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**PHASE I HERITAGE IMPACT ASSESSMENT REQUESTED IN TERMS OF
SECTION 38 OF THE NATIONAL HERITAGE RESOURCES ACT NO 25/1999
FOR THE PROPOSED MINE PROSPECTING ON A PORTION OF THE
REMAINING EXTENT OF THE FARM 84 & PORTION OF FARM 393, BARKLY
WEST DISTRICT, NORTHERN CAPE PROVINCE**

Prepared by

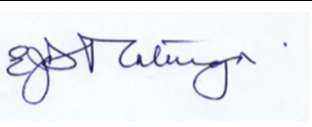
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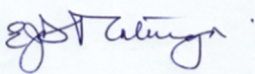
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DECLARATION OF INDEPENDENCE

AHSA 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).

DISCLAIMER

All possible care was taken to identify and document heritage resources during the survey in accordance with best practices in archaeology and heritage management. However it is always possible that some hidden or subterranean sites are overlooked during a survey. AHSA will not be held liable for such oversights and additional costs thereof.



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EXECUTIVE SUMMARY

A Heritage Impact Assessment was conducted in terms of Section 38 of the National Heritage Resources Act (25 of 1999) in respect of the proposed prospecting and application for mining rights a Portion of the Remaining Extent of the Farm 84 and a Portion of the Farm 393 (hereinafter the properties), Barkly West District, Northern Cape:

The following is a summary of the findings of the study:

Thirty-three (33) sites were recorded. A significance ranking system was used for the purpose to recommend appropriate mitigation in view of the proposed development. The attributes of the sites are systematically documented with photo illustrations in a Catalogue in Section 8 of this Report. In addition the Tables below is a Site Inventory in spreadsheet with a summary of the attributes of each site.

Ranking of Findings

	RANKING	SIGNIFICANCE	No of sites
1	High	National and Provincial heritage sites (Section 7 of NHRA). All burials including those protected under Section 36 of NHRA. They must be protected.	0
2	Medium A	Substantial archaeological deposits, buildings protected under Section 34 of NHRA. Footprint of early modern mining. These may be protected at the recommendations of a heritage expert.	5
3	Medium B	Sites exhibiting archaeological characteristics of the area, but do not warrant further action after they have been documented.	16
4	Low	Heritage sites which have been recorded, but considered of minor value relative to the proposed development.	12
		TOTAL	33

PORTION OF THE FARM 393

SITE NO	LATITUDE	LONGITUDE	PERIOD	DESCRIPTION	RANKING
S1	28° 4'7.00"S	24°25'29.00"E	MSA/LSA	One scraper/flake found	Medium B
S2	28° 4'42.90"	24°25'16.20"E	MSA/LSA	One flake/scraper found.	Medium B
S3	28° 5'45.00"S	24°24'35.80"	MSA/LSA	Scraper of dolomite shows convex percussion bulb	Medium B
S4	28° 6'35.20"S	24°23'37.73"E	MSA/LSA	Dolomite tool underside pear-shaped.	Medium B
S5	28° 5'42.93"S	24°24'29.56"E	Early Modern Mining	Fissure mining	Medium A
S6	28° 5'39.92"S	24°24'28.66"E	Early Modern Mining	Fissure mining	Medium A
S7	28° 5'27.70"S	24°24'37.20"E	Early Modern Mining	Old mine claim pegs	Medium A
S8	28° 5'24.30"S	24°24'39.10"E	Modern mining	Old mine shaft	Low
S9	24°24'37.80"E	24°24'37.80"E	Modern mining	Hunting camp	Low
S10	28° 4'21.58"S	24°25'30.40"E	Early Modern Mining	Old mine hole and claim pegs	Low
S11	28° 6'41.78"S	24°23'51.44"E	Modern mining	Shaft No 1 at southern end	Low
S12	28° 6'21.88"S	24°24'1.83"E	Modern mining	Main Shaft No 2	Low
S13	28° 6'21.51"S	24°24'6.96"E	Modern mining	Training Centre	Low
S14	28° 6'13.15"S	24°24'1.89"E	Modern mining	Workers village 22 units, including communion	Low
S15	28° 6'9.97"S	24°24'10.55"E	Modern mining	Shaft No 3 and Mine Village	Low
S16	28° 5'42.10"S	24°24'29.30"E	Modern mining	Shaft No 4 near old workings	Low
S17	28° 5'42.42"S	24°24'20.88"E	Modern mining	Gabled house	Low
S18	28° 6'9.40"S	24°24'16.00"E	Modern mining	Old Building	Low

PORTION OF THE REMAINING EXTENT OF FARM 84

SITE NO	LATITUDE	LONGITUDE	PERIOD	DESCRIPTION	RANKING
S19	28° 6'24.91"S	24°23'0.37"E	MSA/LSA	Flakes/ waste material	Medium B
S20	28° 8'7.40"S	24°22'2.00"E	MSA/LSA	3 stools, 2 obsidian and 1 chert	Medium B
S21	28° 7'54.10"S	24°22'8.50"E	MSA/LSA	4 occurrences of stone tools	Medium B
S22	28° 7'37.10"S	24°22'22.19"E	MSA/LSA	One scraper	Medium B
S23	28° 7'8.90"S	24°22'39.60"E	MSA/LSA	2 tools including chert	Medium B
S24	28° 6'41.70"S	24°22'54.00"E	MSA/LSA	Possible core from which flakes were made.	Medium B
S25	28° 6'3.90"S	24°22'53.30"E	MSA/LSA	Flake tools/scrapers	Medium B
S26	28° 5'22.60"S	24°22'49.70"E	MSA/LSA	Several flakes/scrapers and waste material.	Medium B
S27	28° 5'19.80"S	24°22'45.80"E	MSA/LSA	4 scrapers	Medium B
S28	28° 6'15.90"S	24°22'33.61"E	MSA/LSA	4 scrapers	Medium B
S29	28° 6'9.60"S	24°22'18.90"E	Early Modern Mining	Old mine working	Low
S30	28° 6'18.60"S	24°22'8.10"E	MSA/LSA	Stone tools found among calcrete stones.	Medium B
S31	28° 6'26.70"S	24°21'56.40"E	MSA/LSA	Cattle watering place, one scraper found	Medium B
S32	28° 6'9.30"S	24°24'37.20"E	Early Modern Mining	Old mine ramp with stone revetment wall	Medium A
S33	24°24'37.20"E	24°24'37.20"E	Commercial Farming	A linear pile of stones 470m long	Medium A

Summary of Findings

PORTION OF THE FARM 393

Eighteen sites (18) were recorded (see Inventory above and Catalogue in Section 8).

The Stone Age

Four (4) Stone Age Sites were recorded all with a low density of lithics, and none demonstrating concentrated or regular activity. None of the sites represent substantial settlement to warrant further investigation. The sites appear to be spread all over the plateau and escarpment.

The Iron Age

No Iron Age sites were found on the properties.

Early Modern Mining

The occurrence of many mine claim pegs (an iron plaque standing in a concrete cube base) is evidence of the existence of many small claims in the early pioneering years. None of the trenches made by the small-scale minors are worth preserving. The claim pegs in concrete are portable and can be moved, displayed in a park or garden.

Two instances of early fissure mining have been recorded. One site is fenced off with a steel palisade. One or both fissures may be wholly or partially preserved as evidence of early mining methods.

Modern Mine infrastructure and associated buildings

Buildings and Infrastructure at four the mine shafts were recorded, of which none is more than 60 years old. Although these are important utilities they carry no heritage significance in terms of statutory provisions.

THE REMAINING EXTENT OF 84

Fifteen sites (15) were recorded (see Inventory above and Catalogue in Section 8).

The Stone Age

Twelve (12) Stone Age Sites were recorded of which all have a low density of lithics, and none demonstrating concentrated or regular activity (S19 – S27, S30-S31). They seem to represent general activity and movement of foragers in the area in the MSA/LSA, and no particular regular settlement can be pinpointed. The sites have been recorded and no further mitigation is recommended.

The Iron Age

No Iron Age sites were found on the properties.

Early Modern Mining

A deep mine trench was recorded (S28). An old concrete ramp or terrace with a stone revetment wall with a maximum height of 220m was built on the crest of the ridge. It appears to be the remains of a processing plant. This structure is in a sound state and can be preserved as a footprint of early modern mining in the area.

Linear pile of stones

A linear pile of stones 470m long is laid transverse to the ridge. The stones appear to have been extracted during trenching for a water pipeline. They were replaced after laying of the pipe and backfilling. The pile is a significant linear feature in the landscape seen from the top of the ridge, and may be worth preserving.

Recommendations

The proposed mine prospecting can go ahead subject to the precautions stated above taken. In the event of discovery of other heritage resources in future phases of the project, the Provincial Heritage Resources Authority or SAHRA must be alerted immediately and an archaeologist or heritage expert called to attend.

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
NHRA	National Heritage Resources Act
SAHRA	South African Heritage Resources Agency

DEFINITIONS

Archaeological material: remains resulting from human activity left as evidence of their presence which, as proscribed by South African heritage legislation, are older than 100 years, which are in the form of artefacts, food remains and other traces such as rock paintings or engravings, burials, fireplaces and structures.

Artefact/Ecofact: 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/heritage place or landscape including maintenance, preservation, restoration, reconstruction and adaptation.

Cultural Heritage Resources: refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistorical 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. This include intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

Cultural landscape: “the combined works of nature and man” and demonstrate “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”.

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

Early Stone Age: Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs. before present.

Early Iron Age: Refers cultural period of the first millennium AD associated with the introduction of metallurgy and agriculture in Eastern and Southern Africa

Later Iron Age: Refers to the period after 1000AD marked by increasing social and political complexity. Evidence of economic wealth through trade and livestock keeping especially cattle

Excavation: A method in which archaeological materials are extracted, involving systematic recovery of archaeological remains and their context by removing soil and any other material covering them.

Grave: a place of burial which include materials such as tombstone or other marker such as cross etc.

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

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

Historical archaeology: the study of material remains from both the remote and recent past in relationship to documentary history and the stratigraphy of the ground in which they are found; or archaeological investigation on sites of the historic period. In South Africa it refers to the immediate pre-colonial period, contact with European colonists and the modern industrial period.

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

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

Late Stone Age: The period from ± 30 000-yr. to the introduction of metals and farming technology

Middle Stone Age: Various stone using industries dating from ± 250 000 yr. - 30 000 yrs. ago

Monuments: architectural works, buildings, sites, sculpture, elements or structures of an archaeological nature, inscriptions, cave dwellings 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 protecting and maintaining the fabric of a place in its existing state and retarding deterioration or change, and may include stabilization where necessary.

Sherd: ceramic fragment.

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.

1. INTRODUCTION

A Heritage Impact Assessment was requested in terms of Section 38 of the National Heritage Resources Act (25 of 1999) (NHRA) for the proposed mine prospecting on a Portion of the Remaining Extent of Farm 84 and Portion of Farm 393, Barkly West District, Northern Cape Province.

1.1. Nature of Development

Prospecting on a large scale is planned on the above properties. Presently diamonds are extracted by underground methods with four shafts being operated. Prospecting generally has a low surface impact, but it may involve excavation of test pits and drilling with potential destructive impacts on heritage resources. Heritage resources are likely to be affected more significantly during the extraction phase as both opencast and drilling methods may entail the following:

- Large scale open excavations;
- Placement of mine plant,
- Construction of buildings for offices/workers accommodation;
- Road and / or installation of conveyor belts;
- Stockpiling (topsoil, tailings and discards)
- Waste management (including slimes dam).

The requirement to protect heritage resources in light of such physical works is enacted in Section 38 of the NHRA, which calls for Heritage Impact Assessments. This report is a preliminary identification and documentation of heritage resources on the above properties and suggests appropriate measures to protect them or mitigate potentially harmful impacts of the proposed development.

2. GEOGRAPHICAL SETTING

2.1. Physical setting

Portion of the Remaining Extent of Farm 84 and Portion of the Farm 393 (hereinafter the properties) are located 45km west of Barkly West in the Northern Cape Province (Figs 1-2). The properties are situated in a high plain 1200m AMSL called the Ghaap

Plateau. Exposures of dolomite beds on the edge of the Plateau facing the Harts River are weathered into a series of fine terraces or steps forming an escarpment seen on the Google-Earth map, and can be captured by a camera from the eastern bank of the Harts River 10km away (Figs 3-5). Vegetation is sparse and predominantly acacia scrub. *Acacia karoo* is mixed with a short hooked thorn (Afrikaans - *haakbos* - *Acacia mellifera* subsp. *detinens*). Medium to dense acacia woodland thrives below the escarpment to the east in a wide flat valley through which the Harts River flows in a south-westerly direction to a confluence with the Vaal River below the town of Barkly West (Fig 6). As we move westward the ground rises steeply again creating another escarpment and leaving behind a bench 2.3km wide. Farm 393 and part of Farm 84 straddle the bench (Fig 7). The superficial bedrock is dolomite and there is a large surface concentration of loose stones and rocks of the same material, the result of long-term weathering. In places the dolomite is overlaid by calcrete, also accumulated over time as water washed through the dolomite bedrock leaving calcium carbonate residue.

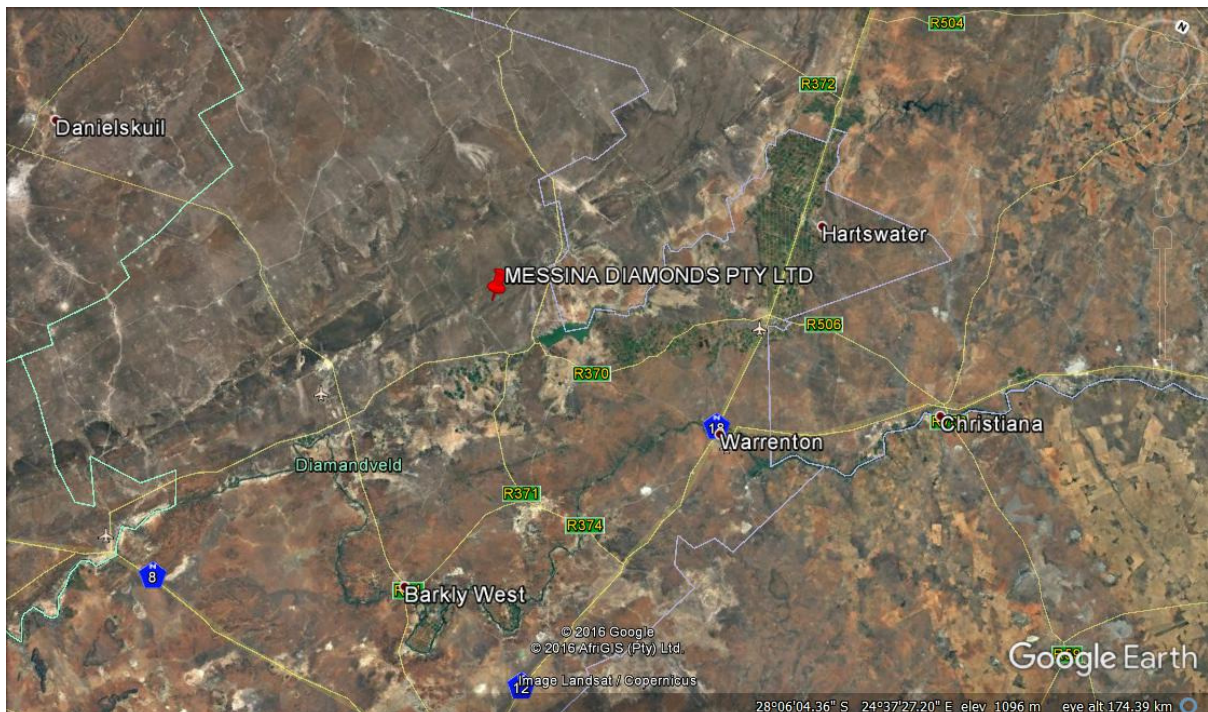


Fig 1. Google-Earth map of area.

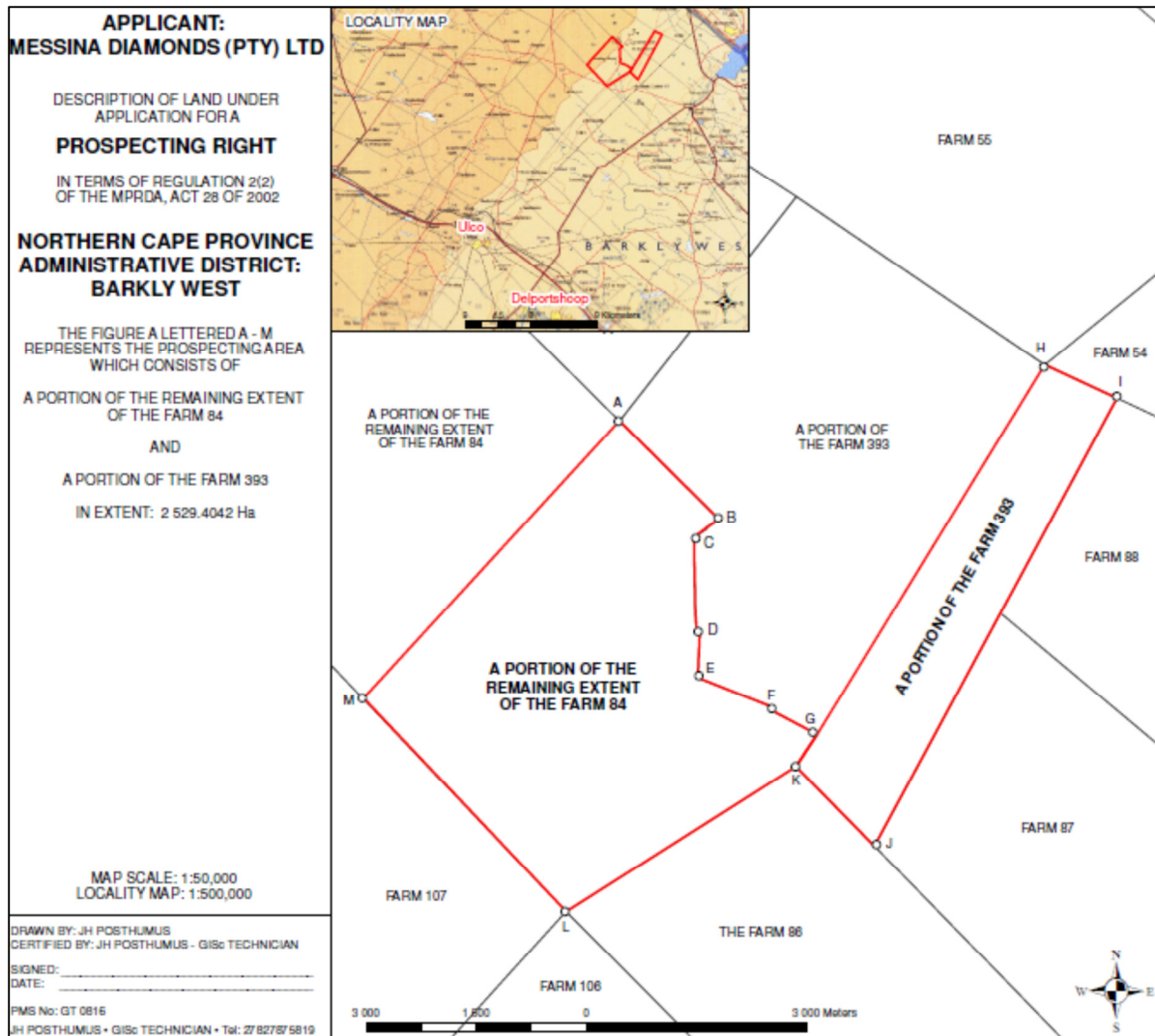


Fig 2. Map of the properties (Courtesy of Messina Diamonds (Pty) Ltd)

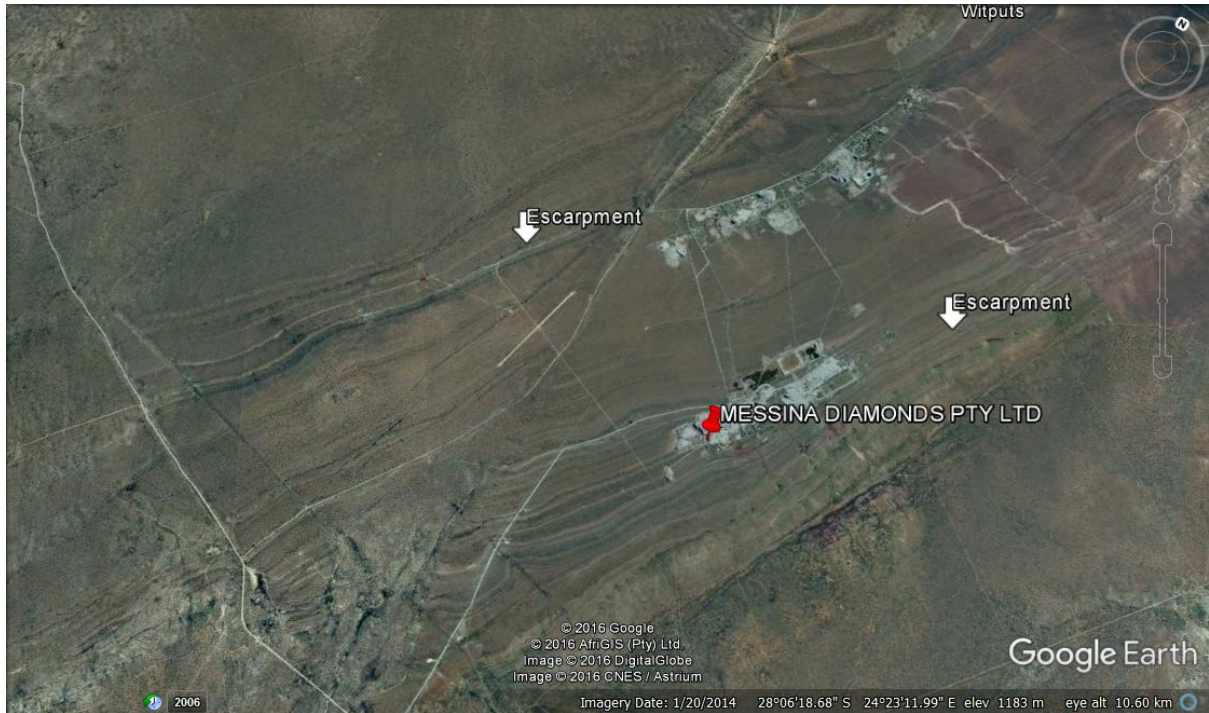


Fig 3. Google-Earth map shows a bench between two escarpments,



Fig 4. Terrace exposures of dolomite bedrock on the edge of the plateau.



Fig 5. Messina Diamonds mine perches the Ghaap Plateau on the edge of an escarpment, Harts Valley in foreground, view west from the eastern bank of the Harts River.



Fig 6. Acacia scrub on the plateau (foreground) contrast with the woodland in the valley below.

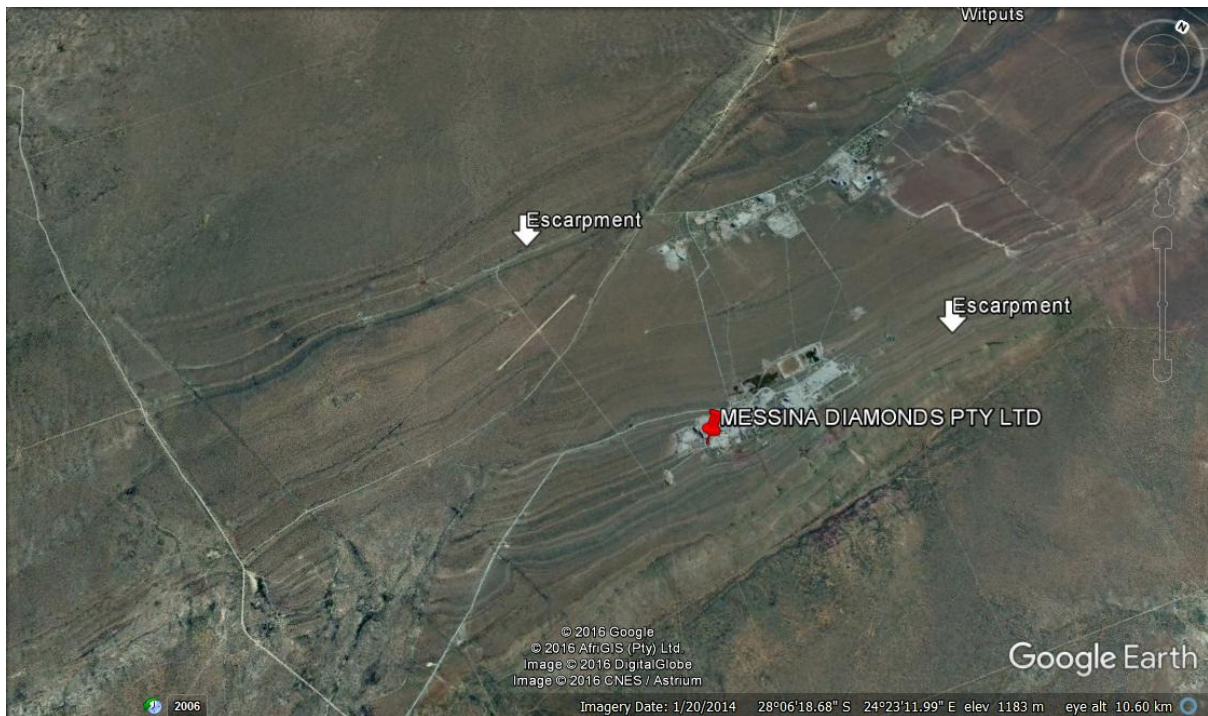


Fig 7. The properties are situated on a bench between two escarpments.

3. LEGAL FRAMEWORK

3.1. The National Heritage Resources Act (25 of 1999)

The proposed prospecting requires a Heritage Impact Assessment as stipulated under Section 38 of the National Heritage Resources Act (No 25 1999). The terms and conditions of an HIA are stated as follows:

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, power line, 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 50m in length;

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

(i) exceeding 5 000m² in extent; 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 m² in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

Other Sections of the **National Heritage Resources Act** (No. 25 of 1999) NHRA of relevant application are:

Section 34 of the NHRA for provisional protection of all structures and features older than 60 years.

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

Section 36 of the **NHRA** gives priority for the protection of Graves and Burial Grounds graves and burial grounds more than 60 years old, and graves and burial ground of victims of conflict.

3.2. International Principles and Policies

In practice heritage management advocates protection and respect the sanctity of all graves regardless of their age. International principles are based on the same ethical considerations. The the **Vermillion Accord on Human Remains** adopted by the **World Archaeological Congress (WAC)** at the WAC Inter-Congress in South Dakota (USA) urges “*respect for the mortal remains of the dead shall be accorded to all, irrespective of origin, race, religion, nationality, custom and tradition.*”

Some generic principles and standards for the protection of heritage resources are drawn from international charters and conventions, in particular the **Australia Charter for the Conservation of Places of Cultural Significance (the Burra Charter 1999)**, which South Africa has adopted.

4. APPROACH AND METHODOLOGY

4.1. Literature Survey

The purpose of a literature survey was to obtain background information in order to form a picture of the heritage potential of the area. A number of reports have been generated through heritage impact assessment studies in the area, which set both a theory base as well as influenced approaches to fieldwork. Some of the reports have been posted on internet.

4.2. Local Information

Local knowledge of the area obtained from the Client regarding mining and geology is acknowledged in this report.

4.3. Ground Survey

A field visit was made between 30 November and 2nd December 2016. Ground survey was done by means of a motor vehicle combined with random walking and targeted surveys of spots seen as likely to yield material.

4.4. Significance Ranking

The sites have been ranked to show potential risks and appropriate protection measures which must be taken:

	SIGNIFICANCE	RANKING
1	National and Provincial heritage sites (Section 7 of NHRA). All burials including those protected under Section 36 of NHRA. They must be protected.	High
2	Substantial archaeological deposits, buildings protected under Section 34 of NHRA. These may be protected at the recommendations of a heritage expert.	Medium A
3	Sites exhibiting archaeological characteristics of the area, but do not warrant further action after they have been documented.	Medium B
4	Heritage sites which have been recorded and are deemed of minor importance.	Low

5. ARCHAEOLOGICAL AND HISTORICAL CONTEXT

An outline of the cultural sequence in South Africa provides general context for identification of heritage resources in the development area. The cultural sequence spans nearly 4.4 million, the major epochs of which are the appearance of Hominids, the Stone Age, Iron Age and Historical Period.

5.1. Appearance of Hominids

Hominid or proto-humans appeared in South Africa more than 3million years ago. Hominid sites and their fossil remains are largely confined to dolomite caves on the highveld in Gauteng, Limpopo and Northwest Provinces.¹ Hominid refers to primate species which are the immediate ancestors of man. The nearest hominid site is Taung near Vryburg (300km to the north).This site is inscribed on the UNESCO World Heritage Site in a serial nomination with the Sterkfontein (Krugersdorp) and Makapans Valley (Mokopane).

¹ Deacon, J. and N. Lancaster. 1986. *Later Quaternary Palaeo-environments of Southern Africa*. Oxford: Oxford University Press.

5.2. The Stone Age

The Stone Age dates back more than 1.5 million years, and marks a more diagnostic appearance of the cultural sequence divided into three epochs, the Early, Middle and Late Stone Ages. Stone and bone implements manifest the technological development and typologies indicating chronological development.

5.2.1. The Early Stone Age [1.4 million – 250 000 yrs BP]

The Early Stone Age marks the earliest appearance of stone artefacts about 1.4 million years ago. Such tools bore a consistent shape such as the pear-shaped handaxe, cleavers and core tools (Deacon & Deacon, 1999). These tools, which have been called Acheulian after a site in France, were probably used to butcher large animals such as elephants, rhinoceros and hippopotamus. Acheulian artefacts are usually found near sites where they were manufactured and thus in close proximity to the raw material or at butchering sites. The early hunters are classified as hominids or proto-humans, meaning that they had not evolved to the present human form.

A good profile of the Stone Age is emerging partly as a result of a number of Heritage Impact Assessments that have been conducted in the region in recent years. According to Vollenhoven Early Stone Age sites have been reported on the farm Drooge Veldt No 292 near Barkly West. Further afield to the east Stone Age finds at Wonderwork Cave near Kuruman and Khathu have been widely publicised.²

5.2.2. Middle Stone Age (MSA) [250 000 yrs – 30 000 yrs BP]

The Middle Stone Age (MSA) appeared more than 200 000 years ago. It marks 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 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. These were two

² A.C. van Vollenhoven. 2014. Heritage Scoping Report Related to the Eskom Kimberley strengthening phase 4 project between the Boundary and Ulco Substations in the Northern Cape province

remarkable steps in human cultural advancement.³ Middle Stone Age sites are known from many localities in the area including Lylyfeld, Demaneng, Mashwening, King, Rust & Vrede, Paling, Gloucester and Mount Huxley to the north.⁴

5.2.3. Later Stone Age (LSA)[40 000 yrs to ca2000 yrs BP]

By the beginning of the LSA, humans had evolved into *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 are definitely 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. A number of LSA sites has been reported in the area in the area during heritage impact studies although most researchers are hesitant to draw a fine distinction between the MSA and LSA.⁵ Both Rock paintings and engravings have been reported around Danielskuil ca80km to the west of the properties.⁶ Ancient workings of specularite at Tsantsabane and Doornfontein near Postmasburg and Beeshoek respectively seems to indicate the technology and demand for minerals date back to the MSA, contrary to the notion that it started during the Iron Age.⁷

5.3. The Iron Age Culture [ca. 2000 years BP]

The Iron Age culture supplanted the Stone Age at least 2000 years ago, associated with the introduction of farming (peoples practiced agriculture and kept domestic animals such as cattle, sheep, goat and chicken amongst others) and use of several

³ Deacon, J & H. Deacon. 1999. *Human Beginnings in South Africa*. Cape Town: David Philip.

⁴ Morris, D. 2005: Report on a Phase 1 Archaeological Impact Assessment of proposed mining areas on the farms Ploegfontein, Klipbankfontein, Welgevonden, Leeuwfontein, Wolhaarkop and Kapsteveld, west of Postmasburg, Northern Cape. p3.

⁵ Schalkwyk, J 2015. Heritage scoping assessment for the proposed Perseus-Kronos 765kv Transmission Power Line and Substations Upgrade, Northern Cape and Free State Provinces.

⁶ Orton. J. 2015. Heritage Impact assessment for the Proposed 132 KV Olien-Karats Power Line at Lime Acres, Postmasburg Magisterial District, Northern Cape.

⁷ Van Vollenhoven, A. C. 2014. Heritage Scoping Report Related to the Eskom Kimberley strengthening phase 4 project between the Boundary and Ulco Substations in the Northern Cape Province. Beaumont, P.B. & Boshier, A.K. 1974. Report on test excavations in a prehistoric pigment mine near Postmasburg, Northern Cape. *S. Afr. Archaeol. Bull.* 29, 41 - 59.

metals and pottery. There is however increasing evidence that sheep might have moved into the area much earlier than the Iron Age.

5.3.1. Early Iron Age

The Early Iron is generally associated with the population of the subcontinent by speakers of Bantu languages. A sudden appearance of metal and farming technologies in South Africa, and the whole region of Eastern and Southern Africa, is postulated. Pottery styles are used as spatial and chronological markers. Coexistence and amalgamation with pre-existing Stone Age communities certainly happened, the cultural encounters producing the hybrid people and languages found in the area today.

There are few if any sites attributed to the EIA in the western parts of the country. Settlement preference for the relatively wetter woodlands to the east and eastern seaboard, compared to the arid west appears to have been a logical response to environmental opportunities and constraints. There is a strong possibility that transhumant pastoralism / seasonal hunting camps existed in the western regions from the Stone Age through to the Iron Age, although there is little or no surviving physical evidence of these activities.

The Later Iron Age

The LIA is marked by the presence of extensive stonewalled settlements such as the Tlhaping capital at Dithakong near Kuruman.⁸

5.4. Historical Context

What is particularly remembered of this period is the *Difaqane* or *Mfecane*, violent episodes characterised by war and displacements which affected the eastern seaboard as well as the high plateau. The Northern Cape was not spared; it was affected by the arrival of new groups from the north and east – the Tlokwa, Fokeng, Hlakwa and Phuting tribal groups – historical ethnic groups of Tswana stock.⁹

5.5. The European Contact Period

⁸ De Jong 2010: 36
⁹

As the Difaqane was playing out there were new arrivals in the area – the Griquas, the Korana and white communities from the southwest. There was a steady stream of White traders, hunters and missionaries from the Cape. PJ Truter and William Somerville reached the Tlhaping capital at Dithakong near Kuruman in 1801. Cowan, Donovan, Burchell and Campbell travelled into the interior which prompted James Read to establish the London Mission Society station near Kuruman in 1817. After these initial contacts, the Boer Trek starting in 1836 brought in a large number of farmers with their stock. This put pressure on existing communities creating a conflict situation which the British tried to resolve through the Keate Arbitration, setting the border between the Boers and the Bechuanaland Protectorate in 1871. Meanwhile another conflict had started over the ownership of diamond fields discovered in the area in 1867 pitting the Boers, Griquas and Korana. The British intervened again proclaiming their own territory, Griqualand West, over the diamond fields in 1871, which was eventually annexed to the Cape Colony in 1879. The discovery of diamonds at Kimberley in 1871 created the dramatic momentum for industrialisation and urbanisation. The area around Kimberley was an active theatre of the Anglo-Boer War with many skirmishes ultimately leading to a three months siege of Kimberley by the Boers in 1899-1900.

The above cultural and historical sequence provides context for the identification of heritage resources in the area.

6. FINDINGS OF THE HERITAGE SURVEY

Thirty-three (33) sites were recorded. A significance ranking system was used for the purpose to recommend appropriate mitigation in view of the proposed development. The attributes of the sites are systematically documented with photo illustrations in a Catalogue in Section 8 of this Report. In addition the Table below is a Site Inventory in spreadsheet with a summary of the attributes of the sites.

6.1. Ranking of Findings

	RANKING	SIGNIFICANCE	No of sites
1	High	National and Provincial heritage sites (Section 7 of NHRA). All burials including those protected under Section 36 of NHRA. They must be protected.	0
2	Medium A	Substantial archaeological deposits, buildings protected under Section 34 of NHRA. Footprint of early modern mining. These may be protected at the recommendations of a heritage expert.	5
3	Medium B		16
4	Low	Heritage sites which have been recorded, but considered of minor value relative to the proposed development.	12
		TOTAL	33

PORTION OF THE FARM 393

SITE NO	LATITUDE	LONGITUDE	PERIOD	DESCRIPTION	RANKING
S1	28° 4'7.00"S	24°25'29.00"E	MSA/LSA	One scraper/flake found	Medium B
S2	28° 4'42.90"	24°25'16.20"E	MSA/LSA	One flake/scraper found.	Medium B
S3	28° 5'45.00"S	24°24'35.80"	MSA/LSA	Scraper of dolomite shows convex percussion bulb	Medium B
S4	28° 6'35.20"S	24°23'37.73"E	MSA/LSA	Dolomite tool underside pear-shaped.	Medium B
S5	28° 5'42.93"S	24°24'29.56"E	Early Modern Mining	Fissure mining	Medium A
S6	28° 5'39.92"S	24°24'28.66"E	Early Modern Mining	Fissure mining	Medium A
S7	28° 5'27.70"S	24°24'37.20"E	Early Modern Mining	Old mine claim pegs	Medium A
S8	28° 5'24.30"S	24°24'39.10"E	Modern mining	Old mine shaft	Low
S9	24°24'37.80"E	24°24'37.80"E	Modern mining	Hunting camp	Low
S10	28° 4'21.58"S	24°25'30.40"E	Early Modern Mining	Old mine hole and claim pegs	Low
S11	28° 6'41.78"S	24°23'51.44"E	Modern mining	Shaft No 1 at southern end	Low
S12	28° 6'21.88"S	24°24'1.83"E	Modern mining	Main Shaft No 2	Low
S13	28° 6'21.51"S	24°24'6.96"E	Modern mining	Training Centre	Low
S14	28° 6'13.15"S	24°24'1.89"E	Modern mining	Workers village 22 units, including communion	Low
S15	28° 6'9.97"S	24°24'10.55"E	Modern mining	Shaft No 3 and Mine Village	Low
S16	28° 5'42.10"S	24°24'29.30"E	Modern mining	Shaft No 4 near old workings	Low
S17	28° 5'42.42"S	24°24'20.88"E	Modern mining	Gabled house	Low
S18	28° 6'9.40"S	24°24'16.00"E	Modern mining	Old Building	Low

PORTION OF THE REMAINING EXTENT OF FARM 84

SITE NO	LATITUDE	LONGITUDE	PERIOD	DESCRIPTION	RANKING
S19	28° 6'24.91"S	24°23'0.37"E	MSA/LSA	Flakes	Medium B
S20	28° 8'7.40"S	24°22'2.00"E	MSA/LSA	3 stools, 2 obsidian and 1 chert	Medium B
S21	28° 7'54.10"S	24°22'8.50"E	MSA/LSA	4 occurrences of stone tools	Medium B
S22	28° 7'37.10"S	24°22'22.19"E	MSA/LSA	One scraper	Medium B
S23	28° 7'8.90"S	24°22'39.60"E	MSA/LSA	2 tools including chert	Medium B
S24	28° 6'41.70"S	24°22'54.00"E	MSA/LSA	Possible core from which flakes has been made.	Medium B
S25	28° 6'3.90"S	24°22'53.30"E	MSA/LSA	Flake tools/scrapers found	Medium B
S26	28° 5'22.60"S	24°22'49.70"E	MSA/LSA	Several flakes/scrapers and waste material	Medium B
S27	28° 5'19.80"S	24°22'45.80"E	MSA/LSA	4 scrapers	Medium B
S28	28° 6'15.90"S	24°22'33.61"E	MSA/LSA	4 scrapers	Low
S29	28° 6'9.60"S	24°22'18.90"E	Early Modern Mining	Old mine working	Low
S30	28° 6'18.60"S	24°22'8.10"E	MSA/LSA	Stone tools found among calcrete stones	Medium B
S31	28° 6'26.70"S	24°21'56.40"E	MSA/LSA	Cattle watering place, one scraper found	Medium B
S32	28° 6'9.30"S	24°24'37.20"E	Early Modern Mining	Old mine ramp with stone revetment wall	Medium A
S33	24°24'37.20"E	24°24'37.20"E	Commercial Farming	A linear pile of stones 470m long	Medium A

6.2. Summary of Findings

6.2.1. PORTION OF THE FARM 393

Eighteen Sites were recorded (see inventory and catalogue).

The Stone Age

Four (4) Stone Age Sites were recorded all with a low density of lithics, and none demonstrating concentrated or regular activity. None of the sites represent substantial settlement to warrant further investigation. The sites appear to be spread all over the plateau and escarpment.

The Iron Age

No Iron Age sites were found on the property

Early Modern Mining

The occurrence of many mine claim pegs (an iron plaque standing in a concrete cube base) is evidence of the existence of many small claims in the early pioneering years. None of the trenches made by the small-scale minors are worth preserving. The claim pegs in concrete are portable and can be moved, displayed in a park or garden.

Two instances of early fissure mining have been recorded. One site is fenced off with a steel palisade. One or both fissures may be wholly or partially preserved as evidence of early mining methods.

Modern Mine infrastructure and associated buildings

Buildings and Infrastructure at the four mine shafts were recorded, of which none is more than 60 years old. Although these are important utilities, they carry no heritage significance in terms of statutory provisions.

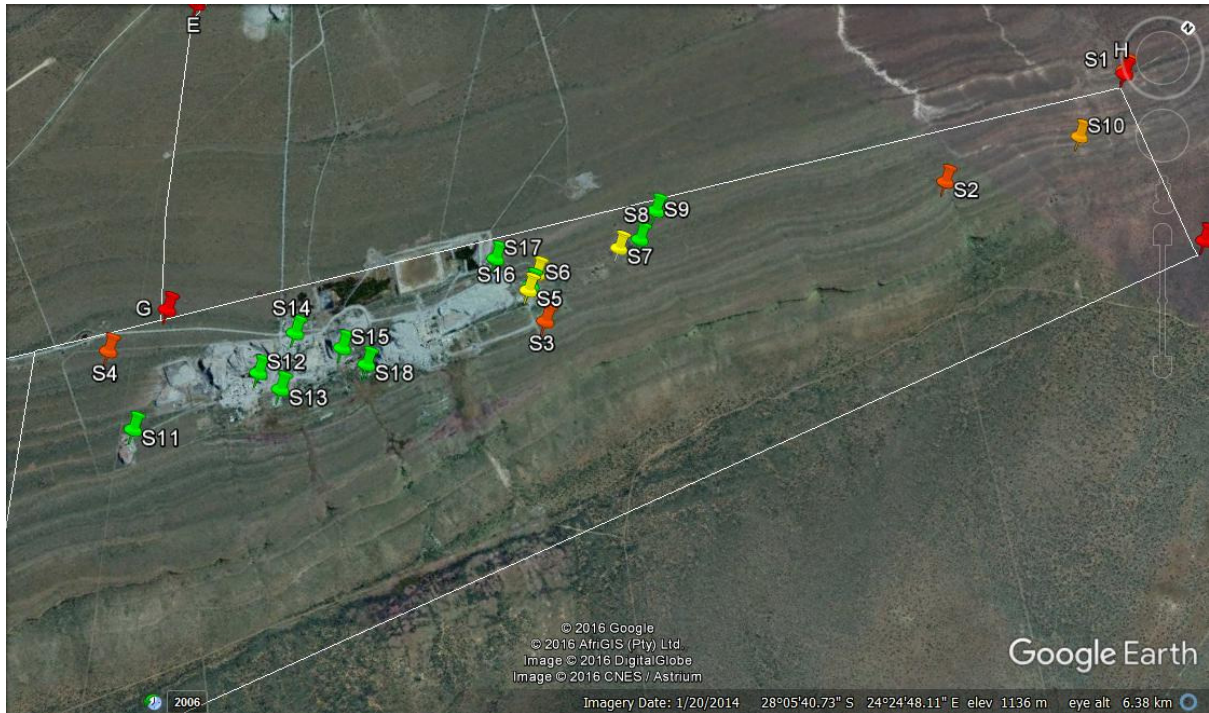


Fig 8. Sites on a Portion of the Farm 393. Orange= Stone Age sites; Yellow = sites of the early mining period; Green = Sites of no heritage value in terms of statutory provisions.

6.2.2. THE REMAINING EXTENT OF 84

Fifteen (15) sites were recorded (see Inventory and Catalogue)

The Stone Age

Twelve (12) Stone Age Sites were recorded of which all have a low density of lithics, and none demonstrating concentrated or regular activity (S19 – S27, S30-S31). They seem to represent general activity and movement of foragers in the area in the MSA/LSA. and no particular regular settlement can be pinpointed. The sites have been recorded and no further mitigation is recommended.

The Iron Age

No Iron Age sites were found on the property.

Early Modern Mining

A deep mine trench was recorded (S29). An old concrete ramp or terrace with a stone revetment wall with a maximum height of 220m was built on the crest of the ridge. It appears to be the remains of a processing plant. This structure is in a sound state and can be preserved as a footprint of early modern mining in the area.

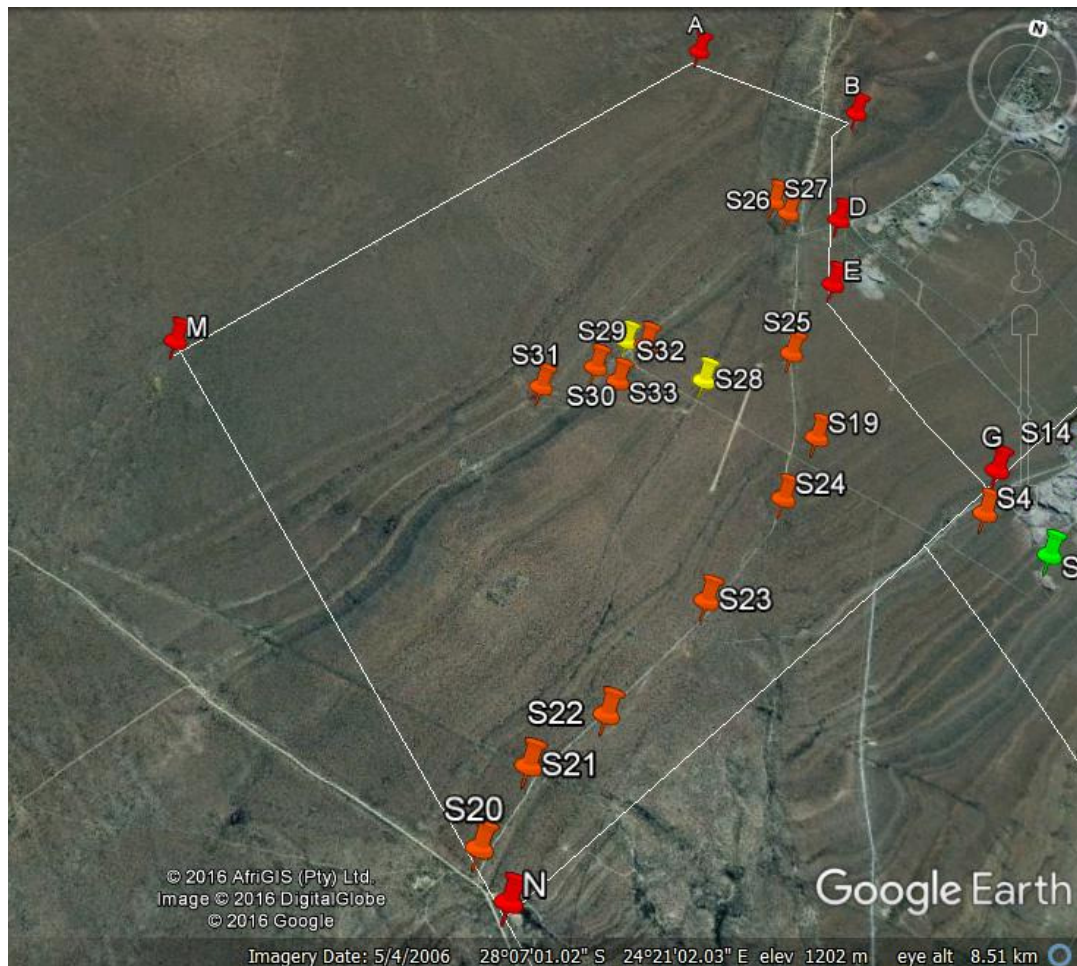


Fig 9. Sites on Portion of the Remaining extent of the Farm 393. Orange= Stone Age sites; Yellow = sites of the early mining period.

Linear pile of stones

A linear pile of stones 470m long laid transverse to the ridge. The stones appear to have been extracted during trenching for a water pipeline. They were replaced after laying of the pipe and backfilling. The pile is a significant linear feature in the landscape seen from the top of the ridge, and may be worth preserving.

6.3. Assessment of Impacts Using the Heritage Impact Assessment Statutory Framework

6.3.1. Section 3(3) of the NHRA

The following is an assessment of the value of the identified heritage resources in accordance with Section 3 of the NHRA which defines the National Estate.

(3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of—

	STATUTORY REFERENCE	OBSERVATIONS
(a)	Its importance in the community, or pattern of South Africa's history	None
(b)	Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage	None
(c)	Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	The high frequency of stone tools dating to the MSA/LSA is typical of the highveld region of the Northern Cape
(d)	Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	None
(e)	Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group	None
(f)	Its importance in demonstrating a high degree of creative or technical achievement at a particular period	None
(g)	Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	The beginning of mining and modernisation in South Africa.
(h)	Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa	None
(i)	Sites of significance relating to the history of slavery in South Africa.	None

6.3.2 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

Thirty-three sites (33) sites were recorded.

(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. However the sites have been ranked in four categories for the purpose to recommend appropriate mitigation in view of the proposed development.

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

The risk ranking is a definition of potential risks based on perceived value of the heritage and potential threats posed by the proposed development. Five (5) sites may deserve to be protected.

(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 developing momentum in mining operations point to great future potential of the mineral wealth to provide stimulus for rapid socio-economic development in the Northern Cape Province and the country as a whole. Mining is labour intensive and there is real prospect of employment relief in view of the current high rate of employment in the country. General improvement in the quality of livelihoods in local communities and the country at large is expected.

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

N/A

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

Excavation, drilling, placement of rail/roads/conveyor belts must avoid the sensitive areas as identified in this survey.

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

In the event of discovery of other heritage resources during site preparation and mining phase, the Provincial Heritage Resources Authority or SAHRA will be informed immediately and an archaeologist or heritage expert called to attend.

6.4. Risk Assessment of the Findings

EVALUATION CRITERIA	RISK ASSESSMENT
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)
Nature of Impact	Negative, both direct & indirect impacts.
Extent of Impact	Test pits, drilling and ground clearing has potential to damage archaeological resources above and below the surface not seen during the survey.
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 before mitigation	High.
Mitigation measures	Protect graves and part of the old pioneer mine. Should archaeological or other heritage relics be found during the construction phase, heritage authorities will be advised immediately and a heritage specialist will be called to attend. This is standard precaution in view of inherent limitations of archaeological fieldwork.
Level of significance of impacts after mitigation	Low.
Cumulative Impacts	None.
Comments or Discussion	None.

7. RECOMMENDATIONS AND CONCLUSIONS

The mine prospecting can go ahead subject to the precautions stated above taken. In the event of discovery of other heritage resources in future phases of the project, the Provincial Heritage Resources Authority or SAHRA must be alerted immediately and an archaeologist or heritage expert called to attend.

8. CATALOGUE OF SITES

8.1. CATALOGUE OF SITES ON PORTION OF THE FARM 393

No	COORDINATES	PERIOD
S1	28° 47.00"S, 24°25'29.00"E	MSA/LSA



DESCRIPTION

Northern boundary of the Farm. Open site with scrub vegetation. Concentration of calcrete stones. One scraper/flake found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S2	28° 4'42.90", 24°25'16.20"E	MSA/LSA

DESCRIPTION



On the edge of the plateau. Dolomite bedrock and large concentration of stones is evidence of extensive dolomite surface weathering. A dry streambed descending the plateau. One flake/scrapper found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

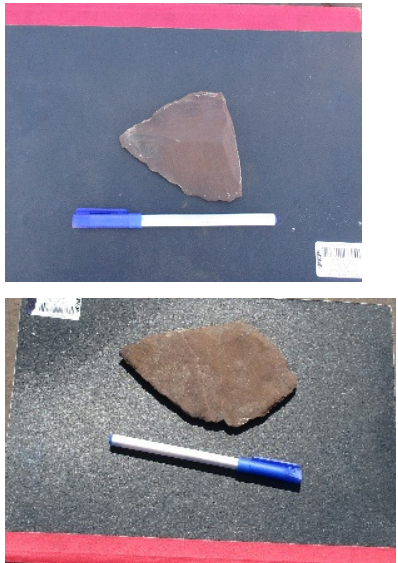
No	COORDINATES	PERIOD
S3	28° 5'45.00S", 24°24'35.80"E	MSA/LSA


DESCRIPTION




On the edge of the plateau. Dolomite bedrock, Acacia scrub vegetation. Scraper of dolomite shows convex bulb of percussion.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA


No	COORDINATES	PERIOD
S4	28° 6'35.20"S, 24° 23'37.73"E	MSA/LSA
DESCRIPTION		
		
<p>Southern boundary of the Farm. Scrub vegetation on exposed dolomite bedrock. Possible dolomite tool, upper side in the shape of a pyramid, and underside pear-shaped.</p>		
<p>HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.</p>		

No	COORDINATES	PERIOD
5	28° 5'42.93"S, 24° 24'29.56"E	Early modern mining
		
<p>DESCRIPTION</p> <p>Fissure mining, early method of modern reef diamond mining. Site is enclosed by a steel palisade.</p>		
<p>HERITAGE SIGNIFICANCE: Significant as evidence early methods of reef diamond mining.</p>		
<p>MITIGATION</p> <p>The site is preserved and retention as footprint of early modern mining is recommended.</p>		

No	COORDINATES	PERIOD
6	28° 5'39.92"S, 24° 24'28.66"E	Early Modern Mining
		
<p>DESCRIPTION Fissure mining, early method of modern reef diamond mining</p>		
<p>HERITAGE SIGNIFICANCE: Significant as evidence early methods of reef diamond mining.</p>		
<p>MITIGATION</p>		<p>Whole or partial retention of fissure to show evidence of early reef diamond mining.</p>

No	COORDINATES	PERIOD
S7	28° 5'27.70"S, 24°24'37.20"E	Early Modern Mining
		
		
<p>DESCRIPTION</p> <p>Mine claims pegs mounted on concrete bases. Evidence of secondary use as shooting targets.</p>		
<p>HERITAGE SIGNIFICANCE: History of early modern mining.</p>		
<p>MITIGATION</p>	<p>The pegs may be moved to a park/garden or museum for preservation / exhibition as mining history artefacts.</p>	

No	COORDINATES	PERIOD
S8	28° 5'24.30"S, 24° 24'39.10"E	MSA/LSA
  <p data-bbox="193 1352 384 1384">DESCRIPTION</p> <p data-bbox="193 1397 1225 1473">Rusted iron frame, relict mine headgear. There is a terrace or ramp retained by a stone wall.</p>		
HERITAGE SIGNIFICANCE: History of modern mining.		
MITIGATION	The structures appear to date to the 1980s. Preservation not necessary. A museum might be interested in the material.	

No	COORDINATES	PERIOD
S9	24°24'37.80"E, 24°24'37.80"E	Modern Mining
<p data-bbox="188 331 379 365">DESCRIPTION</p>  <p data-bbox="193 969 807 1003">Building of cement blocks. Flat roof. Hunting camp.</p>		
<p data-bbox="188 1014 954 1048">HERITAGE SIGNIFICANCE: Structure is less than 60 years old</p>		

No	COORDINATES	PERIOD
S10	28° 4'21.58"S, 24°25'30.40"E	MSA/LSA


DESCRIPTION





Mine claim pegs. Circular mine hole.


HERITAGE SIGNIFICANCE: Significant as evidence early methods of reef diamond mining.

MITIGATION Pegs may be moved to a park/garden or museum for be preservation / exhibition as mining history artefacts.

No	COORDINATES	PERIOD
S11	28° 6'41.78"S, 24°23'51.44"E	Modern Mining
		
<p>DESCRIPTION</p> <p>Shaft No 1 located on the southern limits of the Farm. Underground reef mine headgear dating to the 1980s; it is currently being rehabilitated.</p>		
<p>HERITAGE SIGNIFICANCE: Structure is less than 60years.</p>		

No	COORDINATES	PERIOD
S12	28° 6'21.88"S, 24°24'1.83"E	Modern Mining
		
<p>DESCRIPTION</p> <p>Main Shaft (No 2) – Headgear, other installations, buildings include main office complex and workshop.</p>		
<p>HERITAGE SIGNIFICANCE: Structures less than 60 years old.</p>		

No	COORDINATES	PERIOD
S13	28° 6'21.51"S, 24°24'6.96"E	MSA/LSA
		
<p>DESCRIPTION</p> <p>Training Centre combines single incline and gable roofs. The blocks enclose a square courtyard at the centre.</p>		
<p>HERITAGE SIGNIFICANCE: Building less than 60 years.</p>		

No	COORDINATES	PERIOD
14	28° 6'13.15"S, 24°24'1.89"E	MSA/LSA
		
<p>DESCRIPTION</p> <p>Workers village consists of rectangular houses with flat corrugated iron roofs, and long communal buildings operating like hostels.</p>		
<p>HERITAGE SIGNIFICANCE: Buildings less than 60 years old.</p>		


No	COORDINATES	PERIOD
S15	28° 6'9.97"S, 24°24'10.55"E	MSA/LSA





DESCRIPTION

Shaft No 3. Headgear and a number of associated buildings including a village complex housing the mine workers.

HERITAGE SIGNIFICANCE: Structures / installations less than 60years old.

No	COORDINATES	PERIOD
S16	28° 5'42.10"S 24°24'29.30"E	MSA/LSA
 <p>DESCRIPTION Shaft No 4. Head gear and operations room.</p> <p>HERITAGE SIGNIFICANCE: Installations less than 60 years old.</p>		

No	COORDINATES	PERIOD
S17	28° 5'42.42"S, 24°24'20.88"E	MSA/LSA
 <p>DESCRIPTION Isolated house made of prefabricated material.</p> <p>HERITAGE SIGNIFICANCE: Structure less than 60 years.</p>		

No	COORDINATES	PERIOD
S18	28° 6'9.40"S, 24°24'16.00"E	MSA/LSA
 <p data-bbox="188 875 376 904">DESCRIPTION</p> <p data-bbox="188 920 1262 954">A house located on the foot of a large tailing heap. Appears to have been broken recently.</p> <p data-bbox="188 969 890 1003">HERITAGE SIGNIFICANCE: Structure less than 60 years.</p>		

**8.2. CATALOGUE OF SITES ON PORTION OF THE REMAINING EXTENT OF FARM
84**

No	COORDINATES	PERIOD
S19	28° 6'24.91"S, 24°23'0.37"E	MSA/LSA
<div data-bbox="188 479 871 981" data-label="Image"> </div> <div data-bbox="188 994 834 1447" data-label="Image"> </div> <p data-bbox="188 1509 376 1541">DESCRIPTION</p> <p data-bbox="188 1554 1262 1630">Scrub vegetation, border area of dolomite bedrock to the east and a calcerious area to the west. Two flakes/waste material.</p> <p data-bbox="188 1646 1262 1727">HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.</p>		



No	COORDINATES	PERIOD
S20	28° 8'7.40"S, 24°22'2.00"E	MSA/LSA



DESCRIPTION

Southern boundary of the farm. Flat area, sparsely wooded with Acacia. Exposures of dolomite and scatters of calcrete. 3 stools, 2 obsidian and 1 chert.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S21	28° 7'54.10"S, 24°22'8.50"E	MSA/LSA
<div style="display: flex; flex-direction: column; align-items: flex-start;">   <p data-bbox="193 1088 384 1122">DESCRIPTION</p> <p data-bbox="193 1133 1214 1211">Dry streambed, stony area with calcrete. Sparse Acacia scrub. 4 occurrences of stone tools.</p> <p data-bbox="193 1223 1270 1303">HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.</p> </div>		

No	COORDINATES	PERIOD
S22	28° 7'37.10"S, 24°22'22.19"E	MSA/LSA



DESCRIPTION

Flat area with calcrete stones, largely open with Acacia scrub. One scraper found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S23	28° 7'8.90"S, 24°22'39.60"E	MSA/LSA



DESCRIPTION

Open flat area with sparse scrub vegetation, Two tools including chert.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S24	28° 6'41.70"S, 24°22'54.00"E	MSA/LSA



DESCRIPTION

Open area with scrub. Calcareous soils with calcrete stone. Possible core from which flakes has been made.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S25	28° 6'3.90"S, 24°22'53.30"E	MSA/LSA



DESCRIPTION

Open flat area with scrub vegetation. Flake tools/scrapers found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S26	28° 5'22.60"S, 24°22'49.70"E	MSA/LSA
 		
<p>DESCRIPTION</p> <p>The area is a low ridge but generally flat. Calcrete stones and exposures of bedrock. Several flakes/scrapers and waste material.</p> <p>HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.</p>		

No	COORDINATES	PERIOD
S27	28° 5'19.80"S, 24°22'45.80"E	MSA/LSA

DESCRIPTION



Area is flat with sparse scrub vegetation. There is a borehole nearby. Four scrapers found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S28	28° 6'15.90"S, 24°22'33.61"E	Early modern mining
<div data-bbox="189 378 927 925" data-label="Image"> </div> <p data-bbox="197 943 384 969">DESCRIPTION</p> <p data-bbox="197 987 671 1014">Mining trench ca15m x 3m x 3m (depth).</p> <p data-bbox="197 1032 938 1059">HERITAGE SIGNIFICANCE: Footprint of early modern mining.</p>		

No	COORDINATES	PERIOD
S29	28° 6'9.60"S, 24°22'18.90"E	MSA/LSA



DESCRIPTION

At the base of a dolomite ridge. Concentration of broken dolomite stones is evidence of weathering of the bedrock. 5 flakes/scrapers found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S30	28° 6'26.70"S, 24°21'56.40"E	MSA/LSA



DESCRIPTION

On the crest of the ridge. Stone tools found among calcrete stones.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S31		MSA/LSA



DESCRIPTION

Watering place for cattle. One scraper found.

HERITAGE SIGNIFICANCE: Significant as evidence of tool manufacturing and use during the MSA/LSA.

No	COORDINATES	PERIOD
S32	28° 6'9.30"S, 24°22'14.40"E	MSA/LSA



On the crest of the ridge. A ramp with revetment wall of stone and mortar. Below there are some low terrace walls. Iron gad 40cm long. Possible site of processing plant.

HERITAGE SIGNIFICANCE: Footprint of early modern mining.

MITIGATION

The structure may be preserved.

No	COORDINATES	PERIOD
S33	28° 6'21.01"S, 24°22'13.81"E	Modern Mining



DESCRIPTION

On the foot of the ridge. A linear pile of stones 470m long laid transverse to the ridge protected a buried water pipeline.

HERITAGE SIGNIFICANCE: Footprint of commercial farming

MITIGATION

A significant feature in the landscape seen from the top of the ridge and may be preserved.

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Legislation

National Heritage Resources Act (No 25: 1999)

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