

**A SURVEY OF CULTURAL RESOURCES
AT ARNOT COLLIERY PIT 3 WEST AND SHAFT 10,
MIDDELBURG DISTRICT, MPUMALANGA**

For:

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Survey conducted and report prepared by the:

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SUMMARY**A survey of cultural resources at Arnot Colliery Pit 3 West and Shaft 10, Middelburg District, Mpumalanga**

A survey to establish the nature, extent and significance of cultural resources was made on at Arnot Colliery Pit 3 West and Shaft 10, Middelburg District, Mpumalanga.

No significant cultural (archaeological & historical sites, features and artifacts) resources were identified. Only one structure (Pit 3 area) of a fairly recent age were located. The proposed development will therefore not impact on any significant cultural resource and it is recommended that the development of Pit 3 West and Shaft 10 continue. However, if alternative sites for development are identified and decided upon, the National Cultural History Museum must be contacted in order to do a complete survey before development can start. It is also recommended that if, during any part of the development, sites or artifacts of cultural importance are found, the Museum be contacted to undertake proper scientific investigation of the finds.

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**A SURVEY OF CULTURAL RESOURCES
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1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Amcoal Environmental Services** to survey two areas of proposed mining development at the Arnot Colliery, Middelburg District, Mpumalanga. Arnot Colliery is planning to expand their operations by developing the new Shaft 10 area and opening Pit 3 west workings for opencast mining. The survey formed part of the pre-mining surveys for inclusion into the colliery's EMPR. The aim of the survey was to locate, identify, evaluate and document possible sites, objects and structures of cultural importance within the boundaries of both the areas of proposed development.

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.

We were informed by the client about the extent of the area that will be affected by the proposed development. The survey was to be confined to this area.

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 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.

- 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.
- All recommendations are made with full cognisance of the relevant legislation, in this case the National Monuments Act (Act 28 of 1969).

4. LEGISLATIVE REQUIREMENTS

Currently two of the more important Acts concerning cultural resources are the National Monuments Act (Act 28 of 1969) and the Environmental Conservation Act (Act 73 of 1989). It is however important to note that new legislation is being prepared and this might come into effect before the end of 1998.

4.1 National Monuments Act

According to this law the following appropriate cultural resources are protected:

- a.Meteorites and fossils
- b.Prehistoric rock art
- c.Prehistoric tools, ornaments and structures
- d.The Anthropological and archaeological contents of graves, rock shelters, caves, middens, etc.
- e.Historical sites and archaeological or paleonthological finds, material or artifacts
- f.Declared national monuments
- g.Cemeteries and graves older than 50 years

The above mentioned may only be disturbed or moved by an archaeologist, after obtaining a permit to do so from the National Monuments Council. A person is only regarded an archaeologist if he/she has an Honours degree in archaeology.

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.

4.3 White Paper in Heritage Resources

The white paper is currently being discussed by parliament and is destined to become law before the end of 1998. It will replace the National Monuments Act. The types of sites protected by this act will be more or less the same than that covered by the National Monuments Act, but provides more strict measures of protection. An important change is that all graves, cemeteries and structures older than 60 years will be protected.

5. METHODOLOGY

5.1 Field survey

A thorough survey of both the areas of proposed development (Pit 3 west and Shaft 10) was undertaken. The survey was conducted according to generally accepted archaeological practises, and was aimed at locating all possible sites, objects and structures of archaeological and historical (cultural) importance. Special attention was given to the areas of proposed development, while areas in close proximity of the planned development were also investigated. All natural features such as prominent hills and outcrops, streambeds, clumps of trees and erosion trenches were investigated.

5.2 Data sources

The Archaeological Data Recording Centre (ADRC) of the National Cultural History Museum in Pretoria was consulted. This was done in order to determine if any archaeological and/or historical sites have been documented previously in the area of the survey.

5.3 Documentation

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

5.4 Presentation of the information

In discussing the results of the survey, a chronological rather than a geographical approach is followed in the presentation of 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.

6. DESCRIPTION OF THE AREA

Shaft 10 incorporates an area of 72 ha (25°55'30" S, 29°46'00" E), and Pit 3 covers an area of 431.43 ha (25°54' S, 29°42' E). The topography is basically flat open grassveld, typical of the Highveld, with stretches of Bloekom trees. The largest part of the area (Pit 3) has been and are being used for agricultural purposes (mealies). Only a small section has not been ploughed or developed agriculturally. The vegetation is basically Bankenveld (Central Variation), with the veld a particularly sour, wiry grassveld, virtually ungrazable in winter. Rocky hills and outcrops carry a Bushveld vegetation. In sheltered valleys and sinkholes there are traces of temperate or transitional forest (Acocks 1988:112-114).

7. DISCUSSION

No significant cultural resources were identified during the survey in the areas where development are being planned. Only one site was located and documented in the area of Pit 3. This is the remains of a fairly recent waterfurrow. It is located at 25°54'50" S, 29°43'07.9" E. It is built of stone, cement and brick, and is approximately 24m in length and 3m wide. The age and purpose of the structure is unknown. Small amounts of refuse (metal, glass and bone) of a recent age are also found in the vicinity of this structure. The Database search also provided no evidence of sites of cultural importance in the area. As the area of Pit 3 is extensively ploughed, it is not unexpected to find no archaeological sites, objects or structures. This does not necessarily mean that the area was not populated or utilised in the past, but that all or nearly all traces of this settlement was destroyed or disturbed during the more recent agricultural activities in the area. Similarly, Shaft 10 produced no sites of cultural significance.

The structures inhabited at present will in some way be affected by the future mining developments in the area, specifically those in the Pit 3 west area. The people occupying these dwellings will be affected. The impact of development on them must be taken into consideration, and a Impact Assessment must be carried out. Last mentioned will have to be carried out, preferably by an social anthropologist.

8. CONCLUSIONS AND RECOMMENDATIONS

As no significant cultural resources were found in the areas of planned development, it is recommended that the development of Pit 3 west and Shaft 10 at Arnot Colliery continue. However, if alternative sites for development, on other parts of the area, are

identified and decided upon, the National Cultural History Museum must be contacted in order to do a complete and thorough survey before development can commence. It is also recommended that if, during any part of the development, sites or artifacts of cultural importance are found, the Museum be contacted to undertake proper scientific investigation of the finds.

9. REFERENCES

9.1 Data Base

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

9.2 Literary sources

Acocks, J.P. 1988. **Veld Types of South Africa**. Memoirs of the Botanical Survey South Africa, No.40. Pretoria: Botanical Research Institute.

9.3 Maps

(a) Maps supplied by the client, Amcoal Environmental Services

(b) 1:50 000 Topographic series - 2529CC Pan
- 2529DD Arnot

10. PROJECT TEAM

J van Schalkwyk - Principal Investigator

A Pelser - Field Supervisor