Cultural Heritage Assessment for the Proposed Rehabilitation of Kaalspruit, Tembisa, City of Johannesburg Metropolitan Municipality, Gauteng

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Version: 2 (Final Report)
Executive Summary

This report contains a comprehensive heritage impact assessment investigation in accordance with the provisions of Sections 38(1) and 38(3) of the National Heritage Resources Act (Act No. 25 of 1999) and focuses on the survey results from a cultural heritage survey as requested by NuLeaf Planning and Environmental (Pty) Ltd as part of the rehabilitation project in Tembisa, Midrand, Gauteng.

Archaeological and historical remains

No archaeological (Stone Age and Iron Age) or historical artefacts, assemblages, features, structures or settlements were recorded during the survey.

Graveyard and Graves

No graveyards or individual graves were recorded.

Conclusion and Recommendations

Based on the assessment, from a cultural heritage perspective, there is no impact on cultural heritage remains and it is recommended that the proposed rehabilitation project be allowed to continue, taking cognizance of the following as aspects:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (cf. NHRA (Act No. 25 of 1999), Section 36 (6)).

Definitions and abbreviations

Midden: Refuse that accumulates in a concentrated heap.
Stone Age: An archaeological term used to define a period of stone tool use and manufacture
Iron Age: An archaeological term used to define a period associated with domesticated livestock and grains, metal working and ceramic manufacture
NHRA: National Heritage Resources Act (Act No. 25 of 1999)
SAHRA: South African Heritage Resources Agency
SAHRIS: South African Heritage Resources Information System
PHRA-G: Provincial Heritage Resources Authority - Gauteng
GDARD: Gauteng Department of Agriculture and Rural Development
HIA: Heritage Impact Assessment
DMR: Department of Mineral Resources

I, Francois Coetzee, hereby confirm my independence as a cultural heritage specialist and declare that I do not have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of the listed environmental processes, other than fair remuneration for work performed on this project.
Francois P Coetzee  
Cultural Heritage Consultant  
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Professional Member of ASAPA (CRM Section) Reg no: 28
Contents

1. Introduction ....................................................................................................................... 6
2. Objectives .......................................................................................................................... 6
3. Study Area ......................................................................................................................... 6
4. Proposed Project Activities ............................................................................................. 11
5. Legal Framework ............................................................................................................ 13
6. Study Approach/Methods ................................................................................................ 16
   6.1 Review of existing information/data ........................................................................ 17
   6.2 Site visit ..................................................................................................................... 19
   6.3 Impact assessment ..................................................................................................... 19
   6.4 Assumptions, restrictions and gaps in knowledge ..................................................... 19
7. Description and Evaluation of Cultural Heritage Sites .................................................. 19
8. Recommendations and Conclusions ............................................................................... 19
9. References ....................................................................................................................... 20

Addendum 1: Archaeological and Historical Sequence .......................................................... 21
Addendum 2: Surveyor General Farm Diagram ..................................................................... 24

Figures

Figure 1: Regional context of the survey area situated in northern Gauteng ...................... 7
Figure 2: Local context of the survey area (indicated by the red areas) on Google Earth (2016) ................................................................. 7
Figure 3: General survey area as indicated on the 1:50 000 topographic maps 2528CC and 2628AA ................................................................. 8
Figure 4: General survey area as indicated on the 1:50 000 topographic maps 2528CC and 2628AA ................................................................. 8
Figure 5: General view along access roads and existing bridges ........................................ 9
Figure 6: Existing infrastructure (Rand Water pipelines) ..................................................... 9
Figure 7: General view of existing bridge and residential areas ........................................ 9
Figure 8: The riverbanks with powerline servitude ......................................................... 10
Figure 9: General view of the central river system ......................................................... 10
Figure 10: Recreational parks and sport fields ................................................................. 10
Figure 11: Canals and water management along residential structures .............................. 11
Figure 12: Various zones of the survey area ................................................................. 11
Figure 13: General context of the survey area ................................................................. 13
Figure 14: Recorded survey tracks for the project ............................................................ 17
Figure 15: The location of Kaalfontein as indicated on the War Office map of the Transvaal in 1899 ................................................................. 18
Figure 16: The map of the Pretoria and Heidelberg Goldfields in 1887 clearly indicate the extent of the farm Kaalfontein ........................................ 18
Figure 17: The original farm Kaalfontein 554 (13 IR) as recorded on the Jeppe Map of 1899 (notice two main roads and the railway line traversing the farm) ........................................ 18
Figure 18: Icon sub-branch of the Moloko pottery sequence (Huffman 2007:434) .......... 22
Figure 19: The location and distribution of settlements with Madikwe facies pottery (Huffman 2007:435) ................................................................. 23
Figure 20: Surveyor General’s map of Portion 5 the farm Kaalfontein 13 IR transferred in 1894 and surveyed in 1907 .............................................. 24
Tables

Table 1: Rating the significance of sites ................................................................. 15
Table 2: Level of protection of buildings/structures .............................................. 16
1. Introduction

Tembisa was formally established in 1957 and is currently an expanding residential area. The current project aims to focus on the rehabilitation and formalisation of the certain aspects which include the riverine zone, waste management, agricultural hubs, playgrounds, sport fields and pedestrian movement. NuLeaf Planning and Environmental has requested a cultural heritage survey to establish a baseline of known heritage sites in the area.

2. Objectives

The general aim of this cultural heritage survey is to record and document cultural heritage remains consisting of both tangible and intangible archaeological and historical artefacts, structures (including graves), settlements and oral traditions of cultural significance.

As such the terms of reference of this survey are as follows:

- Identify and provide a detailed description of all artefacts, assemblages, settlements and structures of an archaeological or historical nature (cultural heritage sites) located on the study area,
- Estimate the level of significance/importance of the these remains in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value,
- Assess any possible impact on the archaeological and historical remains within the area emanating from the proposed development activities, and
- Propose possible mitigation measures which will limit or prevent any impact provided that such action is necessitated by the development.

3. Study Area

The survey focussed on a specific area of the Tembisa Township. Most of the survey is located on the farm Kaalfontein 13 IR, a section of the farm Alandale 10 IR, and smaller sections of the farms Randjesfontein 405 JR and Olifantsfontein 410 JR 931KP. Tembisa is located south of Pretoria near Kempton Park in Midrand, Gauteng. The study area focuses on Ivory Park and divided by the Kaalspruit River (which eventually flows into the Hennops River). The area is densely settled and land use comprises mainly residential dwellings with access roads, fences, sport facilities, commercial structures, schools, bridges and other infrastructure.

The vegetation in the area around Tembisa categorised as Egoli Granite Grassland (part of the Mesic Highveld Grassland Bioregion) (Mucina & Rutherford 2006).
Figure 1: Regional context of the survey area situated in northern Gauteng

Figure 2: Local context of the survey area (indicated by the red areas) on Google Earth (2016)
Figure 3: General survey area as indicated on the 1:50 000 topographic maps 2528CC and 2628AA

Figure 4: General survey area as indicated on the 1:50 000 topographic maps 2528CC and 2628AA
Figure 5: General view along access roads and existing bridges

Figure 6: Existing infrastructure (Rand Water pipelines)

Figure 7: General view of existing bridge and residential areas
Figure 8: The riverbanks with powerline servitude

Figure 9: General view of the central river system

Figure 10: Recreational parks and sport fields
4. Proposed Project Activities

The rehabilitation project will aim to:

- Address dumping, waste and pollution along the river system.
- Address flooding and erosion along the river system.
- Reinstate ecological systems and environments.
- Formalise public open space along the river system.
- Formalise movement routes, access points and crossings along the river system.
- Support appropriate and compatible activities within the open space, including sport, recreation, food gardens and open air worship.
- Establish appropriate implementation and management systems, which will allow for changing needs, opportunities and conditions.
- Foster community buy-in and civic pride.
- Ensure public safety.
Figure 12: Various zones of the survey area
5. Legal Framework

- Archaeological remains can be defined as human-made objects, which reflect past ways of life, deposited on or in the ground.
Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and they are valuable, finite, non-renewable and irreplaceable.

All archaeological remains, features, structures and artefacts older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the National Heritage Resources Act (NHRA) (Act No. 25 of 1999, Section 34 & 35). The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory (see Section 38). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the South African Heritage Resources Agency (SAHRA). Full cognisance is taken of this Act in making recommendations in this report.

Cognisance will also be taken of the Mineral and Petroleum Resources Development Act (Act No 28 of 2002) and the National Environmental Management Act (Act No 107 of 1998) when making any recommendations.

Human remains older than 60 years are protected by the NHRA, with reference to Section 36. Human remains that are less than 60 years old are protected by the Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003 as well as local Ordinances and regulations.

Mitigation guidelines (The significance of the site):

Rating the significance of the impact on a historical or archaeological site is linked to the significance of the site itself. If the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low (also see Table 1).

<table>
<thead>
<tr>
<th>Significance Rating</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not protected</td>
<td>1. None</td>
</tr>
<tr>
<td>Low</td>
<td>2a. Recording and documentation (Phase 1) of site adequate; no further action required</td>
</tr>
<tr>
<td></td>
<td>2b. Controlled sampling (shovel test pits, auguring), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction</td>
</tr>
<tr>
<td>Medium</td>
<td>3. Excavation of representative sample, C\textsuperscript{14} dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a &amp; 2b]</td>
</tr>
<tr>
<td>High</td>
<td>4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 &amp; 3 investigation); site management plan; permit required if utilised for education or tourism</td>
</tr>
<tr>
<td></td>
<td>4b. Graves: Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and</td>
</tr>
</tbody>
</table>
Table 1: Rating the significance of sites

- With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise.

- The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3, and the Australian ICOMOS (International Council on Monuments and Sites) Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.

- It should be kept in mind that archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (cf. NHRA (Act No. 25 of 1999), Section 36 (6)).

- **Architectural significance:**
  - Does the site contain any important examples of a building type?
  - Are any of the buildings important examples of a style or period?
  - Do any of the buildings contain fine details and or reflect fine workmanship?
  - Are any of the buildings the work of a major architect or builder?
  - Are the buildings important examples of an industrial, technological or engineering development?
  - What is the integrity of the buildings?
  - Are the buildings still utilised?
  - Has the buildings been altered and are these alterations sympathetic to the original intent of the design?

- **Spatial significance of architecture:**
  - Is the site or any of the buildings a landmark in the city or town?
  - Does the plant contribute to the character of the neighbourhood/region?
  - Do the buildings contribute to the character of the street or square?
  - Is the place or building part of an important group of buildings?

- **Architecture: Levels of significance are:**
  - Protect
  - Highly significant
  - Possible significance
  - Least significance
  - No significance

- **Architecture: Levels of protection are:**

| Retain and protect | Considered to be of high significance. The building or structure can be used as part of the development but must be suitably protected. Should not include major structural alterations. If the |
Coetzee, FP

<table>
<thead>
<tr>
<th>Building Protection Level</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Retain and re-use</td>
<td>Considered to be of moderate significance. The building or structure can be altered to be accommodated within the development plans. Structural alterations can be included. If the building is older than 60 years a modification permit is required from SAHRA.</td>
</tr>
<tr>
<td>Alter and re-use</td>
<td>Considered to be of low significance. The building or structure can be structurally altered or destruction can be considered following further documentation. If the building is older than 60 years a modification/destruction permit is required from SAHRA.</td>
</tr>
<tr>
<td>Can be demolished</td>
<td>Considered to be of negligible significance and can be demolished. If the building is older than 60 years a destruction permit is required from SAHRA.</td>
</tr>
</tbody>
</table>

Table 2: Level of protection of buildings/structures

- A copy of this report will be lodged with the SAHRA as stipulated by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), Section 38 (especially subsection 4) and the relevant Provincial Heritage Resources Authority (PHRA).

- Note that the final decision for the approval of permits, or the removal or destruction of sites, structures and artefacts identified in this report, rests with the SAHRA (or relevant PHRA).

6. **Study Approach/Methods**

Regional maps and other geographical information (ESRI shapefiles) were supplied by NuLeaf Planning and Environmental. In addition the most up-to-date Google Earth images and topographic maps were used to indicate the survey area. The survey area is localised on the 1:50 000 topographic maps 2528CC and 2628AA. Please note that all maps are orientated with north facing upwards (unless stated otherwise).

The strategy during this survey was to concentrate on certain focus areas within the general survey area. The survey area was accessed by using existing tracks, dirt roads and main tarred roads, with selected areas surveyed on foot.
6.1 Review of existing information/data

Additional information on the cultural heritage of the area was sourced from the following records:

- National Mapping Project by SAHRA (which lists heritage impact assessment reports submitted for South Africa);
- Online SAHRIS database;
- Maps and information documents supplied by the client; and
- Published and unpublished material on the area.

According to the Surveyor General’s database the farm Kaalfontein 13 IR was first surveyed in July 1907, but the Deed of Transfer was already registered on 9 March 1894 (see Addendum 2). The early 20th century occupation of the area can probably be attributed to early farmers moving into the region and started commercial farming activities. Of interest is the fact that the railway line between Pretoria and Johannesburg, and main several access roads pass through the farm.
Figure 15: The location of Kaalfontein as indicated on the War Office map of the Transvaal in 1899

Figure 16: The map of the Pretoria and Heidelberg Goldfields in 1887 clearly indicate the extent of the farm Kaalfontein

Figure 17: The original farm Kaalfontein 554 (13 IR) as recorded on the Jeppe Map of 1899 (notice two main roads and the railway line traversing the farm)
6.2 Site visit

The field surveys were conducted on 7 October 2015.

6.3 Impact assessment

The criteria used to describe heritage resources and to provide a significance rating of recorded sites are listed in the NHRA (Act No. 25 of 1999) specifically Section 7(7) and Section 38. SAHRA also published various regulations including: Minimum standards: Archaeological and palaeontological components of impact assessment reports in 2006 and updated requirements in 2012.

6.4 Assumptions, restrictions and gaps in knowledge

No severe physical restrictions were encountered as gravel and tarred roads provided access to the survey area. All the focus areas were visited on foot.

7. Description and Evaluation of Cultural Heritage Sites

Archaeological and historical remains

No archaeological (Stone Age and Iron Age) or historical artefacts, assemblages, features, structures or settlements were recorded during the survey.

Graveyard and Graves

No graveyards or individual graves were recorded.

8. Recommendations and Conclusions

Based on the assessment, from a cultural heritage perspective, there is no impact on cultural heritage remains and it is recommended that the proposed rehabilitation project be allowed to continue, taking cognizance of the following as aspects:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (cf. NHRA (Act No. 25 of 1999), Section 36 (6)).
9. References


Internet Sources


SAHRIS Website: www.sahra.org.za/sahris (Accessed: January 2016)
Addendum 1: Archaeological and Historical Sequence

The table provides a general overview of the chronological sequence of the archaeological periods in South Africa.

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>APPROXIMATE DATE</th>
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<tbody>
<tr>
<td>Early Stone Age</td>
<td>More than c. 2 million years ago - c. 250 000 years ago</td>
</tr>
<tr>
<td>Middle Stone Age</td>
<td>c. 250 000 years ago – c. 25 000 years ago</td>
</tr>
<tr>
<td>Later Stone Age (Includes San Rock Art)</td>
<td>c. 25 000 years ago - c. AD 200 (up to historic times in certain areas)</td>
</tr>
<tr>
<td>Early Iron Age</td>
<td>c. AD 400 - c. AD 1025</td>
</tr>
<tr>
<td>Late Iron Age (Stonewalled sites)</td>
<td>c. AD 1025 - c. AD 1830 (c. AD 1640 - c. AD 1830)</td>
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Archaeological Context

Stone Age Sequence

Concentrations of Early Stone Age (ESA) sites are usually present on the flood-plains of perennial rivers and may date to over 2 million years ago. These ESA open sites may contain scatters of stone tools and manufacturing debris and secondly, large concentrated deposits ranging from pebble tool choppers to core tools such as handaxes and cleavers. The earliest hominins who made these stone tools, probably not always actively hunted, instead relying on the opportunistic scavenging of meat from carnivore fill sites.

Middle Stone Age (MSA) sites also occur on flood plains, but are also associated with caves and rock shelters (overhangs). Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris. Tools may have been hafted but organic materials, such as those used in hafting, seldom preserve. Limited drive-hunting activities are also associated with this period.

Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA.

Iron Age Sequence

In the northern regions of South Africa at least three settlement phases have been distinguished for early prehistoric agropastoralist settlements during the Early Iron Age (EIA). Diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. The first phase of the Early Iron Age, known as Happy...
Rest (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of Diamant is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the Eiland tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. These sites are usually located on low-lying spurs close to water.

The Late Iron Age (LIA) settlements are characterised by sites without stone walls (Early Moloko settlements such as Icon (AD 1350 – 1500) and stone-walled sites such as Madikwe (AD 1500 – 1700) and Buispoort (AD 1700 – 1800) situated on defensive hilltops. This occupation phase has been linked to the arrival of ancestral Tswana speakers and in the northern regions of South Africa with associated sites dating between the sixteenth and seventeenth centuries AD. The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery commonly attributed to the Sotho-Tswana. These settlements can in many instances be correlated with oral traditions on population movements during which African farming communities sought refuge in mountainous regions during the processes of disruption in the northern interior of South Africa, resulting from the so-called difaqane (or mfecane).
Historical Context

Tembisa, an Nguni name meaning Promise or Hope, is a large township situated to the north of Kempton Park on the East Rand, Gauteng, South Africa. It was established in 1957 when black South Africans were resettled from Alexandra and other areas in Edenvale, Kempton Park, Midrand and Germiston.

Purported to be the one of the largest townships in the Southern hemisphere, Tembisa has had its fair share of political turmoil, particularly in the early 1990s, as violence erupted in the lead up to the first democratic elections but little has been recorded about its history, particularly when compared with Soweto, the other large township in the Gauteng province (www.saha.org.za).
Addendum 2: Surveyor General Farm Diagram

Figure 20: Surveyor General's map of Portion 5 the farm Kaalfontein 13 IR transferred in 1894 and surveyed in 1907