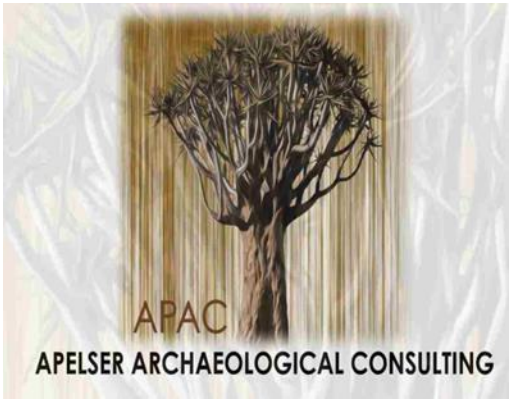

Comprehensive and Professional Solutions for all Heritage Related Matters

CK 2006/014630/23 **VAT NO.: 4360226270**

PHASE 1 HIA REPORT FOR PROPOSED TOWNSHIP ESTABLISHMENT ON A PORTION OF THE REMAINING EXTENT OF ERF 687, BARKLY WES DIKGATLONG LOCAL MUNICIPALITY, NORTHERN CAPE PROVINCE

For:

Maxim Planning Solutions
P.O.Box 6848
FLAMWOOD
2572

REPORT: **APAC020/022**

by:

A.J. Pelser
Accredited member of ASAPA

March 2020

P.O.BOX 73703
LYNNWOOD RIDGE
0040
Tel: 083 459 3091
Fax: 086 695 7247
Email: apac.heritage@gmail.com

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

DISCLAIMER:

Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSER Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.

Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference

SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Maxim Planning Solutions to conduct a Phase 1 HIA for proposed Township Establishment on a Portion of the Remaining Extent of Erf 687, in Barkly-West. The development & study area is located in the Digatlong Local Municipality of the Frances Baard District Municipality of the Northern Cape Province.

The study area is approximately 188 hectares in extent. The project is conducted on instruction from Barzani Town Planning (Pty) Ltd.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the Canteen Koppie Archaeological Heritage site about 1.3km south-east of the town. The assessment of the study area identified some sites, features or material of cultural heritage (archaeological and/or historical) origin or significance. These sites have a Stone Age archaeological origin. This report discusses the results of both the background research and physical assessment and provides recommendations regarding required mitigation measures to minimize the impact of the proposed development on these sites.

Finally, it is recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.

CONTENTS

1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by Maxim Planning Solutions to conduct a Phase 1 HIA for proposed Township Establishment on a Portion of the Remaining Extent of Erf 687, in Barkly-West. The development & study area is located in the Digatlong Local Municipality of the Frances Baard District Municipality of the Northern Cape Province.

The study area is approximately 188 hectares in extent. The project is conducted on instruction from Barzani Town Planning (Pty) Ltd.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the Canteen Koppie Archaeological Heritage site about 1.3km south-east of the town. The assessment of the study area identified some sites, features or material of cultural heritage (archaeological and/or historical) origin or significance. These sites have a Stone Age archaeological origin.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion.

2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;

3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;

4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;

5. Review applicable legislative requirements;

3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

3.1. The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
c. Objects of decorative and visual arts
d. Military objects, structures and sites older than 75 years
e. Historical objects, structures and sites older than 60 years
f. Proclaimed heritage sites
g. Grave yards and graves older than 60 years
h. Meteorites and fossils
i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

a. Places, buildings, structures and equipment of cultural significance
b. Places to which oral traditions are attached or which are associated with living heritage
c. Historical settlements and townscapes
d. Landscapes and features of cultural significance
e. Geological sites of scientific or cultural importance
f. **Sites of Archaeological and palaeontological importance**
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. **Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)**

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
b. The construction of a bridge or similar structure exceeding 50m in length
c. Any development or other activity that will change the character of a site and exceed 5 000m^2 or involve three or more existing erven or subdivisions thereof
d. Re-zoning of a site exceeding 10 000 m^2
e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

a. ancestral graves
b. royal graves and graves of traditional leaders
c. graves of victims of conflict
d. graves designated by the Minister
e. historical graves and cemeteries
f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations** (**Ordinance no. 12 of 1980**) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act** (**Act 65 of 1983 as amended**).

3.2. The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

4. METHODOLOGY

4.1. Survey of literature

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

4.2. Field survey

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

4.4. Documentation

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

5. DESCRIPTION OF THE AREA

The study area is located on a Portion of the Remaining Extent of Erf 687, in Barkly-West, in the Digatlong Local Municpality of the Frances Baard District Municipality of the Northern Cape Province. The study area is approximately 188 hectares in extent and comprises 2 sections (Northern = approximately 102ha & Southern = approximately 86ha). The 2 sections is separated by the R31 road running in an east-west direction from the town.

The topography of the area is relatively flat & open, with some small rocky ridges and outcrops present in parts. Informal settlement has occurred in sections of the study area, and access here was limited. Although large tree cover in the study area is scarce, small tree, shrub and grass cover was fairly dense. This and red sand covering large parts made visibility on the ground relatively difficult. Recent impacts (over and above the informal settlement in sections) in the study and larger surrounding area includes power-and telecommunication lines and servitudes, a railway line on the northern boundary of the development area, the surrounding urban settlements, the R31 road and recent historical mining (diamonds?) and quarrying in the southern portion of the study area. The area would possibly also have been used in the past for agricultural purposes. If any significant sites, features or material of a cultural heritage origin or significance did exist here in the past it would have been disturbed or destroyed to a large degree as a result of these activities.

However, some Stone Age material and possible sites were identified during the assessment. Details on these finds and the recommended mitigation measures will be discussed further on in the report.

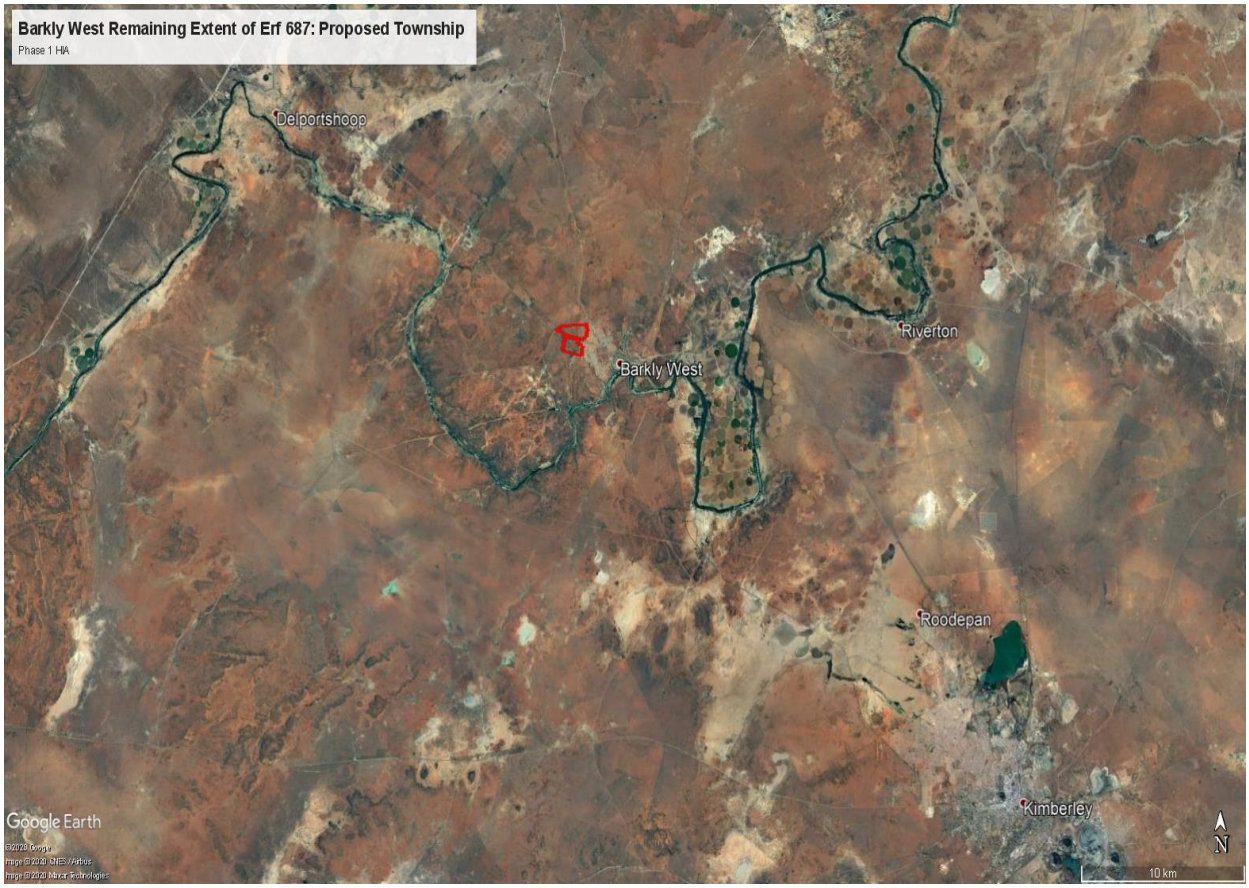

Figure 1: General location of study and development area (Google Earth 2020).

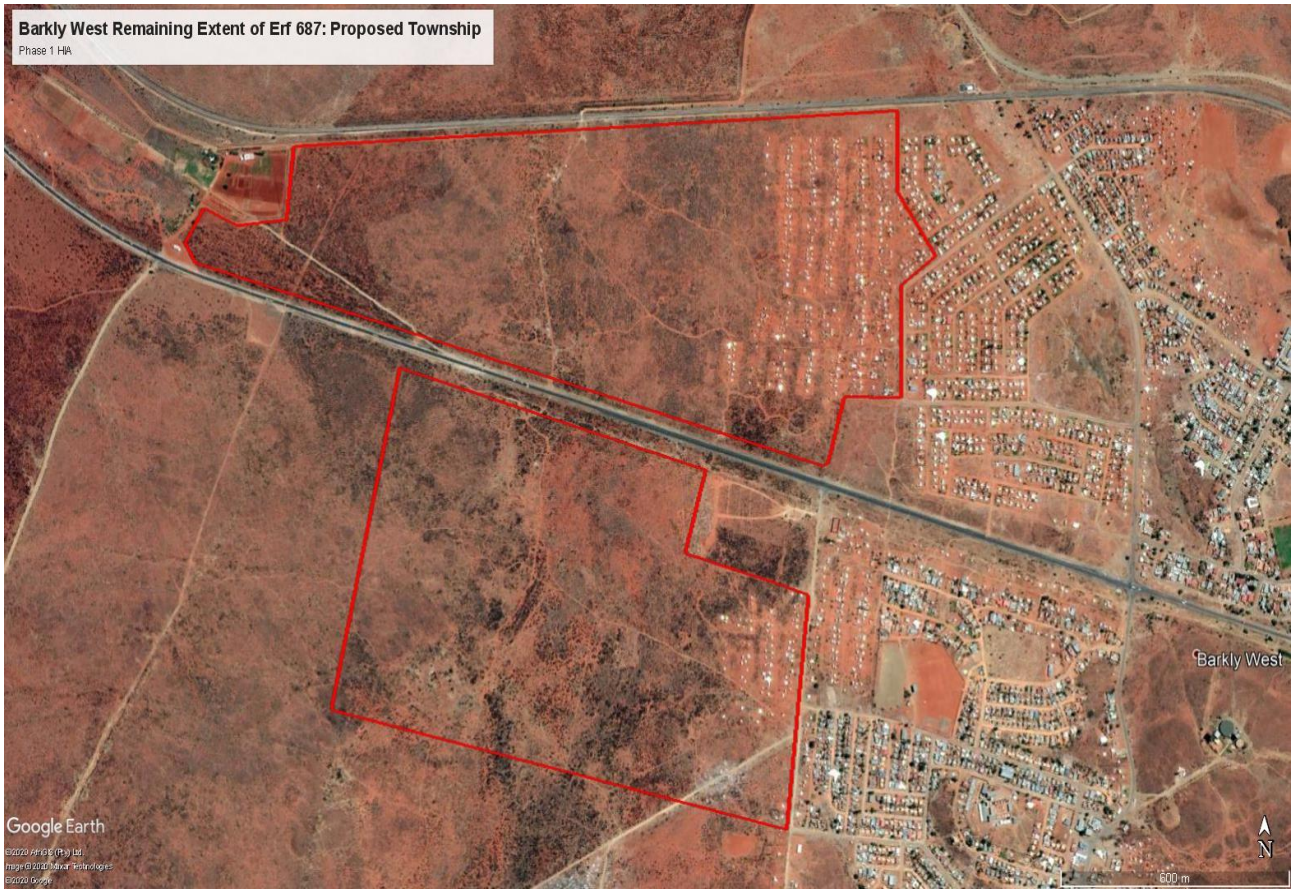

Figure 2: Closer view of study and development area footprint (Google Earth 2020).

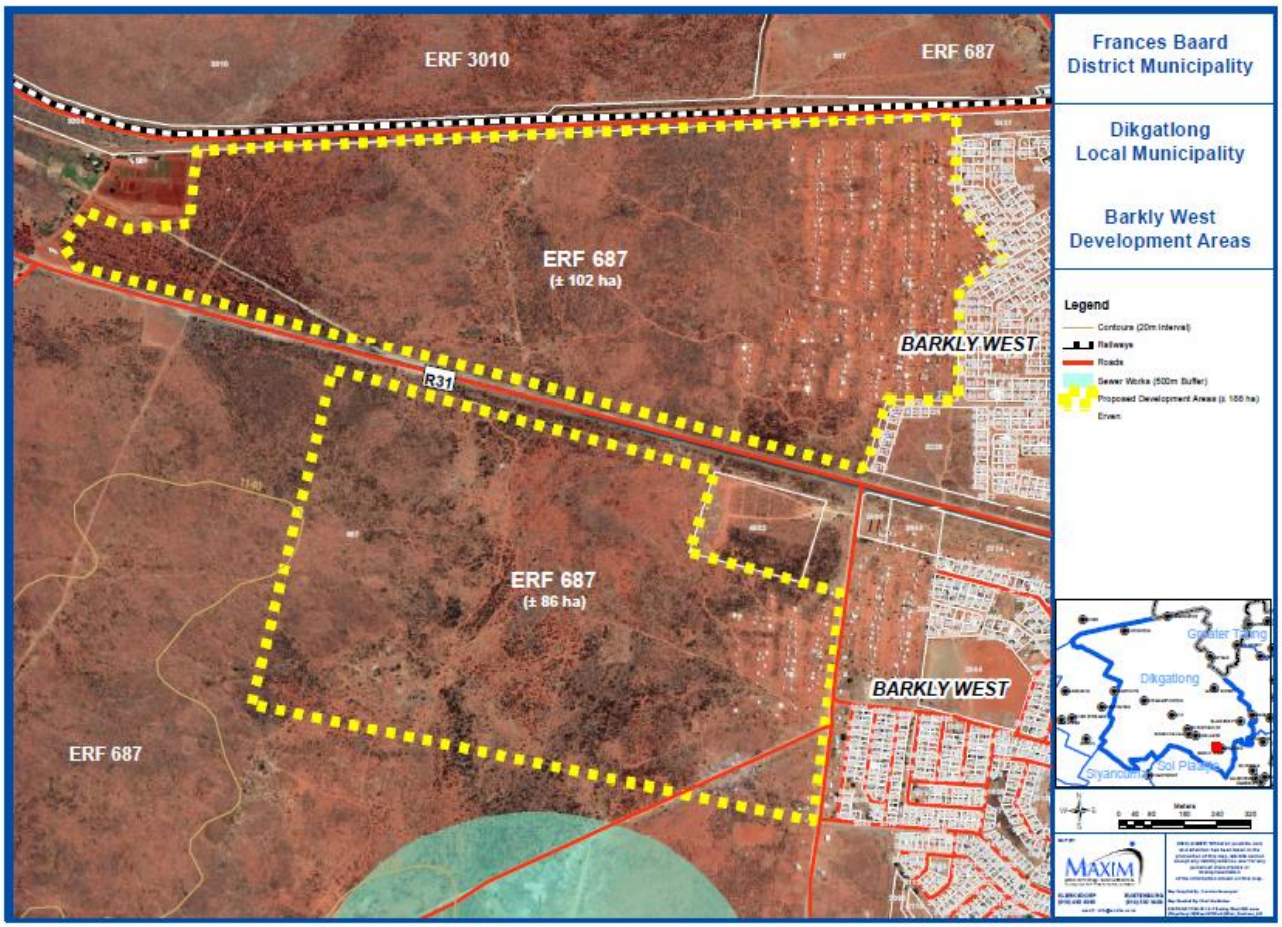

Figure 3: Study Area location and footprint (provided by Maxim Planning Solutions).

Figure 4: A view of a portion of the northern section.

Figure 5: Another view of a portion of the northern section.

Figure 6: A view of the study area showing the dense grass cover and red sands.

Figure 7: Powerline corridor in the area.

Figure 8: Informal dumping also occurs throughout the area.

Figure 9: A view of the railway line on the northern boundary of the Northern section.

Figure 10: Informal settlement in part of the northern section.

Figure 11: Another view of informal settlement in the area.

Figure 12: Some informal settlement close to and in the southern section of the study area.

Figure 13: A view of a portion of the southern section. Again note the grass cover & and red sands.

Figure 14: Some evidence of the recent mining/quarrying in the southern section.

Figure 15: More indication of the recent mining & quarrying in the area.

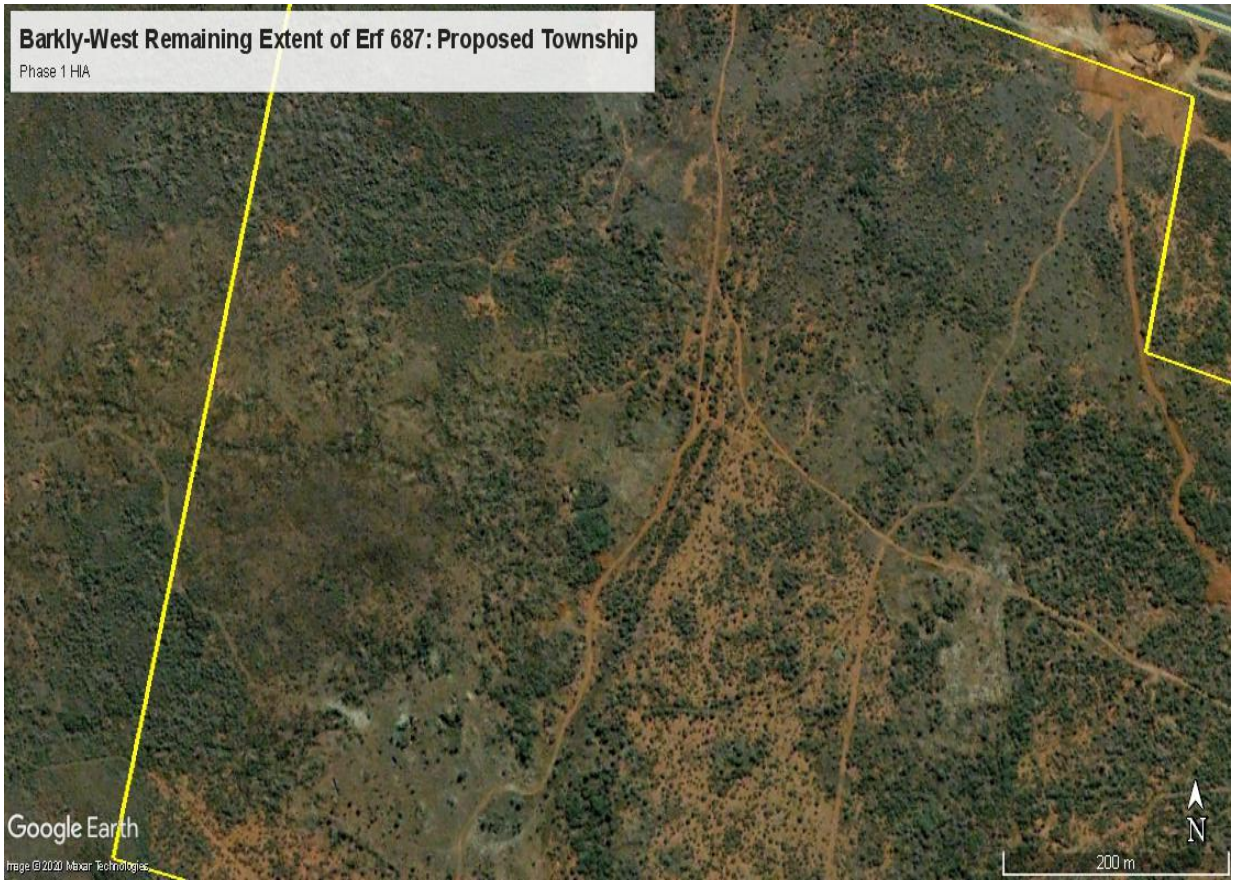

Figure 16: The impact of recent mining/quarrying in the southern section is evident in this 2004 aerial image of the area (Google Earth 2020).

6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

According to David Morris of the McGregor Museum in Kimberley the archaeology of the Northern Cape is rich and varied, covering long spans of human history. The Karoo is particularly bountiful. Some areas are richer than others, and not all sites are equally significant. The significance of sites encountered in the study area may be assessed against previous research in the region and subcontinent. The region's remoteness from research institutions accounts for a relative lack of archaeological research in the area. The area has

probably been relatively marginal to human settlement for most of its history, yet it is in fact exceptionally rich in terms of Stone Age sites and rock art, as a relatively few but important studies have shown (Morris 2006).

Stone Age sites are known to occur in the larger geographical area, including the well-known Wonderwerk Cave in the Kuruman Hills, Tsantsabane, an ancient specularite working on the eastern side of Postmasburg, Doornfontein, another specularite working north of Beeshoek and a cluster of important Stone Age sites near Kathu. Additional specularite workings with associated Ceramic Later Stone Age material and older Fauresmith sites (early Middle Stone Age) are known from Lylyfeld, Demaneng, Mashwening, King, Rust & Vrede, Paling, Gloucester and Mount Huxley to the north. Rock engraving sites are known from Beeshoek and Bruce (Morris 2005: 3).

The most important Stone Age in the area is the famous (and a declared National Heritage Site) Canteen Koppie. The site is located around 1.3km south-east of the town along the Vaal River (De Wit 2008: 53). Canteen Koppie is the site of early diamond diggings which also exposed a major archaeological occurrence of stratified Acheulean facies, subject to a current collaborative research venture by the University of Southampton, the University of the Witwatersrand and the McGregor Museum in Kimberley (www.wikipedia.org).

Some Stone Age sites & artifacts were identified in the study & development area, and the close location of Canteen Koppie to the area should be taken into consideration. The finds and recommended mitigation measures will be dealt with further on in this section.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

The expansion of early farmers, who, among other things, cultivated crops, raised livestock, made ceramic containers (pots), mined ore and smelted metals, occurred in this area between AD 400 and AD 1100 and brought the Early Iron Age (EIA) to South Africa. They settled in semi-permanent villages (De Jong 2010: 35).

While there is some evidence that the EIA continued into the 15th century in the South African Lowveld, on the escarpment it had ended by AD1100. The Highveld became active again from the 15th century onwards due to a gradually warmer and wetter climate. From

here communities spread to other parts of the interior. This later phase, termed the Late Iron Age (LIA), was accompanied by extensive stonewalled settlements, such as the Thlaping capital Dithakong, 40 km north of Kuruman (De Jong 2010: 35-36).

Sotho-Tswana and Nguni societies, the descendants of the LIA mixed farming communities, found the region already sparsely inhabited by the Late Stone Age (LSA) Khoisan groups, the so-called 'first people'. Most of them were eventually assimilated by LIA communities and only a few managed to survive, such as the Korana and Griqua. This period of contact is sometimes known as the Ceramic Late Stone Age and is represented by the Blinkklipkop specularite mine near Postmasburg and finds at the Kathu Pan (De Jong 2010: 36).

Factors such as population expansion, increasing pressure on natural resources, the emergence of power blocs, attempts to control trade and penetration by Griquas, Korana and white communities from the south-west resulted in a period of instability in Southern Africa that began in the late 18th century and effectively ended with the settlement of white farmers in the interior. This period, known as the difaqane or Mfecane, also affected the Northern Cape Province, although at a relatively late stage compared to the rest of Southern Africa. Here, the period of instability, beginning in the mid-1820s, was triggered by the incursion of displaced refugees associated with the Tlokwa, Fokeng, Hlakwana and Phuting tribal groups.

The difaqane coincided with the penetration of the interior of South Africa by white traders, hunters, explorers and missionaries. The first was P.J. Truter's and William Somerville's journey of 1801, which reached Dithakong at Kuruman. They were followed by Cowan, Donovan, Burchell and Campbell and resulted in the establishment of a London Mission Society station near Kuruman in 1817 by James Read. Robert Moffat and his wife Mary came to Kuruman in 1820 and the mission has been known as The Moffat Mission Station ever since.

The Great Trek of the Boers from the Cape in 1836 brought large numbers of Voortrekkers up to the borders of large regions known as Bechuanaland and Griqualand West, thereby coming into conflict with many Tswana groups and also the missionaries of the London Mission Society. The conflict between Boer and Tswana communities escalated in the 1860s and 1870s when the Korana and Griqua communities became involved and later also the British government. The conflict mainly centered on land claims by various communities. For decades the western border of the Transvaal Boer republic was not fixed. Only through arbitration (the Keate Arbitration), triggered by the discovery of gold at Tati (1866) and diamonds at Hopetown (1867) was part of the western border finally determined in 1871. Ten years later, the Pretoria Convention fixed the entire western border, thereby finally excluding Bechuanaland and Griqualand West from Boer domination (De Jong 2010: 36).

No Iron Age sites, features or cultural material was identified during the assessment of the study area.

Information from Wikipedia

Barkly West was the site of the first major diamond rush, in 1870, on the South African Diamond Fields, and was initially known as Klip Drift. This Dutch name means "stony ford" and is a direct translation from a much older !Kora or Korana name, Ka-aub (or !a |aub) - "stony (place along a) river". Briefly the Klipdrift Diggers' Republic was declared (the town assuming the name Parkerton after President Stafford Parker), before colonial rule was extended here. It became, with Kimberley, one of the main towns in the Crown Colony of Griqualand West and was renamed Barkly West (see the article on New Rush). Like Barkly East, the town is named after Sir Henry Barkly, Governor of Cape Colony and High Commissioner for Southern Africa from 1870 to 1877. During the Anglo-Boer War the town was occupied by Boer forces and temporarily went by the name Nieuw Boshof.

Barkly-West is sometimes erroneously spelled as "Barkley-West". The local municipality, post-1994, is called Dikgatlong, part of the Frances Baard District Municipality.

Other historical heritage sites in Barkly West include the Parish Church of St Mary the Virgin. It was the first Anglican Church to be built on the Diamond Fields. Sir Henry Barkly laid the foundation stone in February 1871. Another site is the iron Barkly Bridge, the first over the Vaal River. It was transported in sections from the United Kingdom (by sea, rail and, over the last more than 100 km by ox wagon) and erected across the Vaal in 1885. A steel plate gives details of its manufacture: "Westwood, Baillie & Co, Engineers and Contractors, London 1884". Shops in Kimberley and Barkly West closed for the occasion when the bridge was opened. A new bridge was built alongside in the 1970s. The toll house erected to recover revenues from those using the old bridge now serves as a museum, opened in 2000.

No historical sites or features were identified in the study area during the assessment.

Results of the study area assessment

Three sites with Stone Age material & tools were found during the assessment work carried out in March 2020. One of these was outside of the study and development area footprint and although it will not be recorded in this report it is similar to those found inside and therefore related.

The two sites contain scatters of tools that can be preliminarily dated to the Earlier, Middle & Later Stone Age. The material includes core and flake tools, as well as large Acheul-type handaxes and possible choppers. This is similar to the material found at the Canteen Koppie site and is therefore fairly significant from an archaeological perspective. The two areas recorded are situated in the area where recent mining and quarrying had taken place and the material was therefore more than likely exposed by these activities and not in situ. Furthermore, it was not possible to assess all of the areas exposed by the mining activities and it is therefore envisaged many similar sites and exposures are present in the development area.

In a small trench area investigated during the assessment, in situ river gravels and possible artifacts are visible under a layer of red Aeolian sands. This indicates that similar deposits could be present all across the study and development area and that in situ archeological material is more than likely located here. The proposed development will therefore have a big impact on the archaeological heritage of the area and necessary mitigation measures will have to be implemented. The relation to and similarity with the Canteen Koppie National Heritage Site around 3.5km to the east of the study area increases the significance of these finds. It is worth mentioning the no Stone Age material or sites were noted in the northern section of the development area, although the possibility of sites being present cannot be discounted. In situ deposits could be located underneath the red sands covering large parts of the area and once development actions (trenching, implementation of services) commence sites and material can be exposed.

The following is recommended:

1. A detailed Phase 2 Assessment of the area to map the occurrence of the Stone Age sites and material.

2. Comprehensive and detailed sampling of surface material after obtaining a permit from SAHRA.

3. Conducting of Test excavations in selected areas to determine the presence of and the nature of the archaeological deposits. For this a SAHRA permit will also have to be obtained

4. The implementation of an Archaeological Watching Brief for when the development activities commences. This will ensure that if in situ deposits are exposed that the material can be recovered and studied and preserved.

It is recommended that the first 3 actions be undertaken before development actions commence and that once these have been completed that the proposed development be undertaken with the Watching Brief then implemented as a matter of course.

GPS Location of Sites: S28 31 34.20 E24 29 18.10 (1); S28 31 43.80 E24 29 14.70 (2).
Cultural Significance: Medium to High.
Heritage Significance: Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
Field Ratings: General protection A (IV A): Site should be mitigated before destruction (High/Medium significance)
Mitigation: See above.

Figure 17: Some of the Stone Age tools from Site.

Figure 18: A view of the area around Site 1.

Figure 19: An Acheul-type handaxe from the Site 1 area.

Figure 20: A core tool/chopper from Site 1.

Figure 21: Some of the material from Site 2.

Figure 22: A small trench near Site 2 showing "in situ" gravels and possible artifacts under the red sands and soil surface.

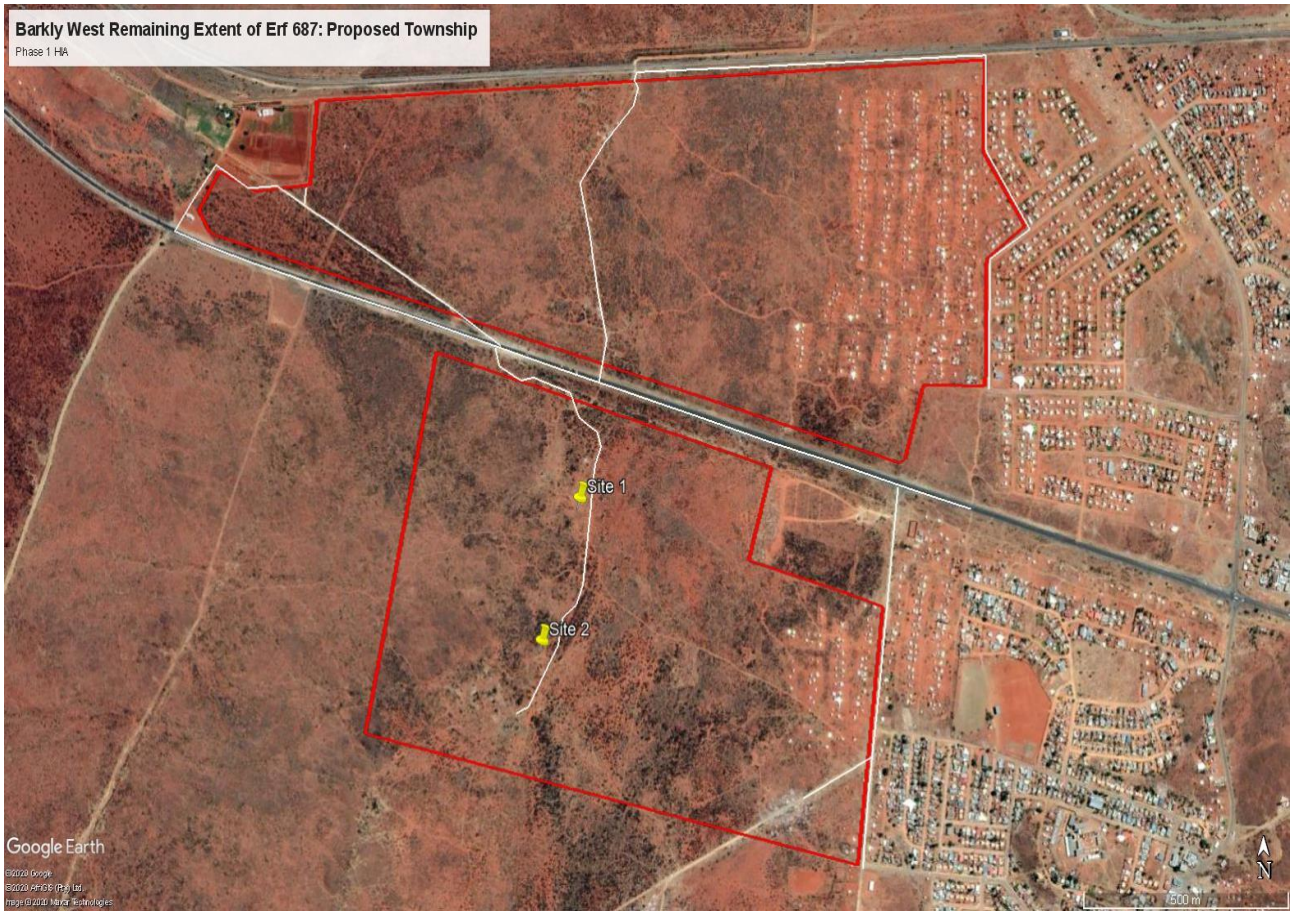

Figure 23: Aerial image showing the sites recorded in the area (Google Earth 2020).

It should be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the Phase 1 HIA for the proposed Township Establishment on the Remaining Extent of Erf 678, in Barkly-West was conducted successfully. The development & study area is located in the Digatlong Local Municpality of the Frances Baard District Municipality of the Northern Cape Province.

The study area is approximately 188 hectares in extent. The project is conducted on instruction from Barzani Town Planning (Pty) Ltd.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. This includes the Canteen Koppie Archaeological Heritage site about 1.3km south-east

of the town. The assessment of the study area identified some sites, features or material of cultural heritage (archaeological and/or historical) origin or significance. These sites have a Stone Age archaeological origin.

The two Stone Age sites found in the study area during the assessment contain scatters of tools that can be preliminarily dated to the Earlier, Middle & Later Stone Age. The material includes core and flake tools, as well as large Acheul-type handaxes and possible choppers. This is similar to the material found at the Canteen Koppie site and is therefore fairly significant from an archaeological perspective. The two areas recorded are situated in the area where recent mining and quarrying had taken place and the material was therefore more than likely exposed by these activities and not in situ. Furthermore, it was not possible to assess all of the areas exposed by the mining activities and it is therefore envisaged many similar sites and exposures are present in the development area.

In a small trench area investigated during the assessment, in situ river gravels and possible artifacts are visible under a layer of red Aeolian sands. This indicates that similar deposits could be present all across the study and development area and that in situ archeological material is more than likely located here. The proposed development will therefore have a big impact on the archaeological heritage of the area and necessary mitigation measures will have to be implemented. The relation to and similarity with the Canteen Koppie National Heritage Site around 3.5km to the east of the study area increases the significance of these finds. It is worth mentioning the no Stone Age material or sites were noted in the northern section of the development area, although the possibility of sites being present cannot be discounted. In situ deposits could be located underneath the red sands covering large parts of the area and once development actions (trenching, implementation of services) commence sites and material can be exposed.

The following is recommended:

1. A detailed Phase 2 Assessment of the area to map the occurrence of the Stone Age sites and material.

2. Comprehensive and detailed sampling of surface material after obtaining a permit from SAHRA.

3. Conducting of Test excavations in selected areas to determine the presence of and the nature of the archaeological deposits. For this a SAHRA permit will also have to be obtained

4. The implementation of an Archaeological Watching Brief for when the development activities commences. This will ensure that if in situ deposits are exposed that the material can be recovered and studied and preserved.

It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other

factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

From a Cultural Heritage point of view the proposed Township Establishment on the Remaining Extent of Erf 678, in Barkly-West could continue once the recommended mitigation measures above have been implemented.

8. REFERENCES

General, Closer views of study area location & footprint and Sites found: Google Earth 2020.

Development Area Map: courtesy Maxim Planning Solutions.

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.

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 Province**. Unpublished Report Cultmatrix Heritage Consultants Project 2010/23 May 2010 for Kai Batla.

De Wit, M.C.J. 2008. Canteen Koppie at Barkly West: South Africa's first Diamond Mine. Department of Geology. Pretoria University, South Africa. **South African Journal of Geology. March 2008**.

Huffman, T.N. 2007. Handbook to the Iron Age: **The Archaeology of Pre-Colonial Farming Societies in Southern Africa**. Scotsville: University of KwaZulu-Natal Press.

Knudson, S.J. 1978. **Culture in retrospect**. Chicago: Rand McNally College Publishing Company.

Lombard, M., L. Wadley, J. Deacon, S. Wurz, I. Parsons, M. Mohapi, J. Swart & P. Mitchell. 2012. **South African and Lesotho Stone Age Sequence Updated (I).** South African Archaeological Bulletin 67 (195): 120–144, 2012.

Morris, David. 2005. **Report on a Phase 1 Archaeological Impact Assessment of proposed mining areas on the farms Ploegfontein, Klipbankfontein, Welgevonden, Leeuwfontein, Wolhaarkop and Kapstevel, west of Postmasburg, Northern Cape. Kimberley**: McGregor Museum.

Morris, David. 2006. **Archaeological Specialist Input to the EIA Phase for the proposed Aries-Garona ESKOM Transmission Power Line, Northern Cape and Comment on the Garona Substation Extension**. Unpublished Report September 2006 for Tswelopele Environmental.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

www.wikipedia.co.za

APPENDIX A: DEFINITION OF TERMS:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE

Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

Aestetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C: SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

i. National Grade I significance: should be managed as part of the national estate

ii. Provincial Grade II significance: should be managed as part of the provincial estate

iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)

iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/ medium significance)

v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)

vi. General protection B (IV B): site should be recorded before destruction (medium significance)

vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D: PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II
Protected areas - An area surrounding a heritage site
Provisional protection – For a maximum period of two years
Heritage registers – Listing Grades II and III
Heritage areas – Areas with more than one heritage site included
Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states
Structures – Older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.

2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.

3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.

4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.

5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.

6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.