



(AHS) Archaeological and Heritage Services Africa (Pty) Ltd

Reg. No. 2016/281687/07

PHASE I HERITAGE IMPACT ASSESSMENT (INCLUDING PALAEOLOGICAL ASSESSMENT) REQUESTED IN TERMS OF SECTION 38 OF THE NATIONAL HERITAGE RESOURCES ACT NO 25/1999 FOR A MINING RIGHT ON A PORTION OF PORTION 1 & PORTION OF PORTION 351 OF FARM VOORUITZIGT 81 KIMBERLEY DISTRICT, NORTHERN CAPE PROVINCE

Prepared by

Edward Matenga

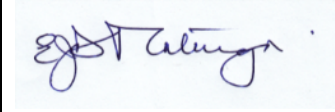
(MPhil, Archaeology; PhD Archaeology & Heritage, Uppsala/Sweden)

Monday, 29 May 2017

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DOCUMENT CONTROL

APPLICANT	ENVIRONMENTAL CONSULTANT
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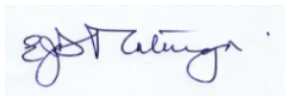
	Name	Signature	Date
FIELD WORK & REPORT:	E. Matenga		26/05/2017

DECLARATION OF INDEPENDENCE

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

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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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

EXECUTIVE SUMMARY

This Heritage Impact Assessment (HIA) report has been prepared in compliance with Section 38 of the National Heritage Resources Act (No 25/1999). The Client, Kimcrush (Pty) Ltd, intends to lodge an application for a Mining Right on a Portion of Portion 1 & Portion of Portion 351 of the Farm Vooruitzigt 81, Kimberley District, Northern Cape Province. The HIA forms an integral component of an Environmental Impact Assessment to be conducted as a prerequisite for the authorisation of the project.

The proposed mining will be undertaken by open cast methods. The target mineral is dolerite which will be crushed at the site to obtain various grades of stone for civil works: ballast stone, crusher sand, crusher dust, paving gravel, building concrete stone, and other grades of concrete stone for roadworks and rail installation. As the foot print of the mine will be extended new service roads will be opened and other support infrastructure developed. These physical works may result in the disturbance or destruction of heritage resources if they exist. For this reason an HIA is necessary to prepare a heritage impact statement showing what is present or what is likely to occur at the site.

A Heritage Impact Assessment (HIA) is a study to evaluate the impact a proposed development or site alteration will have on the cultural heritage resources and to recommend an overall approach to the conservation of the resources. An HIA is based on an understanding of heritage and its significance, and if heritage is found in the area of the proposed development mitigation options are considered and recommendations made on a conservation strategy that best conserves the resource(s) within the context of the proposed development.

Findings of the survey

Borrow pits have been operated on an eastern portion of the property as revealed by wide troughs of varying depths (P1), while on the southern part of this area excavations have been partially filled up with building debris (P2). Building debris is also found on the north-western edge of the excavated area. All the material appear to have been deposited within the last 20 years, while the borrow pits have been active up to a recent date. None of this material therefore carries heritage significance. Elsewhere

the surface appears to be sterile without material evidence of past human activity. Furthermore there is no evidence of the impact of the city on the property which carries heritage significance.

The significance ranking (with a colour scheme) refers to perceived impacts and risk of the proposed development. In addition appropriate interventions and mitigation strategies are also proposed.

	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.	0
3	Medium B	Sites exhibiting archaeological characteristics of the area, but do not warrant further action after they have been documented.	0
4	Low	Heritage sites which have been recorded, but considered of minor importance relative to the proposed development.	0
		TOTAL	0

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). Mining by opencast methods
Nature of Impact	Negative, both direct & indirect impacts.
Extent of Impact	Test pits, drilling, opencast excavation, deep level mining have potential to damage heritage 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	If heritage resources are discovered during the proposed mine operations the heritage resources authorities must be informed and a heritage expert called to attend.
Level of significance of impacts after mitigation	Low.
Cumulative Impacts	None.
Comments or Discussion	None.

Recommendations and conclusions

No heritage resources were found during the survey. This gives the project a green light to go ahead. If heritage resources were to be found during the prospecting or mining phases, the procedure is to approach the relevant heritage authorities (SAHRA and/or the Provincial Heritage Resources Authority).

1. INTRODUCTION

This Heritage Impact Assessment (HIA) report has been prepared for Kimcrush (Pty) Ltd in support of an application for a Mining Right on a Portion of Portion 1 & Portion of Portion 351 of the Farm Vooruitzigt 81, Kimberley District, Northern Cape Province. The HIA report is in compliance with Section 38 of the National Heritage Resources Act (No 25 of 1999). A ground survey was conducted on 26 April 2017 to assess the heritage sensitivity of the area and to determine potential adverse impacts of the proposed activities.

1.1. Nature of proposed development

The proposed mining will be undertaken by open cast methods. The target mineral is dolerite which will be crushed at the site to obtain various grades of stone for civil works: ballast stone, crusher sand, crusher dust, paving gravel, building concrete stone, and other grades of concrete stone for roadworks and rail installation. As the foot print of the mine will be extended new service roads will be opened and other support infrastructure developed. These physical works may result in the disturbance or destruction of heritage resources if they exist. For this reason an HIA is necessary to prepare a heritage impact statement showing what is present or what is likely to occur at the site.

1.2. Location and physical setting

The property is located on the western outskirts of Kimberley. Kimberley is the capital of the Northern Cape Province and one of the earliest and largest cities in South Africa. It is located on a plain between the Vaal and the Orange Rivers. Both these rivers are flowing west and join at a confluence 115km southwest of Kimberley (Fig 1).

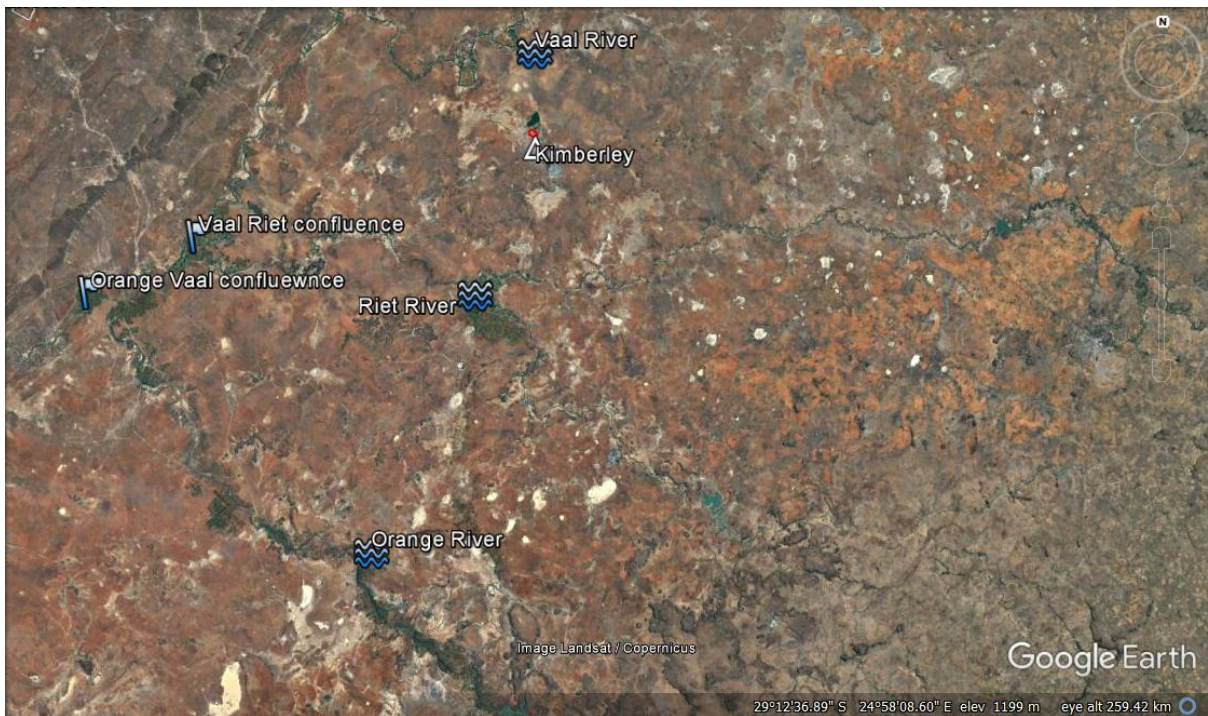


Fig 1. Google-Earth map shows the location of Kimberley relative to the Vaal, Riet and Orange Rivers.

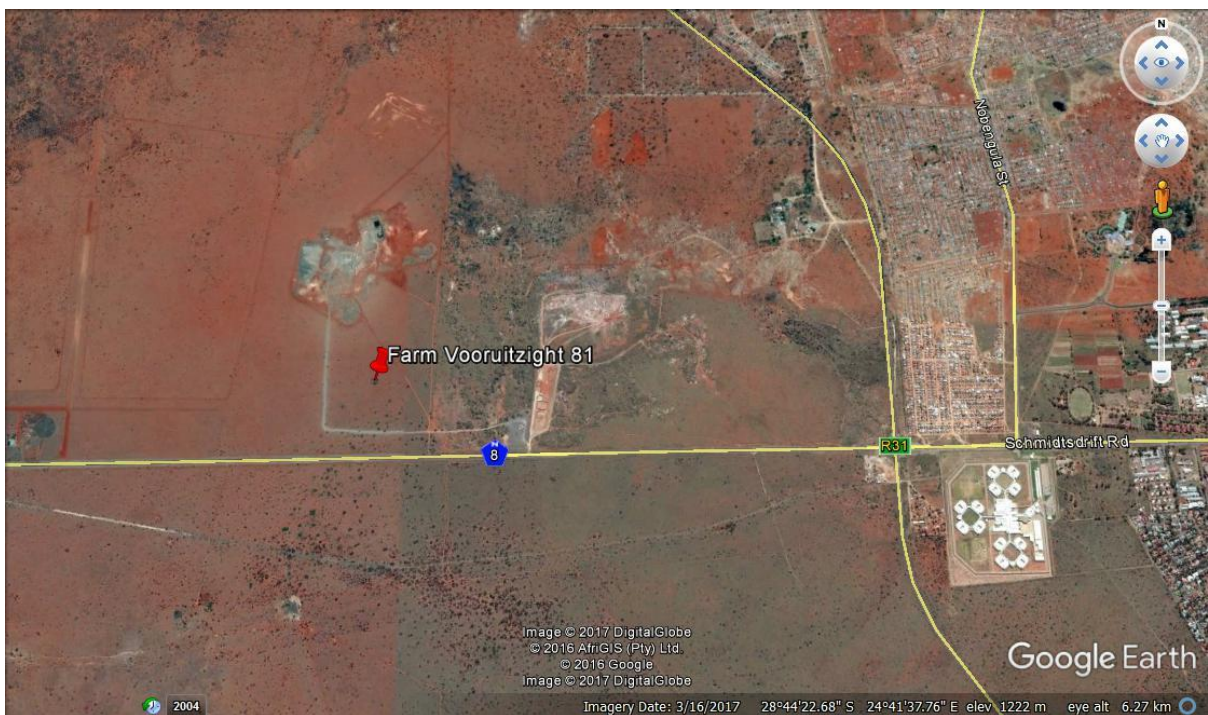


Fig 2. Google-Earth map shows the locations of the property on the western outskirts of Kimberley.

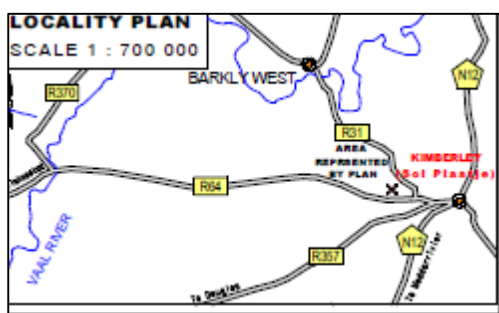
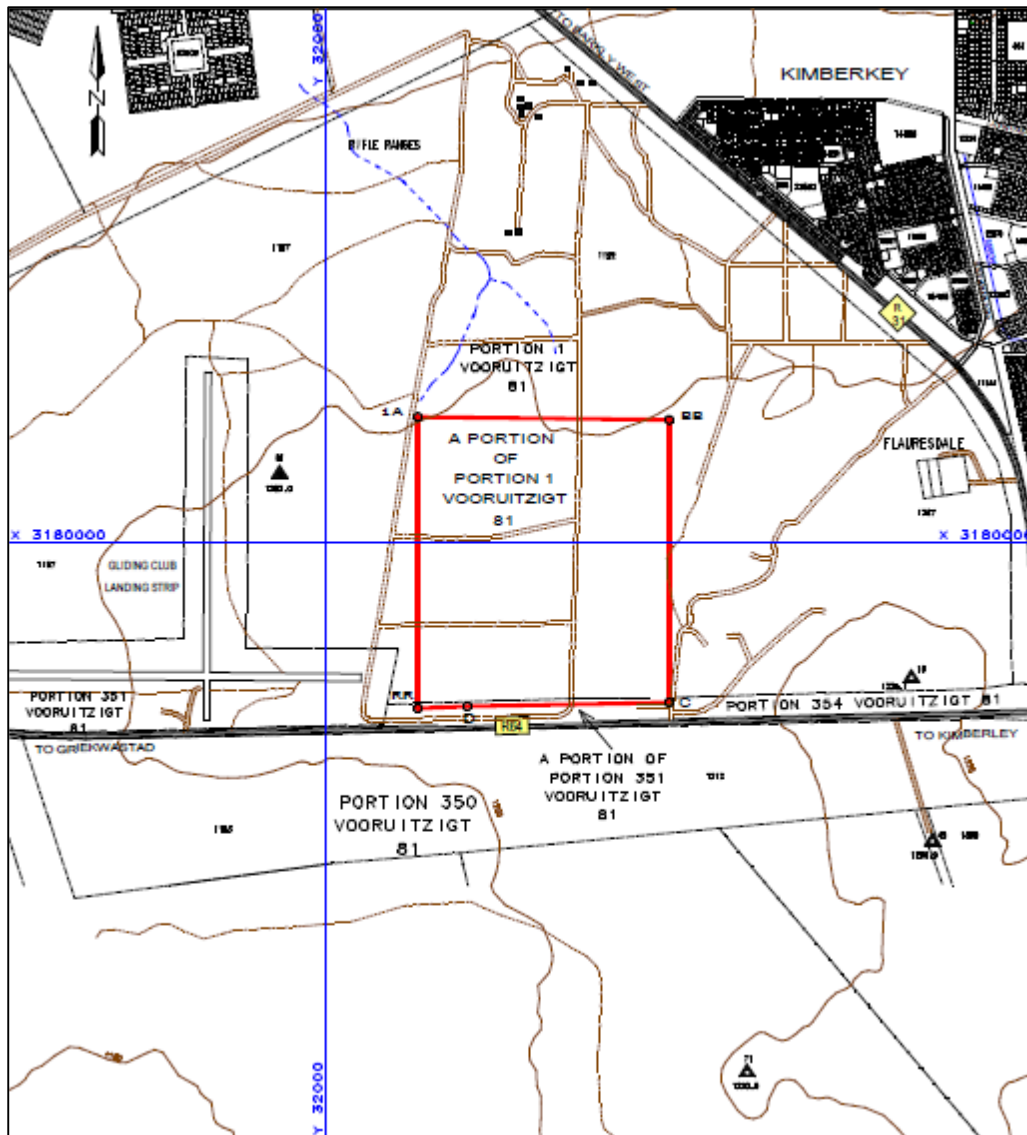


Fig 3. Layout map of the property (courtesy of Kimcrush (Pty) Ltd).

The property is located 2km from the western limits of Kimberley along the N8 highway from the city to Griekwastad. The highway forms the southern boundary of the property. While a small eastern portion of the property has been used as a quarry or borrow pit, a large portion to the west is undisturbed and exhibits the natural vegetation

and soil characteristics of this part of the highveld. The terrain is flat, an open grassland with scattered acacia trees (dominated by *Acacia erioloba*) (Fig 4). The natural vegetation surrounding Kimberley is classified as the Kimberley Thorn Bushveld. The sandy plain support mainly trees and grasses.¹ The crushing plant which is currently being operated and the open cast dolerite source takes a northern central position on the property. A large portion of the property is overlain by fine red-brown loamy sand soils (Fig 5).



Fig 4. Grasses and *Acacia erioloba* occupy a large portion of the property.

¹Anderson, T. 2001. A beginner's Guide to the Plants of Kimberley and Surrounds. McGregor Museum, p3.



Fig 5. The area is overlain by red-brown loamy sand soils.

2. LEGAL FRAMEWORK

This heritage impact assessment fulfils a public responsibility to safeguard heritage resources. That obligation has been legislated and Sections 34, 35, 36 and 38 of the National Heritage Resources Act (No 25 of 1999) form the context in which this HIA report has been prepared.

2.1. Section 38 of NHRA: Heritage Impact Assessments

Section 38 of the NHRA states the nature and scale of development which triggers a HIA:

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

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

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

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

- (i) **exceeding 5 000 m² in extent**²; 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 the regulations by SAHRA or a provincial heritage resources authority,*
- must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

2.2. Protection of buildings and structures older than 60 years

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

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

2.3. Protection of Archaeological Sites

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

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

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*

² The areal extent of the proposed development has triggered the HIA.

(d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

2.4. Graves and burial grounds

Section 36 of the NHRA gives priority for the protection of Graves and Burial Grounds of victims of conflict and graves and burial grounds more than 60 years old. Within this frame cautious approaches are considered including managed exhumations and re-interment to pave way for development:

2.5. The Burra Charter on Conservation of Places of Cultural Significance

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

3. METHODOLOGY AND THEORETICAL APPROACHES

3.1. Literature survey

A review of all available relevant literature included reports of previous HIAs conducted in the in broader area of the study area, historical books, and project planning documents. A lot of material was researched on internet portals, in particular most of the HIA reports that are referred to in this report have been obtained from the internet.

3.2. Fieldwork

The ground survey was conducted on foot with a vehicle used to move between survey areas. The locations that were surveyed were photographed and findings were recorded in a template. A Catalogue of the surveyed locations is presented in Section 5 of this Report.

3.3. South Africa's mining heritage

Kimberley is a historic city, an important aspect of heritage which has been considered in this impact evaluation. The **ICOMOS Charter for the Conservation of Historic Towns and Urban Areas** (the Washington Charter 1987) defines the qualities of a historic city or town as encompassing the historic character of the town or urban area and all those material and spiritual elements that express this character, especially:

- a) Urban patterns as defined by lots and streets;*
- b) Relationships between buildings and green and open spaces;*
- c) The formal appearance, interior and exterior, of buildings as defined by scale, size, style, construction, materials, colour and decoration;*
- d) The relationship between the town or urban area and its surrounding setting, both natural and man-made; and*
- e) The various functions that the town or urban area has acquired over time.*

Kimberley possess all these qualities although it has not been formally declared as a historic city in terms of the national legislation. As a result all present and future development in the city must be sensitive of the city's significance as the historical cradle of South Africa's mining revolution, the mother town of mining since it started there on a large scale in 1871. Relics of mining history are therefore important in defining South Africa's cultural, economic and political heritage. The local municipality has been sensitively engaging with the public to protect the city's mining heritage, historic buildings and cultural landscapes. One such project sponsored by the De Beers Consolidated Mines is centred on the Big Hole (the footprint of a kimberlite pipe excavation in the centre of the town). The kimberlite pipe was pursued to a depth of 1,097 metres. The Kimberley Mine Museum, a De Beers Consolidated Mines initiative with a lookout point over the famous Big Hole, captures various aspects of the lives of early miners and Kimberley's residents.³

³ <http://www.southafrica.net/za/en/articles/entry/article-southafrica.net-the-kimberley-mine-museum> (Consulted 9 January 2016)

From a Southern African regional perspective it is a fact that the South African mineral wealth, in particular diamonds and gold, was used to finance British colonial expansion in the region, in a fundamental way shaping the course of the region's history.

4. ARCHAEOLOGICAL AND HISTORICAL CONTEXT

4.1. Appearance of hominids

Hominids were proto-humans which appeared in South Africa more than 3 million years ago. The nearest hominid site is Taung near Vryburg (130km to the north). This site is UNESCO World Heritage Site inscribed together with the Sterkfontein (Krugersdorp) and Makapans Valley (Mokopane) in a serial nomination. To my knowledge no hominid sites have been reported in the vicinity of Kimberley.

4.2. The Early Stone Age

4.2.1. The Early Stone Age (2 million to 250 000 years BP)

The Stone Age dates back more than 2 million years representing a more explicit beginning of the cultural sequence divided into three epochs, the Early, Middle and Late Stone Ages. These early people made stone and bone implements. Material evidence is found in caves, rock-shelters and on river sides and edges of streams, and very rarely seen in open country.⁴ Such tools bore a consistent shape such as the pear-shaped handaxe, cleavers and core tools (Deacon & Deacon, 1999). These tool industries have been called Oldowan and Acheulian and 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 kill sites. The early hunters are classified as hominids meaning that they had not evolved to the present human form.

Progressively a good profile of the Stone Age in the Northern Cape has been constructed from many heritage impact assessments that have been conducted in recent years. Early (ESA) and Middle Stone Age (MSA) lithics occur in most of the

⁴ <http://archaeology.about/od/bterms/g/bordercave.htm>

areas with a more recent find of Later Stone Age (LSA) occupations.⁵ The Wonderwerk Cave has become a benchmark for the characterisation of the Stone Age. Excavations reveal a long sequence of occupation spanning the Early (ESA), Middle (MSA) and Later Stone Ages (Humphreys & Thackeray 1983).

4.2.2. Middle Stone Age (MSA) [250 000 yrs – 40 000 yrs BP]

The Middle Stone Age (MSA), which appeared 250 000 years ago, is marked by the introduction of a new tool kit which included prepared cores, parallel-sided blades and triangular points hafted to make spears. By then humans had become skilful hunters, especially of large grazers such as wildebeest, hartebeest and eland. It is also believed that by then, humans had evolved significantly to become anatomically modern. Caves were used for shelter 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.⁶ A number of field surveys have been carried out around Danielskuil 130km northwest of Kimberley confirming significant hunter gatherer activity in the area from the MSA onwards.

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

By the beginning of the LSA, humans are classified as *Homo sapiens* which refer to the modern physical form and thinking capabilities. Several behavioural traits are exhibited, such as rock art and purposeful burials with ornaments, became a regular practice. LSA technology is characterised by microlithic scrapers and segments made from very fine-grained rock. Spear hunting continued, but LSA people also hunted small and large game with bows and poisoned arrows. Because of poor preservation, open sites become of less value compared to rock shelters. The practitioners of rock art are definitely the ancestors of the present San and sites abound in the whole of Southern Africa. A number of rock engravings have been reported in the vicinity of Lime Acres and Danielskuil including recent art ascribed to the Griquas and Khoikhoi.⁷

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, p6.

⁶ Deacon, J & H. Deacon. 1999. *Human Beginnings in South Africa*. Cape Town: David Philip.

⁷ Collins, S. 1973. Rock-engravings of the Danielskuil Townlands. *South African Archaeological Bulletin* 109-110: 49-57.; Eastwood, E.B. & Smith, B.W. 2005. Fingerprints of the Khoekhoen: geometric and handprinted rock art in the Central Limpopo Basin, southern Africa. *South African Archaeological Society Goodwin Series* 9: 63–76.

Wildebeest Kuil Rock Art Centre is a rock engraving site now with an interpretation centre on land owned by the !Xun and Khwe San situated 16 km from Kimberley along the R31 road to Barkly West. The site was first reported to the public in modern times by the renowned 19th century researcher, George William Stow.⁸

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

4.3.1. Early Iron Age

The Iron Age culture supplanted the Stone Age more than 2000 years ago, associated with the introduction of farming and use of several metals and pottery. Early Iron Age (EIA) communities associated with speakers of Bantu languages practiced agriculture and kept domestic animals such as cattle, sheep, goat and chicken amongst others. There is however increasing evidence that sheep and cattle might have moved into the area much earlier than the Iron Age.⁹ Probably the EIA was a gradual spread or expansion of settlement of different groups indigenous to the continent which took place over a long period of time. There are few if any sites attributed to the EIA in the western parts of the country. Most settlements of this period are concentrated in the eastern part of South Africa. The woodland zone was preferred for settlement, but there is strong possibility that transhumant pastoralism was practiced and seasonal hunting camps were established in the inhospitable western regions of the country.

4.3.2. The Later Iron Age(LIA)

The LIA is marked by the presence of extensive stonewalled settlements such as the Tlhaping capital at Dithakong near Kuruman.¹⁰

⁸ Wildebeest Kuil Rock Art Centre, at: <http://www.kimberley.co.za/city/wildebeest-kuil-rock-art-centre/> (Consulted 3 May 2017).

⁹ Evers, T. M. 1988. *Recognition of Groups in the Iron Age of Southern Africa*. Unpublished PhD Thesis, University of Witwatersrand. Huffman 2007. *A Handbook on the Iron Age*. Scottsville: UKZN Press

¹⁰ De Jong 2010: De Jong, R.C. 2010. Heritage impact assessment report: proposed manganese and iron ore mining right application in respect of the remainder of the farm Paling 434, Hay Registration Division, Northern Cape. Unpublished report prepared for Kai Batla Minerals Industry Consultants. Pretoria: Cultmatrix, p

4.4. Historical Context

There are many Tswana stock in the area – for example, Tlokwa, Fokeng, Hlakwana and Phuting, Tlhaping, and Tlaro, certainly descending from the Iron Age and probably some with Stone Age roots. The early 19th century was a political turning point characterised by an increasingly uncertain security situation and internal displacements. The first of these episodes was the Difaqane characterised by inter-tribal raids. During the late 18th and early 19th centuries groups of Griqua herders (people of Coloured stock from the southwest) settled in this area establishing a town called Klaarwater and subsequently renamed Griquatown. Meanwhile the initial wave of white hunters, traders and missionaries also entered the area. A little later the Afrikaners arrived bringing their stock as part of a mass exodus from the Cape called the Great Trek. The discovery of diamonds caused the so called “rush” (see Section 4.5). The area which became known as Griqualand West was subsequently incorporated into the Cape Colony in the 1880s.¹¹

4.5. Brief history of Kimberley

Kimberley Mine, popularly known as the New Rush or Colesberg, was discovered on 16 July 1871 on the Farm Johannes Nicholas De Beer. Mining activity increased dramatically within the first 12 months with the sudden influx of labour population of almost 50 000 men (Fig 6). Political stakes were heightened by competing claims of the governments of the time over the diamond fields: the Cape Colony, Transvaal, Orange Free State and Griqualand under Nikolaas Waterboer. The Free State Boers in particular wanted the area as it lay inside the natural borders created by the Orange and Vaal Rivers. The British Governor of Natal Lord Keate mediated and awarded the territory to Waterboer, who was naturally obliged to place himself under British protection. Griqualand West was proclaimed on 27 October 1871 and subsequently annexed to the Cape Colony.

¹¹ De Jong, R.C. 2010. Heritage impact assessment report: proposed manganese and iron ore mining right application in respect of the remainder of the farm Paling 434, Hay Registration Division, Northern Cape. Unpublished report prepared for Kai Batla Minerals Industry Consultants. Pretoria: Cultmatrix.



Fig 6. Kimberley in the early days (photo on display at the Protea Hotel, Kimberley).

The small rival mine claims operating at Kimberley amalgamated in March 1888 to give birth to the De Beers Consolidated Mines Ltd. This move was orchestrated by Cecil John Rhodes, Alfred Beit, Barney Barnato and Charles Rudd. These men were quite controversial businessmen who ultimately controlled the diamond business and used it as political leverage. Rhodes became Prime Minister of the Cape Colony and used his new found political influence to advance the British imperial project which culminated in the colonisation of Bechuanaland (now Botswana), Northern and Southern Rhodesia (Zambia and Zimbabwe respectively) and Nyasaland (Malawi). De Beers has survived to this day as the largest diamond company in the world and its maxim: *a diamond is forever!* inspires the ever lucrative international diamond market.

The Big Hole located in the centre of the city is a footprint of a kimberlite pipe excavation in the 19th century. It has been preserved as a national monument which epitomises the “rush” and the lasting impact of minerals in the history of South Africa and Southern African region as a whole.

Several battles took place within the vicinity of Kimberley, for example the Boers laid siege on Kimberley during the Anglo-Boer War that trapped more than 50 000

inhabitants. The Battle of Magersfontein, 25km southwest of the town was fought on 11 December 1899. The Boers won that round in what became known as Britain's 'Black Week' during which Scotland's Highland Brigade suffered the worst casualties. A field museum and monument was commissioned there in 1971.¹²

4.6. Kimberley and the struggle for freedom

Kimberley was home to many people who participated in the struggle for freedom, who have been honoured through legacy projects in the city including place names and the erection of memorials. To begin with the largest African township, Galeshewe is named after the Kgosi (King) Galeshewe of the Tlhaping and the South African Navy fast attack craft is named after him. He resisted occupation and was captured in 1878 following an attack on Cornforth Hill near Taung (130km north of Kimberley). Galeshewe was sentenced to twelve years imprisonment for his part in the war. In 1897 he staged another uprising called the Langeberg Rebellion. He was imprisoned on Robben Island and died near Hartswater in 1927.¹³ A Galeshewe Activity Route is promoted in the township featuring several historic places in the township.

Sol Plaatje (9 October 1876 – 19 June 1932) was a native of Kimberley, a distinguished intellectual and founder member of the African National Congress (ANC) and its first Secretary General. He was multitalented journalist / newspaper editor, teacher, linguist, translator, court interpreter and novelist. His house in Kimberley has been turned into a museum.

Professor Z. K. Matthews (20 October 1901 – 11 May 1968) was a distinguished academic, political activist and co-author of the Freedom Charter (1955). He grew up in Malay camp in Kimberley (which was later destroyed) before moving to Fort Hare to study there and take up a teaching post at the University.

¹² The Battle of Magersfontein, Northern Cape. At: <http://www.southafrica.net/za/en/articles/entry/article-southafrica.net-the-battle-of-magersfontein> (Consulted 11 May 2017).

¹³ Kgosi Galeshewe. At: <https://www.revolvy.com/main/index.php?s=Kgosi+Galeshewe> (Consulted 7 May 2017).

Ma' Frances Baard (1 October 1909 – 1997) was a female trade unionist one of the leaders of the epic Women's March to the Union Buildings in 1956. The local District Municipality is named after her.

Robert Sobukwe (5 December 1924 – 27 February 1978), initially a member of the ANC left with a splinter group to form the Pan African Congress (PAC) in 1959. Sobukwe served on Robben Island in solitary confinement until his release in 1969 when he was restricted to Galeshewe Township, Kimberley. He studied law and set up a legal practice there before his premature death in 1978.

The above historical and cultural profile is the context for the identification of heritage resources presented in the next Section.

5. FINDINGS OF THE HERITAGE SURVEY

5.1. General observations

Foot surveys were conducted at 15 locations. No indication of archaeological or other historical material was found in the inspected areas (Fig 7). Borrow pits have been operated on an eastern portion of the property as revealed by wide troughs of varying depths (P1) while on the southern part of this area excavations were partially filled up with building debris (P2). Building discard is also found on the north-western edge of the excavated area. All the material appear to have been deposited within the last 20 years, while the borrow pits have been active up to a recent date. None of this material carries heritage significance. Elsewhere the natural surface appears to be sterile without material evidence of past human activity. Furthermore there is no evidence of the impact of the city on the property with heritage significance.

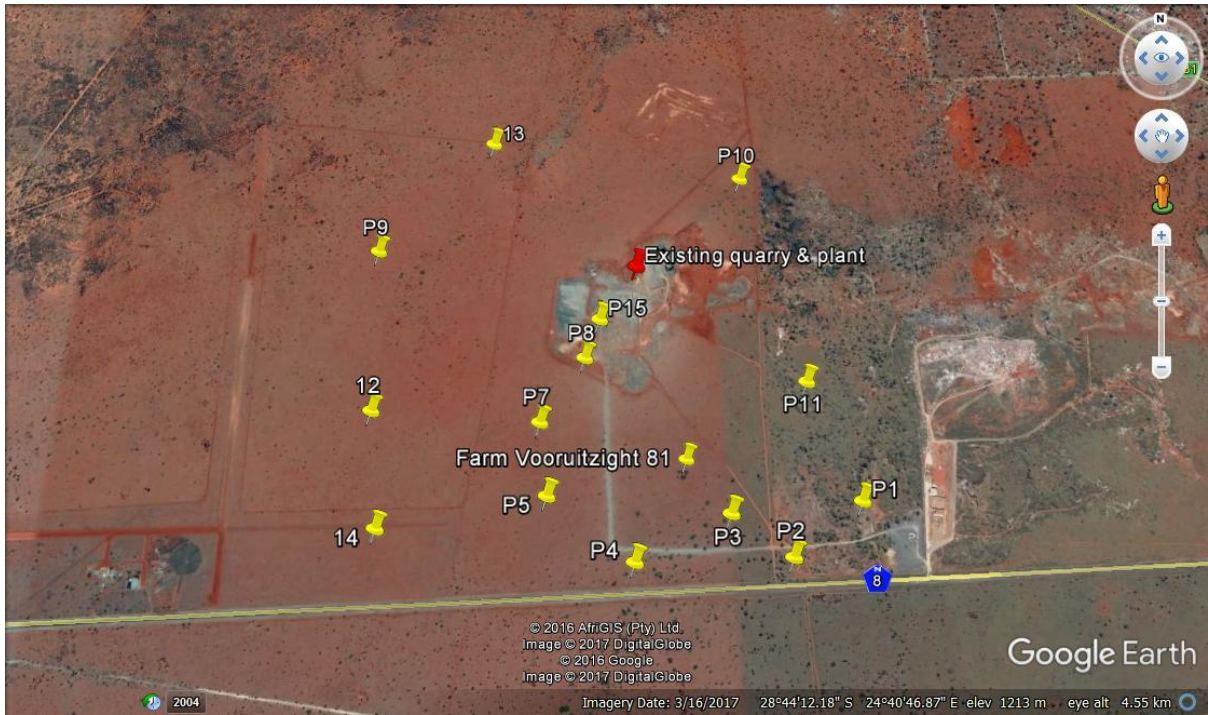


Fig 7. Fifteen locations which were surveyed on foot. No material of heritage significance found.

5.2. Significance ranking of findings

The significance ranking (with a colour scheme) refers to perceived impacts and risk of the proposed development. Appropriate interventions and mitigation strategies are also proposed.

	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.	0
3	Medium B	Sites exhibiting archaeological characteristics of the area, but do not warrant further action after they have been documented.	0
4	Low	Heritage sites which have been recorded, but considered of minor importance relative to the proposed development.	0
		TOTAL	0


5.3. 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). Mining by opencast methods.
Nature of Impact	Negative, both direct & indirect impacts.
Extent of Impact	Test pits, drilling, opencast excavation, deep level mining have potential to damage heritage 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	If heritage resources are discovered during the mining operations the heritage resources authorities must be informed and a heritage expert called to attend.
Level of significance of impacts after mitigation	Low.
Cumulative Impacts	None.
Comments or Discussion	None.

6. RECOMMENDATIONS AND CONCLUSIONS

No heritage resources were found during the survey. This gives the project a green light to go ahead. If heritage resources are to be found during the prospecting or mining phases, the procedure is to approach the relevant heritage authorities (SAHRA and/or the Provincial Heritage Resources Authority) and a heritage expert will be called to attend.

7. CATALOGUE OF SURVEYED LOCATIONS

P1	COORDINATES	28°44'30.50"S	24°41'16.30"E
			
<p>OBSERVATIONS: Old quarry / borrow pit. Scattered acacia.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	


P2	COORDINATES	28°44'36.15"S	24°41'7.47"E
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OBSERVATIONS:


Old quarry / borrow pit, subsequently used as a waste / discard site. Scattered acacia bushes.


HERITAGE SIGNIFICANCE	No heritage resources.
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

P3	COORDINATES	28°44'31.40"S	24°41'0.50"E
			
<p>OBSERVATIONS: Flat terrain, red-brown loamy sand soils. <i>Acacia erioloba</i> (Camel Thorn). Ground visibility moderate to poor.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P4	COORDINATES	28°44'36.15"S	24°40'48.75"E
			
<p>OBSERVATIONS: Flat terrain, red-brown loamy soils. Scattered acacia. Ground visibility moderate to poor.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P5	COORDINATES	28°44'28.97"S	24°40'38.51"E
			
<p>OBSERVATIONS: Flat terrain, red-brown loamy sand soils. <i>Acacia erioloba</i> (Camel Thorn). Ground visibility moderate to poor.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P6	COORDINATES	28°44'22.28"S	24°40'52.39"E
			
<p>OBSERVATIONS: Flat terrain, red-brown loamy sand soils. <i>Acacia erioloba</i> (Camel Thorn). Ground visibility moderate to poor.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P7	COORDINATES	28°44'20.89"S	24°40'37.76"E
			
<p>OBSERVATIONS: Flat terrain, red-brown loamy soils. Acacia bushes. Ground visibility moderate to poor.</p>			
HERITAGE SIGNIFICANCE		No heritage resources.	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P8	COORDINATES	28°44'13.65"S	24°40'43.48"E
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OBSERVATIONS:

Ground exposure on access road. Red-brown loamy sand soils.

HERITAGE SIGNIFICANCE	No heritage resources.
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

P9	COORDINATES	28°43'59.86"S	24°40'16.94"E
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OBSERVATIONS:

Flat terrain, scattered acacia. Ground visibility moderate to poor.

HERITAGE SIGNIFICANCE	No heritage resources.
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

P10	COORDINATES	28°43'51.54"S	24°41'4.89"E
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OBSERVATIONS:

Flat terrain. Scattered acacia. Ground visibility moderate to poor.

HERITAGE SIGNIFICANCE	No heritage resources
POTENTIAL IMPACTS & PROPOSED MITIGATION	-


P11	COORDINATES	28°44'17.11"S	24°41'11.08"E
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OBSERVATIONS:

Area adjacent to the quarry/borrow pits. Dump site, building debris.

HERITAGE SIGNIFICANCE	No heritage resources found.
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

P12	COORDINATES	28°44'19.00"S	24°40'16.96"E
			
OBSERVATIONS:			
Flat terrain, open grassland, scattered trees in the background. Ground visibility moderate to poor.			
HERITAGE SIGNIFICANCE		No heritage resources	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	

P13	COORDINATES	28°43'45.89"S	24°40'31.87"E
			
OBSERVATIONS:			
Flat terrain, scattered trees. Ground visibility moderate to poor.			
HERITAGE SIGNIFICANCE		No heritage resources	
POTENTIAL IMPACTS & PROPOSED MITIGATION		-	
P14	COORDINATES	28°44'31.86"S	24°40'18.12"E



OBSERVATIONS:

Southwest corner of property. Flat terrain, scattered trees. Ground visibility moderate.

HERITAGE SIGNIFICANCE	No heritage resources
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

P15	COORDINATES	28°44'9.09"S	24°40'45.50"E
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OBSERVATIONS:

Crushing plant. Current use. Commissioned 3 years ago.

HERITAGE SIGNIFICANCE	No heritage significance.
POTENTIAL IMPACTS & PROPOSED MITIGATION	-

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Legislation and Policies

National Heritage Resources Act (No 25: 1999)

ICOMOS Australia Charter for the Conservation of Places of Cultural Significance (the Burra Charter 1999)

The ICOMOS Charter for the Conservation of Historic Towns and Urban Areas (the Washington Charter 1987)

GLOSSARY

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 if 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.