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FIRST PHASE ARCHAEOLOGICAL & HERITAGE INVESTIGATION OF THE PROPOSED HOUSING & OFFICE DEVELOPMENTS AT BOSKOP DAM, POTCHEFSTROOM, NORTH WEST PROVINCE

EXECUTIVE SUMMARY

The town of Potchefstroom and its surroundings is very rich in history and remnants of cultural activities from the past. Several of the old Batswana tribes take their origins back to the Potchefstroom and Rustenburg region during the 18th century and 19th century. The natural dolomite underground cavern system at Lepalong represents remains of a time of strife during the Later Iron Age. The nearby Vredefort Dome contains many caves and rock shelters, stone-walled ruins of Iron Age settlements, pioneer European farmsteads, remains of gold mining and Anglo-Boer War relics.

The first South African War of Independence (1880-1881) and the Anglo-Boer War (1899-1902) had a significant influence on the town of Potchefstroom and its environs, in the Gatsrand and the Free State, as far as Hoopstad and Bothaville. Distinctive food cans and specific types and calibres of fired cartridge cases normally identify these sites.

Despite its locality in this potentially cultural rich region, various archaeological and heritage impact assessments in the Vredefort Dome and the surrounding region at Bothaville, Hoopstad, Christiana and Viljoenskroon, produced a low return of material of any cultural or historical significance.

The proposed development site is located on the banks of the Boskop Dam along the road to Carletonville. The proposed residential area will cover about 9ha, with 2,6ha of administration facilities to a total development of about 12ha. The site contains a seriously neglected residential area. The buildings had been prefabricated from hard board sheeting. The houses are in a dilapidated state at present and will be demolished. A small cemetery with two graves occurs on the opposite side of the dam, north west of the existing office facilities. According to the inscriptions on the tombstones, the graves date from the 1930s and 1950s. The names indicate that three people from Afrikaner ancestry were buried here. The graveyard is neatly fenced and the graves are in a well-kept condition. This area to the west of the dam was considered as an alternative for the proposed developments, but it will be more viable to continue near the existing infrastructure.

A rundown ablution block occurs on the western side of the dam near the graveyard. The story of the building is unknown and will not be affected by the developments.

No archaeological, cultural or any historical remains were found at the site and the new developments will have no impact on any cultural, heritage or historical remains. I recommend that the planning of the proposed residential and office facilities can proceed. No mitigation measures will be needed.

INTRODUCTION & DESCRIPTION

Greenmined Environmental Consulting, from Somerset West, is commissioned to compile the Environmental Impact Assessment (EIA) on behalf of the Department of Water Affairs.

Scope and Limitations

The Department of Water Affairs is planning the construction of residential and administration facilities on the banks of the Boskop Dam on the Mooi River, 13km north of Potchefstroom. The proposed developments will cover about 12ha.

The area contains a grass cover and red stony soil on top, with scatters of trees and rows of dilapidated houses along deserted streets.

No limitations have been experienced during site visit.

Methodology

- 1. Standard archaeological survey and recording methods were applied.
- 2. A survey of the literature was done to obtain information about the history, archaeology and cultural heritage of the area.
- 3. The site was inspected on foot and the outskirts were patrolled by vehicle.
- 4. The layout of the area was plotted by GPS and the coordinates transferred to Google Earth.
- 5. The site and its surroundings and features were recorded on camera.

INVESTIGATION

From previous archaeological investigations in the Potchefstroom and Vredefort Dome surroundings, historians are aware that archaeological remains occur in the form of Later Iron Age stone-walled settlements (Maggs 1976, Taylor 1979, Loubser 1985, Pelser 2005, Dreyer 2005, Dreyer, 2006). The distribution of these living sites seems to be fairly general and widespread. It was anticipated by the author that the proposed developments at Boskop Dam could produce archaeological material from this period.

Environmental Impact Assessments (EIA) (Dreyer 2004, 2005, 2006, 2008) and from research done in this region previously (Naudé 2005), we know that the whole region inside and around the Vredefort Dome is also characterised by remnants of Anglo-Boer War activities. Blockhouses and sangars, fired cartridge shells and metal food containers displaying heavily soldered seams, are some of the most common finds.

In the same area, the remains of old gold mining activities (c.1889) are found. These occur in the form of rectangular single room houses, horizontal mining shafts dug into the side of the mountain and heaps of debris (Bakkes et al 2004, Naudé 2005).

The present heritage investigation provided the opportunity to examine the land proposed for the residential and office facilities at Boskop Dam. The terrain is part of an old housing area, which is seriously neglected. The prefabricated buildings are in a dilapidated state and will have to be demolished.

The site was examined on 20 August 2013. Christine Fouché from Greenmined Consulting gave directions and Jaco van Niekerk from Water Affairs accompanied me during the site visit.

The study aims to locate and evaluate the significance of cultural heritage sites, archaeological material, manmade structures older than 60 years, and sites associated with oral histories and graves that might be affected by the proposed developments. In many cases, planted and self-sown trees and other types of vegetation represent a major part of the historical landscape of human settlements in villages and towns, on farmyards or even deserted places in the open veld. These features should be recognised and taken into consideration during any cultural investigation.

The site was examined for possible archaeological and historical material and to establish the potential impact on any cultural material that may be found. The Heritage Impact Assessment (HIA) is done in terms of the National Heritage Resources Act (NHRA), (25 of 1999) and under the National Environmental Management Act, 1998 (Act. 108 of 1998).

Potchefstroom and environs are rich in historical and cultural activities from the past (Dreyer 1968, Jenkins n.d., Prinsloo 1988, Van Eeden 1988). Several of the ancient Batswana tribes take their roots back to the Potchefstroom and Gatsrand region during the 18th century and 19th century (Breutz 1953, 1954, Van Warmelo 1935, War Office 1905). At Lepalong, between Potchefstroom and Carletonville, an underground dolomite cavern system had been used as a hiding place in times of turmoil during the Later Iron Age. It is reported that this large natural cavern system was occupied by the Bakwena ba Modimosana ba Mmatau under Maselwane from 1827 to 1836, while seeking refuge from Mzilikazi (Haughton & Wells 1942, Hall 1995).

Despite the locality of Potchefstroom within this potentially rich cultural region, Archaeological and Heritage Impact Assessments in the Vredefort Dome (Dreyer 2004, 2005, 2006, 2008, 2010) at Bothaville (Dreyer 2007, 2009, 2010) and the surrounding region at Hoopstad (Dreyer 2004, 2012), Christiana (Dreyer 2011) and Viljoenskroon (Dreyer 2005, 2006), produced almost no material of any cultural or historical significance.

The First War of Independence (also known as the Jameson-Raid, 1880-81) had a significant impact on the town of Potchefstroom (Kotze 1967). The siege of the British garrison by the Boer forces under Genl. P.A. Cronjé lasted for three month (16 December 1880 – 21 March 1881). During this time, a constant bombarding of the fort on the outskirts of the town and small arm skirmishes took place on a regular daily basis (Van den Bergh 1975, Palmer 1980, Orford 1980). Revil Mason from Wits did a controlled excavation at the Potchefstroom Fort in 1973-74, almost a hundred years after the war (Mason 1975, Keene 1976). The present condition of the Fort is unknown.

It is essential to note of the Second War of Independence, or Anglo-Boer War (1900-1902), camping and skirmish sites in the Potchefstroom-Gatsrand region of the Northwest Province and the Free State (Meyer 1971, Breytenbach 1978, Van den Berg 1996, Scheepers-Strydom 1970, Raath & Louw 1992) and especially in the Hoopstad and Bothaville area (Dreyer 2003). Distinctive food cans and specific types and calibres of fired cartridge cases normally identify these sites. It is known that during the Anglo-Boer War, Lord Methuen with his British forces used Potchefstroom as their base prior to the Battle of Tygerfontein (6&7 August 1900) near Venterskroon in the Vredefort Dome (Van den Berg 1996, Pelser 2005). Historians and Anglo-Boer War experts are also aware of military activities in the Bothaville and Hoopstad areas during the years 1899 to 1902 (Wessels 2002).

ARCHAEOLOGICAL BACKGROUND

The archaeological record of the Free State and North West Province represents a long time span during the human past. The area is exceptionally rich in terms of Iron Age living sites, which date between mid 17th century and early 19th century (Maggs 1976, Mason 1962, 1986, Evers 1988). For various reasons, there is still a relative lack in research results from the Free State, but certain Later Iron Age sites, have produced important archaeological information (Maggs 1976, Dreyer 1996).

The Later Iron Age phase brought people who cultivated crops, kept livestock, produced an abundance of pottery in a variety of shapes and sizes and smelted metals. Extensive stone-walled enclosures characterise their permanent settlements. These living places are known from the prominent Sotho/Tswana settlements along the Renoster and Vals Rivers near Kroonstad and Bothaville and in the Magaliesberg.

A number of Taaibos Korana and Griqua groups, remnants of the Later Stone Age peoples, managed to survive the assimilation by Sotho/Tswana tribes at Mamusa near Schweizer Reneke (Van den Berg 1996).

Dramatic climate changes resulted in a rapid population growth along the east coast of South Africa. Increased pressure on the natural resources and attempts to control trade during the early 19th century brought the emergence of powerful leaders in the coastal area. Subsequent power struggles developed in a period of instability on the central Highveld. This time of strife or wars of devastation, known as "difaqane" (Sotho/Tswana) or "Mfecane" (Nguni), affected many of the Black tribes in the interior. Attacks from east of the escarpment initiated by the AmaZulu impis of Chaka in about 1822, were sustained by the AmaNdebele of Mzilikazi and the AmaNgwane of Matiwane into the Free State and North West Province, thus uprooting among others, the Batlokwa of Sekonyela and Mantatise and various smaller Sotho/Tswana tribes further inland. On their turn, the Batlokwa drove off the Bafokeng of Sebetoane from Kurutlele near Senekal in the Free State, who, in their effort to escape the pursuit by the AmaNdebele forces, eventually landed up in the Caprivi (Dreyer & Kilby 2003).

This period of unrest directly affected the peoples of the Free State and North West Province, resulting in the displacement of scores of tribesmen, women and children. The stronger tribal groups, such as the AmaNdebele of Mzilikazi, assimilated many of these Batswana refugees.

Early European missionaries and travellers ventured into the interior of the country during the 19th century (Dreyer 2001) and the Rev James Archbell established the missionary at Thaba Nchu by 1834. Several of the marauding hordes affected the lives of the Batswana people living at Dithakong near the mission station of Robert and Mary Moffat near Kuruman.

The Iron Age archaeology of the Free State and North West Province is characterised by a wide distribution of stone-walled sites on the flat-topped ridges and hills. There is detail and consistency in the arrangement and design of these structures. People's expression of culture has left its imprint on the material environment. The settlement patterns display human perceptions with regard to social clustering, economic system and political organisation. Patterns culminate in the arrangement of huts, byres and middens in a particular order and in relation to one another. Spatial organisation in general is characterised by the central position of stock byres and the placing of the main dwelling area on the perimeter of the settlement. Although a variety of different classes and types of settlement have been defined, these are all variations of the Central Cattle Pattern (CCP), a specific model for the organisation and use of space in Zulu and Sotho/Tswana settlements.

The classification of sites is based on the assumption that settlement layout is bound and prescribed by cultural perceptions. The identification of different ethnic groups is thus possible from the way in which these traditional peoples organised their different living places in terms of space and time. The result was directed by cultural preference (choice) and function. The significance of livestock, personal status, kinship, social organisation and the diverse roles of men, women and offspring have always been important in the understanding of settlement patterns.

The Later Iron Age classification of settlement patterns formulated by Maggs (1976) and Mason (1986), produced a standardised archaeological framework for the ordering of structures and sites characterised respectively by stock enclosures with connecting walls, in certain cases including corbelled huts (Type V), surrounding walls (Type N) and huts with bilobial courtyards (Type Z). Associated pottery assemblages with different decoration styles confirm the classification of sites based on layout (Maggs 1976:290). Different settlement patterns also produced huts of different materials in different styles.

ARCHAEOLOGICAL BACKGROUND OF THE VREDEFORT DOME

Attracted by the availability of water, caves and rock shelters, building material, a pleasant climate and environment with ample vegetation and fauna, humans utilised the mountain area of the Vredefort Dome (Du Preez 1987). Stone Age hunter-gatherers were living a nomadic lifestyle, while roaming from one shelter to another. Although there is a lack of Stone Age research in the Potchefstroom - Vredefort Dome area, characteristic stone tools from the Early Stone Age (2 million to 200 000 years BP), Middle Stone Age (200 000 to 25 000 years BP) and Later Stone Age (25 000 to 2000 years BP), occur (Pelser 2005).

Iron Age settlements in the Vredefort Dome area are relatively late when compared to Early Iron Age sites at Klein Afrika in the Soutpansberg, Broederstroom in the Magaliesberg and Silverleaves near Tzaneen. During the Later Iron Age, which dated from about 1300 AD, emphasis was not only on stone-building, for additional structures of perishable materials, supplementing living space, have also been revealed. The characteristics of individual settlement patterns allow the recognition of specific cultural groups of people populating the landscape.

The author anticipates that the most Iron Age settlements will have a similar site arrangement as those found and excavated at Askoppies on the farm Tygerfontein 488 IQ (Pelser 2002). This type of settlement is widely scattered over an extensive part of the Vredefort Dome in particular and in the area north of the Vaal River. The archaeological research by Taylor (1979) and Loubser (1985) in the Buffelshoek area produced an appreciation of the local cultural material and settlement types. Taylor concluded that his Group II settlements resemble Maggs' Type Z settlement pattern in the Free State. Research by Pelser at Askoppies in the Vredefort Dome (2000, 2003, 2004), showed many settlements with stone-building but he also describes sites with stone platforms and built-up agricultural terraces. At these sites, other features included stock enclosures, with huts and raised platforms for storage vessels. Large refuse middens at most of the sites contained potsherds, bone and grinding stones. Remnants of a metal smelting furnace were found at Buffelskloof (Dreyer 2004).

The remains at Type Z sites normally show up as a ring of scalloped stone-walls surrounding several stock enclosures. From this, it is concluded that these dwellings consisted of a cone on cylinder hut with stone-walled courtyards at both front and rear, forming a bilobial layout. The huts are arranged around a cluster of central cattle byres. Raw materials have been substituted at different localities, resulting in a variation in settlement pattern where clay walls replaced stone-walling of the front lobe at Bothaville (Maggs 1976) and at Willem Pretorius Game Reserve on the Sand River, near Ventersburg (Dreyer 1997).

The occupation of the sites with bilobial dwellings is ascribes to Batswana (e.g. Thlaping and Rolong) groups. It is also possible to link Kubung people to every known site of this kind (Maggs 1976).

Pottery decorations associated with these settlements are characterised by shallow line incisions in bands and triangles below the rim and on the shoulder, combined with straight or curved lines and areas of red ochre burnish on the body of clay vessels (Maggs 1976).

According to radiocarbon dating and oral tradition, these Type Z sites were occupied from the 16th and 17th to early 19th century at Ventersburg, and 18th to early 19th century at Bothaville. A single bone sample from Jansfontein in the Doringberg, near Ventersburg, produced a calibrated date of 1670, which is

slightly later than the Ventersburg date (Dreyer 1992). Taylor's Group II sites produced a date between AD 1650 and 1800 with the settlements at Askoppies around late 1670s, early 1680s and early 1800 (Pelser 2005).

LOCALITY

Boskop Dam is an earth-fill type dam on the Mooi River, near Potchefstroom, North West Province, constructed in 1959 mainly for irrigation and domestic usage. The hazard potential of the dam is high, due to poor maintenance and the development of sinkholes in the area. The Nature Reserve around the dam covers 3000 hectare and serves as an important recreational facility for the communities in close proximity.

The proposed development site is located on the banks of the Boskop Dam along the R501 road to Carletonville (Map 1). The proposed residential area (Maps 2&3) will cover about 9ha, with 2,6ha of office space (Maps 2&4) to a total development of about 12ha.

The following GPS coordinates (Cape scale) were taken (Map 5):

Α	26°34'17"S 027°07'07"E	Altitude 1402m	(Figs.1&2).
В	26°34'13"S 027°07'04"E	Altitude 1388m	(Figs.3&4).
С	26°34'13"S 027°07'01"E	Altitude 1389m	(Figs.5&6).
D	26°34'15"S 027°07'05"E	Altitude 1384m	(Fig.7).
E	26°34'14"S 027°07'09"E	Altitude 1394m	(Figs.8&9).
F	26°34'06"S 027°07'19"E	Altitude 1396m	(Figs.10&11).
G	26°34'08"S 027°07'22"E	Altitude 1392m	(Figs.12&13).
н	26°34'03"S 027°07'22"E	Altitude 1404m	(Figs.14&15).
J	26°34'02"S 027°07'18"E	Altitude 1409m	(Figs.16&17).
к	26°34'09"S 027°07'17"E	Altitude 1404m	(Figs.18&19).
GY	26°34'10"S 027°06'47"E	Altitude 1419m	(Figs.20-22).
AB	26°34'02"S 027°06'50"E	Altitude 1410m	(Fig.23).

FINDS

Although the Boskop Dam is situated in a potentially cultural rich area around Potchefstroom, various archaeological and heritage impact assessments in the Vredefort Dome and the surrounding region at Bothaville, Hoopstad, Christiana and Viljoenskroon, produced a low detection of cultural or historical material.

The site consists of a seriously neglected residential area. The prefabricated buildings were made from hard board sheeting and the houses are in a dilapidated state.

A cemetery (Point GY), containing two graves is located on the opposite side of the dam, about 700m north west of the existing office facility. Inscriptions on the tombstones indicate that the graves date from the 1930s and 1950s. The names of three people from Afrikaner descent are inscribed. The graveyard is neatly fenced and the graves are in a well-kept state.

A rundown ablution block (Point AB) with separate entrances for male and female attendants also occurs on the western side of the dam near graveyard (Fig.23). The corrugated iron roof sheets have been looted, the doors and windowpanes removed and the bathroom appliances destroyed. The original purpose and origin of the building is unknown and the author speculates that the ablution facility was erected for people visiting the dam for recreational activities.

No archaeological, cultural or any historical remains were found at the site.

IMPACT ASSESSMENT

The proposed new developments will have no effect on the ruin of the ablution building. The specific area to the west of the dam was considered as a possible alternative for the proposed developments, but it seems to be more viable to keep the developments near the existing infrastructure.

The proposed new residential and administrative facilities will have no impact on any heritage or historical resources.

RECOMMENDATIONS

There are no obvious reasons to delay further planning of the developments at the specific site.

MITIGATION

No mitigation measures will be required.

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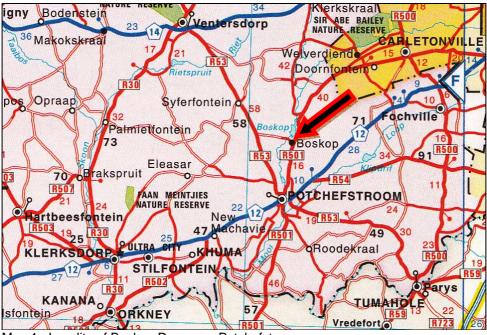
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LIST OF ILLUSTRATIONS:



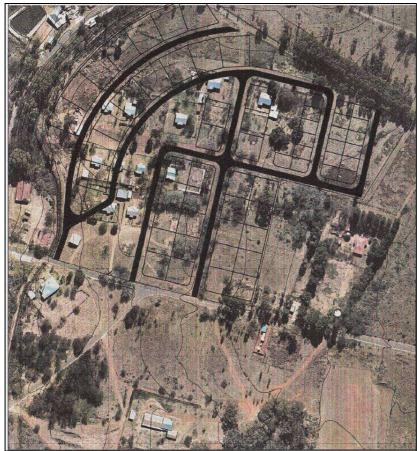
Map 1 Locality of Boskop Dam near Potchefstroom.



Map 2 Placing of the proposed developments at Boskop Dam, Potchefstroom.

В

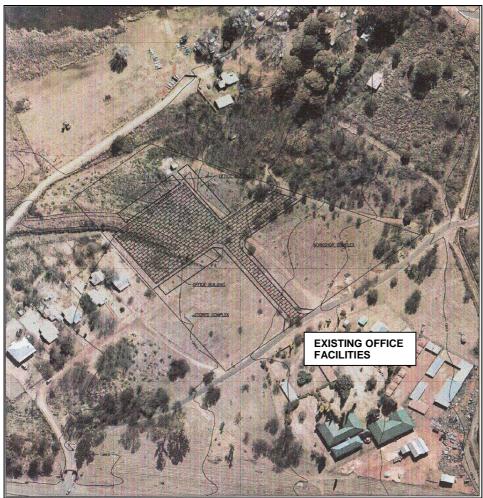
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Map 3 Residential layout at Boskop Dam, Potchefstroom.



Fig.1 Point A at Boskop Dam, Potchefstroom.



Map 4 New office layout at Boskop Dam, Potchefstroom.



Fig.2 Point A facing existing office facilities at Boskop Dam.



Map 5 Coordinate points at Boskop Dam, Potchefstroom.



Fig.3 Point B at Boskop Dam, Potchefstroom.



Fig.4 Abandoned pre-fabricated houses at Point B at Boskop Dam, Potchefstroom.



Fig.5 Point C at Boskop Dam, Potchefstroom.



Fig.6 Point C at Boskop Dam, Potchefstroom.



Fig.7 Point D at Boskop Dam, Potchefstroom.



Fig.8 Point E at Boskop Dam, Potchefstroom.



Fig.9 Point E at Boskop Dam, Potchefstroom.



Fig.10 Point F at Boskop Dam, Potchefstroom.



Fig.11 Point F at Boskop Dam, Potchefstroom.



Fig. 12 Point G at Boskop Dam, Potchefstroom.



Fig.13 Point G at Boskop Dam, Potchefstroom.



Fig.14 Point H at Boskop Dam, Potchefstroom.



Fig.15 Point H at Boskop Dam, Potchefstroom.



Fig.16 Point J at Boskop Dam, Potchefstroom.



Fig.17 Point J at Boskop Dam, Potchefstroom.



Fig.18 Point K at Boskop Dam, Potchefstroom.



Fig.19 Point K at Boskop Dam, Potchefstroom.



Fig.20 Grave yard (Point GY) at Boskop Dam, Potchefstroom.

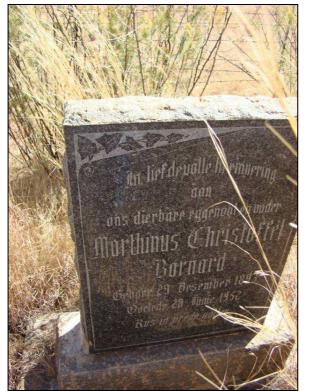


Fig.21 Grave of Marthinus Christoffel Barnard 29/12/1893 †28/6/1952 at Point GY.



Fig.22 Grave of Adam Barnard*1866 †1935 & Elsie M. Barnard*1868 †1952 at Point GY.



Fig.23 The old ablution block near the Boskop Dam, Potchefstroom.