

# HERITAGE SCOPING REPORT

For the Proposed Wonderstone Limited (WST) Driekuil project, Northwest Province

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## EXECUTIVE SUMMARY

Wonderstone Limited (WST) will continue mining from the existing Wonderstone Opencast Pit and will include additional five (5) mining blocks where Pyrophyllite will be mined. Envirologistics (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the requisite Environmental Impact Assessment (EIA) process for the Project. Beyond Heritage was appointed to assess the potential impact to heritage resources by the Project. This report is for the scoping phase of the Project and is based on a desktop study. Key findings include:

- The reporting of the scoping component is based on the results and findings of the desk-top study, wherein potential issues associated with the proposed project is identified, and those issues requiring further investigation through the EIA Phase highlighted;
- Heritage Assessments in the larger geographical area recorded Stone Age material as well as burial sites (Van der Walt 2016 and 2021).
- In addition, Rock Art sites are on record for the farm Driekuil and Gestoptefontein where the current project is located and formed the basis of a PhD study (Hollman 2013);
- No grave sites are indicated on archival maps or the genealogical society database within the impact areas, but burial sites can occur across the landscape and can be expected.
- The study area is of insignificant to low paleontological sensitivity and no further studies are required for this aspect;
- The study area forms part of a landscape characterised by wide scale cultivation and mining activities.

The scoping study did not identify any fatal flaws in in the study area and the project is acceptable from a heritage point of view. It is expected that if any sites are identified within the development footprint, the sites can be mitigated, either by avoidance or by a Phase 2 assessment. To comply with the National Heritage Resources Act (NHRA) and with cognisance of known heritage resources in the greater area it is recommended that the study area should be subjected to a field-based Heritage Impact Assessment (HIA). During this study the potential impact on heritage resources will be determined as well as levels of significance of recorded heritage resources. The HIA should also provide management and mitigation measures should any significant sites be impacted upon, ensuring that all the requirements of the SAHRA are met.

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**ABBREVIATIONS**

AIA: Archaeological Impact Assessment
ASAPA: Association of South African Professional Archaeologists
BIA: Basic Impact Assessment
CRM: Cultural Resource Management
ECO: Environmental Control Officer
EIA: Environmental Impact Assessment*
EIA: Early Iron Age*
EIA Practitioner: Environmental Impact Assessment Practitioner
EMP: Environmental Management Plan
ESA: Early Stone Age
GPS: Global Positioning System
HIA: Heritage Impact Assessment
LIA: Late Iron Age
LSA: Late Stone Age
MEC: Member of the Executive Council
MIA: Middle Iron Age
MPRDA: Mineral and Petroleum Resources Development Act
MSA: Middle Stone Age
NEMA: National Environmental Management Act
PRHA: Provincial Heritage Resource Agency
SADC: Southern African Development Community
SAHRA: South African Heritage Resources Agency

*\*Although EIA refers to both Environmental Impact Assessment and the Early Iron Age both are internationally accepted abbreviations and must be read and interpreted in the context it is used.*

**GLOSSARY**

Archaeological site (remains of human activity over 100 years old)

Early Stone Age (2 million to 300 000 years ago)

Middle Stone Age (300 000 to 30 000 years ago)

Late Stone Age (30 000 years ago until recent)

Historic (approximately AD 1840 to 1950)

Historic building (over 60 years old)

Lithics: Stone Age artefacts

## 1. INTRODUCTION

Beyond Heritage was contracted by Envirogistics (Pty) Ltd to conduct a heritage scoping study for the proposed Wonderstone Limited Driekuil Project. The site is situated  $\pm 300$  kilometres west of Johannesburg and approximately 10km outside Ottosdal in the North-West Province (Figure 1.1 to 1.3). The heritage scoping report forms part of the EIA for the proposed project.

The aim of the scoping report is to identify possible heritage resources within the project area and to submit appropriate recommendations with regards to the responsible cultural resources management measures that might be required within the framework provided by Heritage legislation.

The report outlines the approach and methodology utilized for the scoping phase of the Project. The report includes information collected from various sources and consultations. Possible impacts are identified, and mitigation measures are proposed in the following report.



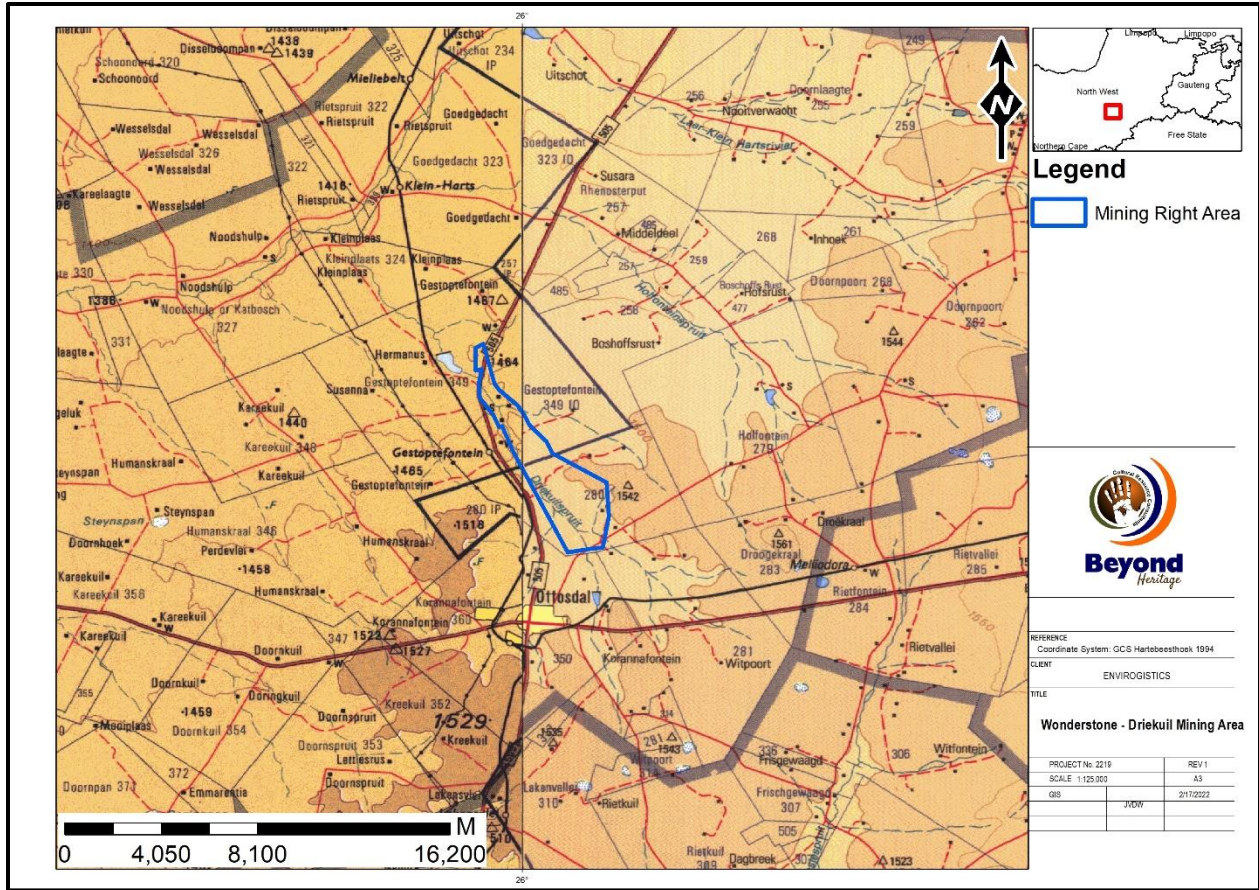


Figure 1.1. Regional setting of the study area.

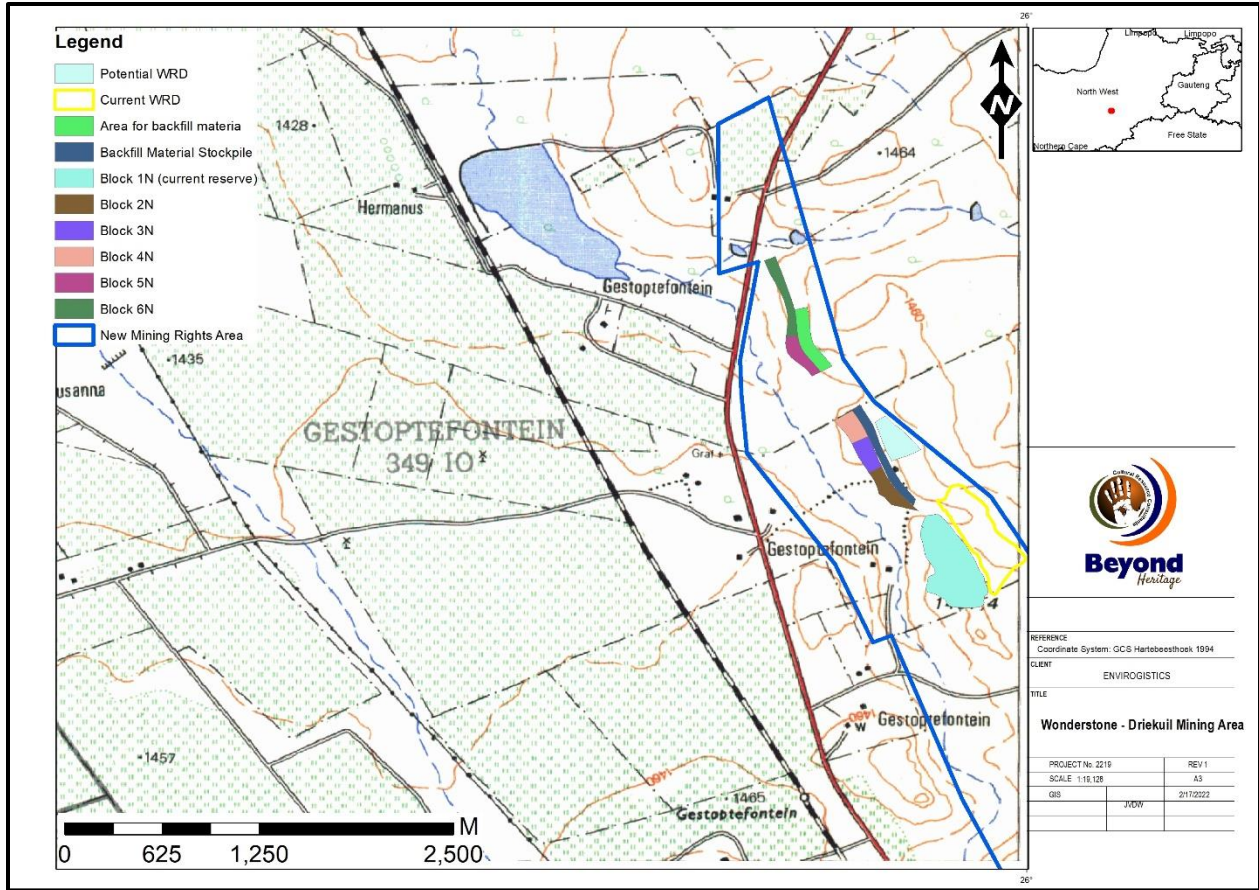


Figure 1.2. Local setting of the Project.



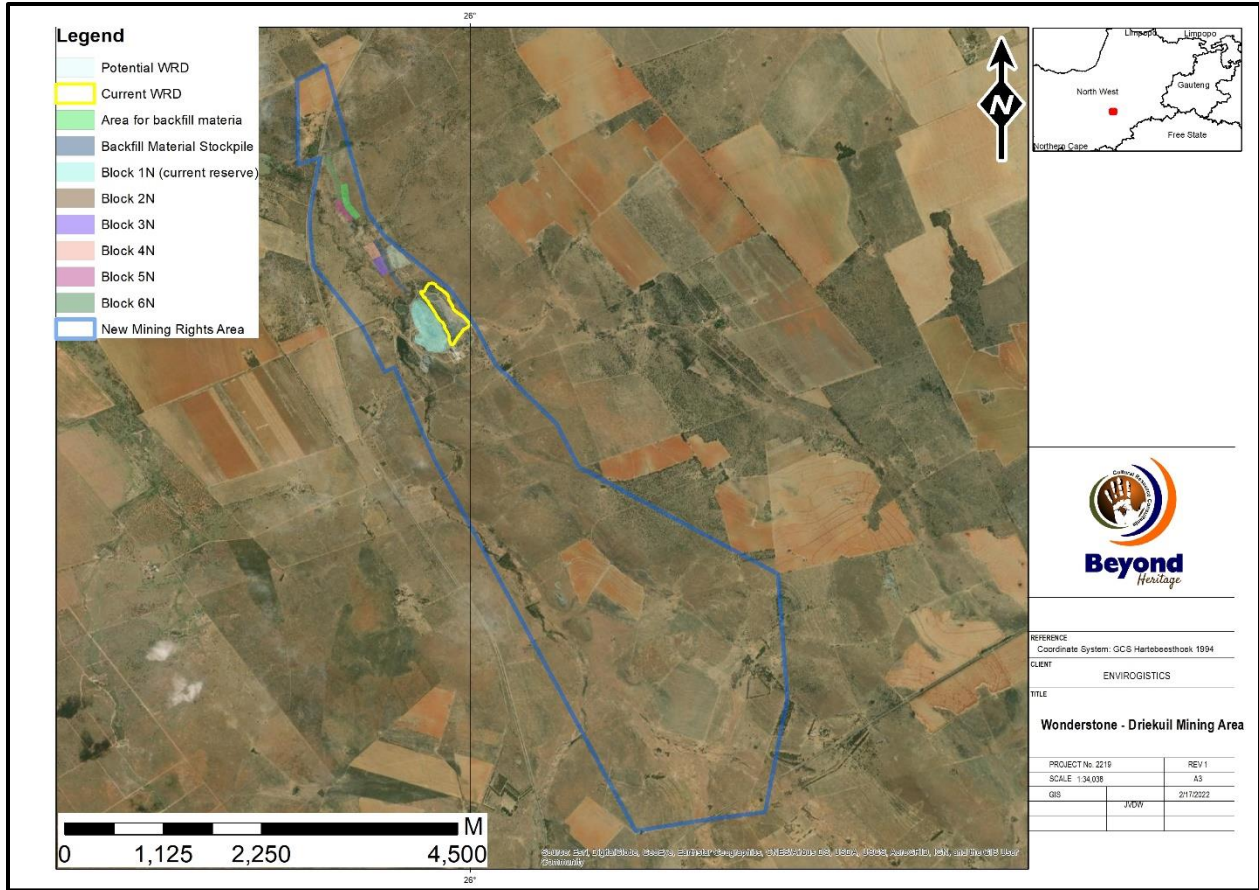


Figure 1.3. Aerial setting of the Project.

## 1.1 Terms of Reference

The main aim of this scoping report is to determine if any known heritage resources occur within the study area and to predict the occurrence of any possible heritage significant sites that might present a fatal flaw to the proposed project. The objectives of the scoping report were to:

- » Conduct a desktop study:
  - \* Review available literature, previous heritage studies and other relevant information sources to obtain a thorough understanding of the archaeological and cultural heritage conditions of the area;
  - \* Gather data and compile a background history of the area;
  - \* Determine whether the area is renowned for any cultural and heritage resources, such as Stone Age sites, Iron Age sites, informal graveyards or historical homesteads.
  
- » Report

The reporting of the scoping component is based on the results and findings of the desk-top study, wherein potential issues associated with the proposed project will be identified, and those issues requiring further investigation through the IA Phase highlighted. Reporting will aim to identify the potential impacts of the proposed project activity on heritage resources. Reporting will also consider alternatives should any significant sites be impacted on by the proposed project. This is done to assist the developer in managing heritage resources in a responsible manner, in order to protect, preserve and develop them within the framework provided by Heritage Legislation.

## 1.2 Nature of the development

### 1.2.1. Background information

The following information on the current status of the project and new project components was provided by the client:

Wonderstone Limited (WST) is a mining operation that is wholly owned by Assore Ltd. ("Assore") and has been mining a uniquely pure Pyrophyllite deposit since 1935. Up until recently the mine has been operating under the legal entitlement, Mining License: ML1-97, converted to Mining Right: NW 30/1/2/2/398 MR (Registered Right dated 23 December 2014). The issued mining right authorises the extraction of Pyrophyllite for a period of 30 years over the farm Gestoptefontein 349IO:

- Portion 44;
- Area measuring 135.916ha.

Mining takes place by means of open cast mining, comprising of hydraulic hammering and excavator loading with no drilling and blasting required.

In addition, WST also holds an approved New Order Mining Right (NOMR) NW30/5/1/2/2/397MR (signed 20 March 2019) over various portions of the farms Gestoptefontein and Driekuil 280IP:

- Portion 5, 7, 9, 10, 11, 24 (portion of portion 5), remainder of portion 15 (a portion of portion 1), portion 20 and portion 40 (a portion of portion 41 now known as portion 44) of the farm Gestoptefontein 349IO;
- Portions 2, 4, remainder of portion 1, portion 7 (a portion of portion A) and the remainder of farm Driekuil 280IP.
- Area measuring: 4595.4239ha

The mining rights combined cover an area of approximately 140 ha of which just under 30ha has been disturbed by mining activities to date. A large portion of the northern section of the WST mining area on Gestoptefontein has been rehabilitated.

WST would like to combine its existing mining rights into one, consolidated right, in an attempt to ease the administrative duties and compliance requirements associated with multiple mining authorisations per site.

At the same time, the operation would like to abandon some of the areas currently included and authorised as part of the approved NOMR area. After an extensive study, WST forecasts only using a select portion of the already approved NOMR area in its future mining endeavours. Abandonment of the remainder of the approved NOMR areas will ensure future mining in these areas and prevent the sterilisation of said areas for future mining.

During a pre-application meeting with the Department of Mineral Resources and Energy (DMRE) on 15 November 2021, the Department indicated that WST will be expected to submit a Section 102 Amendment Application. The application will include the areas of one approved mining right into the existing area of the other approved right.

WST decided to apply for the extension of the CMR (398MR) area by adding Portions of the approved NOMR (397) areas to the CMR area. At the same time the additional proposed areas of the NOMR, portions of the approved portions will be abandoned to allow for future mining.

### **1.2.2. New project Details (as provided)**

The mine will continue mining from the existing Wonderstone Opencast Pit and will include the additional five (5) mining blocks. The mineral to be mined is Pyrophyllite, an aluminium silicate of the phyllosilicate family, with the chemical formula  $Al_2 Si_4 O_{10} (OH)_2$ .

The pyrophyllite is opencast mined with a Hydraulic hammer mounted on an Excavator that loosens the stone, the loose stone is then loaded onto dump trucks that transport usable stone to the plant for further processing and un-usable stone to the low-grade stockpile. In areas where there is topsoil present, the topsoil, if any, will first be stripped to open the pyrophyllite, this topsoil will on completion of mining process be used during the rehabilitation process. Historically, there is little to no topsoil on Wonderstone deposits. The Pyrophyllite will be mined using an excavator equipped with a hydraulic hammer that will break the stone loose, an excavator with a shovel will load the usable stone on dump trucks that will transport the stone to the processing plant. Unusable stone will be transported to the low-grade stockpile (current Waste Rock Dump) for possible use in future. Mining will be done using the bench method with benches not higher than 5 meters.

It should however be noted that two areas are demarcated for the temporary storage of overburden which will be used for backfilling of the opencast pits in the future.

Existing haul roads will be used but will have to be extended to the new mining area.

No electricity is required in new areas.

Dust control on haul roads will be done with the mine's own water bowser and water will be extracted from Driekuilspruit dam that is included in the mine's existing Water Use License. There are, however, existing boreholes that can be developed should the need arise.

The project will involve:

- Mining:
  - Mining of existing area (Block 1N – about 15ha);

- Five (5 mining blocks (2.5ha, 2.1ha, 2.1ha, 2ha, 2.9ha), which will be mined at different time intervals via opencast mining methods)
- Area: Approx. 12ha (considering 14ha, for inclusion of the area between Block 5 and Block 5)
- Stockpiles:
  - Two areas (3.4 and 3.2ha) have been identified for the temporary stockpiling of overburden – the mine will commit to ongoing rollover mining – but due to the time sequence, material will be stockpiled in these areas. For your studies, please look at these blocks and indicate whether there are any areas within these blocks which must be avoided. Important to note that the existing Waste Rock Dump will remain operational at 13.4ha.
  - Provision in the two new areas must be for topsoil and overburden/waste rock (volumes is still to be supplied by the mine).
- Other:
  - Two roads (eastern and western roads)
    - Eastern Road at 1.9km at 6m width
    - Western Road at 1.8km at 6m width
  - Roads will be gravel/sand – not tarred.
- Environmental Reporting Consideration
  - The site is located in Quaternary Catchment C31C.
  - The site is located in a CBA 1.
  - Please have a look at the abandonment areas – we require a statement by the specialist that no mining activities have been undertaken in this area for the purposes of the abandonment application.
  - Overall Environmental Management Programme and Water Use Licence (Wonderstone and Driekuil combined)
  - Incorporation of Regulation 34 Amendments proposed during 2019
- Sustainable Mining and utilisation of mineral rights
  - Wonderstone is currently in full production on Portion 44 of the farm Gestoptefontein 349 IO which is the Converted Mining Right area. The applicant intends to extend mining to Portion 15 of the farm Gestoptefontein that is adjacent to the current mining area and falls in the New Order Mining Right and all the infrastructure is already in place therefore mining can start immediately. The remaining extent of the outcrop will be planned and mined according to a schedule.
  - Current mining operations planned up until 2027.
  - New plan allows for mining up until 2045 (additional 18 years).

### 1.3 The receiving environment

The study area is located in a agricultural area with evidence of cultivation and mining activities. No focal points such as water sources or topographical features that would have attracted occupation in antiquity is visible on areal imagery for the impact areas.

## 2. APPROACH AND METHODOLOGY

The assessment is to be undertaken in two phases, a scoping phase and an HIA phase as part of the Environmental Impact Assessment process, this report concerns the scoping phase. The aim of the scoping phase is to assess the study area at a desktop level to compile a background history of the study area, to identify possible heritage issues or fatal flaws that should be avoided during development.

This was accomplished by means of the following phases (the results are represented in section 7 of this report):

### 2.1 Literature search

A literature search was conducted utilising data from published articles on the archaeology and history of the area. The aim of this is to extract data and information on the area in question, looking at archaeological sites, historical sites and graves of the area.

### 2.2 Information collection

SAHRIS was consulted to collect data from CRM practitioners who undertook work in the area to provide the most comprehensive account of the history of the area where possible.

### 2.3 Public consultation

A full public consultation process will be facilitated by WSP. Any heritage concerns raised during this process will be addressed in the HIA.

### 2.4 Google Earth and mapping survey

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where archaeological sites might be located.

### 2.5 Genealogical Society of South Africa

The database of the genealogical society was consulted to collect data on any known graves in the area.

## 3. LEGISLATION

For this project the National Heritage Resources Act, 1999 (Act No. 25 of 1999) is of importance and the following sites and features are protected:

- 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. 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 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 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.)

Section 34 (1) of the act deals with structures which is older than 60 years. Section 35(4) of this act deals with archaeology, palaeontology and meteorites. Section 36(3) of the National Heritage Resources Act, deals with human remains older than 60 years. Unidentified/unknown graves are also handled as older than 60 until proven otherwise.



### 3.1 Heritage Site Significance and Mitigation Measures

The presence and distribution of heritage resources define a Heritage Landscape. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface.

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. National and Provincial Monuments are recognised for conservation purposes. The following interrelated criteria were used to establish site significance:

- » The unique nature of a site;
- » The integrity of the archaeological/cultural heritage 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;
- » Potential to answer present research questions.

The criteria above will be used to place identified sites with in SAHRA's (2006) system of grading of places and objects which form part of the national estate. This system is approved by ASAPA for the SADC region. The recommendations for each site should be read in conjunction with section 9 of this report.

Table 1. Heritage significance and field ratings

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP. A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP. B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

## 4. REGIONAL OVERVIEW

### 4.1 General Information

#### 4.1.1. Literature search

The reports indicated in Table 2 were conducted in the greater study area and were consulted for this report:

Table 2. Heritage reports conducted in the greater study area

Author	Year	Project	Findings
Kusel, U.	2007	Cultural Heritage Resources Impact Assessment Of Portions 252, 413 & 449 Of The Farm Hartbeesfontein 297 Ip Matlosana Local Municipality North West Province	Iron Age sites
Van Schalkwyk, J.A.	2010	Heritage Impact Assessment For The Proposed Hermes/Dominion Reefs 132kv Power Line Development, Klerksdorp Magisterial District, North West Province	No sites
Van der Walt, J	2016	AIA Orkney Solar Farm, North West Province	Burial sites
Van der Walt, J	2016	Heritage Impact Assessment Natanjá Sports Complex	No sites
Van der Walt, J	2021	Heritage Impact Assessment for the Proposed Idwala Mining Permit, North West Province.	Stone Age artefacts

#### 4.1 2. Public consultation

A public participation process is facilitated by the EAP and potential heritage concerns raised will be included in the HIA.

#### 4.1.3. Google Earth and mapping survey

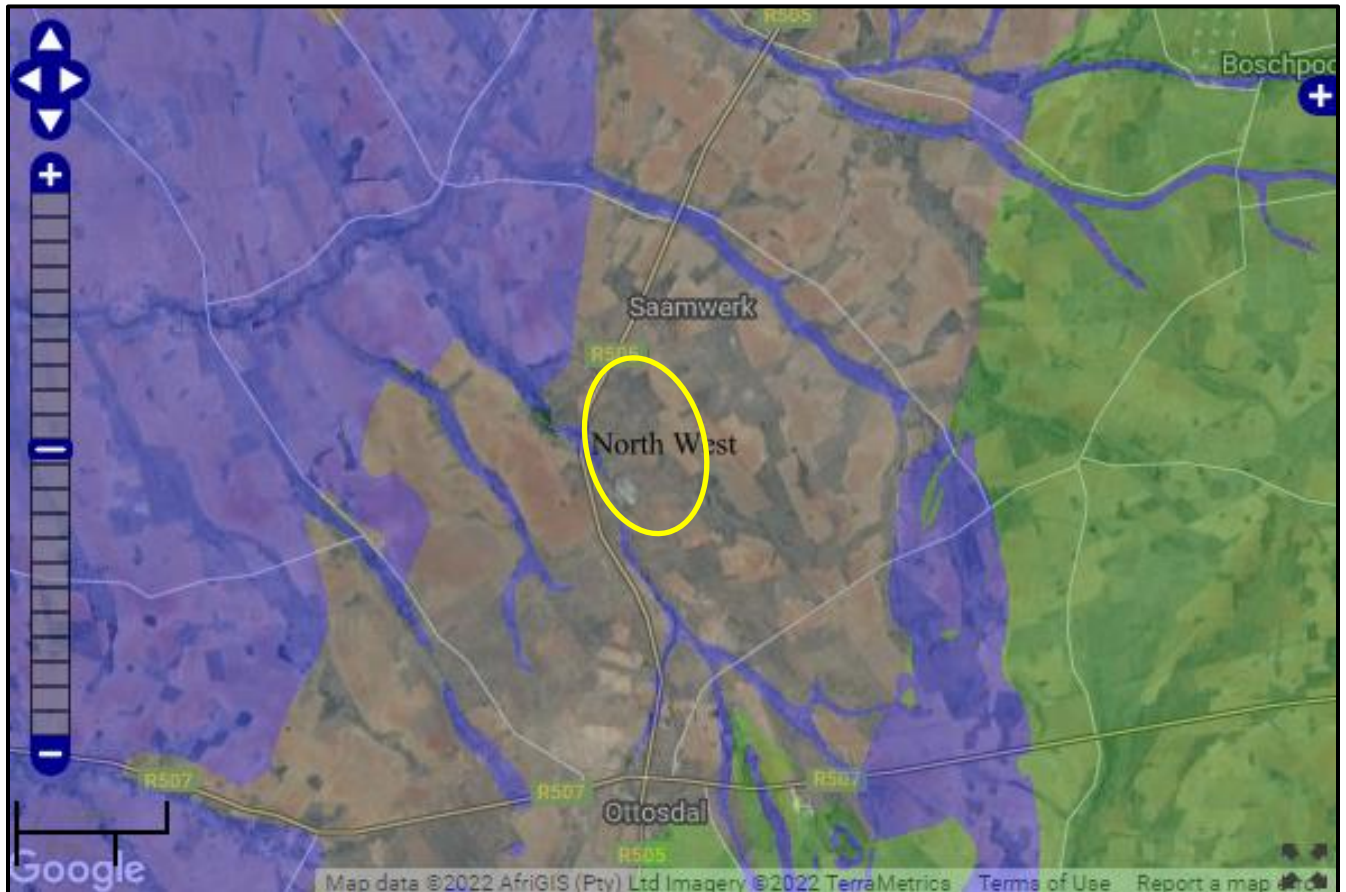
Google Earth and 1:50 000 maps of the area was utilised to identify possible places where archaeological sites might be located.

#### 4.1.4. Genealogical Society of South Africa

No grave sites are indicated within the study area.

#### 4.2. Palaeontology

The study area ranges from insignificant to low palaeontological sensitivity (Figure 4.1) and no further studies will be required in the EIA phase.



Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study; a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 4.1. Palaeontological sensitivity map of the approximate study area (yellow polygon).

### 4.3 Archaeological and Historical Information Available on the Study Area”

The archaeological record for the greater study area consists of the Stone Age and Iron Age.

#### 4.3.1. Stone Age

The Stone Age is divided in the Early; Middle and Late Stone Age. It refers to the earliest people of South Africa who mainly relied on stone for their tools.

**Earlier Stone Age:** The period from  $\pm 2.5$  million yrs. -  $\pm 250\ 000$  yrs. ago. Acheulean stone tools are dominant. No Acheulean sites are on record near the study area, but isolated finds may be possible. However, isolated finds have little value. Therefore, the project is unlikely to disturb a site of significance. The lack of any ESA sites was confirmed during the field investigation.

**Middle Stone Age:** The Middle Stone Age includes various lithic industries in SA dating from  $\pm 250\ 000$  yrs. –  $25\ 000$  yrs. before present. This period is first associated with archaic *Homo sapiens* and later *Homo sapiens sapiens*. Material culture includes stone tools with prepared platforms and stone tools attached to handles.

**Later Stone Age:** The period from  $\pm 25\ 000$ -yrs before present to the period of contact with either Iron Age farmers or European colonists. This period is associated with *Homo sapiens sapiens*. Material culture from this period includes: microlithic stone tools; ostrich eggshell beads and rock art. Sites located in the open are usually poorly preserved and therefore have less value than sites in caves or rock shelters.

Since there are no caves in the study area no Stone Age sites of significance are expected. The Matlwase LSA site is the only known LSA site in the area and is located close to Wolmaransstad (Bergh 1999). San Rock Engravings, Stone Age Implements and Structures are found close to the impact footprint on farms such as Witpoort, Gestoptefontein, Driekuil and Korannafontein. Jeremy Hollman (2013) published a study on the rock engravings at Gestoptefontein and Driekuil at the study area.

#### 4.3.2. The Iron Age

The Iron Age as a whole represents the spread of Bantu speaking people and includes both the pre-Historic and Historic periods. It can be divided into three distinct periods:

- The Early Iron Age: Most of the first millennium AD.
- The Middle Iron Age: 10th to 13th centuries AD.
- The Late Iron Age: 14th century to colonial period.

The Iron Age is characterised by the ability of these early people to manipulate and work Iron ore into implements that assisted them in creating a favourable environment to make a better living. No Sites dating to the Iron Age have been recorded for the study area. However to the north west of the study area towards Zeerust and towards Mafikeng, the area is well known for Later Iron Age stone walled settlements archaeologically referred to as Molokwane settlements (Pistorius 1992, Booyens 1998, Huffman 2007). Bergh (1999) reported on some 88 Late Iron Age sites towards Klerksdorp.

Some well-known examples are Platberg (Wells 1933) and Buisfontein/Thabeng (Maggs 1976). Another site Palmietfontein (30km north of Klerksdorp), excavated in 1975 by D.A. White. An article on this work also indicated that the area north of Klerksdorp is relatively rich in terms of Late Iron Age sites, and that the Rolong capital of Thabeng lies within this area (White 1977: 89). It is possible that sites related to the

Olifantspoort facies of the Urewe Tradition, dating to around AD 1500-1700, and the Thabeng facies of the same tradition (AD 1700-1840) could possibly be found in the area (Huffman 2007). The well-known rock art site of Bosworth that also included Later Stone Age artefacts (Mason 1962) is located to the north of the study area.

#### **4.3.3. Historical Information**

The town of Ottosdal was established as a Dutch Reformed Church Parish on the farm Korannafontein in 1913 and named after its owner, GP Otto. Ottosdal is the only place in South Africa where the unique "Wonderstone" or Pyrophyllite, is found and mined. The annual agricultural show in Ottosdal is one of the oldest in the Province (<http://www.tourismnorthwest.co.za/ottosdal>).

The Town of Ottosdal is also home to a Garden of Remembrance that contains graves of soldiers killed during the Anglo-Boer War as well as an old Farmhouse, built in 1910 and that now houses a unique African collection. Lastly the Old Water Mill in town was built in 1860 and has been declared a national monument (<http://www.tourismnorthwest.co.za/ottosdal>).

#### **4.3.4. Anglo-Boer War**

During the Second Boer War (1899-1902), there were many battles in the area and the Klerksdorp area also housed a large concentration camp. The most famous battle in the Klerksdorp area is the Battle of Ysterspruit. The Boer General, Koos de la Rey, achieved a great victory and this battle is one of the most celebrated of the general's career. It was this battle in which the Boer soldiers pioneered the art of firing from horseback.

On April 11, 1920, Rooiwal, near Klerksdorp, saw the battle of Rooiwal, the last major engagement of the war, where a Boer charge was beaten off by entrenched British troops. Just under a thousand graves of the victims of the concentration camps, namely Boer women and children can still be visited today in the old cemetery just outside of Klerksdorp.

Sites relating to the Anglo Boer War have been recorded and indicated by Meyer (1971), Breytenbach (1978), Van den Berg (1996) as well as Scheepers-Strydom (1970) for the greater study area. A British Fort as well as trenches and Cemeteries dating from the Anglo-Boer War, 1899 to 1902, are located close to the town of Ottosdal on the farms Gestoptefontein and Driekuil.

#### **4.3.5. Graves and Burial sites**

Graves and cemeteries are widely distributed across the landscape and can be expected anywhere. Cemeteries occur on Boschpoort. 21 km to the northeast of the study area. The Riekuil cemetery is indicated on the eGGSA database and includes 53 graves 17 km to the south but no graves are indicated close to the study area.

#### **4.3.6. Cultural Landscape**

The general area is mostly cultivated, and forms part of an agricultural landscape characterised by wide scale cultivation with a recent mining component. The proposed project is in line with the current land use in the immediate surrounds.

## 5. PROBABILITY OF OCCURRENCE OF SITES

Based on the above information, it is possible to determine the probability of finding archaeological and cultural heritage sites within the study area to a certain degree. For the purposes of this section of the report the following terms are used – low, medium and high probability. Low indicates that no known occurrences of sites have been found previously in the general study area, medium probability indicates some known occurrences in the general study area are documented and can therefore be expected in the study area and a high probability indicates that occurrences have been documented close to or in the study area and that the environment of the study area has a high degree of probability having sites.

### » Palaeontological landscape

Fossil remains. *Low to Medium probability.*

### » Archaeological And Cultural Heritage Landscape

NOTE: *Archaeology is the study of human material and remains (by definition) and is not restricted in any formal way as being below the ground surface.*

*Archaeological* remains dating to the following periods can be expected within the study area:

#### » **Stone Age finds**

*ESA: Low Probability*

*MSA: Low Probability*

*LSA: Low to Medium Probability*

*LSA –Herder: Low Probability*

*Rock Art Sites – High Probability*

#### » **Iron Age finds**

*EIA: Low Probability*

*MIA: Low Probability*

*LIA: Low -Medium Probability*

#### » **Historical finds**

*Historical period: Medium to High Probability*

*Historical dumps: Low-Medium Probability*

*Structural remains: Medium to High Probability*

*Cultural Landscape: Low probability*

#### » **Living Heritage**

*For example, rainmaking sites: Low Probability*

#### » **Burial/Cemeteries**

*Burials over 100 years: Medium to High Probability*

*Burials younger than 60 years: Medium to High Probability*

Subsurface excavations including ground levelling, landscaping, and foundation preparation can expose any number of these.

## 6. ASSUMPTIONS AND LIMITATIONS

The study area was not subjected to a field survey as this will be conducted in the EIA phase. It is assumed that information obtained for the wider area is applicable to the study area and the authors acknowledge that the brief literature review is not exhaustive on the literature of the area. Due to the subsurface nature of cultural deposits, the possibility exists that some features or artefacts may not have been published, similarly the possible occurrence of graves and other cultural material cannot be excluded. This study did not assess the impact on medicinal plants and intangible heritage as it is assumed that these components would be highlighted through the public consultation process if relevant. It is possible that new information could come to light in future, which might change the results of this scoping report.

## 7. FINDINGS

The study area is known to contain rock engravings on the farms Gestoptefontein and Driekuil. These sites formed the basis of a PhD study (Hollman 2013). The engravings were done on Wonderstone which is a type of pyrophyllite that will be mined for this application and more sites can be expected. Known sites are indicated in Figure 7.1.

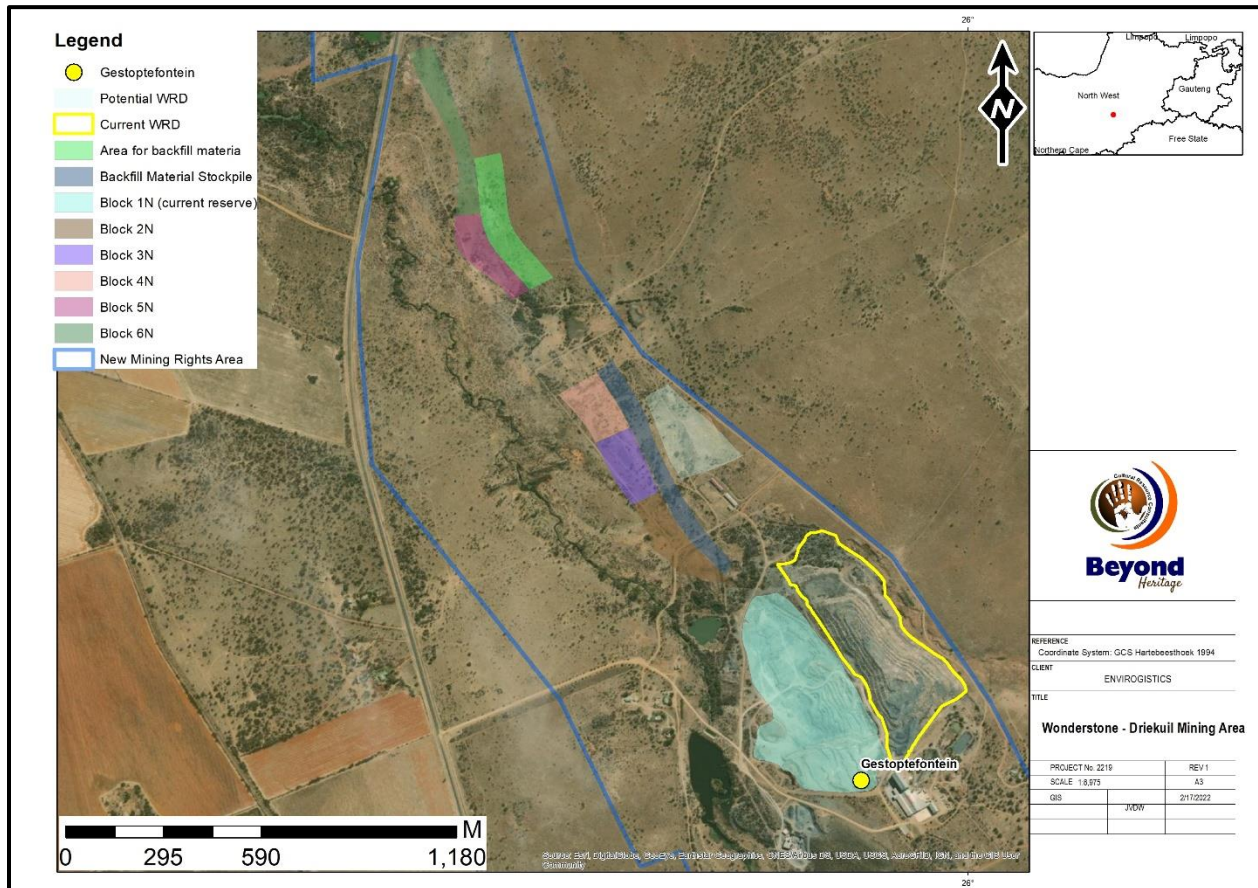


Figure 7.1. Known rock Art site (yellow dot) in relation to the study area.

## 8. POTENTIAL SIGNIFICANCE OF HERITAGE RESOURCES

Based on the current information obtained for the area at a desktop level it is anticipated that any heritage resources that occur within the proposed development area will have a Generally Protected B (GP. B) or lower field rating and all sites should be mitigatable. Graves are of high social significance (Field rating GP A) and can be expected anywhere on the landscape.



## **9. CONCLUSION AND PLAN OF STUDY FOR EIA**

The scoping study did not identify any fatal flaws to the Project from a heritage point of view. To comply with the National Heritage Resources Act (Act 25 of 1999) it is recommended that a Phase 1 HIA must be undertaken for the study area. During the HIA the potential impact on heritage resources will be determined as well as levels of significance of recorded heritage resources. The HIA will also provide management and mitigation measures should any significant sites be impacted upon, ensuring that all the requirements of the SAHRA are met. The study area is of insignificant to low paleontological sensitivity and according to the SAHRIS palaeontological sensitivity no further studies are required. During the Public participation and stakeholder consultation process (advertisements & site notices) must reference the National Heritage Resources Act and address heritage concerns from stakeholders.

## **10. LIST OF PREPARERS**

Jaco van der Walt (Archaeologist and Project Manager)

## **11. STATEMENT OF COMPETENCY**

The author of the report is a member of the Association of Southern African Professional Archaeologists and is also accredited in the following fields of the Cultural Resource Management (CRM) Section (#159): Iron Age Archaeology, Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation. He is also a member of the Association of Professional Heritage Practitioners (#114). Jaco is also an accredited CRM Archaeologist with SAHRA and AMAFA.

Jaco has been involved in research and contract work in South Africa, Afghanistan, Botswana, Mozambique, Zimbabwe, Zambia, Guinea, Tanzania, and the DRC and conducted well over 500 AIAs and HIAs since he started his career in CRM in 2000. This involved several mining operations, Eskom transmission and distribution projects, and renewable energy developments. The results of several of these projects were presented at international and local conferences.

**12. STATEMENT OF INDEPENDENCE**

I, Jaco van der Walt as duly authorised representative of Beyond Heritage, hereby confirm my independence as a specialist and declare that neither I nor the Beyond Heritage have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which the client was appointed as Environmental Assessment practitioner, other than fair remuneration for work performed on this project.

A handwritten signature in black ink, appearing to read 'Jaco van der Walt', is positioned above a horizontal line.

**SIGNATURE:**

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### 13. REFERENCES

- Bergh, J.S. (red.). 1999. Geskiedenis Atlas van Suid-Afrika. Die Vier Noordelike Provinsies. Pretoria: J.L. van Schaik.
- Breytenbach, J.H. 1978. Die Geskiedenis van die Tweede Vryheidsoorlog in Suid-Afrika, 1899-1902. Vols: I-VI. Pretoria: Government Printer.
- Fourie, W. 2008. Heritage Scan for the installation of weather observation radar tower project, in Ottosdal, North West province.
- Maggs, T.M. 1976. Iron Age Communities of the Southern Highveld. Pietermaritzburg: Natal Museum.
- Mason, R.J. 1962. The Prehistory of the Transvaal. Witwatersrand University Press, Johannesburg. 12.
- Mason, R.J. 1986. Origins of the Black People of Johannesburg and the Southern Western Central Transvaal AD 350-1880. (Occasional Paper 16). University of the Witwatersrand, Archaeological Research Unit, Johannesburg.
- Meyer, J.H. 1971. Kommando-jare. Kaapstad, Human & Rousseau.
- Mucina, L. & Rutherford, M.C. 2006. The vegetation map of South Africa, Lesotho and Swaziland. SANBI, Pretoria.
- Pistorius, J.C.C. 1992. Molokwane – An Iron Age Bakwena Village. Perskor, Johannesburg. 13.
- Scheepers-Strydom, C.J. 1970. Ruitervuur. Nasionale Handelsdrukkery, Elsiesrivier.
- Van Den Berg, G. 1996. 24 Battles and battle fields of the North-West Province. North West Tourism Association. Potchefstroom.
- Van Schalkwyk, J. 1995. A Survey of Archaeological Resources in the Witpoort Mining Lease Area, Ottosdal.
- Wells, L.H. 1933. A report on the stone structures of the Platberg near Klerksdorp. South African Journal of Science 30:582-584.
- White, D.A. 1977. The Excavation of an Iron Age Site at Palmietfontein near Klerksdorp. The South African Archaeological Bulletin, Vol. 32, No. 125 (Jun., 1977), pp. 89-92.
- Sahra Report Mapping Project Version 1.0, 2009.