

ARCHAEOLOGICAL IMPACT ASSESSMENT OF TWO BORROW PITS ALONG THE NATIONAL ROUTE 1 NEAR TROPMSBURG, FREE STATE



ACTIVE HERITAGE cc.

For: SRK

Frans Prins
MA (Archaeology)
P.O. Box 947
Howick
3290

feprins@gmail.com

activeheritage@gmail.com

Fax: 086 7636380

www.activeheritage.webs.com

6 July 2014

TABLE OF CONTENTS

1	BACKGROUND INFORMATION ON THE PROJECT	2
2	BACKGROUND INFORMATION OF THE SURVEY	6
2.1	Methodology	6
2.2	Restrictions encountered during the survey	6
2.2.1	<i>Visibility</i>	6
2.2.2	<i>Disturbance</i>	7
2.3	Details of equipment used in the survey.....	7
3	DESCRIPTION OF SITES AND MATERIAL OBSERVED	7
3.1	Locational data	7
3.2	Heritage sites identified.....	7
3.2.1	<i>Municipal Borrow Pit A</i>	7
3.2.2	<i>Municipal Borrow Pit B</i>	8
4	STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)	8
4.1	Field Rating.....	8
5	RECOMMENDATIONS	9
7	MAPS AND FIGURES	10
8	REFERENCES	17

LIST OF TABLES

Table 1.	Background information.....	2
Table 2.	Field rating and recommended grading of sites (SAHRA 2005)	9

LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2006).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

EXECUTIVE SUMMARY

An archaeological survey of two borrow pits situated along the National Route 1 Section 14 near Trompsburg identified no archaeological or heritage sites on the footprint. Some ruins do occur in the near vicinity of the study area but these are not threatened by the proposed development. There is no archaeological reason why development may not proceed the footprint as planned. Attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

1 BACKGROUND INFORMATION ON THE PROJECT

Table 1. Background information

Consultant:	Frans Prins (Active Heritage cc) for SRK
Type of development:	The South African National Roads Agency SOC Limited (SANRAL) proposes to rehabilitate and widen the N1 Section 14 between the Trompsburg interchange (Km19) and Fonteintjie (Km39) in the Kapanong Local Municipality. Two additional borrow pits have been identified for mining in order to complete this project. These are located near Trompsburg adjacent to each other. One is already being mined by the local municipality and the other consists of grazing land.
Rezoning or subdivision:	n.a
Terms of reference	To carry out a Heritage Impact Assessment
Legislative requirements:	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999).

1.1. Details of the area surveyed:

This section of the N1 is located in the Free State province about 86 kilometres south of Bloemfontein. The closest major towns are Colesberg in the South and Bloemfontein in the North (Fig 1). The current road is a two-lane single carriageway with travel lanes of about 3.7m wide and 2,4m paved shoulders. The route also includes borrow and quarry pits that was investigated. Two additional borrow pits have been identified that needs to be investigated. These borrow pits are situated just outside the town of Trompsburg on its northern aspect (Figs 1 & 2). They are located adjacent to each other on either side of the R171 (Figs 3 & 4). Municipal Borrow Pit A is an existing feature that has been quarried by the local municipality. The proposed Municipal Borrow Pit B is situated in a grassland environment that has been used for grazing. The GPS coordinates for these borrow pits are as follows:

- a) Municipal Borrow Pit A: S 30° 0' 53.23" E 25° 47' 35.63"
- b) Municipal Borrow Pit B: S 30° 0' 54.11" E 25° 47' 24.59"

1.2. Cultural Heritage legislation

According to Section 3 (2) of the NHRA, the heritage resources of South Africa include:

- a. places, buildings, structures and equipment of cultural significance;
- b. places to which oral traditions are attached or which are associated with living heritage;
- c. historical settlements and townscapes;
- d. landscapes and natural features of cultural significance;
- e. geological sites of scientific or cultural importance;
- f. archaeological and palaeontological sites;
- g. graves and burial grounds, including.
 - ancestral graves;
 - ii. royal graves and graves of traditional leaders;
 - iii. graves of victims of conflict;
 - iv. graves of individuals designated by the Minister by notice in the Gazette;
 - v. historical graves and cemeteries; and
 - vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
 - h. sites of significance relating to the history of slavery in South Africa;
 - i. movable objects, including objects recovered from the soil or waters of South Africa, including
 - archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - ii. objects to which oral traditions are attached or which are associated with living heritage;
 - iii. ethnographic art and objects;
 - iv. military objects;
 - v. objects of decorative or fine art;
 - vi. objects of scientific or technological interest; and
 - vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).”

In terms of section 3 (3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

- a. its importance in the community, or pattern of South Africa's history;

- b. its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- d. its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g. its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h. its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i. sites of significance relating to the history of slavery in South Africa.”

1.3 BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

1.3.1 Stone Age

The greater project area, including the southern Free State between Bloemfontein and Colesberg, is home to all three of the known phases of the Stone Age, namely: the Early- (2.5 million – 250 000 years ago), Middle- (250 000 – 22 000 years ago) and Late Stone Age (22 000 – 200 years ago). The Late Stone Age in this area also contains sites with San rock engravings. Early to Middle Stone Age sites are less common in this area; however rock-art sites and Late Stone Age sites appear to be more abundant.

Early Stone Age sites have been ascribed to *Homo erectus* and *Homo ergaster*. These early hominins were hunters and scavengers. They typically lived near permanent sources of water and that is also where most of these sites occur. Although they could control fire it is debateable to what extent they had symbolic cognitive expressions. It was only much later during the Middle Stone Age, some 200 000 years ago, that anatomically modern people or *Homo sapiens* emerged in Eastern and Southern Africa respectively. Unlike their hominin predecessors they manufactured a wider range of tools, with more advanced technologies that included the spear thrower and even the bow and arrow in some areas. This enabled skilled hunter-gatherer bands to adapt more successfully to different environments. From this time onwards, rock shelters were reoccupied over very long periods of time (Mitchell 2002).

The Late Stone Age, considered to have started some 20 000 to 40 000 years ago, is associated with the predecessors of the Khoisan hunter-gatherers that were encountered by the first Europeans in southern Africa some 300 years ago. Later Stone Age hunter-gatherers lived well into the 19th century in some places in SA including the greater project area. Stone Age sites most probably occur in many locales in the area. Later Stone Age sites have been systematically recorded in parts of the Karoo system, to the immediate south of the project area, the density of Later Stone Age sites has been postulated to be as much as 16 sites per square kilometer (Smith 2009) with areas such as the Seacow river producing over 16 000 sites. This is however an average number with sites displaying a clustering nature on the whole. A classic Stone Age location such as Smithfield (the original location of the Smithfield Industry) is located adjacent to the greater project area (Mitchell 2002).

The following Stone Age components could occur in this area:

- Early Stone Age sites dating to more than 300 000 years old.
- Middle Stone Age sites dating from approximately 200 000 to 30 000 years ago.
- Later Stone Age (San hunter-gatherer) artefacts dating to within the last 30 000 years.
- The possible presence of Khoikhoi herder sites within the area dating back to the last 1500 years.
- Rock art, in the form of paintings or engravings, dating mainly to the last 10 000 years (see below)

1.3.2 Rock Art

The SARADA data base indicates that rock art sites occur in small concentrations in the Southern Free State. This is mostly due to the geographic suitability of some areas, providing protection from the elements in the way of rock shelters, overhangs and caves. These sites are known for rock paintings while rock engravings occur over a larger variety of geological formations. These engravings are found mainly on andesite outcrops, although they also occur occasionally on basalt, dolomite, dolerite, gneiss granite and even on sandstone.

1.3.3 Iron Age

Although Later Iron Age sites, belonging to Bantu-speaking agropastoralists, are abundant in northern and eastern Free State none are known to occur in the southern Free State (Dreyer 1996; Maggs 1976). The area to the south of Bloemfontein was most probably too dry and not suitable for the dryland cultivation of Iron Age cultigens and crops (Mitchell 2002).

1.3.4 The Historic Era

The area was already transgressed by trekboers and later by Voortrekkers in the 1830's. Many farmsteads and associated cemeteries belonging to these early Dutch

settlers occur in the area. Sites belonging to the Anglo-Boer war period of 1899-1901 are also scattered throughout the southern Free State. None, however, are known from the footprint.

2 BACKGROUND INFORMATION OF THE SURVEY

2.1 Methodology

A desktop study was conducted of the available heritage and archaeological databases. In addition, the available archaeological literature covering the greater Trompsburg area was also consulted. The following documents were consulted in this study:

- South African National Archive Documents
- The SAHRIS website
- SAHRA Database of Heritage Studies
- Internet Search
- Historic Maps
- Google Earth 2011, 2009 & 2003 imagery
- Published articles and books
- JSTOR Article Archive
- South African Rock Art Digital Archive (SARADA)
- Rock Art Research Institute (RARI)

A ground survey, following standard and accepted archaeological procedures, was conducted. The field assessment was conducted by a SAHRA accredited archaeologist. The borrow pits were surveyed by foot. Phase 1 AIA fieldwork was limited to a surface survey; no excavation or subsurface testing was done. Sub-surface interpretation is based on exposed sub-surface sections.

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2005) (Table 4). The field assessment aimed to locate, identify and assess the significance of cultural heritage resources, inclusive of archaeological deposits / sites, built structures older than 60 years, burial grounds and graves, graves of victims of conflict and basic cultural landscapes or viewsapes, as defined and protected by the NHRA 1999, that may be affected by the proposed development.

2.2 Restrictions encountered during the survey

2.2.1 Visibility

Visibility was good.

2.2.2 Disturbance

No overt disturbance of any potential heritage features was noted.

2.3 Details of equipment used in the survey

GPS: Garmin Oregon 550 (Datum: WGS84).

Digital cameras: Pentax K20D

All readings were taken using the GPS. Accuracy was to a level of 5 m.

3 DESCRIPTION OF SITES AND MATERIAL OBSERVED

3.1 Locational data

Province: Free State Province

Municipality: Kapanong Local Municipality

Town: Trompsburg

3.2 Heritage sites identified

3.2.1 Municipal Borrow Pit A

No archaeological or cultural heritage sites, as defined and protected under the NHRA 1999, were identified on the surface or within exposed sub-surface sections at this site. Exposed sections varied greatly in depth, ranging from 1- 2 m high across the widely utilised site. However, the site has been disturbed to such an extent that no cultural heritage sites or artefacts would have remained in situ (Figs 5 & 6).

Two ruins occur outside of the footprint in the near vicinity of Borrow Pit A. A short description of each follows below:

3.2.1.2 Ruin A

The first ruin, also called Ruin A, is a large rectangular enclosure measuring 30m x 10m (Figs 4 & 8). The GPS coordinates of the structure is: S 30° 00' 56.47" E 25° 47' 41.07". Portions of the wall has collapsed and the structure is dysfunctional. It most probably served as an enclosure for livestock in the past. The structure appears to be older than 60 years old.

The structure is rated as having medium heritage significance (Table 2). The site is protected by National Heritage Legislation and may not be damaged or altered without a permit issued by SAHRA. The developer is urged to maintain a buffer of 25m around this site. Should the developer wish to expand the Borrow Pit operations into this area

then a second phase heritage impact assessment, by a built heritage specialist, is called for. Applications for a permit to demolish or alter a portion of the structure would be an integral component of this second phase.

3.2.1.3 Ruin B

The second ruin, also called Ruin B, is a square enclosure measuring approximately 5m X 5m (Figs 4 & 9). The GPS coordinates of the structure is: S 30° 0' 58.46" E 25° 47' 42.45". The structure is dysfunctional as portions of its wall has collapsed. It most probably served as an enclosure for livestock in the past. The structure appears to be older than 60 years old.

The structure is rated as having medium heritage significance (Table 2). The site is protected by National Heritage Legislation and may not be damaged or altered without a permit issued by SAHRA. The developer is urged to maintain a buffer of 25m around this site. Should the developer wish to expand the Borrow Pit operations into this area then a second phase heritage impact assessment, by a built heritage specialist, is called for. Applications for a permit to demolish or alter a portion of the structure would be an integral component of this second phase.

3.2.2 Municipal Borrow Pit B

No archaeological or cultural heritage sites, as defined and protected under the NHRA 1999, were identified on the surface of this proposed Borrow Pit. The area has been used for grazing in the past and no features are visible (Figs 10 & 11).

4 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

4.1 Field Rating

Not applicable as no archaeological or heritage sites were located on the footprint. However, both Ruins A and B, that are located in the near vicinity of the footprint, are rated as having medium significance (Table 2).

Table 2. Field rating and recommended grading of sites (SAHRA 2005)

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

5 RECOMMENDATIONS

It is recommended that the establishment of Municipal Borrow Pit A and Municipal Borrow Pit B proceed as applied for without the developer having to comply with additional compliance requirements. There is no archaeological reason why the proposed development may not take place on the footprint as planned. However, care must be taken not to damage or compromise Ruins A and B that are situated in the near vicinity of Borrow Pit A. A buffer of 25m must be strictly maintained around each Borrow Pit. It must also be pointed out that the South Africa Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

7 MAPS AND FIGURES



Figure 1. Site locality of the N1 section 14 rehabilitation



Figure 2. Google aerial photograph showing the location of Municipal Borrow Pits A & B on either side of the R171.



Figure 3. Municipal Borrow Pit A organisational plan (Source: SRK)



Figure 4. Ruins A and B situated in the near vicinity of Municipal Borrow Pit A. However, none of these ruins are situated less than 40m from the footprint.



Figure 5. Municipal Borrow Pit B organisational plan (Source: SRK)



Figure 6. View over Municipal Borrow Pit A



Figure 7. View over Municipal Borrow Pit A



Figure 8. Ruin A situated approximately 40m from the edge of Borrow Pit A.



Figure 9. Ruin B situated approximately 55m from the edge of Borrow Pit A.

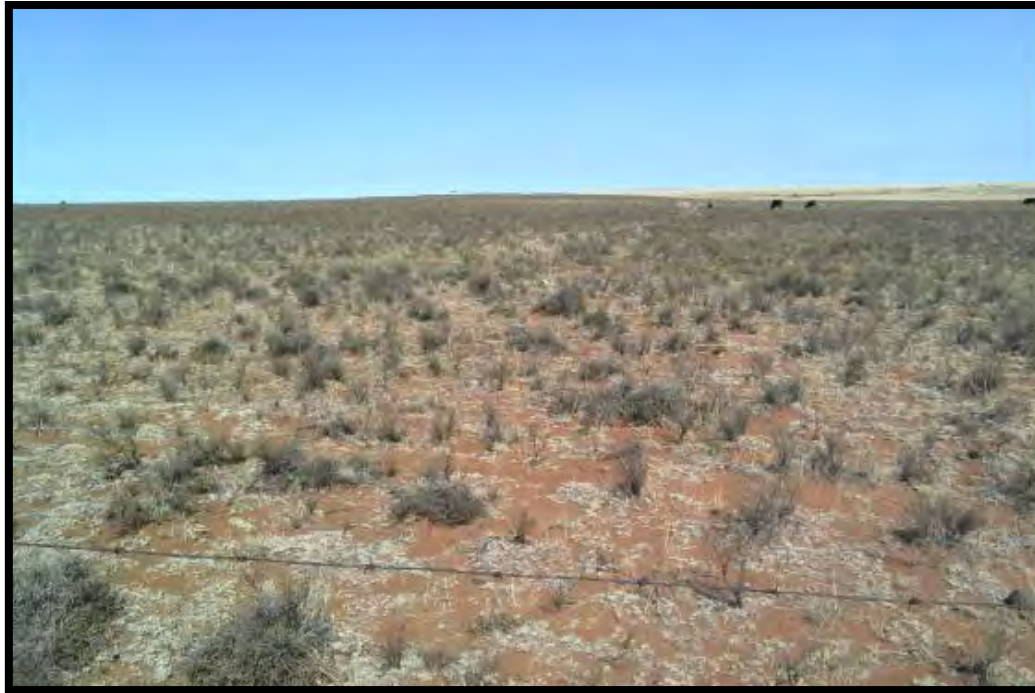


Figure 10. View over proposed site for Municipal Borrow Pit B.



Figure 11. View over proposed site for Municipal Borrow Pit B.

8 REFERENCES

DREYER, J. 1996. Introduction to Free State Iron Age Archaeology. In: Guide to archaeological sites in the Free State and Lesotho. *Southern African Association of Archaeologists (SA3), 14th Biennial Conference, Bloemfontein, Post-conference tour 5-8 July 1996*. Bloemfontein: National Museum.

Huffman, T. N. 2007. *Handbook to the Iron Age: The Archaeology of Pre-colonial Farming Societies in Southern Africa*. University of KwaZulu-Natal Press. Pietermaritzburg.

MAGGS, T.M. 1976. *Iron Age Communities of the Southern Highveld*. Pietermaritzburg: Natal Museum.

Mitchell, P. 2002. *The Archaeology of Southern Africa*. Cambridge University Press: Cambridge

SAHRA, 2005. *Minimum Standards For The Archaeological And The Palaeontological Components Of Impact Assessment Reports, Draft version 1.4*.