



Archaetnos Culture & Cultural  
Resource Consultants  
BK 98 09854/23

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**AN ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT REPORT FOR THE  
PROPOSED WATER TREATMENT PLANT AT NKOMATI MINE, NEAR  
BADPLAAS IN THE MPUMALANGA PROVINCE**

For:

**WSP**

e-mail: [Patricia.Nathaniel@wsp.com](mailto:Patricia.Nathaniel@wsp.com)

**REPORT NO.: AE02419V**

By:

***Prof. A.C. van Vollenhoven (L.AKAD.SA.)***

***Accredited member of ASAPA (Accreditation number: 166)***

***Accredited member of SASCH (Accreditation number: CH001)***

**&**

***Johan Smit, BA (Hons)***

***15 April 2024***

Archaetnos  
P.O. Box 55  
GROENKLOOF  
0027

Tel: 083 291 6104

Fax: 086 520 4173

E-mail: [antonv@archaetnos.co.za](mailto:antonv@archaetnos.co.za)

Member: AC van Vollenhoven BA, BA (Hons), DTO, NDM, MA (Archaeology) [UP], MA (Culture History) [US], DPhil (Archaeology) [UP], Man Dip [TUT], D Phil (History) [US]

## **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. Arrangements can however be made if necessary.**

**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 is 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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## EXECUTIVE SUMMARY

Archaeon cc was requested by WSP to conduct an Archaeological Impact Assessment (AIA) for the Nkomati Mine proposed Water Treatment Plant. The Nkomati Mine is about 52 km from Badplaas, in the Local municipality City of Mbombela, in the district municipality of Ehlanzeni, Mpumalanga Province. The client indicated the area to be surveyed. It was surveyed via foot and an off-road vehicle.

A survey of literature was undertaken in order to obtain background information regarding the area. The field 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 area of proposed development.

The following is recommended:

1. This report is seen as ample mitigation and the development may therefore continue, but only after receiving the necessary approval from SAHRA.
2. During the relocation of graves within the Nkomati Mine previously, the mortal remains were moved to a new cemetery located at the coordinates of 25°45'19.5"S 30°37'10.9"E. The development needs to ensure that this cemetery is not impacted by the development.
3. It should be noted that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on site cease immediately and a qualified archaeologist be called in to investigate the occurrence.
4. In this regard the following 'Chance find Procedure' should be followed:
  - *Upon finding any archaeological or historical material all work at the affected area must cease.*
  - *The area should be demarcated to prevent any further work there until an investigation has been completed.*
  - *An archaeologist should be contacted immediately to provide advice on the matter.*
  - *Should it be a minor issue, the archaeologist will decide on future action. Depending on the nature of the find, it may include a site visit.*
  - *SAHRA's APM Unit may also be notified.*
  - *If needed the necessary, permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist.*
  - *The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter.*
  - *Work on site will only continue after the archaeologist/ SAHRA has agreed*

*to such a matter.*

It is also important to take cognizance that it is the client's responsibility to do the submission of this report via the SAHRIS System on the SAHRA website. No work on site may commence before receiving the necessary comments from SAHRA.

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**CURRICULUM VITAE**  
**Prof. Anton Carl van Vollenhoven**

**PERSONAL INFORMATION**

- Born: 20 January 1966, Pretoria, RSA
- Address: Archaeynos, PO Box 55, Groenkloof, 0027
- Cell phone: 083 291 6104
- Nationality: RSA
- E-mail: antonv@archaeynos.co.za

**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**

**Current:**

- *August 2007* – present – Managing Director for Archaeynos Archaeologists.
- *Since 2012*: Archaeologist and heritage official, Department of Environment and Agriculture, City of Tshwane
- *Since 2015*: Extraordinary Professor of History at the North-West University

**Previous:**

- *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 Archaeynos 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.
- *2014-2015*: Part-time lecturer for the Honours degree in Museum Sciences in the Department of History and Heritage Studies at the University of Pretoria
- *2020-2022*: Part-time lecturer in History at the North-West University

### **OTHER**

- NRF C2 Research rating.
- Has published 42 peer-reviewed and 56 popular articles.
- Has written 13 books/book contributions/conference proceedings.
- Has been the author and co-author of over 1 118 unpublished reports on cultural resources surveys and archaeological work.
- Has delivered more than 84 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.
- Member of Association for South African Professional Archaeologists. (Council member since 2022).
- Member of the South African Society for Cultural History (Chairperson 2006-2008; 2012-2014; 2018-2021).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Editorial member of various scientific journals.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Member of Provincial Heritage Resources Agency, Gauteng's HIA adjudication committee (Chairperson 2012-2024).

A list of reports can be viewed on [www.archaetnos.co.za](http://www.archaetnos.co.za).

### **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:

Date: 15 April 2024

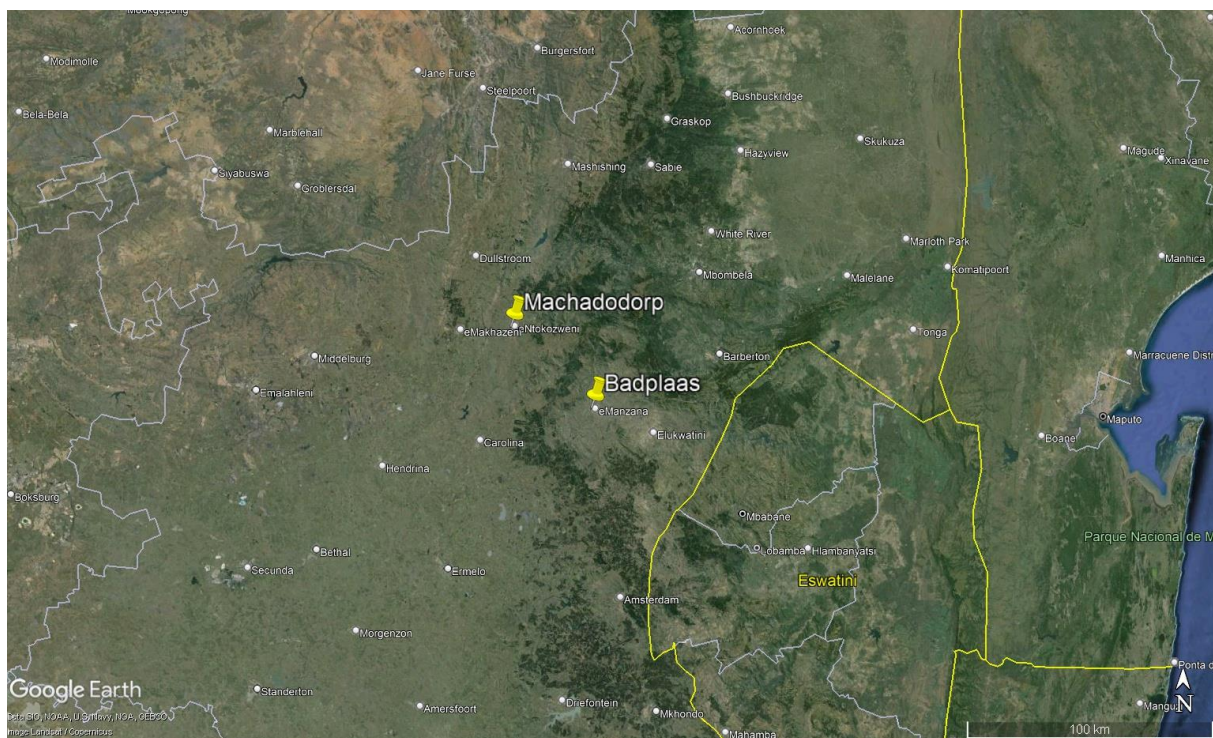
### **LIST OF ACRONYMS:**

AIA – Archaeological Impact Assessment  
CMP – Cultural Management Plan  
EAP – Environmental Assessment Practitioner  
EIA – Environmental Impact Assessment  
HIA – Heritage Impact Assessment  
PIA – Palaeontological Impact Assessment  
SAHRA – South African Heritage Resources Agency

## 1. INTRODUCTION

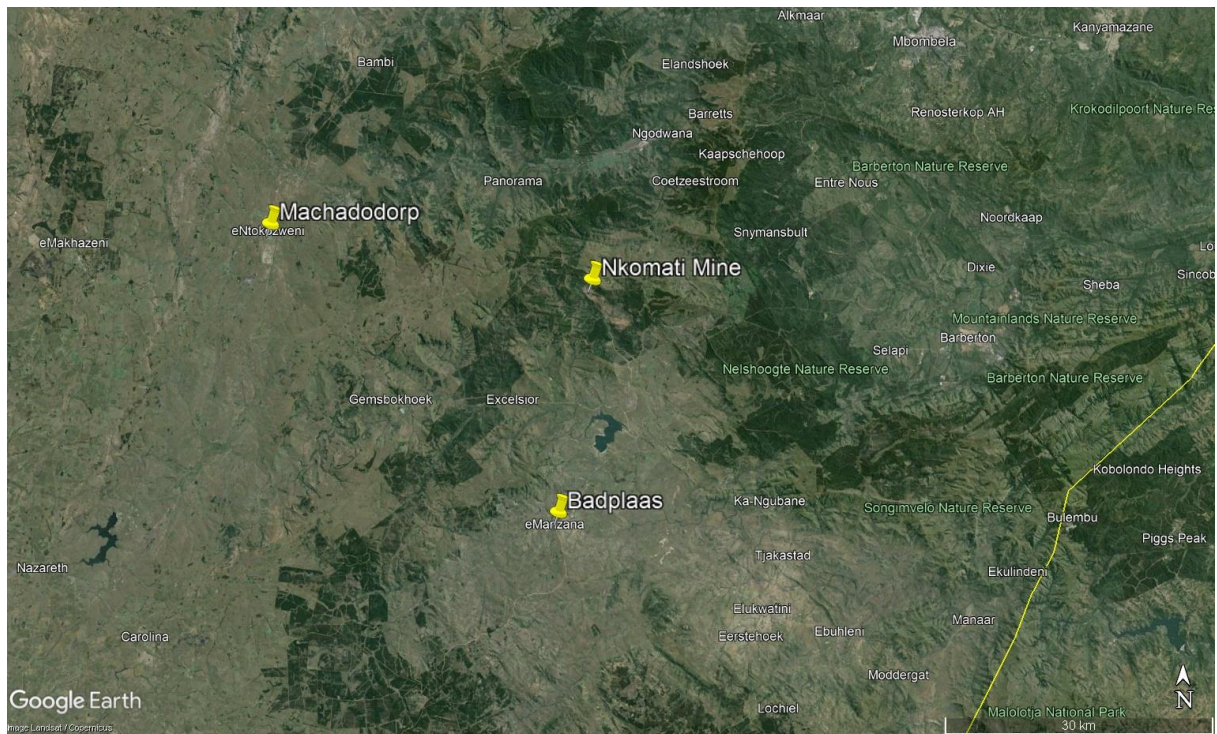
Archaeos cc was requested by WSP to conduct an Archaeological Impact Assessment (AIA) for the Nkomati Mine proposed Water Treatment Plant. The Nkomati Mine is about 52 km from Badplaas, in the Local municipality City of Mbombela, in the district municipality of Ehlanzeni, Mpumalanga Province (Figure 1-3). The client indicated the area to be surveyed (Figure 4). It was surveyed via foot and an off-road vehicle.

A survey of literature was undertaken in order to obtain background information regarding the area. The field 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 area of proposed development.

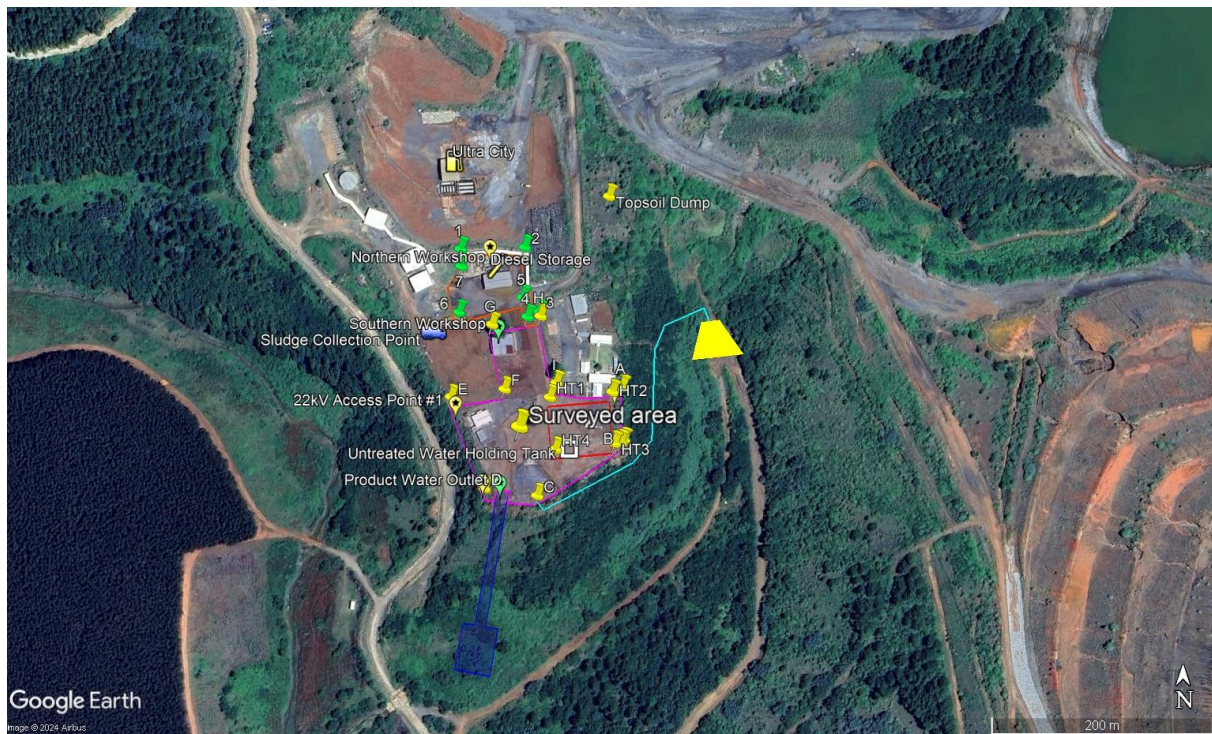


**Figure 1: Location of Machadodorp and Badplaas in the Mpumalanga Province.**









**Figure 4: View of the surveyed area.**

## **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 in the surveyed area (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 artefacts 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 artefacts 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 this report should make it clear how to handle any other finds that might occur.
7. The surveyed area was found to be disturbed by inter alia mining office buildings, parking, storage and maintenance infrastructure. Thus it is seen as a low risk area to contain heritage sites.
8. In areas with no visible infrastructure, the vegetation cover was medium in height and dense and had a dense under footing. The horizontal and vertical archaeological visibility was influenced negatively by the vegetation.

## **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) and the National Environmental Management Act (Act 107 of 1998).

### **4.1 The National Heritage Resources Act**

According to the above-mentioned act, the following are protected as cultural heritage resources:

- a. Archaeological artefacts, 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. Graveyards and graves older than 60 years
- h. Meteorites and fossils
- 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
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (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. 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 300m 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 000m<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>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

### **Structures**

Section 34 (1) of the mentioned act 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 this act 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;
- 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, or
- 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 the South African Heritage Resources Agency (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
- f. human remains

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

- a. destroy, damage, alter, exhume or remove from its original position or 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 until proven otherwise. Human remains that are less than 60 years old are subject to provisions of the **National Health Act (Act 61 of 2003)** and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Exhumations (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 **National Health Act (Act 61 of 2003)**.

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

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects 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 the 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). Possible chance finds, 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 impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artefacts and structures need to be removed it 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 not 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 effected communities. Again, professionals should carry out the work and adhere to the best available techniques.

Consultation with affected communities should be engaged in. This means 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 extraordinary 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 effected 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 to obtain background information regarding the area. This includes reports identified on the SAHRIS Database. Sources consulted in this regard are indicated in the bibliography. One other study was found with regard to the Nkomati Mine (Steyn & De Jager 2016). Several other reports were found in the larger surrounding area of Machadodorp, Badplaas, and Belfast (SAHRIS database; Archaetnos database).

### **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 area of proposed development. One regularly 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 5).

Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. In this instance the area with found to be disturbed by mining office buildings, parking, storage and maintenance infrastructure. In areas with no visible infrastructure, the vegetation cover was mostly medium in height and dense and the area had a dense under footing. The horizontal and vertical archaeological visibility was influenced negatively by the vegetation. The surveyed area consisted of 10 Ha development, and the survey took 2 hours to complete.

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





**Figure 5: Track route of the survey in blue.<sup>2</sup>**

### 6.3 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 employing a Global Positioning System (GPS). The information was added to the description in order to facilitate the identification of each locality.

### 6.4 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)
- The preservation condition of the site
- Uniqueness of the site and

<sup>2</sup> Note that two persons did the survey but only one GPS unit was available. Thus, the track represents the movement of one person, with the other covering the areas in-between.,

- Potential to answer present research questions.

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

The surveyed area is largely disturbed due to past human activities, that took the form of mining-related activities and infrastructure (Figure 6-7). Vegetation in the surveyed area varies in height, with low vegetation in areas where there are still activities and high in others (Figure 8-9) The areas where the vegetation growth was higher and denser, consist largely of pioneer plants. These are indications that these areas were disturbed in the recent past (Figure 10).

The topography of the area is mostly flat with a steep slope on the southern end of the proposed development area (Figure 11).



**Figure 6: View of office buildings in the surveyed area.**





**Figure 7: Another view of the surveyed area.**



**Figure 8: View of low vegetation growth in the surveyed area.**



**Figure 9: View of overgrown vegetation growth in the surveyed area.**



**Figure 10: View pioneer vegetation in the surveyed area.**





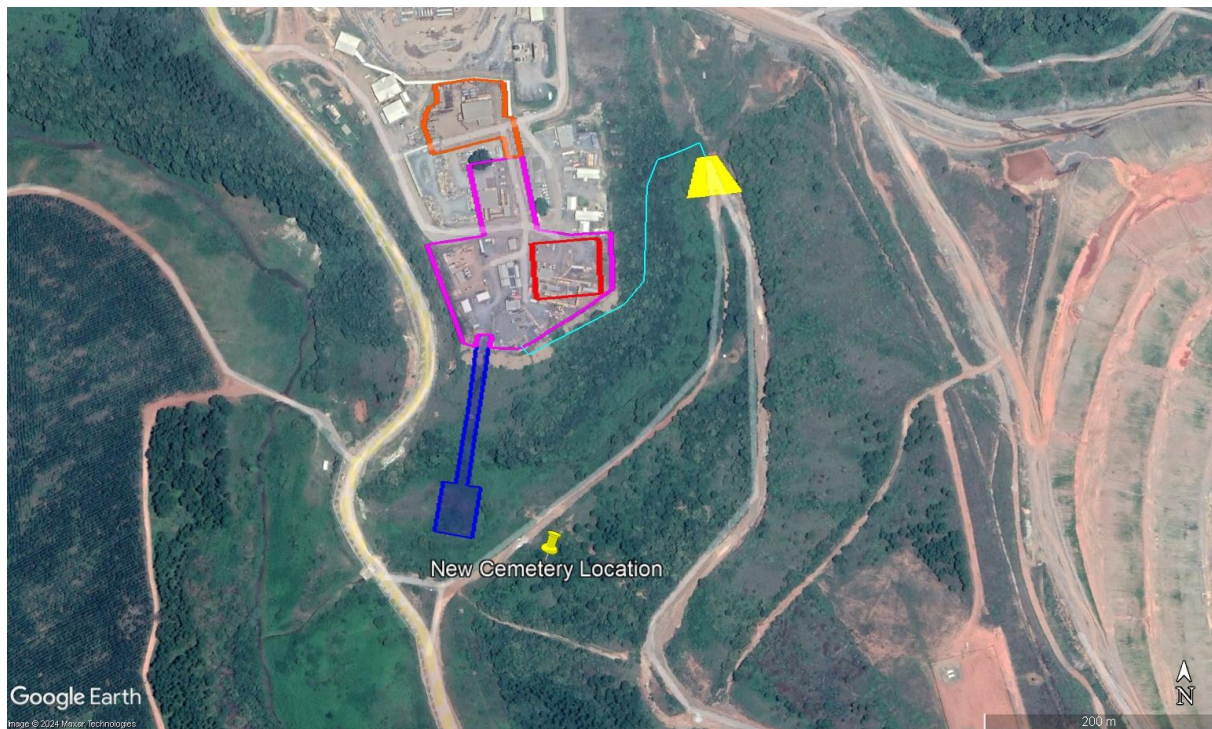
**Figure 11: View of steep slope at the southern end of the surveyed area.**

## **8. HISTORICAL CONTEXT**

No new heritage sites were identified during the survey. One cemetery is located approximately 70 m to the east-southeast of the proposed development, on the opposite side of a gravel road (Figure 12). This cemetery was constructed as part of a grave relocation project, conducted in 2016 (Steyn & De Jager 2016). During the survey, the cemetery was overgrown and not visible (Figure 13).

Some background information is given to place the surveyed area in a broad historical and geographical context and to contextualize possible finds that could be unearthed during construction activities.

A few heritage reports were completed around the towns of Badplaas, Machadodorp and Belfast (SAHRA's SAHRIS database; Archaeos database). The sites found in these reports fall far outside of the impacted area of this survey except for the cemetery that was indicated in the report of Steyn & De Jager (2016).



**Figure 12: Location of relocated cemetery.**



**Figure 13: View of the location of the cemetery from the surveyed area.**

### **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  
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

The environment around Belfast is not one known for containing Stone Age sites. This may be a result of not much research having been done here. However, no Stone Age sites are indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrences are Late Stone Age sites at Carolina and Badplaas, and rock painting sites close to Machadodorp, Badplaas and Carolina (Bergh 1999: 4-5).

No Stone Age sites were found during the survey. The environment of the surveyed area is such that it does provide natural shelter, however likely at some distance away. It therefore is possible that Stone Age people did not settle inside of the surveyed area, but perhaps in nearby caves or rock shelters. They would have been lured to the area due to an abundance of wildlife as the occurrence of water and natural vegetation would have provided ample grazing.

## **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 into two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.  
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.  
Late Iron Age (LIA) 1300 – 1840 A.D.

In an area around Belfast, including Lydenburg, Nelspruit, Machadodorp and Badplaas a number of 1 792 Iron Age sites have been identified (Bergh 1999: 7). These all are dated to the Late Iron Age. Sites such as these are known for extensive stone buildings forming settlement complexes. No indication of metal smelting was identified at any of these sites (Bergh 1999: 8).

It is also known that the early trade routes did not run through this area (Bergh 1999: 9). However one should bear in mind that many of these areas may not have been surveyed before and therefore the possibility of finding new sites is always a reality.

No Iron Age sites were found during the survey. The type of environment is suitable for human habitation as ample building material, water, grazing and fuel are available.

One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers later on moved into this environment.

### **8.3 Historical Age**

The historical age started with the first recorded oral history in the area. It includes the moving into the area of people that were able to read and write. This era is sometimes called 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, and because less time has passed, 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 needed in order to determine whether these indeed have cultural significance. Factors to be considered include the aesthetic, scientific, cultural and religious value of such resources.

At the beginning of the 19th century the Phuthing, a South Sotho group, stayed to the south of Belfast. The Koni of Makopole stayed to the north-east and the Ndzundza Ndebele to the west. During the Difaquane they fled to the south, south-west and north-west as Mzilikazi's impi moved in from the southeast. During this time the Swazi also moved into this area (Bergh 1999: 10-11; 109).

The first white traveller to visit these surroundings was Robert Scoon in 1836 (Bergh 1999: 13). The area around Belfast, stretching as far as the Kruger Park, Middelburg and Ohrigstad, was first traded from the Swazi in 1846. White farmers therefore only settled here after this date (Bergh 1999: 16, 133).

The town of Belfast was established in 1890 and by the 1890's this area was inhabited by many white farmers (Bergh 1999: 21). Just to the south of the town, on the farm Wemmershuis, the remains of an old coach house were identified. This is on the old trade route between Middelburg and the far eastern Transvaal (Van Vollenhoven 2008: 14). A map from Bulpin (1974) shows that the eastern railway line went through Belfast and one can assume that this was an important stop for travellers. The reason is that the road forks here to the north in the direction of Ohrigstad and Lydenburg and to the east in the direction of Nelspruit.

During the Anglo-Boer War, the area around Belfast saw much action. The last of the conventional military encounters between the British and Boer forces were that of the Battle of Bergendal, sometimes called the Battle of Dalmanutha. The battle took place between 21 and 27 August 1900.

On 21-22 August skirmishes started on the farm Van Wyksvlei, to the south of Belfast. This was followed by an attack on 23 August by the British on the Boer forces on the farm Geluk. Later that day the Boers at Dalmanutha were also under attack. The final phase of the battle was at Bergendal on 27 August 1900 (Van der Westhuizen & Van der Westhuizen 2000: 218-220). The Boers retrieved from the scene and the British could continue their advance to the Lowveld.



On 24 August 1900, the British occupied Belfast. In the town they had three concentration camps for Boer women and children (Van der Westhuizen & Van der Westhuizen 2000: 211-214). After the British reached Komatipoort on 24 September 1900, they erected blockhouses and other fortifications along the railway line in order to safeguard this from the Boers (Van Vollenhoven 1995: 86). The remains of two of these are found to the south of the railway line at Belfast (Van Vollenhoven 2008: 15). During the night of 7-8 January 1901 the Boers attacked Belfast and started against the blockhouses on Monument Hill (Van der Westhuizen & Van der Westhuizen 2000: 217).

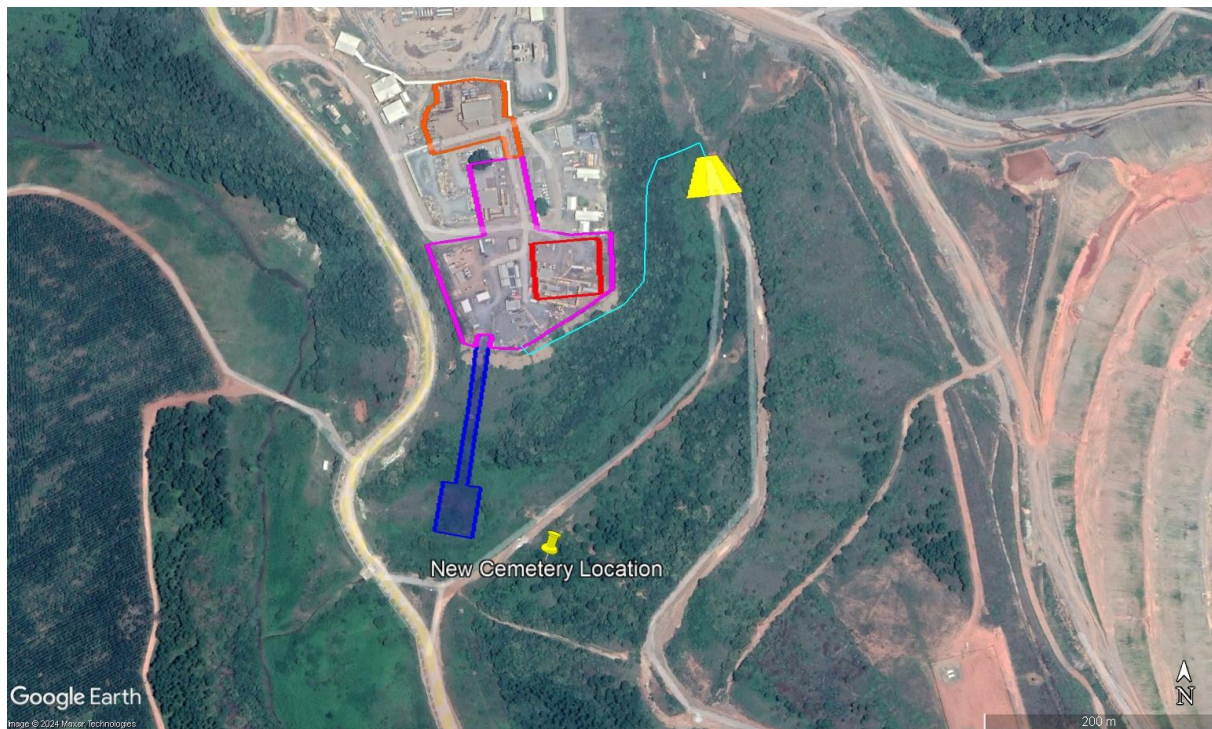
One may therefore expect to find farm buildings, structures, and objects in the area. Many graveyards from this period in time have been identified in surrounding areas during past surveys. Historical graves have also been found at Wemmershuis, just to the south of Belfast previously (Archaetnos database). One should therefore be on the lookout for graves in the surveyed areas. No Historic sites were found during the survey.

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

No sites of cultural heritage importance were identified within the surveyed area.

## **10. CONCLUSION AND RECOMMENDATIONS**

It is concluded that the assessment of the area was conducted successfully. A known heritage site is however found in the area (see Figure 14) and is located on the opposite side of the road. No development is planned in this area and is therefore not threatened by it.



**Figure 14: Known heritage site close to the surveyed area.**

The following is recommended:

1. This report is seen as ample mitigation and the development may therefore continue, but only after receiving the necessary approval from SAHRA.
2. During the relocation of graves within the Nkomati Mine previously, the mortal remains were moved to a new cemetery located at the coordinates of 25°45'19.5"S 30°37'10.9"E. The development needs to ensure that this cemetery is not impacted by the development.
3. It should be noted that the subterranean presence of archaeological and/or historical sites, features or artefacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, work on site cease immediately and a qualified archaeologist be called in to investigate the occurrence.
4. In this regard the following 'Chance find Procedure' should be followed:
  - *Upon finding any archaeological or historical material all work at the affected area must cease.*
  - *The area should be demarcated to prevent any further work there until an investigation has been completed.*
  - *An archaeologist should be contacted immediately to provide advice on the matter.*

- *Should it be a minor issue, the archaeologist will decide on future action. Depending on the nature of the find, it may include a site visit.*
- *SAHRA's APM Unit may also be notified.*
- *If needed the necessary, permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist.*
- *The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter.*
- *Work on site will only continue after the archaeologist/ SAHRA has agreed to such a matter.*

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## **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 artefacts, found in 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: Artefact (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 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:**

National Grade I significance	should be managed as part of the national estate
Provincial Grade II significance	should be managed as part of the provincial estate
Local Grade IIIA	should be included in the heritage register and not be mitigated (high significance)
General protection A (IV A)	site should be mitigated before destruction (high/medium significance)
General protection B (IV B)	site should be recorded before destruction (medium significance)
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, assessing their significance, making comments on the impact of the development and making 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.