

HERITAGE SCOPING REPORT

For the BCR Projects Prospecting Right on the Farm Zwartfontein 814 LR and Moordkopje 813 LR, in the magisterial district of Mogalakwena, Limpopo

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EXECUTIVE SUMMARY

Beyond Heritage was appointed to conduct a Heritage Baseline Study in support of the prospecting application on the Farm Zwartfontein 814 LR and Moordkopje 813 LR by BCR Projects (Pty) Ltd. The proposed prospecting is non-invasive and include the following main techniques:

- Data search, field mapping and desktop studies;
- Logging and sampling historical core; and
- Scoping and (pre) feasibility studies.

The Project area is vast measuring 4095.03 ha and since prospecting is non-invasive a detailed pedestrian survey is not feasible at this point. The aim of the scoping phase is to assess the study area at a desktop level with a brief site visit to compile a background history of the study area, to identify possible key heritage issues to be addressed if invasive prospecting becomes necessary and heritage issues that should be avoided during development. Key findings of the assessment include:

- In anticipation of mining and electrical infrastructure projects in the current study area several Heritage Impact Assessments were conducted (e.g., Pistorius 2017, Van der Walt 2019, Pistorius 2021) that contextualises the types of heritage resources present in the area;
- The study area is located in the midst of communities whose ancestors were once part of the sphere of influence of the Langa Ndebele and still have strong ties to heritage sites in the landscape;
- Isolated Stone Age lithics mostly dating to the Middle Stone Age (MSA) and characterised by flakes and Levallois type cores are found widely scattered across the study area in vertic soils and are not *in-situ*. These background scatters of artefacts do not constitute an archaeological site and are scattered too sparsely to be of any significance apart from noting their presence (Du Piesanie & Hodgskiss 2015, van der Walt 2019). In addition, Pistorius (2021) recorded Stone Age artefacts of low significance along the banks of the Mohlosane River in the southern section of the study area;
- Two types of Iron Age settlements were recorded in the greater area (Van der Walt 2019). The first consists of an older settlement phase that is marked by middens and vitrified dung deposits **without** stone walls with undecorated ceramics. The second consists of well-defined stone walled settlements with ceramics belonging to the Utkoms *facies* dating to AD 1650 – 1820 (Huffman 2007). The stone walled settlements follow the central cattle pattern with a central cattle kraal and an enclosing outer wall classified as Type N walling (Maggs 1976), additionally Pistorius (2020 and 2021) recorded Iron Age sites with metal slag sites of low significance;
- According to the SAHRIS paleontological sensitivity map, the area is of insignificant paleontological sensitivity and no further studies are required in this regard;
- Remains from the recent past which consists of the disintegrated remains of dwellings;
- Several grave sites occur throughout the study area and should be left *in-situ*. It should be noted that graves can occur anywhere on the landscape and additional graves can be expected.

A Summary of the screening tool and verified sensitivity is indicated below. Based on the non-invasive nature of the proposed project, no impacts are expected on heritage resources in the study area and the project is acceptable from a heritage point of view with the implementation of the recommendations in this report and based on approval from SAHRA.

ASPECT	SCREENING TOOL SENSITIVITY	VERIFIED SENSITIVITY	OUTCOME STATEMENT/PLAN OF STUDY	RELEVANT SECTION MOTIVATING VERIFICATION
Palaeontology	Medium	Low	No further studies are required.	Section 7.2.
Cultural Heritage	Low to high	Medium to high	Prior to invasive activities the impact areas should be subjected to the heritage walkdown.	Section 7.1.

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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 recently)

Historic (approximately AD 1840 to 1950)

Historic building (over 60 years old)

Lithics: Stone Age artefacts

1. INTRODUCTION

Beyond Heritage was appointed to conduct a desktop based scoping assessment for the prospecting application on the Farm Zwartfontein 814 LR and Moordkopje 813 LR, Limpopo (Figure 1.1 to 1.3). 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 (National Heritage Resources Act (NHRA) 25 of 1999).

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;
 - * Identify known and recorded archaeological and cultural sites;
 - * 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 highlighted. Reporting will aim to identify the anticipated impacts, as well as cumulative impacts, of the operational units of the proposed project activity on the identified heritage resources for all 3 development stages of the project, i.e., construction, operation and decommissioning. 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 the discovered heritage resources in a responsible manner, in order to protect, preserve and develop them within the framework provided by the National Heritage Resources Act.

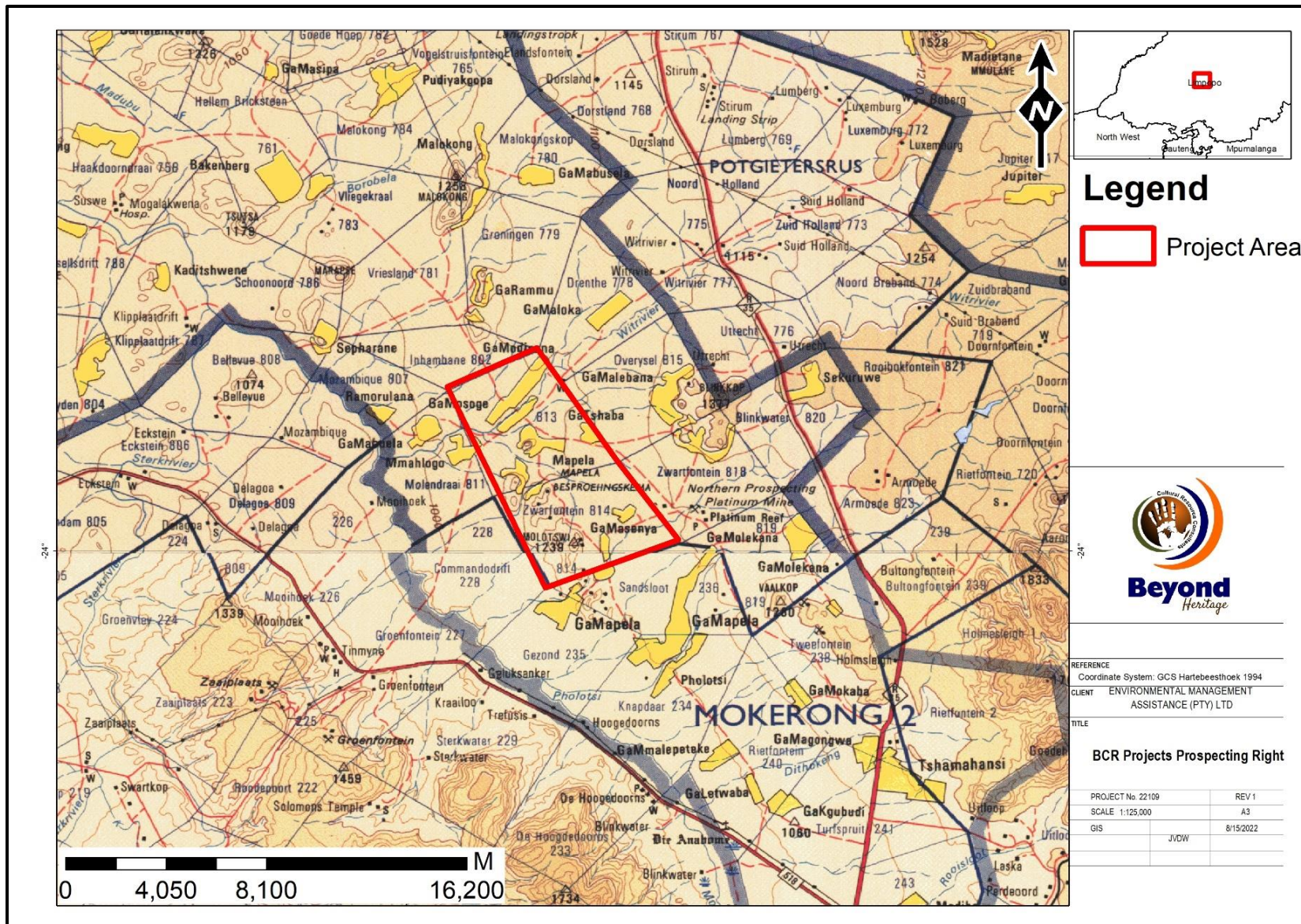


Figure 1.1. Regional setting of the study area.

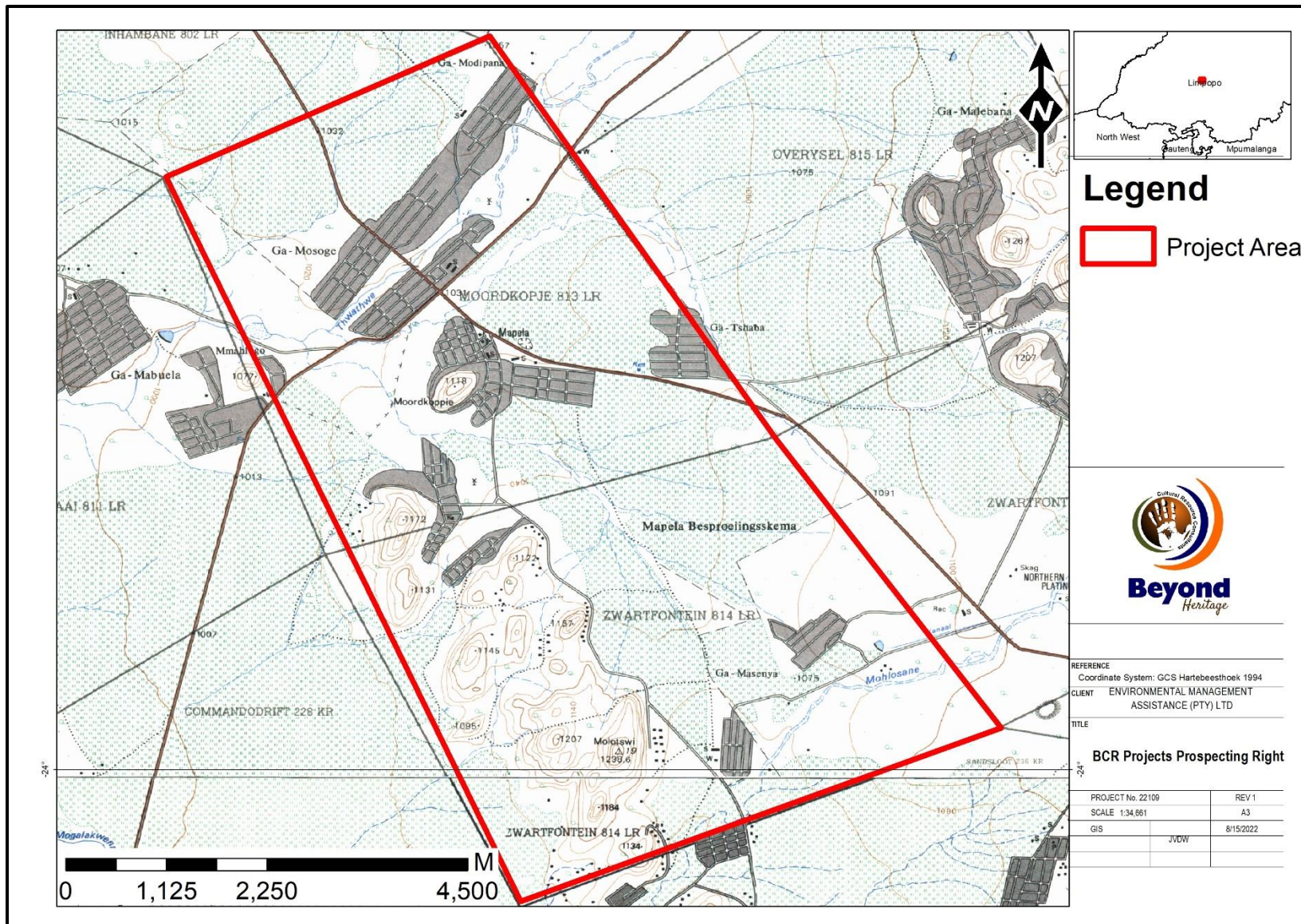


Figure 1.2. Local setting of the study area.

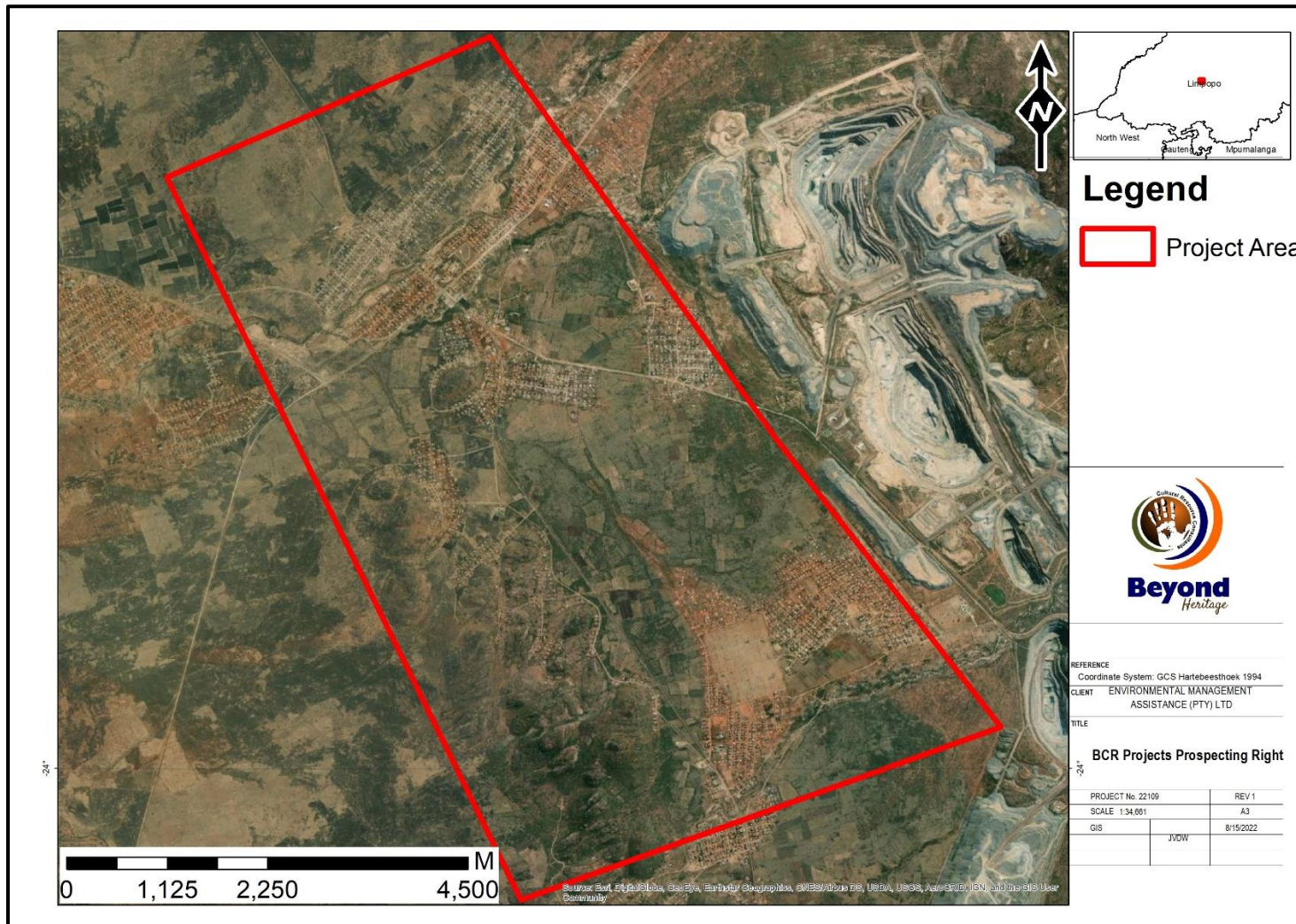


Figure 1.3. Aerial view of the study area.

1.2 Nature of the development

BCR Projects (Pty) Ltd (the applicant) is proposing a prospecting application, referred to as BCR Projects (Pty) Ltd Prospecting, as indicated in Table 1.

Table 1. Project details

Farm Name:	Farm Moordkopje 813 LR and Zwartfontein 814 LR
Application area (Ha) :	4095.03 ha
Magisterial district:	Mogalakwena Local Municipality
Distance and direction from nearest town:	Mokopane is the nearest town, 25 km south from the area, Limpopo Province
21 digit Surveyor General Code for each farm portion:	TOIT00000000010800002 TOIT00000000010800009 TOIT00000000010800011 TOIT00000000010700001 TOIT00000000010700007 TOIT00000000010700012 TOIT00000000010700014
Project activities:	<p>The proposed non-invasive prospecting activities will include the following main techniques:</p> <ul style="list-style-type: none"> • Data search, field mapping and desktop studies; • Logging and sampling historical core; and • Scoping and (pre) feasibility studies. <p>Due to the large amount of previous diamond core drilling conducted in the area, new drilling locations will only be considered after completion of all the sourced historic exploration results.</p>

2. APPROACH AND METHODOLOGY

The assessment is to be undertaken in two phases, a scoping phase and, potentially, a Heritage Walkdown phase if invasive activities are required at a later stage, this report concerns the scoping phase. The aim of the scoping phase is to cover archaeological data available to compile a background history of the study area. In order to try and 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 4 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

South African Heritage Resource Information System (SAHRIS) was consulted to collect data from Cultural Resource Management (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 Environmental Management Assistance (Pty) Ltd. Any potential heritage issues raised during this process will be addressed prior to development.

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.

2.6. Site visit

A brief site visit was conducted to verify conditions in the study area (Figure 2.1).

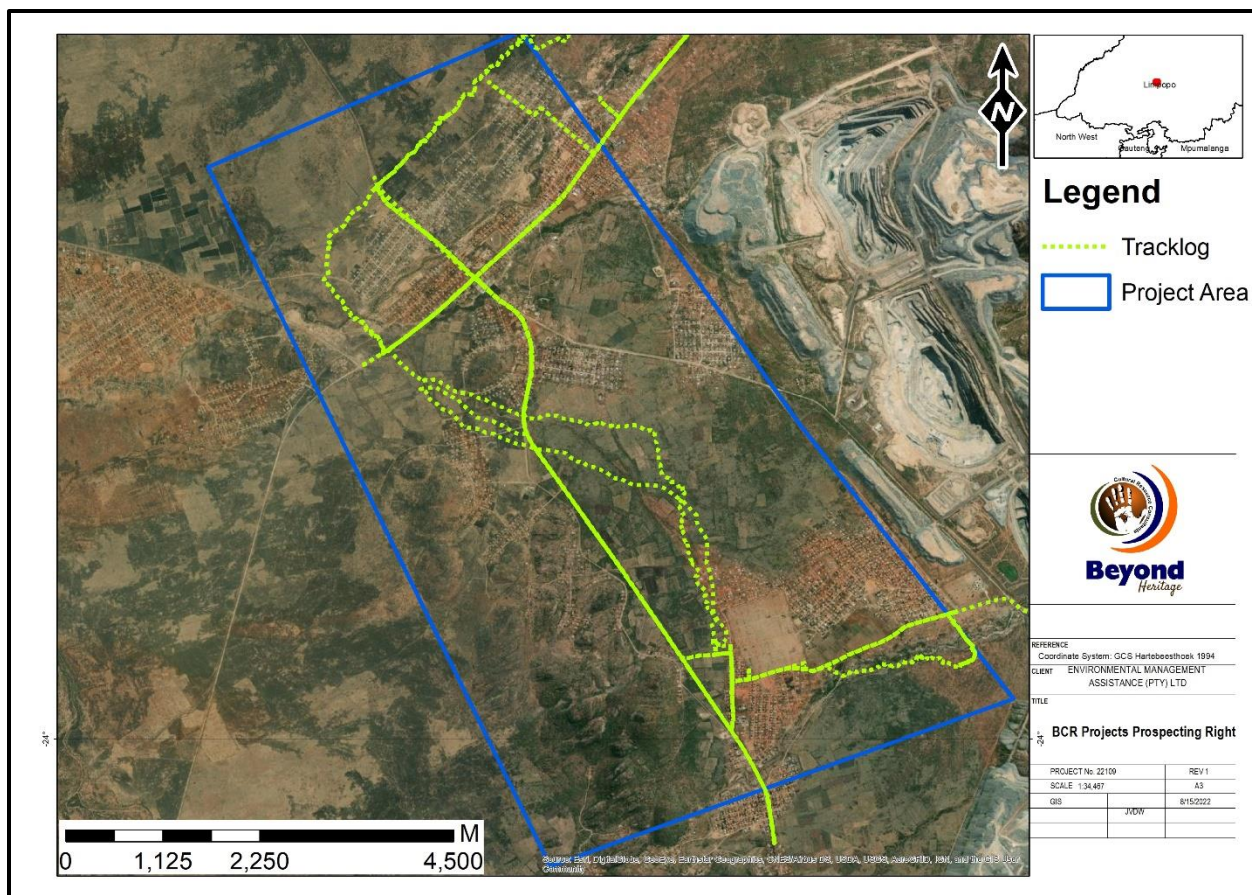


Figure 2.1. Tracklog of the survey path.

3. LEGISLATION

3.1 National Heritage Resources Act

For this Project the National Heritage Resources Act, 1999 (Act No. 25 of 1999 Section3) is of importance and the following sites and features are protected:

- Archaeological artefacts, structures, and sites older than 100 years
- Ethnographic art objects (e.g., prehistoric rock art) and ethnography
- Objects of decorative and visual arts
- Military objects, structures, and sites older than 75 years
- Historical objects, structures, and sites older than 60 years
- Proclaimed heritage sites
- Graveyards and graves older than 60 years
- Meteorites and fossils
- 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.

Even though there is no protocol for Heritage and Palaeontology, both components are defined in the Screening Report for An Environmental Authorization as required by the 2014 EIA Regulations – Proposed Site Environmental Sensitivity and was therefore consulted as well as the required sensitivity verification and Appendix 6.

3.2 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 2. 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. 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.

South Africa has a long and complex Stone Age sequence of more than 2 million years. The broad sequence includes the Later Stone Age, the Middle Stone Age and the Earlier Stone Age. Each of these phases contains sub-phases or industrial complexes, and within these we can expect regional variation regarding characteristics and time ranges. For Cultural Resources Management (CRM) purposes it is often only expected/ possible to identify the presence of the three main phases.

Yet sometimes the recognition of cultural groups, affinities or trends in technology and/or subsistence practices, as represented by the sub-phases or industrial complexes, is achievable. The three main phases can be divided as follows:

- Later Stone Age: associated with Khoi and San societies and their immediate predecessors. Recently to ~30 thousand years ago
- Middle Stone Age: associated with Homo sapiens and archaic modern humans. 30-300 thousand years ago.
- Earlier Stone Age: associated with early Homo groups such as Homo habilis and Homo erectus. 400 000-> 2 million years ago.

4.1. Earlier Stone Age

Hominids began to make stone tools about 2.6 million years ago. Known as the Oldowan industry, most of the earliest tools were rough cobble cores and simple flakes. The flakes were used for such activities as skinning and cutting meat from scavenged animals. These early artefacts are difficult to recognize and have so far only been found in rock shelters such as the Sterkfontein Caves (Kuman, 1998) and also in Makapan Valley in the caves in this area.

At about 1.4 million years ago hominids started producing more recognizable stone artefacts such as hand axes, cleavers and core tools (Deacon & Deacon, 1999). Among other things these Acheulian tools were probably used to butcher large animals such as elephants, rhinoceros and hippopotamus that had died from natural causes. Acheulian artefacts are usually found near the raw material from where they were quarried, at butchering sites, or as isolated finds. However, isolated finds have little value. Therefore, the project is unlikely to disturb a significant site.

Evidence suggests that the region surrounding the project area has been inhabited during all periods of the Stone Age, including the Early Stone Age (ESA), Middle Stone Age (MSA) and Later Stone Age (LSA). This is most evident and extensively documented at the Cave of Hearths in the Makapans Valley some 57 km to the south east (McNabb & Binyon, 2004; Phillipson, 2005). Fourie (2002) reported on a possible ESA core found on the surface to the west of the study area.

Makapans Valley was declared a World Heritage Site in 2005. The UNESCO website states the following: "Fossils found in the many archaeological caves of the Makapan Valley have enabled the identification of several specimens of early hominids, more particularly of Paranthropus, dating back between 4.5 million and 2.5 million years, as well as evidence of the domestication of fire 1.8 million to 1 million years ago." (UNESCO, 2013).

The proposed project is not expected to have a visual impact on the Makapans Valley and is located adjacent to existing mining activities in the area and is not expected to have an impact on the World Heritage Site.

4.2. Middle Stone Age

By the beginning of the Middle Stone Age (MSA), tool kits included prepared cores, parallel-sided blades and triangular points hafted to make spears (Volman, 1984). MSA people had become accomplished hunters by this time, especially of large grazing animals such as wildebeest, hartebeest and eland.

These hunters are classified as early humans, but by 100,000 years ago, they were anatomically fully modern. The oldest evidence for this change has been found in South Africa, and it is an important point in debates about the origins of modern humanity. In particular, the degree to which behaviour was fully modern is still a matter of debate. The repeated use of caves indicates that MSA people had developed the concept of a home base and that they could make fire. These were two important steps in cultural evolution (Deacon & Deacon, 1999).

The Pietersburg lithic industry occurs in the Limpopo province and is epitomized by large elongated products, including long points that are usually unifacial and manufactured on blades (Mason 1962; Sampson 1974). Cores and end products are often made on hornfels (Mason 1962; Sampson 1974), a rock that sometimes occurs in large blocks that allow the knapping of long blades or flakes. Other rocks that occur in large pieces, such as quartzite, were also used, suggesting that the appearance of Pietersburg assemblages may, to a degree, be influenced by available rocks.

Some known sites in the Waterberg are a small rock shelter with MSA and LSA components, North Brabant, (Schoonraad and Beaumont 1968, Van der Ryst 1998). MSA material was also recorded from a rock shelter at Schurfpoort 112 KR and Goergap 113 KR on the Waterberg plateau (van der Ryst 1998). Olieboomspoor rock shelter is an MSA site of considerable significance (Mason 1962) that underlies a long LSA sequence (van der Ryst 2006).

Relatively few MSA sites have been studied on the Waterberg plateau and none is dated (Wadley *et al* 2016). In contrast, several late LSA sites have been excavated (van der Ryst 1998). The hiatus between MSA and LSA occupations on the plateau requires further research; LSA settlements are not present before the late eleventh/early twelfth century AD when Iron Age agro pastoralists also entered the region (van der Ryst 1998; Wadley 2016).

4.3. Later Stone Age

By the beginning of the Later Stone Age (LSA), human behaviour was undoubtedly modern. Uniquely human traits, such as rock art and purposeful burials with ornaments, became a regular practice. These people were the ancestors of the San (or Bushmen).

San rock art has a well-earned reputation for aesthetic appeal and symbolic complexity (Lewis-Williams, 1981). In addition to art, LSA sites contain diagnostic artefacts, including microlithic scrapers and segments made from very fine-grained rock (Wadley, 1987). Spear hunting probably continued, but LSA people also hunted small game with bows and poisoned arrows. Important LSA deposits have been excavated in Olieboomspoor Cave (Mason, 1962) and other sites in the Waterberg to the West (Van der Ryst, 1998).

According to Bergh (1999) some rock paintings, are known 20 to 30 km north east of Mokopane and the Archaeological database at Wits also have paintings on record to the east of the study area on the Planknek Mountain range.

4.4. The Iron Age (AD 400 to 1840)

Bantu-speaking people moved into Eastern and Southern Africa about 2,000 years ago (Mitchell, 2002). These people cultivated sorghum and millets, herded cattle and small stock and manufactured iron tools and copper ornaments. Because metalworking represents a new technology, archaeologists call this period the Iron Age. Characteristic ceramic styles help archaeologists to separate the sites into different groups and time periods. The first 1,000 years is called the Early Iron Age followed by the Middle and Late Iron Age.

As mixed farmers, Iron Age people usually lived in semi-permanent settlements consisting of pole-and-daga (mud mixed with dung) houses and grain bins arranged around a central area for cattle (Huffman, 1982). Usually, these settlements with the 'Central Cattle Pattern' (CCP) were sited near water and good soils that could be cultivated with an iron hoe. For the project area, few sites are on record.

According to the most recent archaeological cultural distribution sequences by Huffman (2007), the study area falls within the distribution area of various cultural groupings originating out of both the Urewe Tradition (eastern stream of migration) and the Kalundu Tradition (western stream of migration).

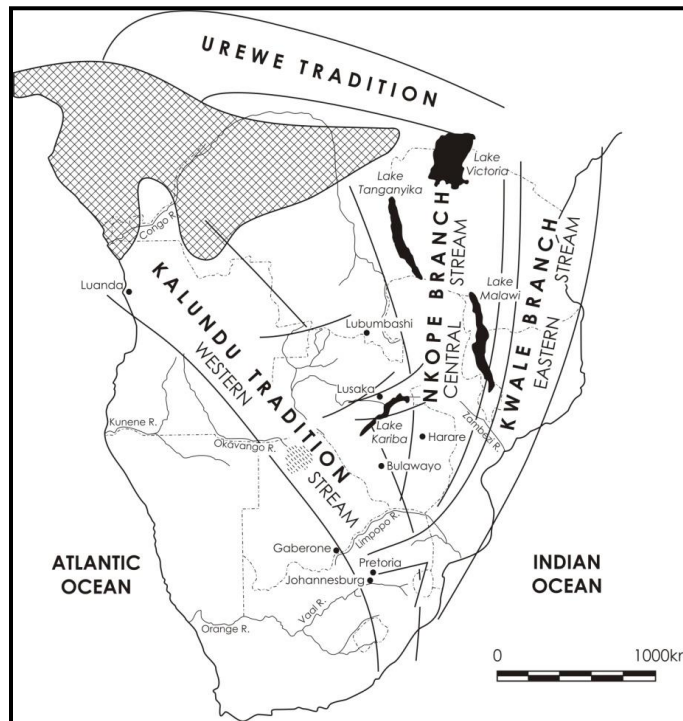


Figure 4.1. Movement of Bantu speaking farmers (Huffman 2007)

The ceramic facies that may be present are:

- Urewe Tradition:** Kwale branch- Mzonjani facies AD 450 – 750 (Early Iron Age).
Moloko branch- Icon facies AD 1300 - 1500 (Late Iron Age)
- Kalundu Tradition:** Happy Rest sub-branch - Doornkop facies AD 750 - 1000 (Early Iron Age)
Eiland facies AD 1000 – 1300 (Middle Iron Age)
Klingbeil facies AD 1000 - 1200 (Middle Iron Age)
Letaba facies AD 1600 - 1840 (Late Iron Age)
Uitkoms Facies AD 1650 – 1820 (Late Iron Age)

Van Warmelo (1930) classified the Ndebele chiefdoms of Mokopane and Polokwane as the Northern Transvaal Ndebele with the Langa Ndebele and Kekana Ndebele as the most prominent chiefdoms of the region. The Langa Ndebele are thought to have migrated out of northern Kwa-Zulu Natal between 1630 and 1670 and kept their Nguni language (Huffman 2004). The exact origin of the Kekana Ndebele is not known with certainty but speculated to have also been from northern Kwa-Zulu Natal (Huffman 2004). The Langa Ndebele comprised of numerous and varied clans whereby each ward was ruled by a different sub-headman who was ultimately ruled by the Langa chief (Jackson 1983).

In September of 1854, the Langa Ndebele and Kekana Ndebele attacked three Voortrekker groups in the region as an act of defiance against the demands set forth by the Boers for land from the Ndebele territory (Esterhuysen 2008). Prior to the attacks, the Kekana Ndebele with their chief Mugombane took refuge in Historic Cave and created their stronghold there. The first attack by the Langa Ndebele at Fothane Hill (Moordkoppie – located in the study area) saw the death of Voortrekker leader Andries Hendrik Potgieter’s younger brother Hermanus Phillipus Potgieter. Makapaanspoort and Pruisen were

then attacked the following day. The attacks have been speculated to have been planned ahead of time due to the preparation of the stronghold at the cave as well as the simultaneous attacks by separate Ndebele chiefdoms (Jackson 1983). Boer reinforcements from Rustenburg and the Soutpansberg were called to the area with around 500 men arriving in October of 1854 (Esterhuysen 2008). Meanwhile, the Kekana Ndebele sought refuge in the hills and the Langa in the Historic Cave. The arrival of Boer reinforcement allowed the Voortrekkers to attack the Kekana Ndebele at the Historic Cave. During their siege of the cave, 2000 Kekana Ndebele were killed along with the Commandant-General Piet Potgieter (Birkholtz and Smeyatsky 2019). In honour of Commandant-General Piet Potgieter, the nearby town of Vredenburg was renamed Piet Potgietersrust in September 1858. After the siege of the Historic Cave, the Voortrekkers proceeded to attack the Langa Ndebele at Fothane Hill on the 14th of April 1858 (Esterhuysen 2008). Eight hundred Langa Ndebele were killed with Mankopane and his remaining Langa Ndebele fleeing the hill and subsequently moving their capital to Thutlwane Hill in Magagamatala (Jackson 1983). Excavations at the base of the Historic Cave, now known as Makapan's Caves, yielded diagnostic ceramic sherds belonging to the late Moloko branch and Letaba/Phalaborwa facies. Huffman (2007), noted the potential presence of Urewe and Kalundu ceramic traditions within the region, signifying cultural material of both the eastern and western stream of the Bantu migration.

Ten years later, in January 1868, the Kekana Ndebele attacked the town of Piet Potgietersrust with the support of the Langa Ndebele. By March 1868, the conflict had escalated with Commandant Paul Kruger laying siege to the Kekana Ndebele at Sefakaulo Hill near to Piet Potgietersrust (Bergh 1999, Esterhuysen 2008). Unable to succeed in the full siege of Sefakaulo Hill, Kruger proceeded to attack Chief Mankopane and his Langa Ndebele at Thutlwane Hill on the 13th of June 1868. After the attack lasted for a few days, chief Mankopane had been triumphant and had forced Kruger and his men to retreat back to Piet Potgietersrust (Birkholtz and Smeyatsky 2019). On July 6th 1869, a peace agreement between the Langa Ndebele and the Boers was settled upon with no further development occurring in the town.

By 1870, the town had been evacuated due to Malaria and was only reoccupied in 1890 (Bergh 1999). Under the leadership of Commandant Henning Pretorius from 1890, the town of Piet Potgietersrust was then further developed and expanded into a larger town. The town has since been renamed Mokopane. Chief Mankopane died on 30 May 1877 at Thutlwane and was succeeded by his son Masebe (Jackson 1983).

Further attacks took place between 1883 and 1886 when the Langa Ndebele and Kekana Ndebele battled against each other (Jackson 1983). The war took place in several areas within the region, including a battle which took place along the Mogalakwena River. In 1886, State President Paul Kruger ordered the two chiefs to end the war and agree on peace (Jackson 1983).

In 1890, the Location Commission visited the Langa Ndebele and the Kekana Ndebele in order to demarcate territories to each chiefdom. The death of the successor of Mankopane, Chief Masebe, had created a rift within the Langa Ndebele as the two sons of Masebe were in disagreement for the new title of chief (Cartwright and Cowan 1978). This created a divide within the Langa Ndebele with some members following Hans Masebe and others following Backenberg Masebe (Cartwright and Cowan 1978). This created subsequent partitioning of the territory demarcated for the Langa Ndebele with the southern section being allocated to Chief Hans Masebe and his followers and the northern section to Chief Backenberg Masebe and his followers. The southern section included Fothane Hill, which was once the capital of Chief Mapela, and as such the southern chiefdom became known as *ba ga Mapela* (Jackson 1983). During the partition, conflicts rose between the two chiefs with both chiefdoms attacking each other. In 1901, under the British Army occupation of Pietersburg, the two chiefs were ordered to cease their attacks on each other.

4.5. Cultural Landscape

The greater study area is part of an interesting cultural landscape rich in heritage resources dating back to the Stone Age, Iron Age and historical period. This study area has been part of rural township areas that has been developed to some extent and is characterised by township development, road development, previous water infrastructure developments and extensive cultivation.

4.6. General Information

4.6.1. Literature Review

Based on previous CRM work in the larger area e.g. Huffman, (1997); Fourie (2002); Pistorius (2002); Kusel (2005) Roodt (2007); Roodt (2008); Tomose (2013), Van Schalkwyk, (2011), as well as Karodia and Higgit (2013), Du Piesanie & Hodgskiss (2015) and the Archaeological database at Wits the project area may possibly produce sites that span from the Early Iron Age through to the Late Iron Age (LIA). Most notably *Eiland and Moloko facies* ceramics and LIA Ndebele stone walling some of which was excavated by Huffman and Steele (1997). Du Piesanie & Hodgskiss (2015) also recorded numerous Stone Age occurrence (of negligible significance), Farming community sites (Iron Age) as well as grave sites. More recent studies by van der Walt (2017, 2019) recorded cemeteries, Late Iron Age stone walled sites and find spots, rectangular stone walled ruins and Stone Age sites.

4.6.2. Public consultation

A public participation process is facilitated by Environmental Management Assistance (Pty) Ltd as per the BA process and potential heritage concerns will be addressed prior to development.

4.6.3. Google Earth and The Genealogical Society of South Africa (Graves and burial sites)

No cemeteries are indicated on the database of the genealogical society. Numerous grave and burial sites are on record for the study area as recorded during previous surveys and spatially illustrated in Section 7.

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 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: *High Probability*
LSA: *Medium Probability*
LSA –Herder: *Low Probability*

» **Iron Age finds**

EIA: *Low Probability*
MIA: *Low Probability*
LIA: *High Probability*

» **Historical finds**

Historical period: *Medium Probability*
Historical dumps: *Low to Medium Probability*
Structural remains: *Medium to High Probability*
Cultural Landscape: *Medium probability*

» **Living Heritage**

For example, rainmaking sites: *Medium Probability*

» **Burial/Cemeteries**

Burials over 100 years: *High Probability*
Burials younger than 60 years: *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 detailed field survey, if required this will be conducted in the Heritage Walkdown phase if invasive activities occur. 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 only be discovered/recorded during the survey, similarly the possible occurrence of graves not recorded here, 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

7.1. Heritage resources

Large sections of the study area used to be cultivated in the past and currently used for grazing and township development. The study area has been largely disturbed and the Department Forestry Fisheries and the Environment (DFFE) screening tool indicated the study area as of low heritage sensitivity with isolated areas of high heritage sensitivity on the periphery of the impact area (Figure 7.1). However, the verified sensitivity shows sites of significance (mostly cemeteries) and areas with high heritage potential and is illustrated in Figure 7.2. The sites on record for the proposed study area are mostly derived from Pistorius (2021) and Van der Walt (2019). The site of Fothane Hill (Moordkoppie) is located in the study area. Chief Mapela moved his village to this hill from where he ruled until he passed away in 1825. This is also the location of a skirmish between the Langa Ndebele and the Voortrekkers in 1854. Hills and mountains are also of high heritage potential especially the Molotswi mountain range in the southwest of the study area. The importance of this area was confirmed by local informants who indicated initiation sites (intangible heritage) to the Ecology specialist. Heritage sites and areas of heritage potential are spatially illustrated in Figure 7.2 and outlined in Table 3. A selection of heritage resources is illustrated in Figure 7.3 to 7.6.

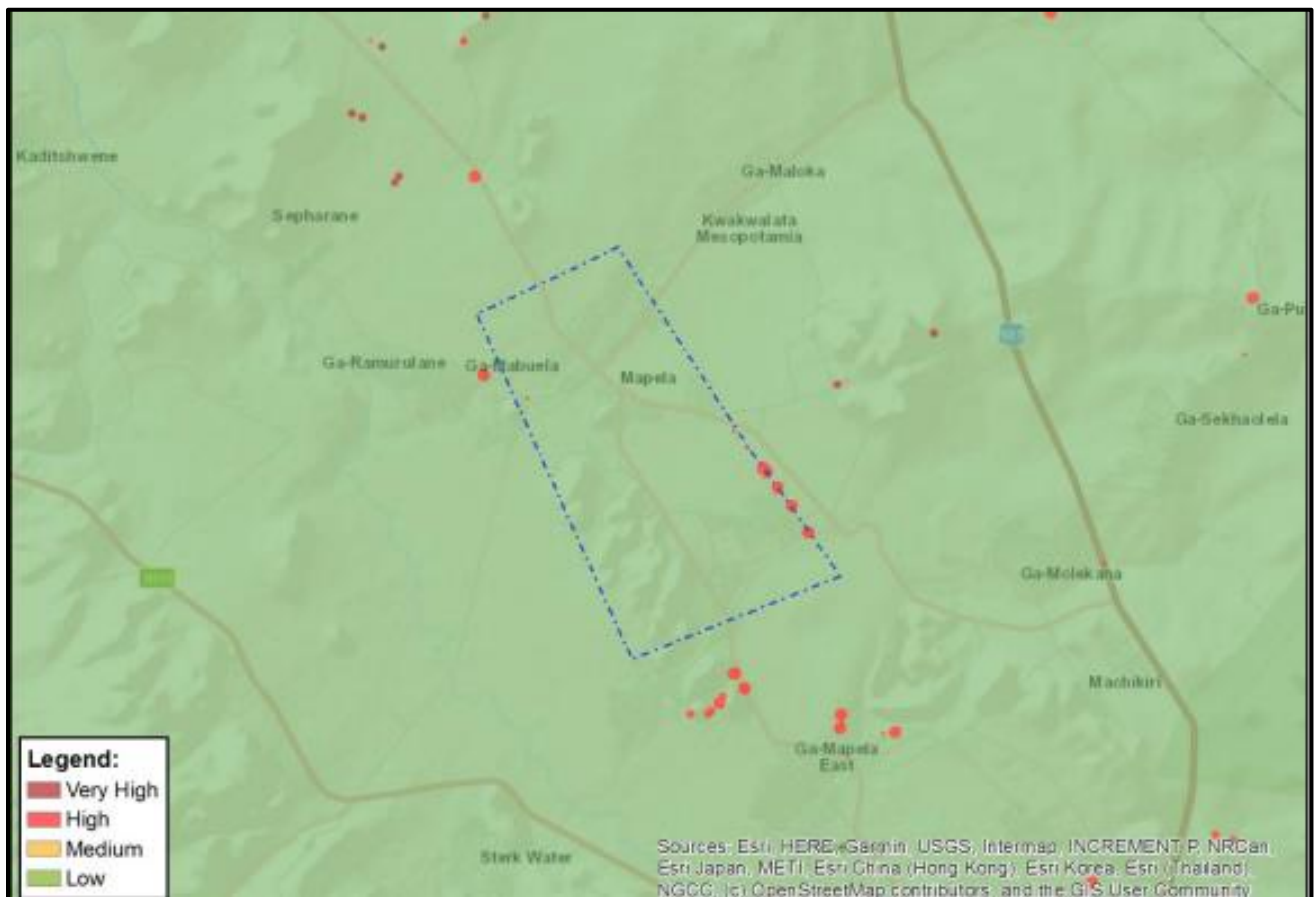


Figure 7.1. Sensitivity of the study area based on the DFFE screening tool. The study area is of low sensitivity.

Table 3. Known sites in the study area.

Label	Longitude	Latitude	Source	Heritage Significance
G01	28° 53' 34.5001" E	23° 59' 39.5001" S	Pistorius 2021	High Social Significance GP A
G02	28° 53' 34.3000" E	23° 59' 39.0001" S	Pistorius 2021	High Social Significance GP A
G03	28° 53' 34.3999" E	23° 59' 38.1999" S	Pistorius 2021	High Social Significance GP A
G04	28° 53' 30.5001" E	23° 59' 37.1000" S	Pistorius 2021	High Social Significance GP A
G05 and G06	28° 53' 26.1601" E	24° 00' 01.2000" S	Pistorius 2021	High Social Significance GP A
G06	28° 53' 29.8800" E	23° 59' 10.9800" S	Pistorius 2021	High Social Significance GP A
G07 TO G10	28° 53' 26.2201" E	24° 00' 01.5000" S	Pistorius 2021	High Social Significance GP A
G09	28° 53' 26.1601" E	24° 00' 01.4399" S	Pistorius 2021	High Social Significance GP A
G10	28° 53' 26.0400" E	24° 00' 01.4399" S	Pistorius 2021	High Social Significance GP A
GO8	28° 53' 26.1000" E	24° 00' 01.5600" S	Pistorius 2021	High Social Significance GP A
Grave 01	28° 53' 38.9400" E	23° 59' 57.1201" S	Pistorius 2021	High Social Significance GP A
Grave 02	28° 53' 38.8800" E	23° 59' 57.1201" S	Pistorius 2021	High Social Significance GP A
Grave 04	28° 53' 39.0001" E	23° 59' 57.5999" S	Pistorius 2021	High Social Significance GP A
Grave 11	28° 53' 23.6399" E	24° 00' 01.3799" S	Pistorius 2021	High Social Significance GP A
Grave 12	28° 53' 23.4600" E	24° 00' 01.3799" S	Pistorius 2021	High Social Significance GP A

Grave 13	28° 53' 23.4600" E	24° 00' 01.5000" S	Pistorius 2021	High Social Significance GP A
Grave 14	28° 53' 23.6999" E	24° 00' 01.4399" S	Pistorius 2021	High Social Significance GP A
Grave 3	28° 53' 39.0001" E	23° 59' 57.8401" S	Pistorius 2021	High Social Significance GP A
Cemetery 1	28° 51' 17.1632" E	24° 00' 11.3870" S	Current Assessment	High Social Significance GP A
Cemetery 2	28° 52' 58.4300" E	23° 59' 33.0591" S	Current Assessment	High Social Significance GP A
Cemetery 3	28° 53' 27.9176" E	23° 59' 11.4105" S	Current Assessment	High Social Significance GP A
Cemetery 4	28° 49' 24.7160" E	23° 57' 03.9488" S	Current Assessment	High Social Significance GP A
Cemetery 5	28° 49' 32.4148" E	23° 57' 21.0932" S	Current Assessment	High Social Significance GP A
Moordkoppie	28° 50' 38.3470" E	23° 57' 41.3773" S	Current Assessment	Local Significance (LS)
Intangible Heritage sites	28° 50' 59.1324" E	23° 59' 51.7632" S	Shown by local informants to the Ecology specialist	Generally Protected A

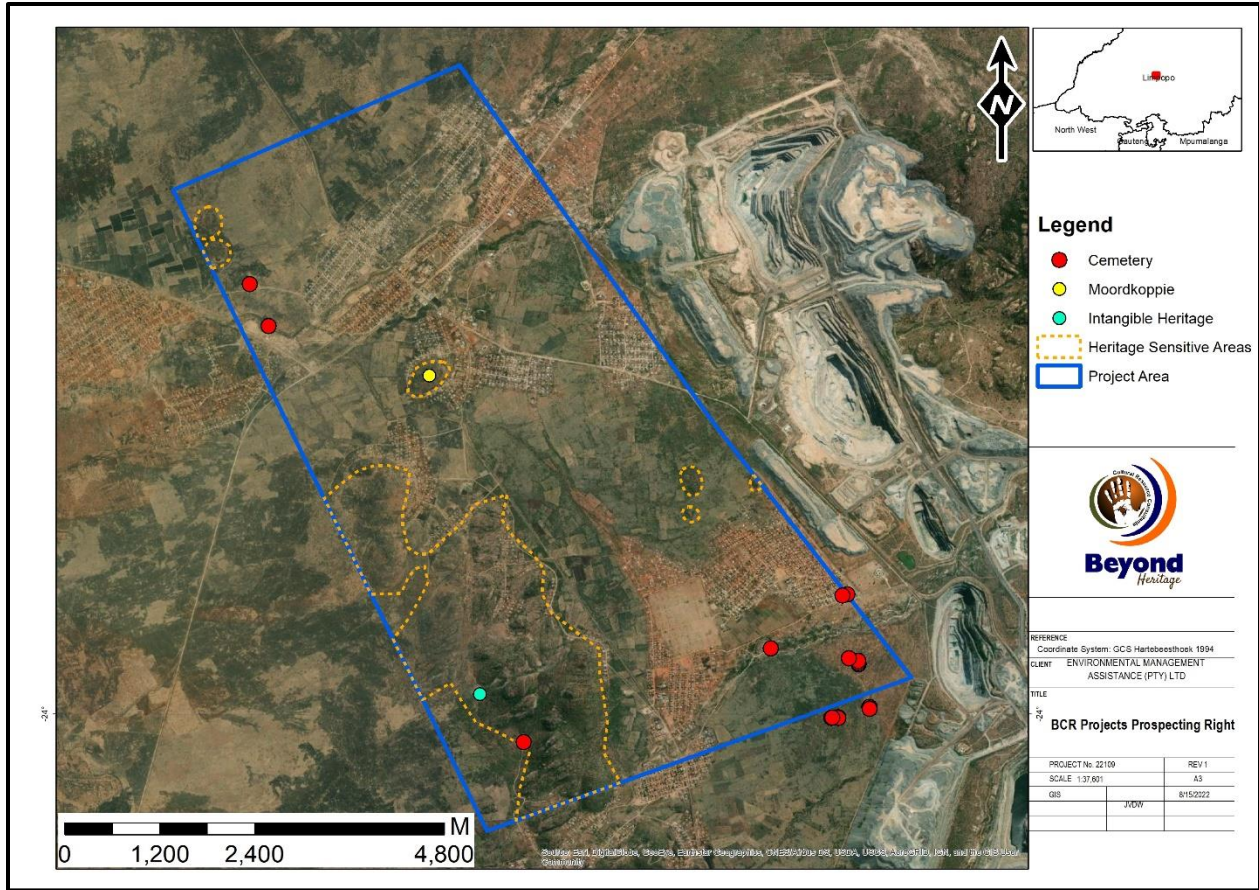


Figure 7.2. Known heritage sites and heritage sensitive areas in relation to the impact area.



Figure 7.3. Typical example of MSA artefacts found in the study area.



Figure 7.4. Intangible site marked by upright stones indicating an initiation site.



Figure 7.5. Formal graves in the study area.



Figure 7.6. Stone packed grave in the study area.

7.2. Palaeontology

The DFFE Screening tool (Figure 7.7) indicated the study area to be of medium sensitivity, the study area is indicated to be of insignificant palaeontological sensitivity (Figure 7.8) on the SAHRIS paleontological map and no further studies are required for this aspect.

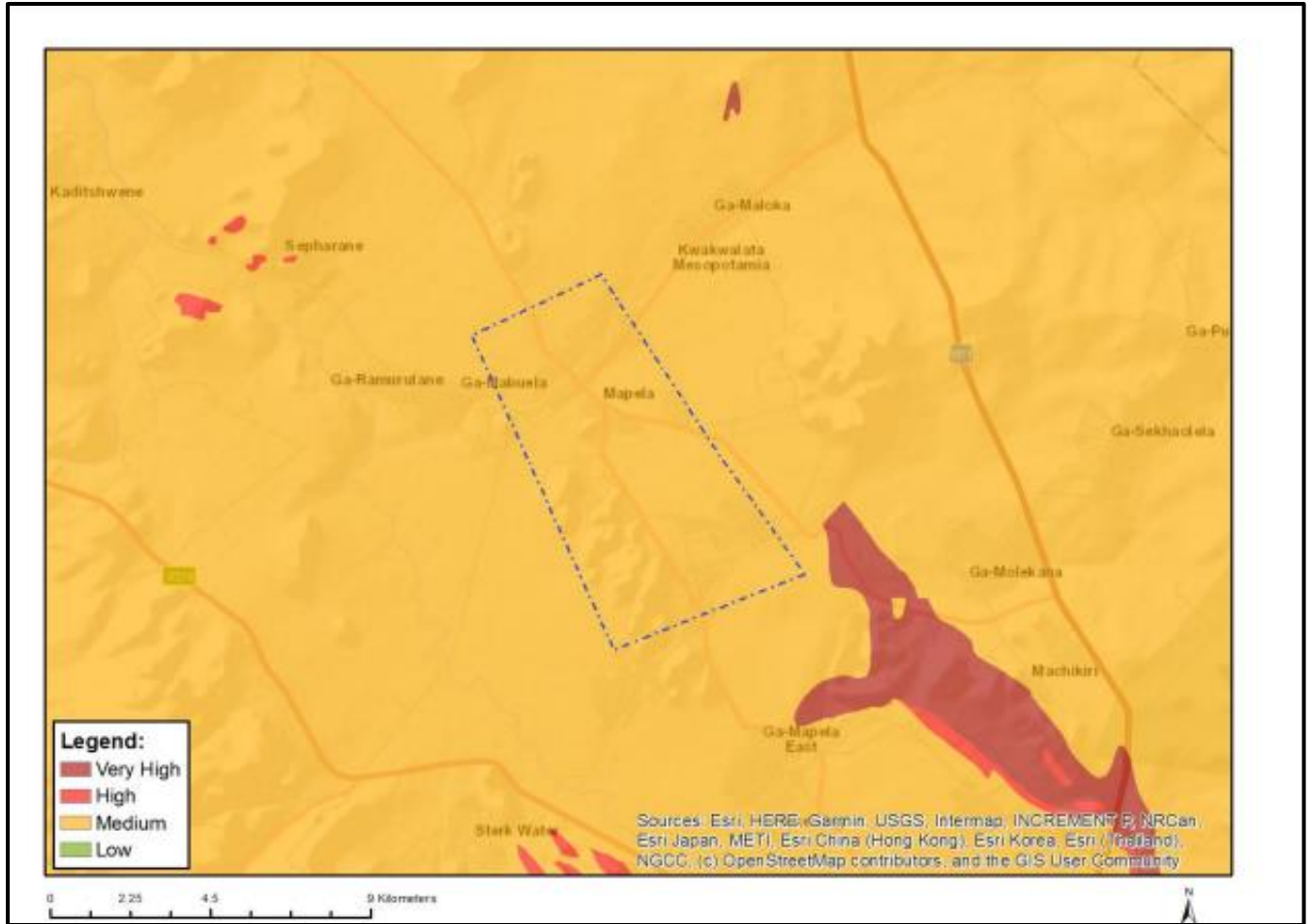
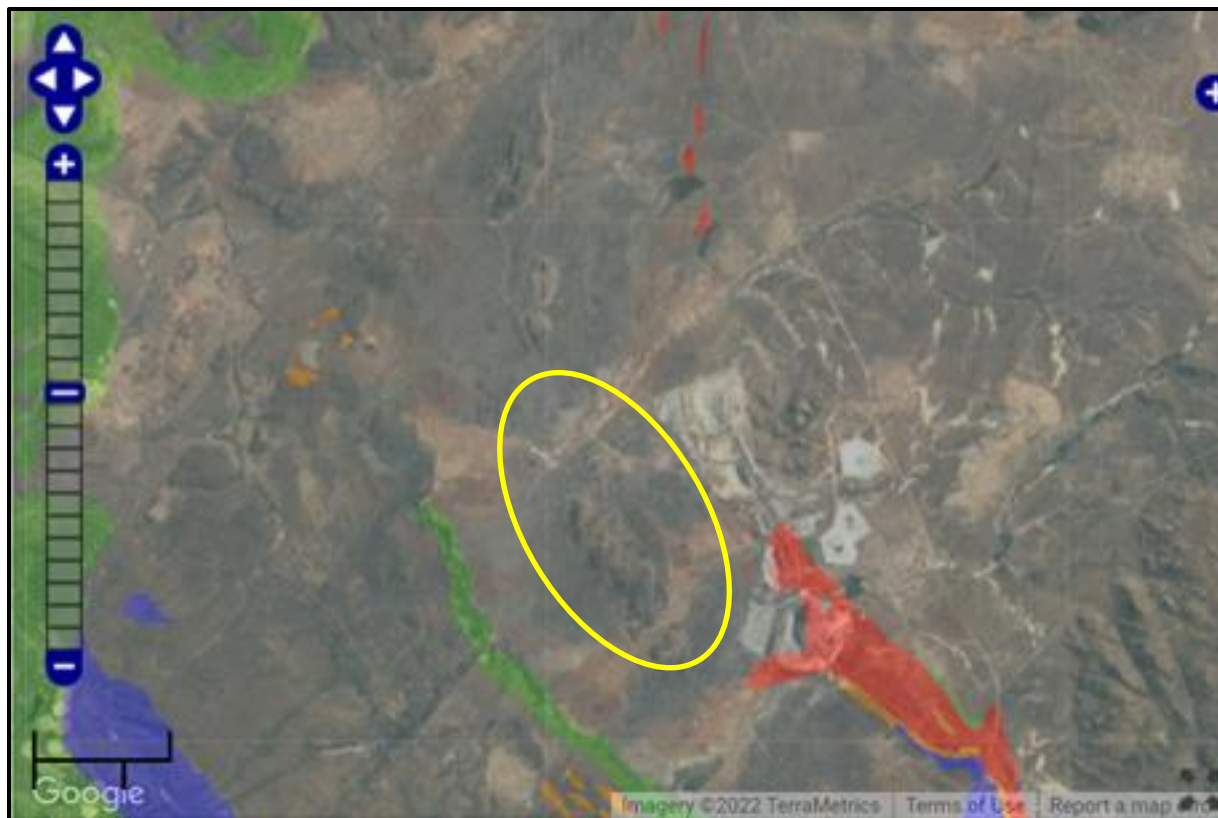


Figure 7.7. Paleontological sensitivity of the study area as per the DFFE screening tool.



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

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 Local Significance (LS), Grade 3B 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.

Table 4. Expected impact on heritage resources.

Impact on Heritage resources			
No impact is expected on heritage resources as prospecting will be non-invasive and consist of data search, field mapping and desktop studies, logging and sampling historical core; and scoping and (pre) feasibility studies.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
No direct or indirect impacts are expected on heritage resources through non intrusive prospecting.	Not Applicable	No impact expected	Where graves occur
Description of expected significance of impact			
Not applicable			
Gaps in knowledge & recommendations for further study			
It is recommended that if invasive activities are required the impact areas should be subjected to a heritage walkdown down to comply with Section 38 (8) of the National Heritage Resources Act.			

9. CONCLUSION AND PLAN OF STUDY

9.1. Summary of Desktop Verification Outcome

The scoping study did not identify any fatal flaws for the proposed BCR Projects Prospecting Project. No impact is expected on heritage resources or the cultural landscape as prospecting will be non-invasive. The study area is of insignificant palaeontological sensitivity and according to the SAHRIS palaeontological sensitivity map no further studies are required for this aspect.

9.2. The way forward

To comply with the National Heritage Resources Act (Act 25 of 1999) it is recommended that should invasive activities be required in future, impact areas should be subjected to a heritage walkdown prior to development as a condition of authorisation. During this assessment the potential impact on heritage resources will be determined as well as levels of significance of recorded heritage resources. The walkdown report will also provide management and mitigation measures should any significant sites be impacted upon, ensuring that all the requirements of the SAHRA are met including an extensive public participation and stakeholder consultation process.

9.1. Reasoned opinion regarding the acceptability of the proposed activity

Based on the current information obtained for the area at a desktop level no red flags were identified and non-intrusive exploration will not negatively affect the cultural resources of the area.

Table 5. Summary of sensitivity and plan of study

ASPECT	SCREENING TOOL SENSITIVITY	VERIFIED SENSITIVITY	OUTCOME STATEMENT/PLAN OF STUDY	RELEVANT SECTION MOTIVATING VERIFICATION
Palaeontology	Medium	Low	No further studies are required.	Section 7.2.
Cultural Heritage	Low to high	Medium to high	Prior to invasive activities the impact areas should be subjected to the heritage walkdown.	Section 7.1.

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, Nigeria, Tanzania, Afghanistan, and the DRC and conducted well over 700 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.



SIGNATURE:

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