



JOHANNESBURG ZOO - ARCHAEOLOGICAL MITIGATION

Archaeological mitigation of an ash midden exposed during construction activities at the Johannesburg Zoo Car Park, City of Johannesburg Metropolitan Municipality, Gauteng Province.

Proposal Document

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1 INTRODUCTION

PGS Heritage was appointed by Mayat Hart to undertake archaeological mitigation of an historical ash midden that was uncovered during construction work at the car park of the Johannesburg Zoo, City of Johannesburg Metropolitan Municipality, Gauteng Province. This mitigation is aimed at obtaining a destruction permit for the midden to allow the construction to continue. All construction at the site has been temporarily halted to allow the mitigation to be completed without further disturbance to the midden. As a result the archaeological mitigation needs to be completed as urgently as possible.

2 BACKGROUND TO PROJECT

The following list provides a chronological framework and background for the process which has been followed thus far, and which has led to this permit application. It must be noted that the framework provided here is based on known information only, and as such may not necessarily represent the entire process leading up to this permit application.

- Construction work at the car park of the Johannesburg Zoo commenced in June 2015.
- In July 2015 the excavation work of the construction project exposed midden material. The construction team did not realise the age of the material at the time and continued its work.
- In mid July 2015 bones were recovered from the excavations and PGS Heritage was contacted by Mr Brendan Hart of Mayat Hart to conduct a site visit to establish whether the bones are human or not.
- On 17 July 2015, Ms Stephany van der Walt of PGS Heritage conducted a site visit and made an assessment of both the recovered bones and its context. She confirmed that the bones are certainly not human and are all animal bones (mostly bovine with some chicken and sheep bones present as well) and found that they were recovered from a historic midden. The construction team was duly informed that no human remains had been identified, but was told that an archaeological site may be located here.

- With at least some of the observed artefacts recovered from the excavation evidently older than 100 years, the construction and development team were informed on Monday, 20 July 2015 that the midden can be classified as an archaeological site and its destruction would require a permit from SAHRA.
- The presence of an archaeological site within the construction area was communicated to the construction and development team and a buffer area of 10 m defined around the exposed midden.
- Further excavations outside of the defined buffer area indicated that the midden extends well beyond the 10 m buffer area.
- On Thursday, 30 July 2015 all work was halted at the construction site for a period of two months to allow the archaeological mitigation to proceed.

3 SITE LOCATION AND DESCRIPTION

The site is located in the Johannesburg Zoo Car Park, off Upper Park Road, at the following coordinates S 26° 10' 09.7" E 28° 02' 15.0".



Figure 1 Google Earth image depicting the position of the Johannesburg Zoo Car Park.

A historical midden was identified during construction work on the Johannesburg Zoo's new parkade. With the entire original car park tarred, evidence for the midden only came to light during excavation work that was deeper than the car park's tarred surface and the sub-base or capping layer underneath.



Figure 2 General view of the construction site showing one of the excavation areas in the back with two spoil heaps in the front. This photograph was taken during the site visit of 17 July 2015.

Two extensive excavations had been mechanically dug before work was temporarily halted to allow archaeological mitigation to take place. The first excavation starts near the centre of the car park, extends roughly 25 m to the east and is approximately 15 m wide. A layer of grey ash could be clearly discerned along the western and eastern profiles of the excavation. Although present along the northern and southern profiles as well, only sections of the grey layer could be seen on these ends due to disturbance caused by the construction work.

The second excavation starts at a point roughly 30 m to the west of the first, and was excavated over an area roughly 35 m x 25 m in extent. The layer of grey ash was also identified in the northern profile of the second excavation, with one complete bottle and two imported ceramic fragments visible in the profile. The layer of grey ash could clearly be discerned along the eastern profile of the excavation, at which point it is approximately 500 mm deep. The layer of ash could not be clearly identified in the remaining three profiles of the second excavation.

Spoil heaps from the excavations are presently located in the undisturbed section of land between the two excavations. Additional spoil heaps are also located along the north-eastern boundary of the car park. The surfaces of these spoil heaps contain varying densities of cultural material including complete and fragmented glass containers, complete and fragmented stoneware containers, fragmented imported ceramics, metal artefacts as well as animal bones.



Figure 3 The northern profile of the western excavation with spoil heaps to the back. This photograph was taken during the site visit of 3 August 2015.



Figure 4 Another view of the spoil heaps located between the two excavations. The western excavation can be seen to the left. This photograph was taken during the site visit of 3 August 2015.

It is clear that both excavations had significantly disturbed the historical midden, although an evidently undisturbed section of land between the two excavations (where the spoil heap are currently located) is expected to still contain a reasonably large section of the midden in primary context. This strip of undisturbed land will be the focus of the archaeological test excavations.



Figure 5 Examples of artefacts observed on the spoil heaps.



Figure 6 Animal bones recovered by the construction team in the fear that it might be human remains.

4 OBJECTIVES

The objectives of the proposed archaeological mitigation are as follows:

- **Assessing Archaeological Significance of Site**

The archaeological mitigation measures proposed here are firstly aimed at assessing the archaeological significance of the site. This includes aspects such as the context of the archaeological deposit and its uniqueness, as well as the type and kind of artefacts found within it.

- **Destruction of Site**

The site will be (and indeed had to a certain extent already been) impacted upon by the proposed construction of the Johannesburg Zoo Parkade, which cannot be undertaken without destroying the site. As a result, one of the objectives of the proposed archaeological mitigation is to thoroughly document the archaeology of the site and to obtain a representative sample of material so that a destruction permit can be issued by SAHRA.

- **Interpreting the Site**

The archaeological mitigation measures proposed here are of course also aimed at interpreting the site. Archaeological excavation and investigation can throw more light on the age of the midden, its origins and the daily life of the early citizens of Johannesburg who used the site as a rubbish heap.

5 PROPOSED METHODOLOGY

The methodology for the proposed mitigation work will comprise the following:

- **Recording of Site Layout Plan**

A site layout plan of the components of the site will be recorded using a Total Station. This plan will include the mechanical excavations, spoil heaps, fencing, entrance gate

and trees. It will also be used to plot the subsequent archaeological mitigation measures such as the positions of the Shovel Test Pits, excavation blocks and the like.

- **Laying out of Grid**

A 5m square grid will be laid out over the site. This grid will be used to contextualise all further work on the site.

- **Surface Collection**

By using the 5m grid for context surface collection of the midden areas will take place. Apart from retrieving artefacts for interpreting the site, this component will also assist in understanding the site and its distribution. As such this activity will help to identify suitable localities for Shovel Test Pits (STP's) and Archaeological Test Excavations.

- **Assessing the Archaeological Context and Depth of the Middens**

As the exact extent and relative depth of the midden is not presently known, this step will comprise the plotting and excavation of Shovel Test Pits across the area where archaeological middens and material are found. This activity will facilitate the assessment and comparison of the context, content and quality of the archaeological deposits at various points across the site.

- **Archaeological Excavations of Identified Areas**

As far as can be ascertained from the two site visits, the only largely undisturbed component of the midden would be located in the strip of land between the two excavations where the spoil heaps are currently located. After surface collection the spoil heaps will have to be carefully removed by mechanical means from their current position to a locality a short distance away. Once deposited at their new locality, a second surface collection action will take place to retrieve any material which had become visible as a result of the movement of the spoil heaps. The undisturbed section of land now clear of spoil heaps will be investigated through archaeological test excavations. These will in all likelihood not be that extensive excavations, but will be limited excavation blocks roughly 1m x 2m or 1m x 3m in extent. Although it is difficult

to state at present what the stratigraphy and stratigraphic context of the deposit will be, the excavations will in all likelihood be undertaken using the arbitrary spit technique. Excavated soil will be screened and sorted after which the recovered archaeological material from each unit will be labelled and bagged separately.

- **Laboratory Analysis of Archaeological Material**

The packaged material from the site will be taken to the offices of PGS Heritage where the laboratory work will be undertaken. The first step will be the cleaning of the material, followed by the compilation of an inventory of all excavated material and the identification of material. Photographic recording will also take place.

Once the laboratory work is complete, the archaeological collection from the site will be packaged and taken to the museum at the Department of Archaeology and Anthropology at UNISA for long-term storage and curation.

- **Researching History of Study Area**

An archival and historical desktop study will be undertaken as part of the overall mitigation process to better understand the origins and context of the midden. This component will be addressed by way of archival research and the study of historic aerial photographs and maps.

- **Compilation of Report**

An archaeological mitigation report will be written and will contain the information recorded from the site as well as from the analyses of the archaeological material. Possible dates and interpretations of the site will be made in the report.

- **Destruction Permit Application**

Assuming that the proposed archaeological research is deemed sufficient for the site's designated significance the final step in this process will be the compilation and submission of a permit application to have the archaeological component of the site destroyed.

6 PROJECT TEAM

The project team will comprise the following individuals:

- Polke Birkholtz – Project Manager and Archaeologist
- Joanna Behrens – Principal Investigator
- John Anderson – Field Assistant
- Thomas Mulaudzi – Field Assistant
- Edward Mukosi Khorommbi – Field Assistant

7 REFERENCES

Unpublished References

Birkholtz, P.D. 2005. *An Archival and Historical Desktop Study of the Johannesburg Zoo*. An unpublished report commissioned by Matakoma.

