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**A 3RD REPORT ON THE ARCHAEOLOGICAL MONITORING WORK
AT THE KATHU EXTENSIONS 6-10 TOWNSHIP ESTABLISHMENT ON
PORTIONS 1 & 2 OF THE FARM KALAHARI GHOLF & JAG LANDGOED 775
GAMAGARA LOCAL MUNICIPALITY (KATHU), NORTHERN CAPE PROVINCE**

For:

Barzani Development (Pty) Ltd

REPORT: APAC022/59

by:

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June 2022

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SUMMARY

APelser Archaeological Consulting (APAC) was initially appointed by Maxim Planning Solutions in 2018 to undertake a Cultural Heritage Resources Impact Assessment in respect of proposed township establishment (Kathu Extension) on Portions 1 & 2 of the farm Kalahari Golf & Jag Landgoed 775 in the Gamagara Local Municipality (Kathu) of the Northern Cape Province.

A number of archaeological and recent historical sites and finds were identified in the study area during the January 2018 assessment (**Report APAC018/04**), and recommendations on their mitigation were provided in this report. In their Final Comments Letter (**of the 20th of March 2019**) on the Phase 1 HIA Report for the proposed Kathu Extensions 6-10 Township Establishment (**Case ID# 13135**), SAHRA concurred with the findings of the Heritage Specialist regarding the Phase 2 Archaeological Mitigation Measures required. A permit for the work was issued to APAC cc (**Permit ID#3024 & Case ID#13944**) at the end of September 2019. The archaeological fieldwork was conducted at the end of October/early November 2019 and the results of the fieldwork presented in a Final Archaeological Report (**Report APAC019/109**). A number of recommendations on the way forward in terms of the continued monitoring of the ongoing development work in the area were provided at the end.

Subsequent to the archaeological work conducted SAHRA requested that the excavations related to the construction activities must be continually monitored for archaeological resources, while the corridor identified between areas A - L represented in the Geotechnical Report Map as part of the Environmental Authorization must be also be monitored by the specialist archaeological team. A Stormwater Management Plan had to be submitted for comment and a detailed archaeological monitoring also submitted to SAHRA for approval.

APAC cc was then appointed by Barzani to undertake the required Monitoring work for a period of 22 months. Due to delays caused by Covid-19 the work commenced in early March 2022 (**APAC022/28**), with a 2nd Site visit conducted in early May 2022 (**APAC022/41**). This document represents the 3rd Report, with fieldwork undertaken at the end of June 2022.

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1. INTRODUCTION

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2. TERMS OF REFERENCE

The Terms of Reference for the Kathu Extensions 6-10 Archaeological Monitoring are to:

1. *Due to the close proximity of the development to Kathu Pan Grade 1 site, the excavations related to the construction activities must be continually monitored for archaeological resources.*
2. *The corridor (Drainage Lines) identified between A - L represented in the Geotechnical Report Map as part of the Environmental Authorization must be monitored by the specialist archaeological team. The extent of the monitoring must be determined in consultation with the specialist archaeological team.*

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 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 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of 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 the 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

The 3rd Monitoring Site Visit was conducted in late June 2022. The work was done by vehicle using the available access roads and internal dirt roads created for the development, while the physical monitoring was done on foot. New trenches dug for the installation of services (water pipelines/sewerage) were inspected for the presence of in situ archaeological deposits, while areas where roads were graded, areas quarried for sand/soil and waste rock & soil dumps were also checked for the presence of archaeological material. In locations where any material were identified these objects were photographed in position and left in place, while GPS coordinates were also taken in areas where stone age material and deposits were found.

5. DESCRIPTION OF THE AREA

The Kathu Extensions 6-10 Township Development is situated on Portions 1 & 2 of the farm Kalahari Gholf & Jag Landgoed 775 in the Gamagara Local Municipality (Kathu) of the Northern Cape Province.

The topography of the study area is relatively flat, with few if any rocky outcrops. The original vegetation cover consists of low shrubs and thorn trees and very little grass cover. The area is characterized by stretches of white and red sands (Aeolian) and calcrete outcrops. An old dry streambed runs roughly from east to west through the area, while a section of the old (tarred) Sishen-Kuruman road runs from north to south on the eastern side of the area. The old (now dysfunctional) Khai Appel Recreational Resort/Caravan Park is located on its western boundary, while new residential (township) developments are found on its eastern boundary. A number of old dry pans are located in the larger area, as well as recent quarries for various materials in some areas. A small section close to its eastern boundary has also been recently cleared of trees. The area is however not heavily disturbed by past agricultural activities and rural/urban developments. The Sishen Iron Mine is located a few kilometers to the south of the area.



Figure 1: General location of study area (Google Earth 2022).

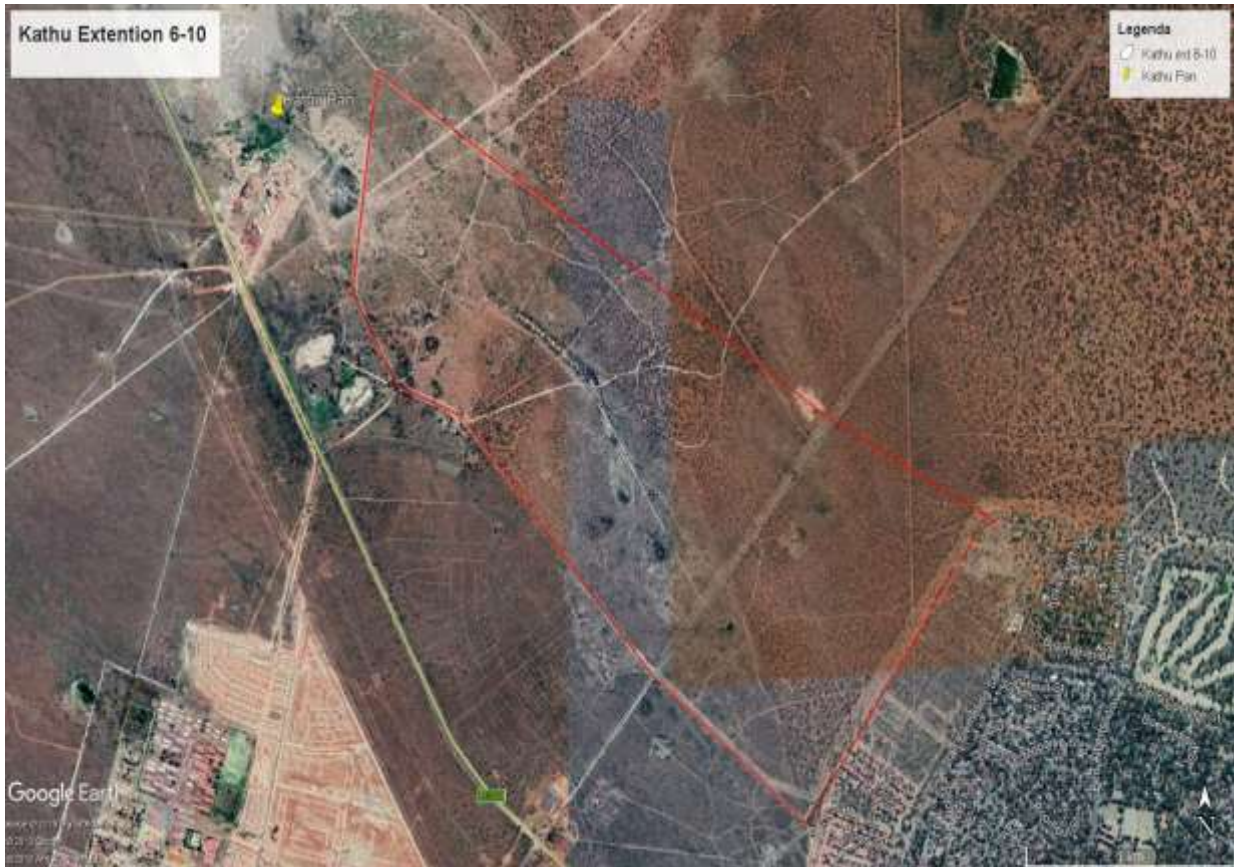


Figure 2: Closer view of study & development area in 2019 (Google Earth 2019).



Figure 3: A closer view of the study & development area in March 2022 showing the extent of the earthworks related to the installation of services (sewerage, water pipelines & internal road networks) (Google Earth 2022).

6. DISCUSSION

The results of the previous archaeological mitigation work will not be repeated here as this has been discussed in some detail in the November 2019 Archaeological Report (APAC 019/109). It would however suffice to include the conclusions from this report here.

The Kathu Extension 6 – 10 development area is located a few kilometers to the north-west of Kathu Townlands. The Stone Age material found next to the tar road section in the study area is similar to that found at Kathu Townlands. The artifacts are mainly on banded iron stone material. What is important to note however in regards to the material found and sampled in the tar road section is that these only occur next to the road and into the road reserve section. Similar material (stone tools) is not found in high numbers away from the road and across the study area, with mainly middle to later Stone Age material identified. The initial hypotheses after the Phase 1 HIA was that the material at the tar road came from another sources and that it might have been used in the construction of the Kathu-Sishen tar road (of which the section in the study area forms part) seems to hold true, taking into consideration the reference in the Walker article that the outcropping of ironstone (and the tremendous amount of artifacts) was used as a source of road gravel. Mr. Viljoen notified Mr. Beaumont (who was excavating at KP1 at the time) that he had observed workmen using gravel that was composed primarily of artifacts to repair roads”. It is therefore very possible that the material found here could have originated from Kathu Townlands or a similar source. It was therefore concluded that the Stone Age material along the tar road in the Kathu Extension 6 -10 Development Area is not in a primary context.

What was also evident from the trenches that were investigated in November 2019, was that the archaeological material/horizon is situated just below the overlying red Kalahari sand layer (which varies in thickness across the area from a few centimeters to more than 1 meter) and right on top of the underlying bedrock/calcrete formations. The “in situ” artifacts (in the trenches) have more than likely “moved” or fallen from their original positions underneath the red sand layer as a result of the digging actions related to the trenches. Furthermore, the Stone Age artifacts identified and sampled from the trenches are all seemingly dating to the late Pleistocene/early Holocene (later Stone Age). The artifacts are mainly small and slim blades (some partially broken), small scrapers, broken points and waste flakes and micro debitage. Currently the only evidence for in situ earlier Stone Age (possible Acheul etc.) presence was a single handaxe found on the outer edge of one of the trenches and a hand axe found on the old road between Sites 5 & the drainage line corridor. On the exterior of both these handaxes there are small traces of calcrete deposits indicating that they originated from the top of the underlying calcrete formation.

A number of sites and scatters of Stone Age material were identified in the area during the November 2019 mitigation. Some of these were in the drainage line corridor area, while some material was found exposed in the scraped roads. Again it is evident that the archaeological material is situated just below the red Kalahari sands that characterize the area here and that they get exposed by wind erosion and in this case when the sands are scraped away for the roads. The material is located between the sand layer and the bedrock/calcrete layer that underlies this sand.

Results of the 3rd Monitoring Site Visit: June 2022.

As with the March 2022 visit, the aim of the 3rd Monitoring Site Visit was to see if there are any in situ archaeological deposits visible in the still open trenches that cover the development area, and also to see if any scatters of archaeological material (Stone Age material) are present in the areas where internal roads and other services have been developed & installed. Waste rock dumps and soil berms were again investigated to see if any quantities of material have been exposed and deposited in these locations. As with the 2nd visit, GPS coordinates were also taken at locations where material were identified, to include on an aerial map of the development area. It also needs to be noted that not the total development area could be covered during the site visit, and so-called spot checks were undertaken in selected areas.

Many of the old trenches have been covered since the last visit, with pipes and other services installed, while a few new ones have been opened. Work on the development is continuing, with intermittent breaks as a result of public holidays and long weekends. Monitoring will continue in the forthcoming months as required.

The following observations (in some instances similar to those previously made) are relevant to the 3rd Monitoring Site Visit:

1. In areas where open excavation trenches is still visible there is a thin layer of red Aeolian (Kalahari) sand overlaying a thick layer of calcrete. Very few artifacts (Stone Age stone tools) are present, but where they are these are located between the red sand and calcrete layers
2. There is no indication of extensive artifact scatters or deposits in the waste rock dumps and soil spoil heaps. Small numbers of objects occur in some locations. These included waste-flakes, cores and flake tools such as scrapers. Determining the exact origin of these artifacts is however not possible as the waste rock and soil dumped here could have come from anywhere on the larger development site. Some Ostrich Egg Shell (OES) pieces were also identified in one location in an area that has been scraped/leveled as part of the construction work taking place.
3. Very little if any archaeological material is evident in or below the calcrete layers that are evident everywhere throughout the area.
4. The areas where thick layers of red sands are present have the highest likelihood of containing intact archaeological deposits and scatters of material.
5. An old borrow pit was identified near the northern boundary of the development during the 2nd Site Visit, located just east of the tar road. Some earlier Stone Age flakes and tools were identified in the pit. These are similar to the ones sampled during the 2019 mitigation work next to the tar road section. It is unsure if this old borrow pit was used during the construction of the tar road and if the stone tools sampled during the earlier work has their origin from here. It was recommended that this borrow pit should be focused on during a next monitoring visit and that if possible any development actions avoid the area.

During the 3rd Visit this area was again inspected in a bit more detail and a number of scatters of Stone Age material were recorded. Although the previous activities at the location (related to the borrowing/quarrying work) have obviously impacted on the archaeology of the site, there remains a possibility that in situ deposits could still be located in and around the borrow pit. It is recommended that this location be kept in tack and that the Kathu 6-10 Township Development incorporate the site into their plans and that the site be properly demarcated and fenced-off with Site Signage. It should be included in a Heritage Site Management Plan for the Development, together with the Grave Site that has already been included in a similar Plan.

The following find spots were recorded during the 3rd Monitoring Site Visit in June 2022:

1. Ostrich Egg Shell (OES) fragments: S27.67683 E23.03275
2. Spoil heap with possible raw material, cores, waste flakes & flake-tools: S27.67529 E23.02944
3. Old Borrow Pit with stone tools: S27 40 37.30 E23 02 02.40 (March 2022); S27.67710 E23.03364 & S27.67712 E23.03398



Figure 4: Areas where Stone Age material was recorded during the 3rd Monitoring Site Visit in June 2022. The old borrow pit locality is also indicated again (Google Earth 2022).



Figure 5: Some of the trenches and areas checked in June 2022.



Figure 6: Some of the trenches have been closed and services installed.



Figure 7: Pieces of Ostrich Egg Shell.



Figure 8: Some of the new waste rock and soil dumps inspected in June 2022.



Figure 9: Cores, waste-flakes and a possible scraper found here.



Figure 10: Stone Age tools in the old borrow pit area (found in June 2022).



Figure 11: More Stone Age tools in the old borrow pit site.



Figure 12: Another section of the Development where internal roads have been established and services had been installed.



Figure 13: One of the new trenches inspected in June 2022. Note the thick calcrete.



Figure 14: Another general view of a part of the development area.



Figure 15: A deep trench/test pit in a part of the development area. Note the very thick calcrete layers.

It is believed that the 3rd Monitoring Site Visit was conducted successfully. The next visit will be scheduled in due course and will aim at investigating new areas that will be opened-up and developed subsequently, including areas not investigated during the 1st to 3rd Monitoring Site Visits. If any extensive archaeological deposits are then found to be present, recommendations on the way forward will be provided in the subsequent reports.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was initially appointed by Maxim Planning Solutions in 2018 to undertake a Cultural Heritage Resources Impact Assessment in respect of proposed township establishment (Kathu Extension) on Portions 1 & 2 of the farm Kalahari Gholf & Jag Landgoed 775 in the Gamagara Local Municipality (Kathu) of the Northern Cape Province.

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8. REFERENCES

Aerial views of Study Area Location and Footprint: Google Earth 2018/19 & 2022.

June 2022 recorded find spots: Google Earth 2022.

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