

**Phase 1 Heritage Impact Assessment & Palaeontological Assessment (Desktop) for a Mine Prospecting Application on the Farm Perth 343 near Hotazel in the Joe Morolong Local Municipality, Northern Cape**

Prepared by

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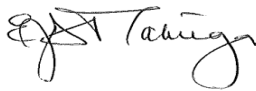
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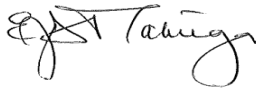
## DOCUMENT CONTROL

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AHSA Pty Ltd is an independent consultancy: I hereby declare that I have no interest, be it business, financial, personal or other vested interest in the undertaking of the proposed activity, other than fair remuneration for work performed, in terms the National Heritage Resources Act (No 25 of 1999).



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## **ABBREVIATIONS**

|       |   |
|-------|---|
| EIA   | Environmental Impact Assessment         |
| HIA   | Heritage Impact Assessment              |
| LSA   | Late Stone Age                          |
| LIA   | Later Iron Age                          |
| PHRA  | Provincial Heritage Resources Authority |
| MSA   | Middle Stone Age                        |
| NEMA  | National Environmental Management Act   |
| NHRA  | National Heritage Resources Act         |
| SAHRA | South African Heritage Resources Agency |
| BP    | Before Present                          |

## EXECUTIVE SUMMARY

1. This specialist report has been prepared in support of a mine prospecting right application for the farm Perth 343 situated 84 km north of Hotazel in the Joe Morolong Local Municipality, Northern Cape Province. Section 38 of the National Heritage Resources Act (No 25 of 1999) sets out the procedures for screening for the possible occurrence of heritage resources that may be affected by the proposed activities, and on the basis of which appropriate mitigation measures will be prescribed.
2. The report is based on consultation of heritage studies that have been undertaken in the broader area to provide contextual data while arrangements are being made for access to the property to conduct a ground survey.

### *3. Findings of the desktop assessment (general observations)*

There is an established presence of Stone Age material in the area represented by scattered distributions of artefacts sometimes localised along the edges of streams and less likely on the sand-covered plains.

Other heritage resources that might occur in the broader area are:

4. Rock engravings (petroglyphs) dating from the Middle Stone Age to Later Stone Age periods
5. Rock Paintings from the Middle Stone Age to the Later Stone Age periods
6. Buildings and objects associated with modern commercial farming from the 19<sup>th</sup> century
7. Graves, burial grounds and human bones.
8. The Table below provides a summary of the probability of occurrence of different typologies of heritage and a confidence rating of the predictions. The ranking system relates to the national grading of heritage sites (adapted from Guidelines for involving Heritage Specialists in EIA processes by Winter S and & N. Baumann (2005, p19). The probability of occurrence of different grades of sites confirms the view that no finds in

the study area (except for graves and rock engravings) are likely to warrant further action apart from documentation. During the exploration phase monitoring will be undertaken using the Chance Finds Procedure.

9. Probability of occurrence of heritage resources

| GRADE | RANKING        | SIGNIFICANCE   | PROBABILITY OF OCCURRENCE | CONFIDENCE RATING |
|-------|----------------|--|---------------------------|-------------------|
| 1a    | National       | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources, | 0%                        | High              |
| 1b    | Burial grounds | Grave are sacred and their treatment is a sensitive issue.   | 50%                       | High              |
| 2     | Provincial     | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential 2 heritage resources                 | 0%                        | High              |
| 3A    | Local          | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 3A heritage resources          | 10%                       | Medium            |
| 3B    | Local          | Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources   | 10%                       | High              |
| 3C    | Local          | Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources                       | 99,99%                    | High              |

#### *10. Chance Finds Procedure (CPF)*

When the environmental and heritage approvals have been received prospecting operations will commence at which time an Archaeological and Heritage Chance Find Procedure (CPF) annexed to the report will be applied as a manual for the protection of heritage resources which may occur in the footprint of the prospecting right.

#### *11. Conclusion and recommendations*

In light of the findings of the desk assessment, the mine prospecting can go ahead. The study is mindful that some important discoveries may be made during prospecting. If this happens operations should be halted, and the provincial heritage resources authority or SAHRA notified in order for an investigation and evaluation of the finds to take place.



## **1. INTRODUCTION**

This specialist report has been prepared in support of a mine prospecting right application for the farm Perth 343 situated 84 km north of Hotazel in the Joe Morolong Local Municipality, Northern Cape Province. Section 38 of the National Heritage Resources Act (No 25 of 1999) sets out the procedures for screening for the possible occurrence of heritage resources that may be affected by the proposed activities, and on the basis of which appropriate mitigation measures will be prescribed. The report is based on consultation of heritage studies that have been undertaken in the broader area to provide contextual data while arrangements are being made for access to the property to conduct a ground survey.

Prospecting for minerals entails the following physical works which may result in damage or destruction of heritage resources above or below the ground:

- Open excavations and trenches;
- Test pits;
- Drilling;
- Opening of temporary service roads; and
- Location of processing plant.

As these activities are likely to damage or destroy heritage resources, an HIA will inform appropriate mitigation measures to be taken based on an understanding of the heritage sensitivity of the property.

### **1.2. Location and physical setting**

The farm Perth is located 85 km NE of Hotazel (Figures 1-2). This author has undertaken a number of field-based heritage studies in the broader area around Kathu, Hotazel and Kuruman and knowledge of the terrain characteristics and superficial geology is of relevant application to this study:

The Farms Erith and Walton are located on the sandveld 100 km south of the farm Perth. The farm La Rochelle is situated on the sandveld 107 km south of Perth. The farm Gamolilo is situated near Tsineng 60 km south of the farm Perth. Topography on Gamolilo is flat with

a north-south banded ironstone ridge forming a low rise backdrop on the western limits of the farm. From a geological perspective this is likely to be an extension of the ridge on the farm Perth 343. The other key features of geology on Gamolilo are extensive surface calcrete waste and occasional exposures of the underlying calcrete hardpan. The farms Titanic 773 and Gassesa 272 lie on the west side of Gamolilo and straddle a calcrete surface and sandveld on the east and west sides respectively.

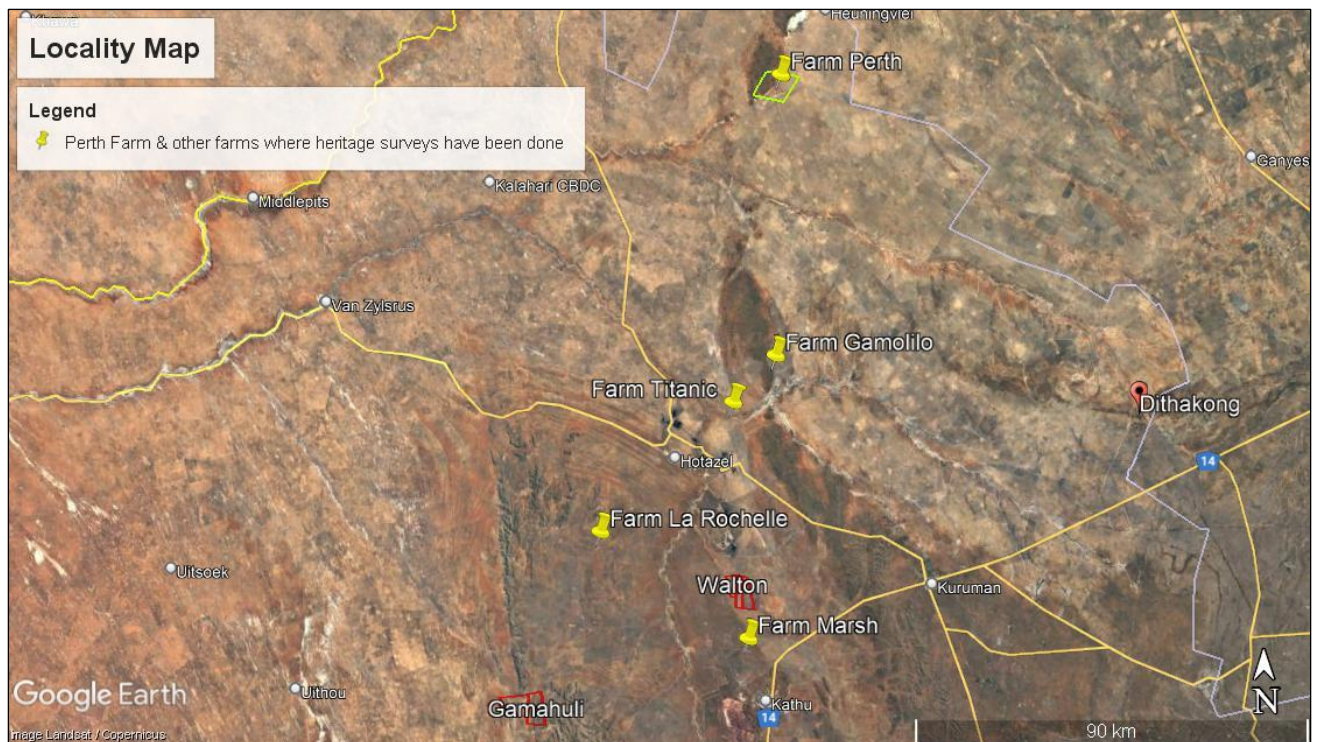


Figure 1: Google Earth map shows the location of the Perth Farm in relation to other farms which have been surveyed by this author: Gamahuli, La Rochelle, Walton, Titanic and Gamolilio

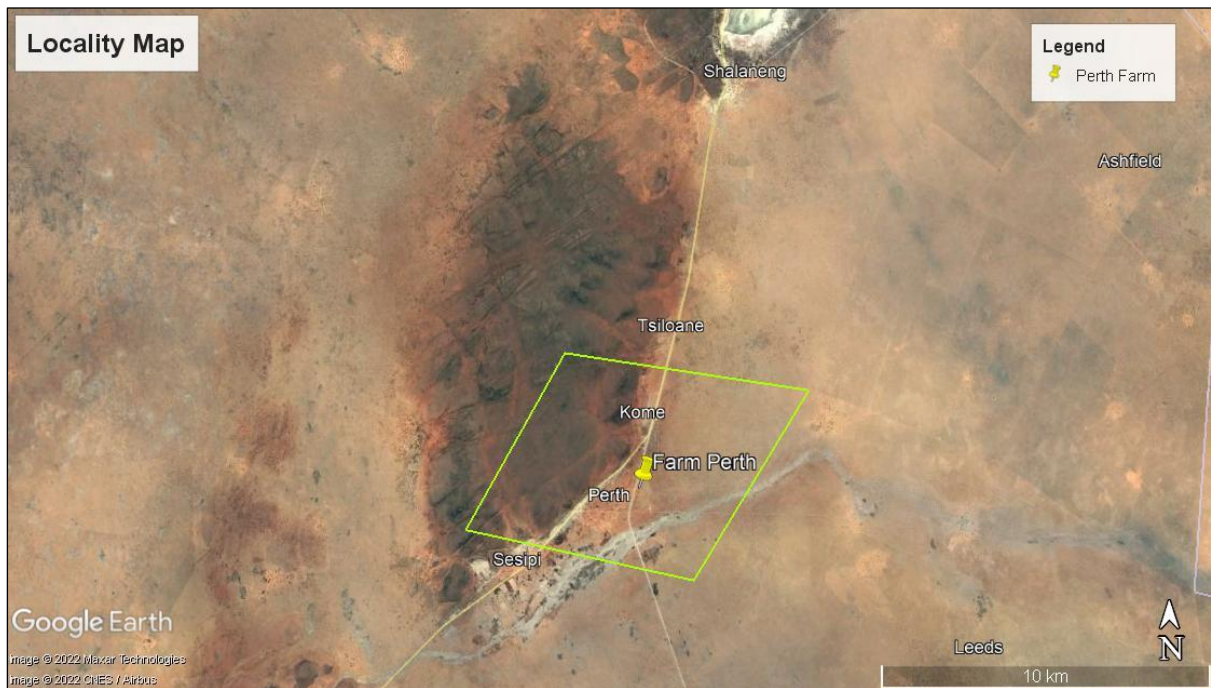


Figure 3: Google Earth map shows the Farm Perth and the ironstone ridge on the western portion of the property.



Figure 3: Section of the Ironstone ridge in a north-central part of the farm Gamolilo. This is likely to be a southern extension of the ridge on the farm Perth 60 km to the north

## 2. LEGAL FRAMEWORK

This heritage impact assessment fulfils an onus on developers to safeguard heritage resources. This obligation has been legislated with Sections 34, 35, 36 and 38 of the National Heritage Resources Act (No 25 of 1999) forming the context in which this HIA report has been prepared.

### 2.1. Section 38 of National Heritage Resources Act (No 25 of 1999) on Heritage Impact Assessments

Section 38 of the NHRA lists activities and thresholds that trigger an HIA:

**38.** (1) *Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—*

*(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*

*(b) the construction of a bridge or similar structure exceeding 50 m in length;*

*(c) any development or other activity which will change the character of a site—*

*(i) **exceeding 5 000 m<sup>2</sup> in extent**<sup>1</sup>; or*

*(ii) involving three or more existing erven or subdivisions thereof; or*

*(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*

*(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*

*(d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or*

*(e) any other category of development provided for in the regulations by SAHRA or a provincial heritage resources authority,*

*must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

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<sup>1</sup> Areal extent of the proposed development triggers the HIA.

## **2.2. Definition of heritage (National Estate)**

Section 3 of NHRA lists a wide range of cultural phenomena which could be defined as heritage, or the *National Estate* (3(2)). Section 3(3) outlines criteria upon which heritage value is ascribed. This Section is useful as a field checklist for the identification of heritage resources.

## **2.3. Protection of buildings and structures older than 60 years**

Section 34 of the NHRA provides automatic protection for buildings and structures more than 60 years old until it can be proven that they do not have heritage value:

*(1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.*

## **2.4. Protection of archaeological sites**

Section 35 (4) of the NHRA prohibits the destruction of archaeological, palaeontological and meteorite sites:

*No person may, without a permit issued by the responsible heritage resources authority—*

*(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 which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

## **2.5. Graves and burial grounds**

Section 36 of the NHRA provides for the protection of certain graves and burial grounds. Graves are generally classified under the following categories:

- Graves younger than 60 years;
- Graves older than 60 years, but younger than 100 years;

- Graves older than 100 years; and
- Graves of victims of conflict
- Graves of individuals of royal descent
- Graves that have been specified as important by the Ministers of Arts and Culture.

This study is however mindful of public sensibilities about the sanctity of graves and burial grounds whether they are protected by the law or not.

## **2.6. The National Environmental Management Act (No 107 of 1998)**

This act states that a survey and evaluation of cultural resources must be done in areas where development projects that will affect 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 is a much broader undertaking to cater for cultural and social needs of people. 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.

## **2.7. The Burra Charter on Conservation of Places of Cultural Significance**

Generic principles and standards for the protection of heritage resources in South Africa are drawn from international charters and conventions. In particular South Africa has adopted the **ICOMOS Australia Charter for the Conservation of Places of Cultural Significance (the Burra Charter 1999)** as a benchmark for best practice in heritage management.

# **3. METHODOLOGY AND THEORETICAL APPROACHES**

## **3.1. Literature survey**

This study is entirely based on a desktop search for information that can be applied to determine the heritage sensitivity of the farm. The author has quite extensive field experience in the broader area and the resultant reports produced. On a general note, many studies in support of Heritage Impact Assessments in the broader area have recorded occurrences of artifacts dating from the Early Stone Age (ESA) through the Middle Stone Age (MSA) to the Late Stone Age (LSA), with a majority falling under the MSA/LSA periods.

Generally finds occur as scatters of scrapers, blades and cores while concentrated finds evidencing manufacturing sites or settlements are rare.

**Matenga, E. 2020.** *Phase I heritage impact assessment (including palaeontological desk assessment) in terms of Section 38 of the National Heritage Resources Act No 25/1999 for the proposed prospecting and mining right on the Farms Titanic 773 and Gasesa 272 near Kuruman, Northern Cape Province*

The above-mentioned farms are situated 70 km south of the farm Perth. Findings included lithics comprising scrapers, blades cores and flakes recorded in twenty-three (23) places representing all three epochs. The occurrence of these artefacts along the Matlhwaring River is a pattern consistent with findings of other studies in the broader area (Kusel 2018). An Early Stone Age pear-shaped hand-axe was found. Farm buildings were also noted on the property

**Matenga, E. 2020.** *Phase 1 Heritage Impact Assessment Requested in Terms of Section 38 of the National Heritage Resources Act No 25/1999 for the Proposed Prospecting and Mining Right on the Farm Gamolilo 72 near Kuruman, Northern Cape Province*

The farm Gamolilo is situated 60 km south of Perth and may share the same terrain characteristics as Perth. Background scatters of lithics comprising scrapers, blades cores and flakes were recorded in 21 places (sites) dating from the Early Stone Age through the Middle Stone Age to the Late Stone Age. Among these finds were rock engravings (petroglyphs) a recommendation of which was made to protect them. Farm buildings were flagged as contributing to landscape elements associated modern commercial farming.

**Matenga, E. 2021.** *Phase I Heritage Impact Assessment & Palaeontological Desk Assessment for a Mine Prospecting Application on the Farms Gamahuli, Malley & La Rochelle near Olifantshoek, under the Gamagara Local Municipality, Northern Cape Province*

La Rochelle is lies 107 km SW of Perth. Two burial grounds of a 19<sup>th</sup>-20<sup>th</sup> century date were recorded.

**Matenga, E. 2021.** *Heritage Impact Assessment in terms of Section 38(8) of the National Heritage Resources Act (No 25/1999) for the Proposed Agricultural Development*

*(Hydroponics Systems Project) on the Remaining Extent of the Farm Marsh Near Kathu, Northern Cape.*

The farm Marsh 467 is 10 km north of Kathu and c 120 km south of Perth. Scatters of lithics comprising a few scrapers and significantly many flakes were recorded. While the area around Kathu has a significant Early Stone Age footprint, the finds on the farm Marsh 467 appear to date to the Middle Stone Age and none of the of the ESA type tools were found.

**Pelser, A J. and A C Vollenhoven. 2011.** *A report on a Heritage Impact Assessment (HIA) for a Proposed New Rail Crossing over the Gamagara River for the Gloria Mine Operations, Assmang Black Rock, on Gloria 266, North of Hotazel, Northern Cape.*

The proposed site of bridge across the Gamagara River is 5 km NW of Hotazel. Fourteen (14) Stone Age sites were recorded. The railway bridge across the Gamagara River was considered of historic significance (page 15).

**Fourie, W. 2015.** *The proposed upgrade of the 66kV network in the Kuruman area, Northern Cape Province (PGS Heritage)*

The report concerned a heritage survey along the servitude of a proposed Eskom power line from Kuruman to Hotazel passing north of the farm La Rochelle. Two cemeteries, several historic farmsteads, historic asbestos mines, a sacred site, a Provincial Monument and a memorial were recorded. No Stone Age finds were reported (p. iv).

**Mlilo, T. & F Bandama. 2016** *Phase 1 Archaeological Impact Assessment Report for Proposed John Taole Gaetsewe School and Hostels on Portion 0 of the Farm Motiton 509 HM in Dithakong, Joe Morolong Local Municipality, Northern Cape Province*

The proposed development was located in Dithakong Village about 100 km to the SE of Perth. Dithakong has an eventful history as a 19<sup>th</sup> century village with stone walls. It was the theatre of fighting during the Difaqane and the war of resistance to colonial occupation. No archaeological or historical relics were found during the survey, although Stone Age relics had been reported in the vicinity (page 24).

**PGS. 2018.** *Proposed Waste Rock Dump Project at Tshipi Borwa Mine, near Hotazel, Northern Cape Province.*



The proposed infrastructural development was located on the Farm Mamatwan 331 and Moab 700 situated 20 km south-east of the town of Hotazel. No archaeological or historical relics were found within the footprint of the proposed development (page v).

**Kusel, U. 2018.** *East Manganese: Phase 1 Heritage Impact Assessment on the farm East 270 (Portion 1 & Re) within the John Taolo Gaetsewe District Municipality, Northern Cape.* The heritage study was undertaken in the vicinity of Hotazel. Stone tools were found in the vicinity of the Ga-Mogara River (a tributary of the Matlharing, the latter flows through the property of the present study). The lithics represented all three periods of the Stone Age with a few cutting tools typical of the Early Stone Age (ESA). A majority of lithics such as blades, a knife (exhibiting secondary trimming or retouch), and triangular flakes are typical of the Middle Stone Age (pp. 22-23).

**Schalkwyk, J. A. 2020.** *The development of a power line, access road and above ground storage of LPG gas as part of the Proposed Kagiso Solar Power Plant on the Remaining Extent of the Farm Kameelaar No 315 Registration Division Kuruman, Northern Cape Province.*

The footprint of the development lies south of Hotazel. No heritage finds were reported.

From the above studies we arrive at an informed conclusion that there is an established presence of Stone Age material in the area represented by scattered distributions of artefacts. Material is likely to be found along the edges of streams and less likely on the sand-covered plains.

**Mlilo, T. 2021.** *Phase 1 Archaeological and Heritage Impact Assessment Report for the Proposed Prospecting of Manganese Ore, on Portion 2 of Farm East 270 in Joe Morolong Local Municipality, Northern Cape Province*

The property is situated on the northern outskirts of Hotazel. No archaeological or historical relics were recorded. Buildings at a commercial farmstead were noted.

#### **4. ARCHAEOLOGICAL AND HISTORICAL CONTEXT**

An outline of the cultural sequence in South Africa provides a theoretical framework for the identification of features / structures and objects of archaeological, historical and cultural interest. As summary of the reconstructed cultural sequence is given below:

#### 4.1. Cultural sequence summary<sup>2</sup>

| PERIOD   | EPOCH                        | ASSOCIATED CULTURAL GROUPS   | TYPICAL MATERIAL EXPRESSIONS   |
|--|------------------------------|--|--|
| Early Stone Age<br>2.5m – 250 000 YCE                              | Pleistocene                  | Early Hominids:<br><i>Australopithecines</i><br><i>Homo habilis</i><br><i>Homo erectus</i> | Typically large stone tools such as hand axes, choppers and cleavers.            |
| Middle Stone Age<br>250 000 – 25 000 YCE                           | Pleistocene                  | First <i>Homo sapiens</i> species  | Typically smaller stone tools such as scrapers, blades and points.               |
| Late Stone Age<br>20 000 BC – present                              | Pleistocene /<br>Holocene    | <i>Homo sapiens</i> including<br>San people  | Typically small to minute stone tools such as arrow heads, points and bladelets. |
| Early Iron Age / Early Farmer Period<br>c300 – 900 AD (or earlier) | Holocene                     | Iron Age Farmers   | Typically distinct ceramics, bead ware, iron objects, grinding stones.           |
| Later Iron Age<br>900ADff  | Holocene                     | Iron Age Farmers, emergence of complex state systems                                       | Typically distinct ceramics, evidence of long distance trade and contacts        |
| (ii) Mapungubwe (K2)   | 1350AD                       |  | Metals including gold, long distance exchanges                                   |
| (ii) Historical period   | Tswana / Sotho, Nguni people | Iron Age Farmers   | Stone walls<br>Mfecance / Difaqane   |
| (iii) Colonial period  | 19 <sup>th</sup> Century     | European settlers / farmers / missionaries/ industrialisation                              | Buildings, Missions, Mines, metals, glass, ceramics                              |

#### 4.3. Appearance of hominids

South Africa has a yielded a very good record of fossil hominids, proto-humans which appeared in South Africa more than 3million years ago. Three famous sites in Gauteng, Limpopo and Northwest Provinces have been collectively named the Cradle of Humankind and inscribed as a serial UNESCO World Heritage Site. No hominid fossils have been reported in the broader locality of the study area. On the farm Eselkloupan off the N8

<sup>2</sup> Adapted from Exigo Consultancy. 2015. Frances Baard District Municipality: Proposed Nkandla Extension 2 Township Establishment, Erf 258 Nkandla, Hartswater, Northern Cape Province.

highway near Groblershoop, c 120 km southwest of Olifantshoek, there is fossilised track resembling donkey spoor. The age of the fossil imprints is not known.<sup>3</sup>

#### **4.4. The Early Stone Age**

##### *4.4.1. The Early Stone Age (2 million to 250 000 years BP)*

The Stone Age dates back more than 2 million years representing a more explicit record of the cultural sequence divided into three epochs, the Early, Middle and Late Stone Ages. These early humans made stone and bone implements. Material evidence is found in caves, rock-shelters and on river sides and edges of streams, and very rarely seen in open country. Such tools bore a consistent shape such as the pear-shaped handaxe, cleavers and core tools (Deacon & Deacon, 1999). These tool industries have been called Oldowan and Acheulean and were probably used to butcher large animals such as elephants, rhinoceros and hippopotamus. Acheulean artefacts are usually found near sites where they were manufactured and thus in close proximity to the raw material or at kill sites. The early hunters are classified as hominids meaning that they had not evolved to the present human form.

Progressively a good profile of the Stone Age in the Northern Cape has been reconstructed from many heritage impact assessments that have been conducted in recent years. The Wonderwerk Cave near Kuruman has become a benchmark for the characterisation of the Stone Age. Excavations revealed a long sequence of occupation spanning the Early (ESA), Middle (MSA) and Later Stone Ages.<sup>4</sup>

##### *4.4.2. Middle Stone Age (MSA) [250 000 yrs – 30 000 yrs BP]*

The Middle Stone Age (MSA) appeared 250 000 years ago and is marked by the introduction of a new tool kit which included prepared cores, parallel-sided blades and triangular points hafted to make spears. By then humans had become skilful hunters, especially of large grazers such as wildebeest, hartebeest and eland. It is also believed that by then, humans had evolved significantly to become anatomically modern. Caves were used for shelter

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<sup>3</sup> Groblershoop: Green Kalahari Region. Found at:  
<https://www.experiencenortherncape.com/visitor/citiesandtowns/groblershoop>

<sup>4</sup> <http://www.southafrica.net/za/en/articles/entry/article-southafrica.net-the-wonderwerk-cave>.

suggesting permanent or semi-permanent settlement. Furthermore there is archaeological evidence from some of the caves indicating that people had mastered the art of making fire.<sup>5</sup>

Several surveys by this author undertaken along the banks of the Orange River have consistently established the Middle Stone Age footprint.

#### *4.4.3. Later Stone Age (LSA)[40 000 yrs to ca2000 yrs BP]*

By the beginning of the LSA, humans are classified as *Homo sapiens* which refer to the modern physical form and thinking capabilities. Several behavioural traits are exhibited, such as rock art and purposeful burials with ornaments, became a regular practice. The practitioners of rock art were the ancestors of the San and sites abound in the whole of Southern Africa. LSA technology is characterised by microlithic scrapers and segments made from very fine-grained rock. Spear hunting continued, but LSA people also hunted small game with bows and poisoned arrows. Because of poor preservation, open sites become of less value compared to rock shelters.

Stone Age material of all periods has been reported in the farm Paling which lies southeast of Olifantshoek and northwest of Postmasburg. Rock engravings have also been reported in the same area at Beeshoek Mine and Paling Farm where core flakes, blades, segments and scrapers made out of silcrete, jasper and quartzite have been seen. Rock paintings have been documented at Inglesby Farm northwest of Olifantshoek. There may be more painted sites in the area, but farmers are reported to be cautious about disclosure fearing exposure to public visits.<sup>6</sup>

On a more general note Stone Age material occurs in sparse distribution described as background scatters over the broader area.

#### **4.5. The Iron Age Culture [ca. 2000 years BP]**

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<sup>5</sup> Deacon, J & H. Deacon. 1999. *Human Beginnings in South Africa*. Cape Town: David Philip.

<sup>6</sup> Pers. Comm. May 2015. Mr Rean Van De Luytgaarden, Owner of Elephant Rock Inn, Oilfantshoek.

The Iron Age culture supplanted the Stone Age at least 2000 years ago, associated with the introduction of farming and use of several metals and pottery. Iron Age communities are believed to have been speakers of Bantu languages who practiced agriculture and kept domestic animals such as cattle, sheep, goat and chickens. There is however increasing evidence that sheep and probably cattle as well might have moved into the area much earlier than the Iron Age.

#### *4.5.1. Early Iron Age*

According to Huffman (2007) there were two migration streams of Early Iron Age (EIA) communities converging in South Africa, one originating in eastern Africa which has been called the *Urewe-Kwale Tradition* (or the eastern stream) and another from the west, spreading through Zambia and Angola, which he termed the *Kalundu Tradition* (or western stream). An alternative perspective is to see the IA as a gradual spread or expansion of settlement of different groups of people indigenous to the continent which took place over a long period of time. There are few if any sites attributed to the EIA in the western parts of the country. Most IA settlements are concentrated in the eastern part of South Africa. The woodland zone was preferred for settlement, but there is strong possibility that transhumant pastoralism was practiced and seasonal hunting camps were established in the inhospitable western regions of the country.

#### *4.5.2. The Later Iron Age*

The LIA is marked by the presence of extensive stonewalled settlements such as the Tlhaping capital at Dithakong near Kuruman.<sup>7</sup>

### **4.6. Colonial Occupation**

#### *4.6.1. Early contact with Europeans*

The area encompassing Olifantshoek, Groblershoop, the Langeberg (Majeng) and the Korannaberg ranges was home to a number of Tswana groups, of particular significance being the Tlaping and Tlaro. On the eve of colonial occupation a number of traders, hunters,

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<sup>7</sup> De Jong 2010: De Jong, R.C. 2010. Heritage impact assessment report: proposed manganese and iron ore mining right application in respect of the remainder of the farm Paling 434, Hay Registration Division, Northern Cape. Unpublished report prepared for Kai Batla Minerals Industry Consultants. Pretoria: Cultmatrix, p

explorers and missionaries transited the area. A few can be named here - PJ Truter's and William Somerville (arriving in 1801), Donovan, Burchell and Campbell, James Read (arriving around 1870) William Sanderson. The arrival of large numbers of Great Trek Boers from the Cape Colony to the borders of Bechuanaland and Griqualand West in 1836 caused conflict with many Tswana groups and the missionaries of the London Mission Society.

The Boers entered the area in the 1860s, and conflict with Tswana communities escalated when the Korana and Griqua communities and the British government became involved. The annexation of Bechuanaland by the British in 1885 imposed further territorial restrictions on these groups. In 1895, when British Bechuanaland was incorporated into the Cape Colony, the land inside the reserves remained the property of the Tswana and could only be alienated with the consent of the British Secretary of State (Engelbrecht & Fivaz, 2018: 17-18, 19).

#### 4.6.2. *The Langberg Rebellion 1896-7*

Mounting anger among the Tlhaping and Tlaro over the confiscation of land, confinement to reserves and continued demands for land at the expense of the African reserves led to rebellion. The outbreak of the bovine disease, rinderpest, in many parts of southern Africa provided the ignition. Demand by the British that the Tlaro put down their horses to contain the epidemic was interpreted as sabotage in preparation for war.<sup>8</sup> Chief Toto Makgokwe of the Tlaro led his people into war and made a good account of himself by defeating British Forces in one of the encounters which lasted 8 months.<sup>9</sup> British war graves on a farm west of Olifantshoek are a tourist attraction. The farms Langkloof, Inglesby, Lukin, Gamayana, Pudukush, Toto, Luka and Hopkins west of Olifantshoek are named after major role players in the Langberg Rebellion<sup>10</sup>

The British forces eventually captured Toto Makgokwe and his son Phemelo together with King (Kgosi) Galeshewe who had sheltered in the area. Toto and his son were taken prisoners to Robben Island; Toto died there (Figure 11).

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<sup>8</sup> Information provided by Mr Rean Van De Luytgaarden, Owner of Elephant Rock Inn, Olifantshoek (2015).

<sup>9</sup> [http://en.wikipedia.org/wiki/Toto\\_Makgokwe](http://en.wikipedia.org/wiki/Toto_Makgokwe) (August 2015)

<sup>10</sup> Corbus Dreyer, 2014. First Phase Archaeological & Heritage Investigation of the Proposed Mine Prospecting at the Remaining Extent of the Farm Inglesby 580 near Olifantshoek, Northern Cape Province

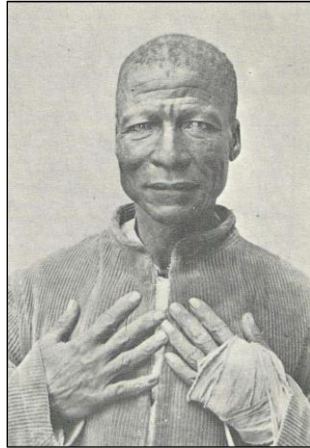


Figure 11: Toto, leader of the Tlalo (From Fourie, 2018: 34).

#### *4.6.3. Olifantshoek and Kathu: A brief history*

Olifantshoek was founded in 1912 on the foot of the Lange Mountains. It was named after the tusk of an elephant which was used as payment for the farm on which the town was built. It is said that the area was abundant with elephants and many elephant bones were found in the vicinity.<sup>11</sup>

The above is the framework for identifying heritage resources in the area.

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<sup>11</sup> About Olifantshoek. Found at: <https://www.sa-venues.com/attractionsnc/olifantshoek.php> Consulted in July 2021

## **5. FINDINGS OF THE DESKTOP ASSESSMENT**

### **5.1. General observations**

There is an established presence of Stone Age material in the area represented by scattered distributions of artefacts sometimes localised along the edges of streams and less likely on the sand-covered plains.

Other heritage resources that might occur in the broader area are:

- Rock engravings (petroglyphs) dating from the Middle Stone Age to Later Stone Age periods
- Rock Paintings from the Middle Stone Age to the Later Stone Age periods
- Buildings and objects associated with modern commercial farming from the 19<sup>th</sup> century
- Graves, burial grounds and human bones.

The Table below provides a summary of the probability of occurrence of different typologies of heritage and a confidence rating of the predictions. The ranking system relates to the national grading of heritage sites (adapted from Guidelines for involving Heritage Specialists in EIA processes by Winter S and & N. Baumann (2005, p19). The probability of occurrence of different grades of sites confirms the view that no finds in the study area (except for graves and rock engravings) are likely to warrant further action apart from documentation. During the exploration phase monitoring will be undertaken using the Chance Finds Procedure.



| GRADE | RANKING        | SIGNIFICANCE   | PROBABILITY OF OCCURRENCE | CONFIDENCE RATING |
|-------|----------------|--|---------------------------|-------------------|
| 1a    | National       | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources, | 0%                        | High              |
| 1b    | Burial grounds | Grave are sacred and their treatment is a sensitive issue.   | 50%                       | High              |
| 2     | Provincial     | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential 2 heritage resources                 | 0%                        | High              |
| 3A    | Local          | Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 3A heritage resources          | 10%                       | Medium            |
| 3B    | Local          | Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources   | 10%                       | High              |
| 3C    | Local          | Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources                       | 99,99%                    | High              |

## 5.2. Assessment of Impacts using the Heritage Impact Assessment Statutory Framework

### Section 38 of the NHRA

Section 38 (Subsection 3) of the National Heritage Resources Act also provides a schedule of tasks to be undertaken in an HIA process:

*Section 38(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:*

***(a) The identification and mapping of all heritage resources in the area affected***

No ground survey was undertaken.

***(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7***

There are no Grade I or Grade II sites.

***(c) An assessment of the impact of the development on such heritage resources***

Sites that may be found during the explorations and are deemed to be significant will be curated in accordance with the procedures in the Heritage Chance Finds Procedure.

***(i) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development***

The mining industry in the Northern Cape Province is poised for growth in the short and long term future due to high demand of minerals such as Manganese and Iron in the country and abroad in China. The country need such impetus for economic growth to solve the growing problem of unemployment. Mining is labour intensive. General improvement in the quality of livelihoods in local communities and the country at large is expected. There is growing expectation that the mining industry will mitigate the vagaries of climate change – induced by droughts which have been experienced over the last decade.

***(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources***

The Environmental Specialist is dealing with stakeholder issues.

***(f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives***

A Chance Finds Procedure will be used for the treatment of any sites or objects found during exploration and when actual mining commences.

***(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.***

In accordance with the CPF in the event of the discovery of heritage resources deemed of significance during exploration or mining, the Provincial Heritage Resources Authority or SAHRA will be informed immediately and an archaeologist or heritage expert called to attend.

### **5.3. Risk Assessment of the findings**

| <b>EVALUATION CRITERIA</b>       | <b>RISK ASSESSMENT</b>   |
|----------------------------------|--|
| Description of potential impact  | Negative impacts range from partial to total destruction of surface and under-surface movable/immovable relics.                          |
| Nature of Impact                 | Negative impacts can both be direct or indirect.   |
| Legal Requirements               | Sections 34, 35, 36, 38 of National Heritage Resources Act No. 25 (1999).  |
| Stage/Phase                      | Prospecting for minerals (test pits, drilling); Mining Phase   |
| Extent of Impact                 | Test pits, excavations and ground clearing can result in damage and destruction of archaeological resources above and below the surface. |
| Duration of Impact               | Any accidental destruction of surface or subsurface relics is not reversible, but can be mitigated.                                      |
| Intensity                        | Uncertain.   |
| Probability of occurrence        | Medium.  |
| Confidence of assessment         | High.  |
| Level of significance of impacts | Medium.  |

|   |   |
|---|---|
| before mitigation                                 |   |
| Mitigation measures                               | If archaeological or other heritage relics deemed of high significance are found during the exploration phase, heritage authorities will be advised immediately and a heritage specialist will be called to attend. |
| Level of significance of impacts after mitigation | Low.  |
| Cumulative Impacts                                | None.   |
| Comments or Discussion                            | None.   |

#### 5.4. Chance Finds Procedure (CPF)

When the environmental and heritage approvals have been received prospecting operations will commence at which time an Archaeological and Heritage Chance Find Procedure (CPF) annexed to the report will be applied as a manual for the protection of heritage resources which may occur in the footprint of the prospecting right.

## 6. CONCLUSION AND RECOMMENDATIONS

In light of the findings of the desk assessment, the mine prospecting can go ahead. The study is mindful that some important discoveries may be made during prospecting. If this happens operations should be halted, and the provincial heritage resources authority or SAHRA notified in order for an investigation and evaluation of the finds to take place.

## 7. GLOSSARY

**Archaeological material:** remains older than 100 years, resulting from human activities left as evidence of their presence, which are in the form of structure, artefacts, food remains and other traces such as rock paintings or engravings, burials, fireplaces etc.

**Artefact:** Any movable object that has been used modified or manufactured by humans.

**Catalogue:** An inventory or register of artefacts and / or sites.

**Conservation:** All the processes of looking after a site or place including maintenance, preservation, restoration, reconstruction and adaptation.

**Cultural Heritage Resources:** refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistoric places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. These include intangible resources such as religious practices, ritual ceremonies, oral histories, memories, indigenous knowledge.

**Cultural landscape:** a stretch of land that reflects “the combined works of nature and man” and demonstrates “the evolution of human society and settlement over time, under the influence of the physical constraints and / or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external”.<sup>12</sup>

**Cultural Resources Management (CRM):** the conservation of cultural heritage resources, management and sustainable utilization for present and future generations.

**Cultural Significance:** is the aesthetic, historical, scientific and social value for past, present and future generations.

**Early Iron Age:** refers to cultural remains dating to the first millennium AD associated with the introduction of metallurgy and agriculture.

**Early Stone Age:** a long and broad period of stone tool cultures with chronology ranging from around 3 million years ago up to the transition to the Middle Stone Age around 250 000 years ago.

**Excavation:** a method in which archaeological materials are extracted from the ground, which involves systematic recovery of archaeological remains and their context by removing soil and any other material covering them.

**Historic material:** means remains resulting from human activities, which are younger than 100 years and no longer in use; that include artefacts, human remains and artificial features and structures.

**Historical:** means belonging to the past, but often specifically the more recent past, and often used to refer to the period beginning with the appearance of written texts.

**Intangible heritage:** something of cultural value that is not primarily expressed in material form e.g. rituals, knowledge systems, oral traditions or memories, transmitted between people and within communities.

**In situ material:** means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

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<sup>12</sup> This definition is taken from current terminology as listed on the World Heritage Convention website, URL: <http://whc.unesco.org/en/culturallandscape/#1> accessed 17 March 2016.

**Later Iron Age:** The period from the beginning of the 2<sup>nd</sup> millennium AD marked by the emergence of complex state society and long-distance trade contacts.

**Late Stone Age:** The period from ± 30 000 years ago up until the introduction of metals and farming technology around 2000 years ago, but overlapping with the Iron Age in many areas up until the historical period.

**Middle Stone Age:** a period of stone tool cultures with complex chronologies marked by a shift towards lighter, more mobile toolkit, following the Early Stone Age and preceding the Late Stone Age; the transition from the Early Stone Age was a long process rather than a specific event, and the Middle Stone Age is considered to have begun around 250 000 years ago, seeing the emergence of anatomically modern humans from about 150 000 years ago, and lasting until around 30 000 years ago.

**Monuments:** architectural works, buildings, sites, sculpture, elements, structures, inscriptions or cave dwellings of an archaeological nature, which are outstanding from the point of view of history, art and science.

**Place:** means site, area, building or other work, group of buildings or other works, together with pertinent contents, surroundings and historical and archaeological deposits.

**Preservation:** means the protecting and maintaining of the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary.

**Rock Art:** various patterned practices of placing markings on rock surfaces, ranging in Southern Africa from engravings to finger paintings to brush-painted imagery.

**Sherds:** ceramic fragments.

**Significance grading:** Grading of sites or artefacts according to their historical, cultural or scientific value.

**Site:** a spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

**Site Recording Template:** a standard document format for site recording.

**Site Recording Template:** a standard document format for site recording.

## **8. REFERENCES**

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**Matenga, E. 2021.** *Phase I Heritage Impact Assessment & Palaeontological Desk Assessment for a Mine Prospecting Application on the Farms Gamahuli, Malley & La Rochelle near Olifantshoek, under the Gamagara Local Municipality, Northern Cape Province*

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## 9. DETAILS OF SPECIALIST

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### (ii) Academic qualifications

1990 - 1993: MPhil in Archaeology (Uppsala University, Sweden) with a published Thesis  
2009 – 2011: PhD in Archaeology & Heritage (Uppsala University, Sweden) with a published Thesis  
2002: Certificate in the Integrated Conservation of Territories and Landscapes of Heritage Value (ICCROM, Rome)

### (iii) Professional experience

**1988-1993:** Curator of Archaeology, Museum of Human Sciences, Harare  
**1994-1997:** Senior Curator / Conservator, Great Zimbabwe World Heritage Site  
**1997-2004:** Director, Great Zimbabwe World Heritage Site  
**2005 – 2016:** Heritage Management Consultant (associateship with various other specialists), South Africa  
2016 – present. Director & Principal Researcher, AHSA Archaeological and Heritage Services Africa (Pty) Ltd

### iv) Membership of professional bodies/associations

ASAPA – Association of Southern African Professional Archaeologists  
ICOMOS – International Council of Monuments and Sites  
WAC – World Archaeological Congress

### (iv) Heritage Impact Assessments &

Edward Matenga has undertaken more than 100 heritage impact assessments and written as many fieldwork based reports. He has a footprint in the Northern Cape and Limpopo Provinces. Matenga has also been involved in the preparation of Heritage Management Plans otherwise known as Conservation Management Plans for sites. He has undertaken exhumations and relocations of graves and has gained considerable experience in handling community issues relating to the treatment of human remains. Over the last 2 decades UNESCO and its affiliated bodies (ICOMOS and ICCROM) sent Matenga on World Heritage advisory missions to Cameroon (2002), Kenya (2006), Mauritius (2007), Ghana (2008) and Ethiopia (2010).