



Archaetnos Culture & Cultural  
Resource Consultants  
BK 98 09854/23

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**A REPORT ON THE CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE  
PROPOSED MASEVE BULK SERVICES PROJECT AT THE PROPOSED  
MASEVE HOUSING PROJECT ON THE REMAINING EXTENT OF PORTION 2  
AND THE REMAINING EXTENT OF PORTION 9 OF THE FARM  
ELANDSFONTEIN 102 JQ, NORTHWEST PROVINCE**

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**REPORT NO.: AE01551V**

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## **SUBMISSION OF REPORT**

**Please note that the South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report.**

**It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website.**

**Clients are advised not to proceed with any action before receiving the necessary comments from SAHRA.**

## **DISCLAIMER**

**Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Access to certain areas is also sometimes limited. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof. Any additional sites identified can be visited and assessed afterwards and the report amended, but only upon receiving an additional appointment.**

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## SUMMARY

Archaetnos cc was requested by HydroScience to conduct a cultural Heritage Impact Assessment (HIA) for the proposed installation of bulk water and sewer services, related to the Maseve housing development. This is on the Remaining Extent of Portion 2 and the Remaining Extent of Portion 9 of the farm Elandsfontein 102 JQ, near Boshhoek, north-west of Rustenburg in the Northwest Province.

A survey of the available literature was undertaken to obtain background information regarding the area. This was followed by a field survey which was conducted according to generally accepted HIA practices, aimed at locating all possible objects, sites and features of cultural significance in the area of the proposed development.

During the survey, one site of cultural heritage significance was found. Mitigation measures are proposed. A large section of the surveyed area, however, appeared to be disturbed and no other sites of significance were observed. The proposed development may therefore continue after implementation of the mitigation measures.

Care should nevertheless be taken as heritage features are frequently not found due to environmental and other factors having an effect on the survey. It should also be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Therefore, when the development commences and any of these are discovered, a qualified archaeologist should be called in to investigate and that the HIA be amended if necessary.

It is also important to take cognisance that it is the client's responsibility to do the submission of this report via the South African Heritage Resources Information System (SAHRIS) on the South African Heritage Resources Agency (SAHRA) website. No work on site may commence before receiving the necessary comments from SAHRA.

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## CURRICULUM VITAE OF SPECIALIST: PROF ANTON CARL VAN VOLLENHOVEN

### Tertiary education

- BA 1986, University of Pretoria
- BA (HONS) Archaeology 1988 (cum laude), University of Pretoria
- MA Archaeology 1992, University of Pretoria
- Post-Graduate Diploma in Museology 1993 (cum laude), University of Pretoria
- Diploma Tertiary Education 1993, University of Pretoria
- DPhil Archaeology 2001, University of Pretoria.
- MA Cultural History 1998 (cum laude), University of Stellenbosch
- Management Diploma 2007 (cum laude), Tshwane University of Technology
- DPhil History 2010, University of Stellenbosch

### Employment history

- 1988-1991: Fort Klapperkop Military Museum - Researcher
- 1991-1999: National Cultural History Museum. Work as Archaeologist, as well as Curator/Manager of Pioneer Museum (1994-1997)
- 1999-2002: City Council of Pretoria. Work as Curator: Fort Klapperkop Heritage Site and Acting Deputy Manager Museums and Heritage.
- 2002-2007: City of Tshwane Metropolitan Municipality. Work as Deputy Manager Museums and Heritage.
- August 2007 – present – Managing Director for Archætnos Archaeologists.
- 1988-2003: Part-time lecturer in Archaeology at the University of Pretoria and a part-time lecturer on Cultural Resources Management in the Department of History at the University of Pretoria.
- 2014: Part-time lecturer for the Honours degree in Museum Sciences in the Department of History and Heritage Studies at the University of Pretoria
- 2015: Appointed extraordinary professor in history at the Mahikeng Campus of the Northwest University

### Other

- Published 75 articles in scientific and popular journals on archaeology and history.
- Author and co-author of over 580 unpublished reports on cultural resources surveys and archaeological work. A list of reports can be viewed on [www.archaetnos.co.za](http://www.archaetnos.co.za)
- Published a book on the Military Fortifications of Pretoria.
- Contributed to a book on Mapungubwe.
- Delivered more than 50 papers and lectures at national and international conferences.
- Member of SAHRA Council for 2003 – 2006.
- Member of the South African Academy for Science and Art.
- Accredited professional member of Association for South African Professional Archaeologists.
- Accredited professional member of the South African Society for Cultural History (Chairperson 2006-2008; 2012-2014).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Member of Provincial Heritage Resources Agency, Gauteng's HIA adjudication committee (Chairperson 2012-2015).

ASAPA Accreditation number: 166  
SASCH Accreditation number: CH001

### **DECLARATION OF INDEPENDENCE**

I, Anton Carl van Vollenhoven from Archaetnos, hereby declare that I am an independent specialist within the field of heritage management.

Signed:

A rectangular box containing a handwritten signature in dark ink on a light-colored background. The signature is cursive and appears to read 'Anton Carl van Vollenhoven'.

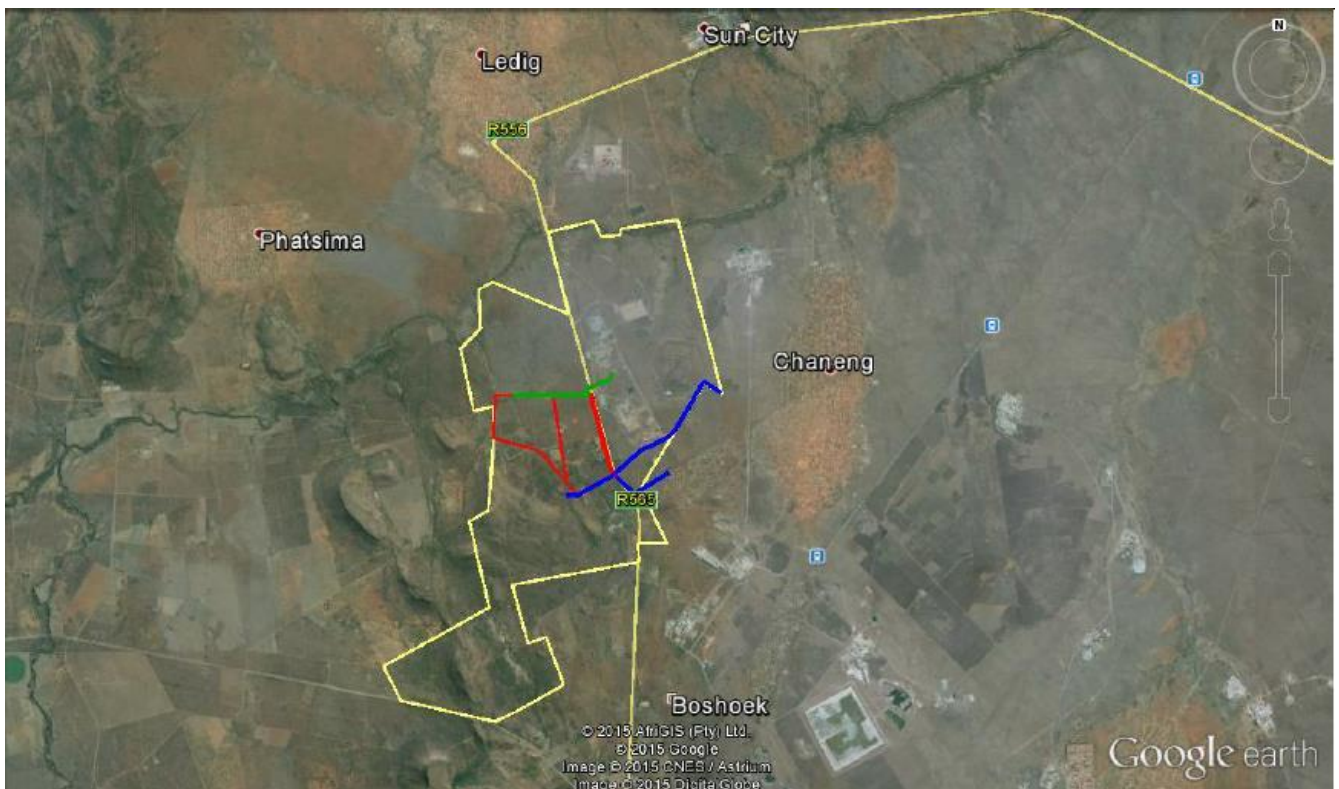
Date: 18 November 2015

## 1. INTRODUCTION

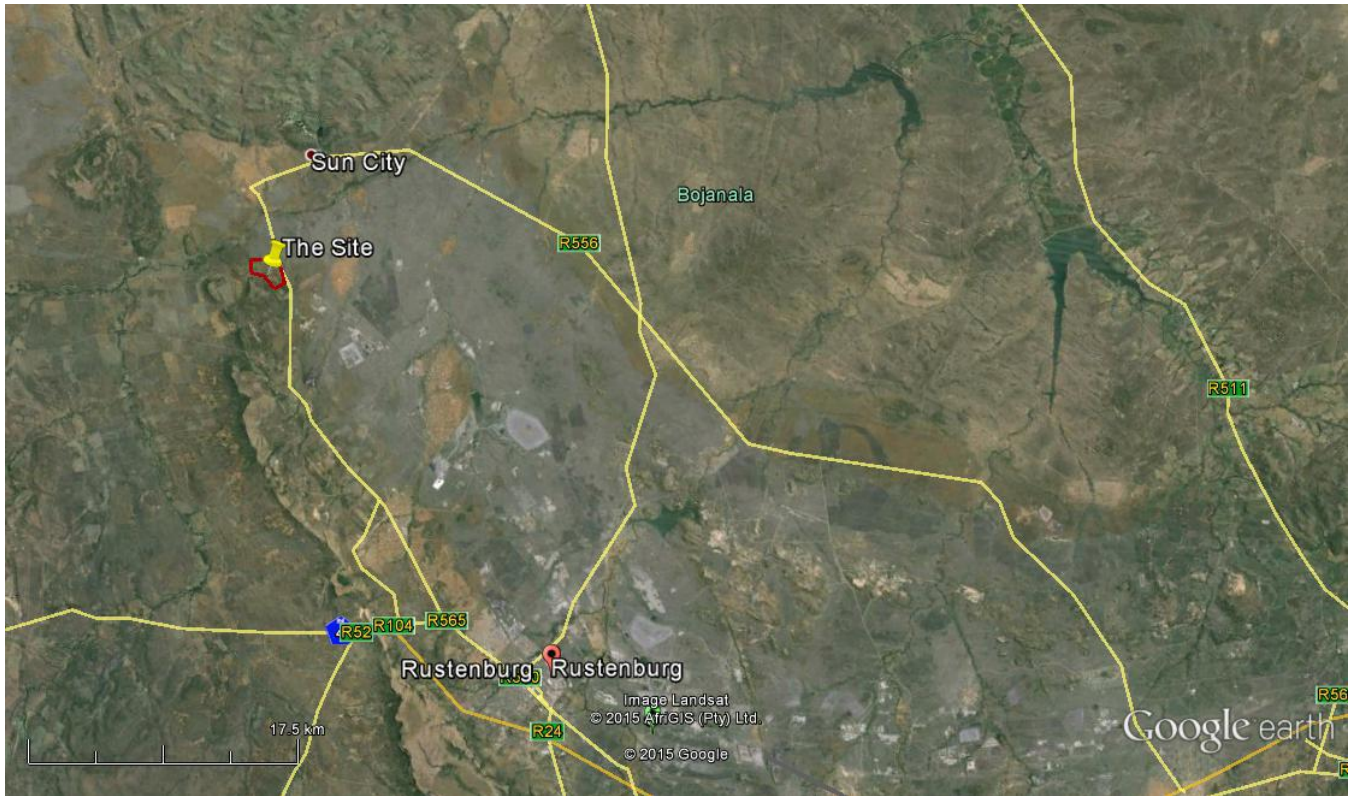
Archaetnos cc was requested by HydroScience to conduct a cultural heritage impact assessment (HIA) for the proposed installation of bulk water and sewer services, related to the proposed Maseve housing development. This is on the Remaining Extent of Portion 2 and the Remaining Extent of Portion 9 of the farm Elandsfontein 102 JQ, close to Boshhoek, north-west of Rustenburg in the Northwest Province (Figures 1 - 3).

The bulk water services entail the installation of a reservoir and pipeline from the existing Magalies Water services. Two alternative options for the pipeline were surveyed. The bulk sewer services include the installation of a proposed sewer pumps station and sewer line, from the Maseve development to the existing sewer plant at the Maseve Mine. Only one option was surveyed.

The study forms part of the specialist studies conducted for the proposed development's Environmental Impact Assessment (EIA). The client indicated the area to be surveyed and the field survey was confined to the proposed project area.



**Figure 1: Locality of the project.**



**Figure 2: Location of the investigated site in relation to Rustenburg. North reference is to the top.**





**Figure 3: Google Earth Map indicating the location of the project area and the routes that were investigated (EPS, 2015).**

## **2. TERMS OF REFERENCE**

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property and routes (see Appendix A).
2. Study background information on the area to be developed.
3. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).
4. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.

5. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.
6. Review applicable legislative requirements.

### **3. CONDITIONS & ASSUMPTIONS**

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

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.
2. The significance of the sites, structures 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. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix C).
4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
5. All recommendations are made with full cognizance of the relevant legislation.
6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.
7. In this particular case the vegetation cover was reasonably dense in certain areas, which had a negative effect on both the horizontal and the vertical archaeological visibility. There were however some open patches throughout the project area, where the visibility was reasonably good. Certain areas, especially those inside of the current Maseve Mine, have been disturbed to a large extent.

## 4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) (NHRA) and the National Environmental Management Act (Act 107 of 1998) (NEMA).

### 4.1 The National Heritage Resources Act

According to the above-mentioned Act, the following is considered protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years;
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography;
- c. Objects of decorative and visual arts;
- d. Military objects, structures and sites older than 75 years;
- e. Historical objects, structures and sites older than 60 years;
- f. Proclaimed heritage sites;
- g. Grave yards and graves older than 60 years;
- h. Meteorites and fossils; and
- i. Objects, structures and sites of scientific or technological value.

The national estate (see Appendix D) includes the following:

- 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 features of cultural significance;
- e. Geological sites of scientific or cultural importance;
- f. Archaeological and paleontological importance;
- g. Graves and burial grounds;
- h. Sites of significance relating to the history of slavery; and
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.).

A HIA is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. A Palaeontological Impact Assessment (PIA) may be requested by SAHRA and will then form part of the HIA. However, it is a different field of study and has to be done by a palaeontologist.

The different phases during the HIA process are described in Appendix E. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300 m in length;

- b. The construction of a bridge or similar structure exceeding 50m in length;
- c. Any development or other activity that will change the character of a site and exceed 5 000 m<sup>2</sup> or involve three or more existing erven or subdivisions thereof;
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>; and
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

### **Structures**

Section 34 (1) of the NHRA states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

### **Archaeology, palaeontology and meteorites**

Section 35(4) of the NHRA deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

- a. Destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
- b. Destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- c. Trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite; or
- d. Bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.
- e. Alter or demolish any structure or part of a structure, which is older than 60 years as protected.

The above-mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from SAHRA. In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

## **Human remains**

Graves and burial grounds are divided into the following:

- a. Ancestral graves;
- b. Royal graves and graves of traditional leaders;
- c. Graves of victims of conflict;
- d. Graves designated by the Minister;
- e. Historical graves and cemeteries; and
- f. Human remains.

In terms of Section 36(3) of the NHRA, no person may, without a permit issued by the relevant heritage resources authority:

- a. Destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. Destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. Bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Unidentified/unknown graves are also handled as older than 60 years until proven otherwise. Graves older than 100 years are known as Archaeological graves and is also handled similarly.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) (HTA) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the **HTA, as amended**).

### **4.2 The National Environmental Management Act**

The NEMA states that a survey and evaluation of cultural resources must be done in areas where developments, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible, the disturbance should be minimized and remedied.

## **5. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE**

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Any possible chance find, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This includes the possible maintenance of such sites in situ, or when not possible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed, this should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the affected communities. Again professionals should carry out the work and adhere to the best available techniques.

Consultation with affected communities should be engaged in. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the affected communities in order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

## **6. METHODOLOGY**

### **6.1 Survey of literature**

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

### **6.2 Field survey**

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the proposed development area. One sometimes looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)<sup>1</sup>, while photographs were also taken where needed. The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied (Figure 4). Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. The size of the areas that was surveyed is approximately 200.5 Ha and the survey took eight hours to complete.

### **6.3 Oral histories**

People from local communities are interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

### **6.4 Documentation**

All sites, objects features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the GPS. The information was added to the description in order to facilitate the identification of each locality.

### **6.5 Evaluation of heritage sites**

The evaluation of heritage sites is done by giving a field rating of each (see Appendix C) using the following criteria:

- The unique nature of a site;
- The integrity of the archaeological deposit;
- The wider historic, archaeological and geographic context of the site;
- The location of the site in relation to other similar sites or features;
- The depth of the archaeological deposit (when it can be determined or is known);

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<sup>1</sup> A Garmin Oregon 550 with an accuracy factor of a few meters.

- The preservation condition of the site;
- Uniqueness of the site; and
- Potential to answer present research questions.



**Figure 4: GPS track of the surveyed area. North reference is to the top.**

## **7. DESCRIPTION OF THE ENVIRONMENT**

The surveyed area largely consists of disturbed landscape. This is the result of recent human activities, mainly agriculture, mining, recreation and housing.

### Bulk water services – Alternative 1:

This is the northern of the two alternatives. It runs from a connection with the existing Magalies Water pipeline towards the east of the Maseve mine. It goes around the tailings dam and runs roughly in a south-western direction. On the existing mine area it runs along a dirt road in an area completely disturbed by former human intervention. This includes old agricultural fields (Figure 5 - 6). The



vegetation therefore consists mostly of pioneer species. The line then passes an old farm dam from where it crosses the R565 tar road (Figure 7 - 8).

On the western side of the road, the line (both alternatives now run together) continues in a south-westerly direction, following a dirt road (Figure 9). Here the vegetation shows patches, which have been disturbed and other looking more pristine. The vegetation cover is medium high and fairly dense which have a negative effect on both the horizontal and vertical archaeological visibility. The specific area where the booster pump is being proposed also is completely disturbed (Figure 10). The last section of the route runs up the mountain and ends at an existing reservoir (Figure 11 - 12). The latter will be replaced by a bigger one. Here the vegetation cover is reasonably dense and seems less disturbed (Figure 13).

The topography of the area is reasonably flat towards the east, but in the west it slopes upwards towards the west. No drainage lines were identified.



**Figure 5: General view of the proposed bulk water pipe line, alternative 1 route, towards the tailings dam.**



**Figure 6: View along alternative 1, running along a dirt road.**



**Figure 7: Old farm dam along alternative 1.**



**Figure 8: View of vegetation close to the R565 road.**



**Figure 9: General view of the environment towards the west of the R565. Here alternative 1 and 2 overlaps.**



**Figure 10: View of the area where the booster pump will be placed.**



**Figure11: Disturbed vegetation along the bulk water pipe line route.**



**Figure 12: Dense vegetation along the bulk water pipe line route.**



**Figure 13: View of the area around the existing water reservoir.**

### Bulk water services – Alternative 2:

This alternative starts at the existing Magalies Water pipe line on a hill towards the south of the Maseve Mine (Figure 14). From here it runs towards the west and crosses the R565 road (Figures 15 - 16). It then follows the road in a northern direction to the point where it links up with alternative 1 and then follows the same westerly direction.

Vegetation cover seems reasonably disturbed along this route (Figure 17). It is however quite dense, and although this affects archaeological visibility, the area is not seen as being a high risk for containing archaeological sites.

The topography of the area is reasonably flat towards the east, but in the west (where the two alternatives run concurrently) it slopes upwards towards the west. No drainage lines were identified.



**Figure 14: General view of the area where the bulk water route alternative 2 starts.**



**Figure 15: View along route alternative 2. It will mainly follow the dirt road.**



**Figure 16: R565 road, where route alternative 2 will cross.**



**Figure 17: Vegetation along route alternative 2.**

**Bulk sewer services:**

The proposed sewer route starts at an area towards the north of the proposed Maseve township development. Here a sewer pump station is proposed. The vegetation at this point is reasonably dense, but seems to have been disturbed (Figure 18). The pipeline route then runs in an easterly direction along a gravel road (Figure 19).

The route then crosses the R565 road and runs slightly north-east towards the existing sewer plant on the Maseve Mine. It is proposed that the sewer plant will be upgraded. The area here is completely disturbed and consists of pioneer plant species in between open patches (Figure 20-21).

The topography of the area is reasonably flat. No drainage lines were identified.





**Figure 18: Area proposed for the sewer pump station.**



**Figure 19: Propose route for the sewer pipeline.**



**Figure 20: General view of pioneer vegetation at the Maseve Mine.**



**Figure 21: Another view of vegetation at the Maseve Mine.**

## **8. HISTORICAL CONTEXT**

During the survey, one site of cultural heritage importance was identified. In order to understand this and the broader history of the larger geographical area, as well as to contextualize possible additional finds that could be unearthed during the development, it is necessary to give a background regarding the different phases of human history in the area.

Two previous surveys were done in the area, namely one at the Maseve Mine (related to an Eskom power line development) and one at the proposed Maseve Housing Development (Van Vollenhoven 2015a; Van Vollenhoven 2015b). During these surveys only one site of heritage significance was identified, being the Sundown Ranch Hotel. This lies towards the north of the proposed bulk water lines and towards the south of the proposed sewer line. A reasonably large number of heritage reports were done in the vicinity of Rustenburg and Boshhoek (SAHRA's SAHRIS database), but no other applicable information was however found in these.

### **8.1 Stone Age**

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided into three periods. It is, however, important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

- Early Stone Age (ESA) 2 million – 150 000 years ago;
- Middle Stone Age (MSA) 150 000 – 30 000 years ago; and
- Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

The closest known Stone Age site in the vicinity of the surveyed area is a rock art site to the northeast. A number of Late Stone Age sites are also known from the Magaliesberg Mountains. Rock engravings are found to the south and east of Rustenburg. These date back to the Late Stone Age (Bergh 1999: 4-5).

No natural shelter exists, although the Magaliesberg Mountain Range is only a few kilometers to the south of the site. The area probably provided good grazing and therefore it is possible that Stone Age people may have utilized the site for hunting purposes. One may therefore find Stone Age material out of context lying around, although none was identified during the survey.

### **8.2 Iron Age**

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artefacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

- Early Iron Age (EIA) 200 – 1000 A.D; and
- Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however, indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

- Early Iron Age (EIA) 250 – 900 A.D.;
- Middle Iron Age (MIA) 900 – 1300 A.D.; and
- Late Iron Age (LIA) 1300 – 1840 A.D.

Many Late Iron Age sites have been identified in the area around the towns of Rustenburg, Koster and Groot Marico as well as in the Waterberg Mountains, which excludes the surveyed area (Bergh 1999: 7-8). During earlier times this part of the Northwest Province was inhabited by Tswana groups, namely the Fokeng and Kwena. These people fled from Mzilikazi during the Difaquane, but later on returned (Bergh 1999: 9-11).

Since the environment is very flat, one would not expect to find large Iron Age sites. The close proximity to Hills and the Magaliesberg Mountain may however mean that people used the plains and therefore isolated pottery may well be present.

### **8.3 Historical Age**

The historical age began with the first recorded oral histories in the area. It includes the moving into the area of people that were literate. This era is often referred to as the Colonial era or the recent past.

Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore, much more cultural heritage resources from this era have been left on the landscape. It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are required in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

Early travelers have moved through this part of the Northwest Province. This included Coenraad de Buys in 1821 and 1825, David Hume in 1825, Robert Scoon and William McLuckie in 1827 and 1829 and Dr. Robert Moffat and Reverend James Archbell in 1829 (Bergh 1999: 12, 117-119).

Hume again moved through this area in 1830 followed by the expedition of Dr. Andrew Smith in 1835 (Bergh 1999: 13, 120-121). Hume again moved through the area with Scoon in 1835. In 1836 William Cornwallis Harris visited the area. The well-known explorer Dr. David Livingstone passed through this area in 1847 (Bergh 1999: 13, 119-122).

In 1837 the Voortrekkers also moved through the Swartruggens area (Bergh 1999: 11). During this year a Voortrekker commando moved out against Mzilikazi and was engaged in a battle with his impi to the north of Swartruggens. The area surveyed was inhabited by white settlers as early as 1839 (Bergh 1999: 14-15).

The greater Magaliesberg and Rustenburg area saw much action during the Anglo-Boer War (1899-1902). British troops reached Rustenburg on 14 June 1900. Three battles were fought here during the War, being the one at Buffelspoort on 3 December 1900, the one at Nooitgedacht on 13 December 1900 and the one at Vlakfontein on 29 May 1901 (Bergh 1999: 51-52).

Historical structures, such as farm houses and infrastructure relating to these times, may be found in the surveyed area. It is also possible that graves associated with the above, may be present.

## **9. DISCUSSION OF HERITAGE SITES IDENTIFIED DURING THE SURVEY**

As indicated, one site of cultural heritage significance was identified. It is a Late Iron Age site.

### **9.1 Site 1 – LIA stone walled complex**

This is a medium sized site, consisting of at least three large circular stone packed kraals and a number of smaller stone packed circles. The large circles are approximately 30 m in diameter with walls between 30 and 60 cm high. The smaller circles, most likely represent living areas and are about 7 m in diameter with walls of about 50 cm high (Figure 22). At least one possible granary platform was identified as well as some terrace walling.



**Figure 22: One of the stone walled kraals at site no. 1.**

GPS: 25°26'13.8"S  
27°04'27.25"E

The site is in a reasonably good condition, but is not very unique. It therefore is regarded as having a medium cultural significance. The field rating is Local Grade IIIB. It means that the site should be included in the heritage register and that it may be mitigated.

The site is close to the location of the proposed reservoir, but clearly demarcated from it by a gravel road between them. There is no reason to cross this road during the development and therefore the site should be left *in situ*. Should it for any reason be necessary to impact on the site directly, it should be tested by means of test excavations and by drawing a site map after which it may be demolished. In order to do this a permit must be applied for from the SAHRA.

## 10. CONCLUSION AND RECOMMENDATIONS

As indicated, one site of cultural heritage importance was identified during the survey (Figure 30). The cultural heritage survey of the indicated area was completed successfully.

The following is recommended:

- The one heritage site identified, is a LIA stonewalled complex and located just outside of the area to be developed. This is at the area where the proposed water reservoir is to be placed.
- The site is in a reasonably good condition, but is not very unique. It therefore is regarded as having a medium cultural significance. The field rating is Local Grade IIIB. It means that the site should be included in the heritage register and that it may be mitigated.
- Although close to the location of the proposed reservoir, it is clearly demarcated from it by a gravel road between them. Since there is no reason to cross this road during the development, the site should be left *in situ*. The developer should ensure that no impact is experienced, especially during construction.
- Should it for any reason be necessary to impact on the site directly, it should be studied during a Phase II study, consisting of test excavations and by drawing a site map. Thereafter it may be demolished. In order to do this a permit must be applied for from the SAHRA.
- No site of heritage significance was found on any of the two alternatives for the proposed water pipe line. Therefore, from a heritage perspective, there is no specific preference for any of these.
- No cultural heritage resources were identified on the proposed sewer line.

- The development may continue in lieu of the recommendation made in this report.
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence and adapt this report.



**Figure 23: Location of the one site identified in the surveyed area.**

## **11. REFERENCES**

Archaetnos database.

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie.** Pretoria: R.D. Coertze.

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

International Finance Corporation. 2012. **Overview of performance standards on Environmental and Social Sustainability. Performance Standard 8, Cultural Heritage.** World Bank Group.

- Knudson, S.J. 1978. **Culture in retrospect.** Chicago: Rand McNally College Publishing Company.
- Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
- Republic of South Africa. 1980. Ordinance on Excavations (**Ordinance no. 12 of 1980**). **The Government Printer: Pretoria.**
- Republic of South Africa. 1983. **Human Tissue Act** (Act 65 of 1983). The Government Printer: Pretoria.
- Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.
- Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.
- SAHRA's SAHRIS database.
- Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
- Van Vollenhoven, A.C. 2015a. **A report on a cultural heritage impact assessment for the proposed Maseve Housing Development on the remaining extent of portion 2 and the remaining extent of portion 9 of the farm Elandsfontein 102 JQ, Northwest Province.** (Unpublished report, Groenkloof: Archaetnos).
- Van Vollenhoven, A.C. 2015b. **A report on a basic cultural heritage assessment for the proposed Impofu – Ngwedi 132kv line project, Northwest Province.** (Unpublished report, Groenkloof: Archaetnos).



## **APPENDIX A**

### **DEFINITION OF TERMS:**

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

## **APPENDIX B**

### **DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:**

- Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.
- Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.
- Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period
- Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.
- Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

## APPENDIX C

### SIGNIFICANCE AND FIELD RATING:

#### Cultural significance:

- Low A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

#### Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III Other heritage resources of local importance and therefore worthy of conservation

#### Field ratings:

- i. National Grade I significance should be managed as part of the national estate
- ii. Provincial Grade II significance should be managed as part of the provincial estate
- iii. Local Grade IIIA should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB should be included in the heritage register and may be mitigated (high/ medium significance)
- v. General protection A (IV A) site should be mitigated before destruction (high/ medium significance)
- vi. General protection B (IV B) site should be recorded before destruction (medium significance)
- vii. General protection C (IV C) phase 1 is seen as sufficient recording and it may be demolished (low significance)

## **APPENDIX D**

### **PROTECTION OF HERITAGE RESOURCES:**

#### **Formal protection:**

National heritage sites and Provincial heritage sites – grade I and II

Protected areas - an area surrounding a heritage site

Provisional protection – for a maximum period of two years

Heritage registers – listing grades II and III

Heritage areas – areas with more than one heritage site included

Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

#### **General protection:**

Objects protected by the laws of foreign states

Structures – older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

## **APPENDIX E**

### **HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.