

Phase 1 Archaeological Impact Assessment of a 4000 m²,
portion of land demarcated for development by Coca
Cola in Bloemfontein.

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Executive Summary

- The study area has been extensively disturbed and altered by earlier construction activities.
- Brick rubble strewn over large parts of the site are derived from the initial construction phase of the Coca Cola depot facility.
- There is no evidence of Stone Age archaeological material, capped or distributed as surface scatters on the landscape.
- There are also no indications of prehistoric structures or remains within or in the immediate vicinity of the site.
- Historical buildings, structures or graves are absent from the site.
- There is no evidence for the accumulation and preservation of intact fossil material within the Quaternary sediments covering the underlying sedimentary rocks.
- The underlying sedimentary rocks will not be impacted by the proposed development.
- **The site is of no archaeological or palaeontological significance.**

Introduction

An area adjacent to the existing Coca Cola depot facility in Bloemfontein is being earmarked for development. An Archaeological Impact Assessment (AIA) of the affected area is required as a prerequisite for the development in terms of the National Environmental Management Act and is also called for in terms of the National Heritage Resources Act 25 of 1999. This required the identification of archaeological sites / occurrences during a field survey, an assessment of their significance, the impact of the proposed development and recommendations.

Description of the Affected Area

Details of area surveyed

Locality data

1:50 000 topographical map 2926AA Bloemfontein.

GPS Coordinates: S29 09.714 E26 13.001

The area surveyed for the purpose of this report is shown as dotted lines in Figure 1. The affected area covers approximately 4000 m² of undeveloped land next to Church Street on the M30.

Geology

Fluvially derived sedimentary rocks of the Karoo Supergroup, comprising the argillaceous shales, mudstones and sandstones of the Beaufort Group dominate the regional geology of the study area. The landscape is also punctuated by flat-topped dolerite hills, the result of Post Karoo intrusions that formed dykes and sills with high occurrences in the Beaufort Group zone. Quaternary deposits younger than two million years in age, comprising unconsolidated sands, alluvial sediments and colluvial deposits, cover the underlying sedimentary rocks of the Karoo Supergroup.

Methodology

All structures and sites that were observed were recorded using a Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a Sony W17 digital camera.

Palaeontological and archaeological background of the area

The sedimentary rocks underlying the survey area belong to the Beaufort Group of fossil – bearing strata within the Karoo Supergroup. An important feature of the Beaufort Group of rocks is its abundance of Permian-Triassic vertebrate fossil remains, which forms an almost complete record detailing millions of years of vertebrate evolution roughly between 280 and 200 million years ago.

In more recent times the central interior and what is now the Free State Province, was once a vast and highly productive grassland ecosystem. Numerous mammal fossils stretching as far back as the Middle Pleistocene are regularly discovered in the Free

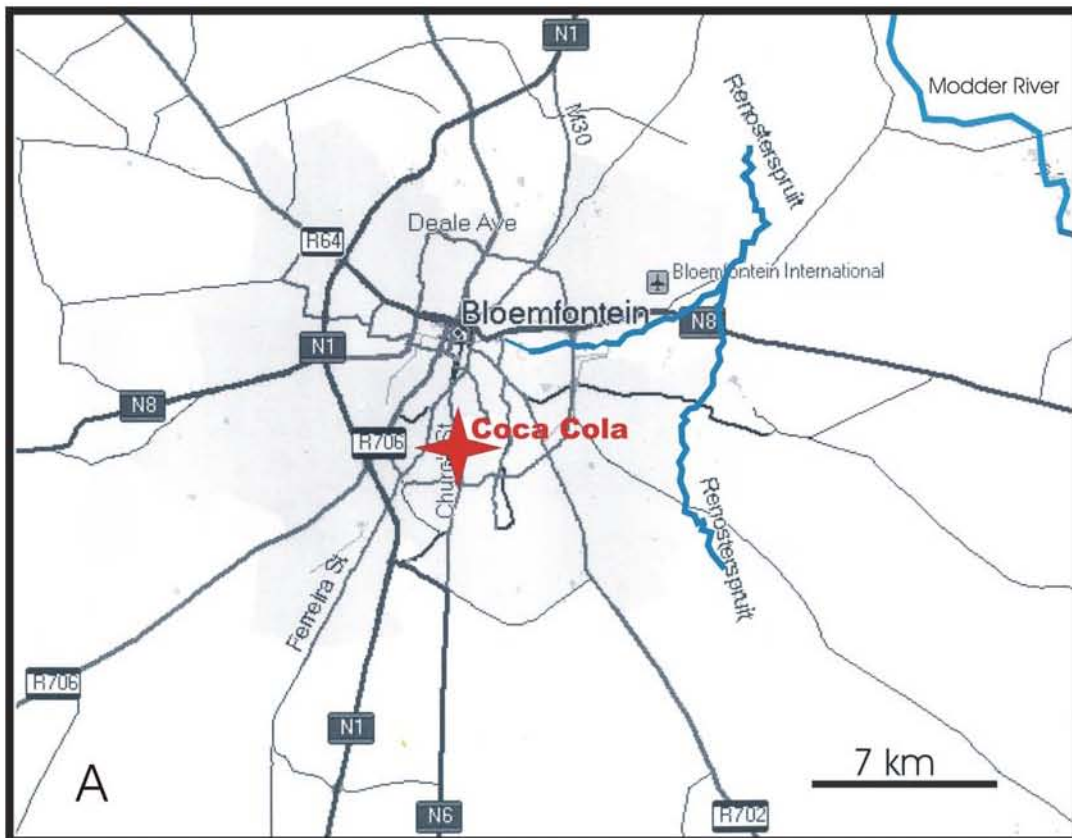


Figure 1. A. General map of the Bloemfontein area showing archaeologically and palaeontologically sensitive river drainages (in blue); B. Aerial photograph (Google Earth) indicating the area that was surveyed (green dotted line).

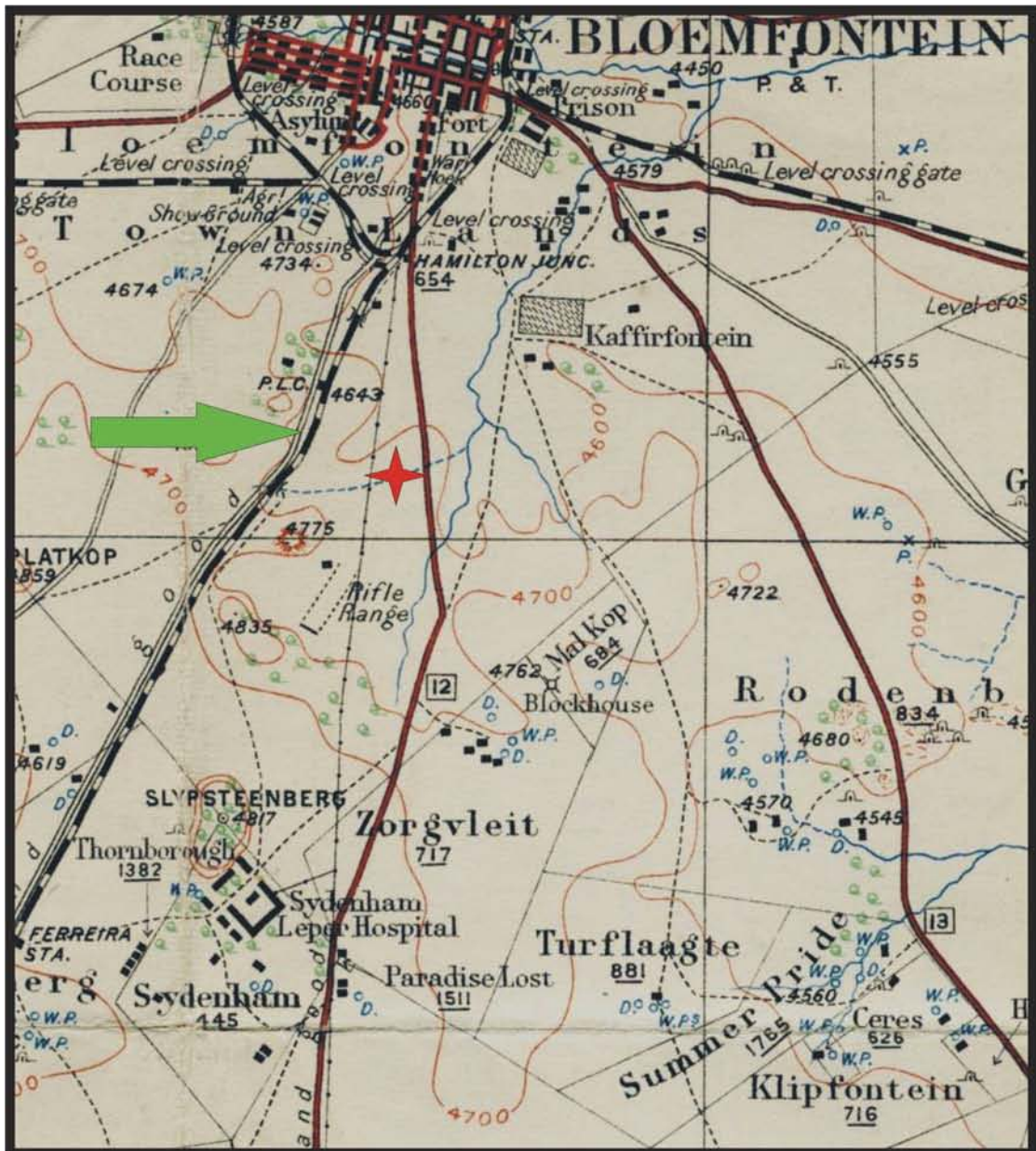


Figure 2. British Military Map of Bloemfontein ca. 1913. The study area is indicated by a red star. The railway line that was crucial in transporting British troops during the Anglo Boer War is indicated by a green arrow.

State Province, especially in fluvial sediments along river courses like the nearby Modder River and the Renosterspruit (Figure 1A). Fossils discovered at various fossil sites along the Modder River and its tributaries revealed the existence of a number of open grassland adapted herbivores. These included a very large zebra (*Equus capensis*), a giant wildebeest (*Megalotragus priscus*) and a giant buffalo (*Pelorovis antiquus*). There also existed smaller grazers such as the sprongbok-like antelope (*Antidorcas bondi*) and a small-bodied ass (*Equus lylei*). Differences in body size and inferred food preferences of these grazers, suggest that they probably interacted as interdependent species based on a grazing succession similar to that observed in the modern Serengeti region in East Africa. The abundance of these different sized grazers in the Free State is a reflection of the availability of abundant seasonal grassland and offers strong evidence for a stable and sustainable grassland ecosystem in the central interior of South Africa thousands of years ago.

The Bloemfontein region also bears evidence of inhabitation by Stone Age hunter-gatherers. Stone tools found in the region are mostly made of hornfels, a dark, fine-grained isotropic rock found in the hot-contact zone between the dolerites and shales in the area. Stone Age artefacts are generally common as surface material on the South African central plateau and particularly along river drainages such as the nearby Modder River and the Renosterspruit (Figure 1A). However, away from localized areas such as riverine sites, the incidence of surface scatters is low with Stone Age artifacts usually occurring as contextually derived individual finds. In addition, because it lacks high visibility and frequently escapes the attention of the public eye, Stone Age artifacts found on the landscape are vulnerable to disturbances caused by modern development.

Historical background of the area

Bloemfontein was officially founded in 1846 by British army major Henry Douglas Warden as a British outpost of the South African frontier known as the *Transoranje* region. From 1902-1910 it served as the capital of the Orange River Colony and since that time as the provincial capital of the Orange Free State (now Free State). In 1910 it became the Judicial Capital of South Africa.

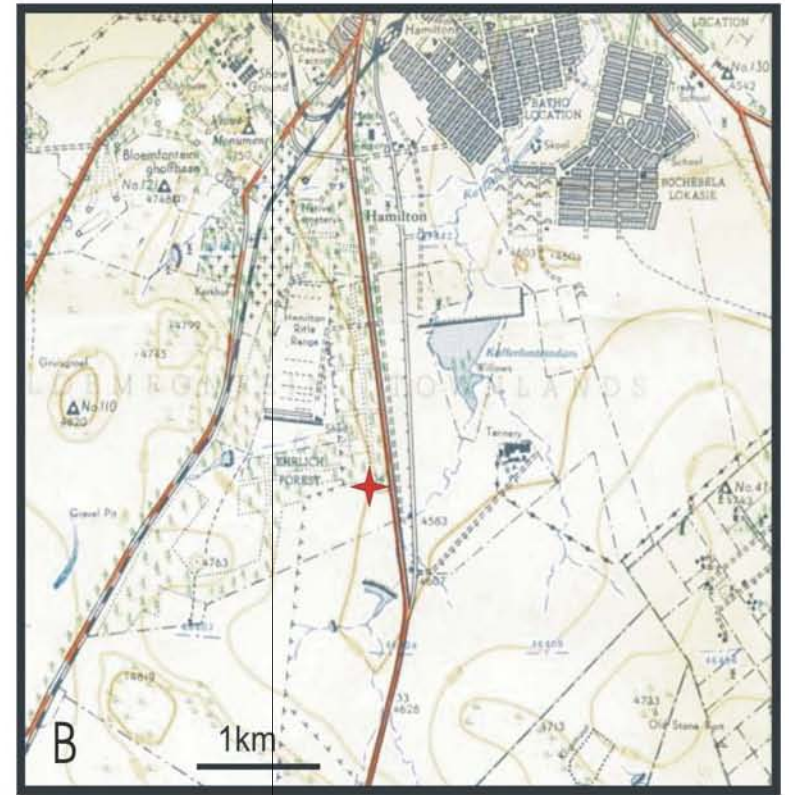
The original railway line immediately to the west of the site was built in 1890 connecting Bloemfontein to Cape Town. This line proved to be critical to the British in occupying the city later in 1900 during the Anglo Boer War (Figure 2). Another historical site is the Sydenham Leper Hospital, located at the foot of Slypsteenbergh about five kilometers south of the study area.

After 1910 the area along Church Street (M30) has largely developed into an industrial zone. In what appears to be the remnants of a formal Eucalyptus plantation, is located in the study area and is indicated on the 1951 1:50 000 topographical map of Bloemfontein as the Ehrlich Forest, (Figure 3).

1 : 50 000 topographic map
of Bloemfontein 2002



1 : 50 000 topographic map
of Bloemfontein 1951



★ Site of proposed production facility & warehouse extension.

Figure 3. Recent as well as an older map of the study area.

Results of Survey

The area demarcated for development has been extensively disturbed and altered by earlier construction activities (Figure 4). Brick rubble is strewn over large parts of the site. The bricks are derived from the initial construction phase of the Coca Cola plant (Figure 4D).

A foot survey has indicated no evidence of Stone Age archaeological material, capped or distributed as surface scatters on the landscape. There are also no indications of prehistoric structures or remains within or in the immediate vicinity of the site. Historical buildings, structures or graves are absent from the site. There is no evidence for the accumulation and preservation of intact fossil material within the Quaternary sediments covering the underlying sedimentary rocks. The underlying sedimentary rocks will not be impacted by the proposed development.

Statement of Significance

The site is of no archaeological or palaeontological significance.

Field Rating

The area demarcated for development has been suitably recorded, mapped and documented in terms of conditions necessary for a Phase 1 impact assessment and can be accessed for further development.



Figure 4. The survey area. The natural condition of the site has been extensively altered as a result of prior as well as ongoing development.

References

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