



Archaetnos Culture & Cultural  
Resource Consultants  
BK 98 09854/23

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**A DESKTOP HERITAGE ASSESSMENT STUDY FOR  
A PROSPECTING RIGHTS APPLICATION ON VARIOUS FARMS  
NEAR MUSINA, MUSINA DISTRICT, LIMPOPO PROVINCE**

For:

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**REPORT: AE1177**

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***August 2011***

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## SUMMARY

Archaetnos cc was requested by MSA Geoservices (Pty) Ltd trading as The MSA Group, on behalf of Capricorn Iron (Pty) Ltd, to conduct a scoping level desktop heritage assessment for a Prospecting Right Application (PRA) near Musina in the Limpopo Province. The area where potential mining will be undertaken is located on various farms in the area. The aims of the study were to determine if there are any archaeological and historical sites, and features in the area that need be taken into consideration when prospecting work commences and that could be potentially impacted upon by future mining operations.

Various sources were consulted for the desktop study. From this it is clear that there are a number of known heritage resources in the larger geographical area, as well as some sites within the boundaries of the prospecting area. It is also envisaged that a number of previously unknown sites might exist here.

**A number of recommendations are put forward at the end of this report. If these are implemented, from a Cultural Heritage point of view, there would be no objection to the proposed mining exploration.**

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## **1. INTRODUCTION**

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Various sources were consulted for the desktop study. From this it is clear that there are a number of known heritage resources in the larger geographical area, as well as some sites within the boundaries of the prospecting area. It is also envisaged that a number of previously unknown sites might exist here.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study were to:

1. to conduct a scoping level desktop heritage assessment in order to determine the possible existence of the archaeological and historical (cultural heritage) sites and features in the area where mining prospecting is proposed to take place, and which could be impacted on by future mining operations

## **3. 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).

### **3.1 The National Heritage Resources Act**

According to the above-mentioned act the following is 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
- 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. Sites of Archaeological and palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, 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. 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 palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological 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 palaeontological material or object, or any meteorite; or

- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological 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 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 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.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) 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 **Human Tissues Act (Act 65 of 1983 as amended)**.

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

### **3.2 The National Environmental Management Act**

This act 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.

## **4. METHODOLOGY**

### **4.1 Survey of literature**

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

### **4.2 Field survey**

No field survey was conducted in this instance.

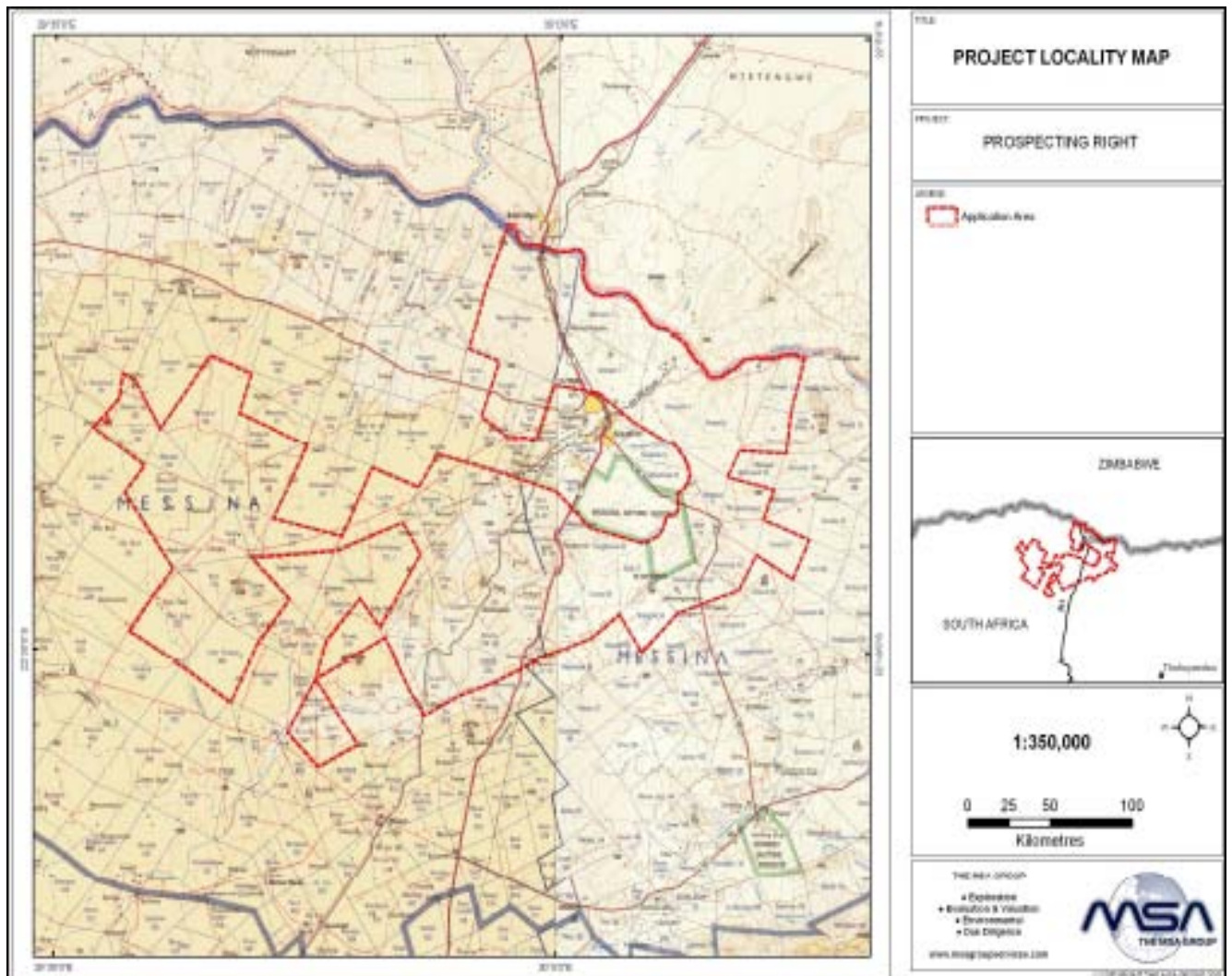
## **5. DESCRIPTION OF THE AREA**

Capricorn Iron (Pty) Ltd has appointed The MSA Group (MSA) as independent environmental consultants to undertake the authorization processes for proposed prospecting activities in the Musina District. The area of interest is located near Musina in the Limpopo Province. Over sixty (60) farms are located within the boundaries of the prospecting area.

MSA has lodged the prospecting right application on behalf of Capricorn for Iron Ore, Limestone, and Marble and has been given a reference number LP30/5/1/1/2/10262PR by the Limpopo Department of Mineral Resources (DMR). Capricorn intends to undertake a 3 year non-invasive prospecting work program which will include desktop studies, satellite photography, reconnaissance geological mapping, geochemical surveys, aeromagnetic surveys, petrological studies, geological analysis, as well as some trenching and drilling activities. These activities will be taking place simultaneously at any given time; however, some activities may be undertaken only if the preceding activities yield favourable results.

Taking the proposed activity and the project study area into consideration, various potential environmental impacts have been identified, including impacts on cultural heritage resources. An Environmental Management Plan (EMP) will be drafted to take precautionary measures to prevent and to minimize negative impacts on the Environmental and Cultural Heritage resources. This will include management and mitigatory measures for any identified potential impacts.





**Figure 1: Location of area (Map courtesy of client).**

## 6. DISCUSSION

The first step in this desktop study was to look at existing maps (1:50 000 topographic maps and aerial images (Google Earth) of the study area in order to see if any possible heritage resources could be identified from these sources.

From the 1:50 000 topographic maps (2229BB Beitbridge, 2229BC Linton, 2229BD Kamkusi and 2230AA Musina – all dating to 1999) some agricultural fields, farming related structures (farmsteads and farm laborer structures), churches, shops and other buildings can be identified, specifically near the town of Musina and the border post of Beitbridge. This does indicate that some cultural heritage resources are present in the area, although the significance and ages of these will not be known without a detailed heritage impact assessment. The presence of graves (associated with the European farmsteads and farm laborer structures) are therefore a very distinct possibility, although none are indicated on the topographic maps.

It is clear that some portions of the area has been disturbed in the recent past through agricultural and residential activities, as well as activities such as the development of other

infrastructure such as roads, power lines and telephone lines. If any sites, features or objects of cultural heritage significance did exist here in the past, it would have been disturbed or destroyed to some extent in these areas. However, traces of their existence could still be identified when a physical assessment of the area is undertaken.

A search in the Ditsong Museum of Culture (the old National Cultural History Museum in Pretoria) Archaeological Data Recording Centre Database (ADRC) was also conducted. Although very few know sites were found on specific farms in the study area, a number were located on neighboring farms, with three farms in the area also indicating sites. This is a reflection of what can be expected to be found in the area. The following information was found:

### **Neighboring farms**

1. Koningsmark 117 MS – Three Middle Iron Age sites
2. Evelyn 159 MS – One MIA site
3. Toynton 49 MT – LIA sites
4. Prinzenhagen 47 MT – LIA
5. Skirbeek 73 MT – Late Stone Age
6. Messina 4 MT – Iron Age (Njebeli Hill) and the old Masonic Hall and historical cemetery

### **Farms in study area**

1. Templehof 150 MS – Historical Railway Bridge. S22.22457 E29.98701
2. Frome 507 MS – Two Late Iron Age sites (a) S22.5000 E29.86417 (b) S22.50389 E29.86667
3. Uitenpas 2 MT – Historical cemetery. S22.32364 E30.04590

A short, general, background to archaeology is given in the following section, after which the archaeology and history of the area for which the prospecting rights application has been made (and its broader geographical context) will be discussed. It must be mentioned that archaeologically speaking the specific study area is not that well known or researched, and that a physical survey in the area will have to be undertaken in order to determine if any sites of significance does exist here that might be impacted on potentially by any proposed activities.

## **6.1 Stone Age**

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in 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.

No known Stone Age sites could be found in the direct area, although some LSA sites are known to occur in the Greefswald area northwest of Musina (Berg 1999: 4). This includes some rock art sites as well (p.5). It is possible that Stone Age sites and objects could be located in the area, especially near rocky outcrops and hills and near streams and river beds (many which run through the study area). A LSA site is known to occur on Skirbeek 73 MT.

## **6.2 Iron Age**

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts (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.

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.

Although only a few Iron Age sites are known to occur specifically in the study area (on Frome 507 MS), a number are known to occur on other farms in the larger geographical area, including LIA and MIA sites. According to Berg there are a number of known EIA and LIA sites in the large geographical area, including the well-known Mapungubwe and the Verdun, Verulam and Machedema stone walled Late Iron Age Venda sites (Berg 1999: 6-7). The Verdun and Verulam sites are located not far from the study. Machedema was on an old trade route which passed through the area around Musina, and Machedema was also a metal (copper mine) working site (Berg 1999: 8, 103).

Tom Huffman's research work shows that EIA, MIA and LIA sites, features or material could be found in the area. This will include the Mzonjani facies of the Urewe Tradition dating to between AD450 and AD750 (Huffman 2007: 127); the Leokwe facies of the same tradition dating to between AD1050 and AD1220 (p.147); the Moloko facies of AD1300-AD1500 (p.183); the K2 facies of the Kalundu Tradition dating to AD1000-AD1200 (p.279); the Mapungubwe facies of the same dating to between AD1300 and AD1420 (p.285); the Happy Rest facies of the Kalundu Tradition, dating to between AD500 and AD750 (p. 219). Finally it is possible that the Letaba facies of the Kalundu tradition (AD1600 – AD1840) could also be located in the area (Huffman 2007: 267).

## **6.3 Historical Age**

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people who were able to read and write. The earliest Europeans to move through or close to the area were the groups of De Buys in 1821 and 1825 and Hume in 1830 (Berg 1999: 12 – 13).

Musina, known until recently as Messina, is the most northerly town in South Africa and the last town before the border with Zimbabwe. Beit Bridge Border Post, South Africa's busiest border post, lies on the Limpopo River some 18 km north of Musina. The town developed in tandem with the copper mining industry. Copper was first discovered here in prehistoric times by miners of the Musina tribe and rediscovered by twentieth-century miners. Today iron, coal, magnetite, graphite, asbestos, diamonds, semi-precious stones and copper are mined here ([www.inabustours](http://www.inabustours)).

A number of historical sites are known to occur in the area, including a historical railway bridge on Templehof 150 MS and a historical cemetery on Uitenpas 2 MT. Many other historical sites might still be located in the area, and only a physical survey of the area will be able to confirm this.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Based on the desktop heritage assessment undertaken for this development (a Prospecting Rights Application), it is clear that the area has not been studied archaeologically and historically in much detail, although more is known about the cultural heritage of the wider geographical area and the cultural heritage of the development area has to be interpreted within this context. Without a physical site assessment the presence or absence of Stone Age and Iron Age sites, features or objects can not be determined, but it is possible that these might be present. Similarly, the age and significance of any historical structures and features also needs to be determined. It is clear from the topographical maps of the area that these exist. The presence of graves is always a distinct possibility when farmsteads and laborer structures are present. Sometimes the graves are unmarked or only low, stone packed features.

In the light of the above the following recommendations are made:

- 1. that all graves and other cultural heritage resources should be avoided at all costs during the prospecting and any other studies, and that a buffer zone of at least 100m should be placed around these should these be encountered. If any sites are identified then these should be reported to a heritage specialist (archaeologist) for investigation**
- 2. that a full Phase 1 Heritage Impact Assessment for the area be undertaken before full-scale mining activities commence in the area**

**Finally, it should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken during any development activities that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate.**

## 8. REFERENCES

Locality maps provided by The MSA Group

1:50 000 Topographic Map series: 2229BB Beitbridge, 2229BC Linton, 2229BD Kamkusi and 2230AA Musina – all dating to 1999

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- Archaeological Data Recording Centre (ADRC) – Ditsong Museum of Culture**
- [www.csg.dla.gov.za](http://www.csg.dla.gov.za)

## **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**

### 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.

## APPENDIX C

### **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



## 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