng Province

A survey to establish the nature, extent and significance of cultural resources were made in the area of the proposed Erwat Sewer outfall route and two proposed sewer sites, Springs District, Gauteng Province.

The area under consideration is largely disturbed by mining and agricultural activities, making the location of primary archaeological sites very difficult, as well as highly unlikely. A number of sites were identified during the survey. It is, however, judged that they would not be impacted upon by the proposed development. It is therefore recommended that the development can continue.

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**A SURVEY OF CULTURAL RESOURCES IN THE
PROPOSED ERWAT SEWER OUTFALL ROUTE, NORTH OF
SPRINGS, GAUTENG PROVINCE**

1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Afrosearch Index** to survey a route north of the Springs, Gauteng Province. The aim was to locate, identify, evaluate and document sites, objects and structures of archaeological, historical and cultural importance within the boundaries of the proposed development.

2. TERMS OF REFERENCE

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

- 2.1 Identify all sites, occurrences and structures of an archaeological or historical nature (cultural resources) located on the site 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.

3. CONDITIONS AND ASSUMPTIONS

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

- Cultural resources** are all nonphysical and physical human-made 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.
- 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 any 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 is to be treated as sensitive information by the developer, and should not be disclosed to members of the public.

4. METHODOLOGY

4.1 Preliminary investigation

4.1.1 Survey of the literature

A survey of all relevant literature was conducted with the aim of reviewing the previous research done and to determine 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 in Pretoria, was consulted.

4.1.3 Other sources

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

Interviews (telephonic) were also held with a number of people interested people - see list of references below.

4.2 Field survey

The survey was conducted according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. This was done by dividing the whole area into blocks, making use of natural and human-made topographical elements. 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 exotic (and indigenous) trees were investigated.

4.3 Documentation



 NATIONALE KULTUURHISTORIESE MUSEUM NATIONAL CULTURAL HISTORY MUSEUM		Figure 1: Map showing the location of the area investigated	
		Report 97KH05	March 1997

All sites, objects and structures identified were documented according to the general minimum standard 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. The information was added to the description 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 to present an overview of human occupation and land use in the area. This helps the reader to better understand and facilitate the potential impact of the development.

5. DESCRIPTION OF THE AREA SURVEYED

The area surveyed (Figure 1) is located on the farms Klipfontein 70 IR, Welgedacht 74IR, Modderfontein 76IR and Geduld 123IR of the Springs, Benoni and Brakpan districts, Gauteng Province.

The vegetation of the study area is classified by Acocks (1978:88) as Cymbopogon-Themada Veld, featuring gentle rolling highveld, with the most important geographical feature being the Blesbokspruit. Large parts of the area is subject to intensive agricultural and mining activities, with the result that any archaeological indicators visible on the surface would have been destroyed or disturbed out of context.

6. DISCUSSION

6.1 Stone Age

Though no stone tools were identified during the survey, it is to be expected that some Middle Stone Age artifacts would be found as surface material. These would, however, be disturbed out of context due to the farming and mining activities that took place in the area. It is, furthermore, doubtful if these artifacts would be found in the area of the proposed outfall route, as the latter is to be located quite close to the banks of the Blesbokspruit. These are areas that were usually avoided for settlement purpose.

6.2 Iron Age

No Iron Age sites were identified in the area. If any were to be found, it would, in all likelihood, be similar to those identified by Maggs (1976) for the southern highveld area

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.

(southern Transvaal, northern Orange Free State). Similarly, it would be destroyed due to the farming and mining activities that took place in the area.

6.3 Historic

Two cemeteries were located. The first, which is still in use, is located at the north eastern extremity of the proposed sewer outfall route on the farm Klipfontein. The second, containing approximately 1000 graves according to Mr Julian Baker of the Modderfontein Mine, is located just west of an old Modderfontein slimes dam. These graves are apparently of Chinese mine labourers and date to the turn of the century. If the pipeline is put through this cemetery, the contents of these graves will have to be relocated. Though none were identified, it must be kept in mind that for the removal of any headstones older than 50 years, a permit will have to be obtained from the National Monuments Council.

A number of structures, all possibly related to mining or farming activities, were located. Except for one site, all are in ruin and are accordingly judged to be of little significance. The Klipfontein No 5 Shaft, though abandoned, show architecture that is specific to mining activities of the last 50 years. If the development impact on these structures, it is suggested that they be documented in full by an architectural historian.

A number of houses, possibly dating to the 1930s are found on the farm Welgedag, next to the railroad. These houses belong to Transnet. They are judged not to be unique, but it is also suggested that if they are to be impacted on by the development, ie. if they are to be torn down, they should first be documented in full by an architectural historian.

7. CONCLUSIONS AND RECOMMENDATIONS

Four sites of cultural significance were found in the general area of the development. Within the scope of the proposed development, it is judged that they would not to be impacted upon by the proposed development and will therefore not prevent the development from continuing, or require modification of the project design. If, however, the alignment of the outfall route is changed for some reason or other, these sites will have to be considered and mitigationary steps taken.

We therefore recommend that the development can continue. It is, however, suggested that the developers be notified that archaeological sites might be exposed during the excavation for the pipeline. 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 find can be made.

8. REFERENCES

8.1 Unpublished sources

8.1.1 Data base

Archaeological Data Recording Centre, (former) Tvl section, National Cultural History Museum, Pretoria.

8.1.2 Interviews

Mr J Baker - Modderfontein Mine

Mr G Dry - Parks Department, Springs

Mr P Robertson - Transnet Heritage Foundation

Mrs H van Achterbergh - Assistant City Librarian, Springs

8.2 Published sources

8.2.1 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.

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

Maggs, T.M.O'C. 1976. **Iron Age communities of the Southern Highveld**. Occasional Papers of the Natal Museum, No. 2. Pietermaritzburg: Council of the Natal Museum.

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

Van Riet Lowe, C. n.d. **The distribution of Prehistoric rock engravings and paintings in South Africa**. Archaeological Survey, Archaeological Series No. 7.

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

8.2.2 Maps

1: 50 000 Topocadastral maps - 2628AB Benoni

9. PROJECT TEAM

J van Schalkwyk - project leader

S Smith

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

Significance of impact:

- lowwhere the impact will not have an influence on or require to be significantly accommodated in the project design
- mediumwhere the impact could have an influence which will require modification of the project design or alternative mitigation
- highwhere 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: Over 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only over 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

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project

APPENDIX 2: 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

25 March 1997

Mrs Geraldine Schoeman
Afrosearch Index
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Dear Mrs Schoeman

Included herewith an invoice for the survey of the Erwat Sewer outfall route. I trust that you found the report acceptable. If you have any problems with it, please contact me.

Yours sincerely

J A VAN SCHALKWYK