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**FIRST PHASE ARCHAEOLOGICAL AND CULTURAL HERITAGE
ASSESSMENT OF THE PROPOSED WATER PIPELINE FROM
SANDDRAAI 391 TO BOKPOORT 390, GROBLERSHOOP,
NORTHERN CAPE**

EXECUTIVE SUMMARY

A water pipeline is planned from Sanddraai on the Orange River to the solar power plant (SPP) near the Garona Eskom Sub-station on the farm Bokpoort 390 near Groblershoop, Northern Cape.

A small stone flake assemblages occurred near the Garona Substation on the farm Bokpoort 390. The flakes were made from the local lithic sources of chalcedony, meta-quartzite and banded ironstone from the Griekwastad Layer. The artefacts showed convergent sides and flaking on the dorsal side, characteristics of the Middle Stone Age industry. The finds occurred as a general distribution of stone tools on the sandy soil and no particular manufacturing site could be found.

I conclude that the planned developments will have an insignificant effect on the cultural and historical heritage of the pipeline route. Further planning of the proposed project could continue.

INTRODUCTION AND DESCRIPTION

Scope and Limitations

The investigation provided an opportunity to examine the route proposed for the installation of a water pipeline from the Orange River at Sanddraai 391 to Bokpoort 390 along the Sishen-Saldanha railway line near Groblershoop.

No limitations were experienced during the site visit.

Methodology

Standard archaeological survey and recording methods were used.

1. The land was investigated by vehicle and on foot.
2. The different points were plotted by GPS and the environment and features were recorded on camera.

INVESTIGATION

A water pipeline is planned from Sanddraai 391 on the Orange River to the Garona Substation at Bokpoort 390 along the Sishen-Saldanha railway line near Groblershoop.

The pipeline route was examined on 5 November 2012. The Bokpoort site had previously been visited on 14 February 2006. The first visit was in the company of experts from Bohlweki Environmental, Johannesburg, an official from ESKOM and other environmental specialists from Bloemfontein.

The present EIA process is driven by SSI Engineers and Environmental Consultants, Building No. 5, Country Club Estate, 21 Woodlands Drive, Woodmead, 2191, P.O. Box 867, Gallo Manor, on behalf of Solafrica, 2nd Floor, 5 Commerce Square, 39 Rivonia Road, Sandhurst.

I have done various Environmental and Heritage Impact assessments in the Northern Cape and along the upper part of the West Coast, along the Orange River towards the Richtersveld, and I consider myself familiar with the archaeology and cultural heritage of the area and competent to do the investigation.

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 development.

The area was examined for possible archaeological and historical material and to establish the potential impact on any cultural material that might be found. The Heritage Impact Assessment (HIA) is done in terms of the National Heritage Resources Act (NHRA), (25 of 1999) and under the Environmental Conservation Act, (73 of 1989).

LOCALITY

The water pipeline is planned over a distance of about 15km, from the Orange River at Sanddraai 391 to Garona Substation at Bokpoort 390. The site is reached along the Loop 16 / Gariep gravel road at a turn-off from the R64 road between Groblershoop and Griquatown, Northern Cape (Maps 1&2).

The vegetation cover of the region can be described as Kalahari Thornveld and consists mainly of *Eragrostis* grassland with scatters of thorny shrubs. This includes Swarthaak or Black Thorn (*Acacia mellifera*), Driedoring (*Rhigozum trichotomum*), Witgat or Shepherds Tree (*Boscia albitrunca*) and Mesquite (*Prosopis species*).

The area is covered with red sandy dunes and alternating outcrops of Calcrete and Quartsite scatters.

The pipeline will be placed outside the road reserve and the Transnet servitude, mainly on the western side of the Sishen-Saldanha railway line (Maps 3&4).

The pump station and water inlet structure will be influenced by the water flow and height and will be planned accordingly (Map 5).

The following GPS coordinates (Cape scale) were taken (2822CA) (Map 4).

Garona Substation	28°44'24"S 021°59'44"E Altitude 954m (Figs.1&2).
Bokpoort	28°44'46"S 021°58'34"E Altitude 946m (Figs.3-6).
A	28°46'48"S 021°55'19"E Altitude 881m (Figs.7-8).
B	28°46'47"S 021°59'52"E Altitude 873m (Figs.9-11).
C	28°47'07"S 021°53'32"E Altitude 866m (Figs.12&13).
D	28°47'12"S 021°53'16"E Altitude 848m (Fig.14).
E	28°45'24"S 021°57'13"E Altitude 943m (Figs.15&16)

FINDS

A small collection of stone flakes and cores was found on the surface at Bokpoort (Fig.17). The material originates from the local geological horizon and is broadly described as chalcedony, meta-quartzite and banded ironstone from the Griquastad Layer.

Some of the flakes show the convergent Middle Stone Age flaking, which form triangular points with no scars or secondary trimming. Most flakes are unutilised and cannot be described as “tools”. Points have convergent edges and single or multiple flaking on the dorsal side. Percussion bulbs are clearly recognisable in most cases. Prepared platforms are narrow and bent and are either faceted or plain. Through the application of standard tool typology and basic characteristics, the material could arbitrarily be classified as Middle Stone Age.

ASSESSMENT OF IMPACT

The lithic assemblage is sparsely distributed on the surface and seems to be in the form of a general distribution of flakes and cores. The impact on the cultural heritage remains of the proposed development route at Bokpoort will be of minor significance.

No other cultural or historical components were found during the investigation, nor were there any buildings, graves or burial grounds in the area.

MITIGATION

No mitigation measures will be required along the pipeline route.

RECOMMENDATIONS

I recommend that the planning and the development of the pipeline installation may proceed.

ACKNOWLEDGEMENTS

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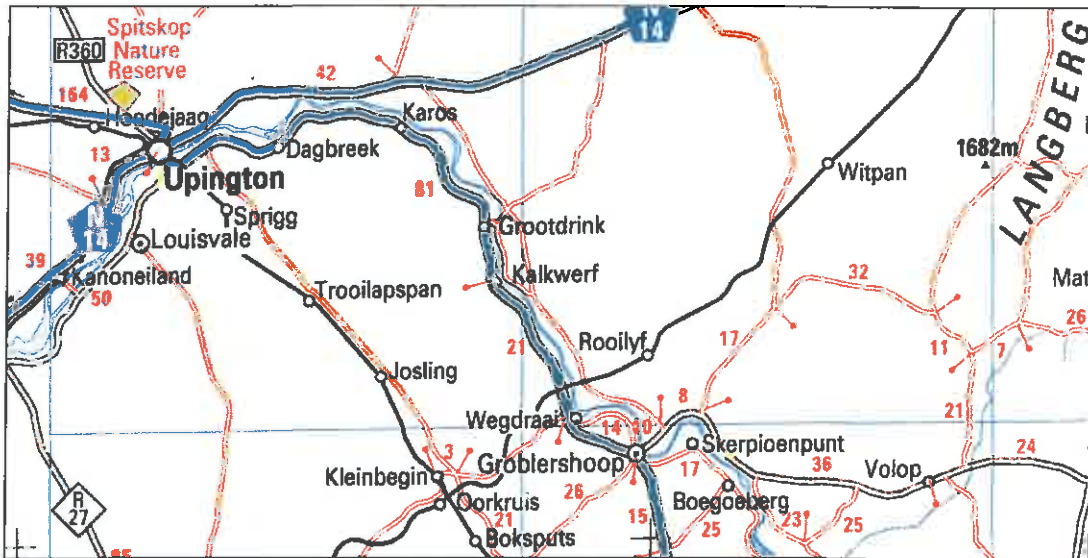
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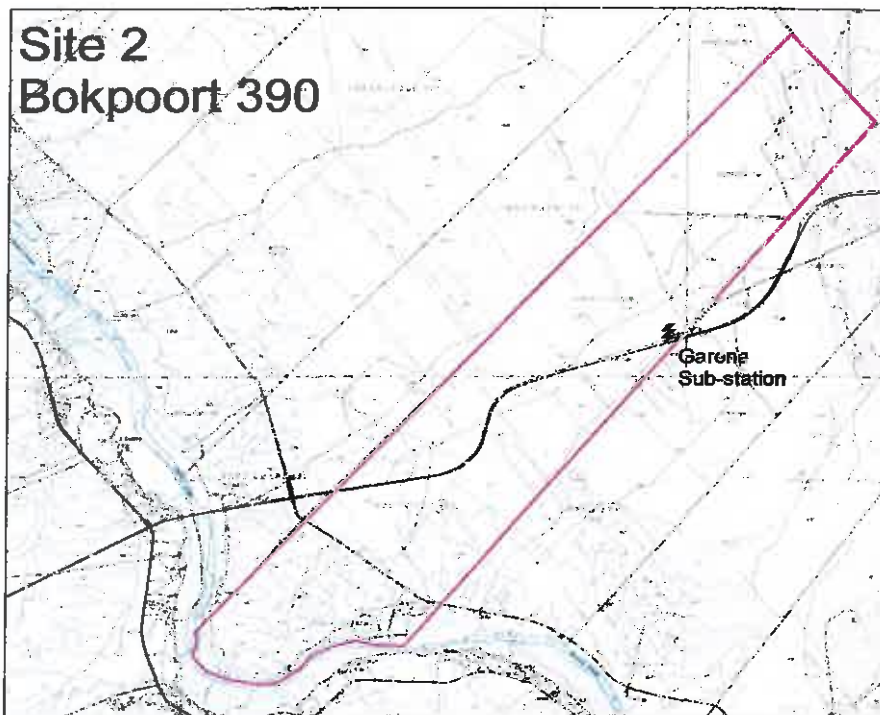
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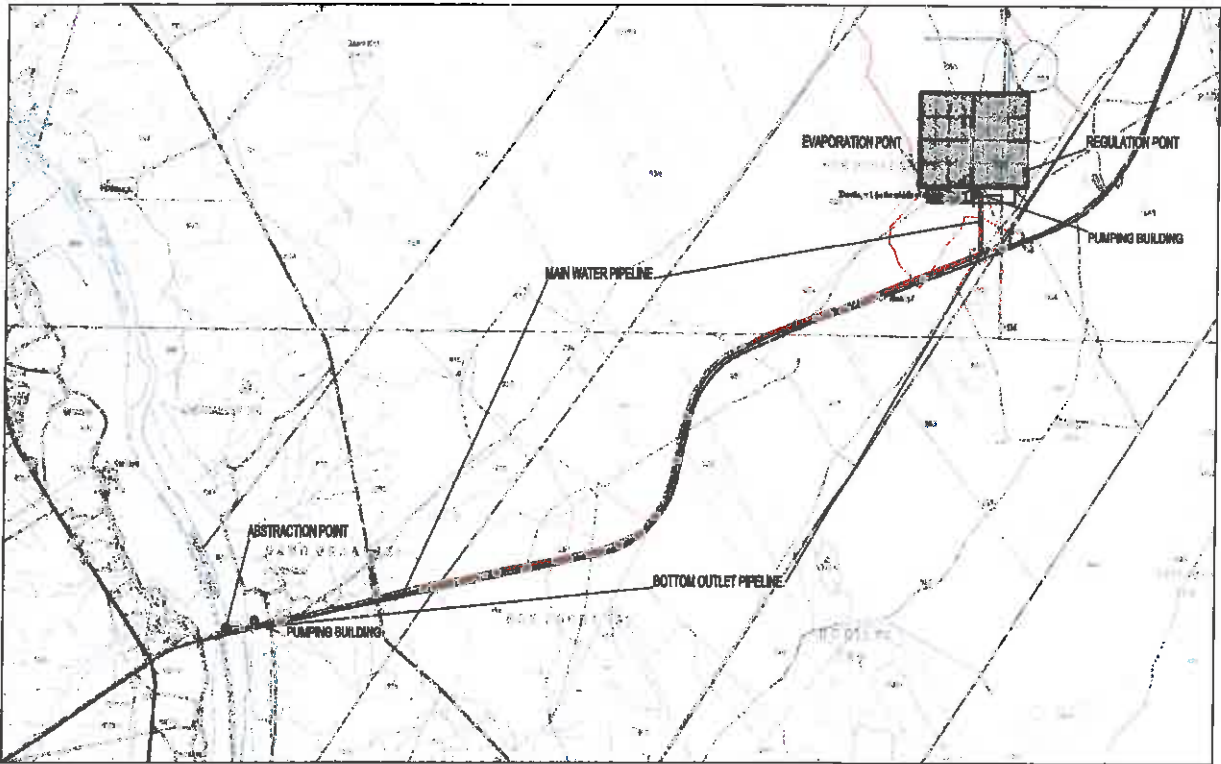
LIST OF ILLUSTRATIONS



Map 1 Locality of Groblershoop on the N10 in relation to Upington on the N14 main road.



Map 2 Placing of the farm Bokpoort 390, Groblershoop.



Map 3 Proposed pipeline route along the railway line from Sanddraai to Garona Substation.



Map 4 Coordinate points along the railway line from Garona to Sanddraai.



Map 5 Water intake and pump station at Sanddraai on the Orange River.



Fig.1 Garona substation on the Sishen-Saldanha railway line.



Fig.2 Garona substation on the Sishen-Saldanha railway line.

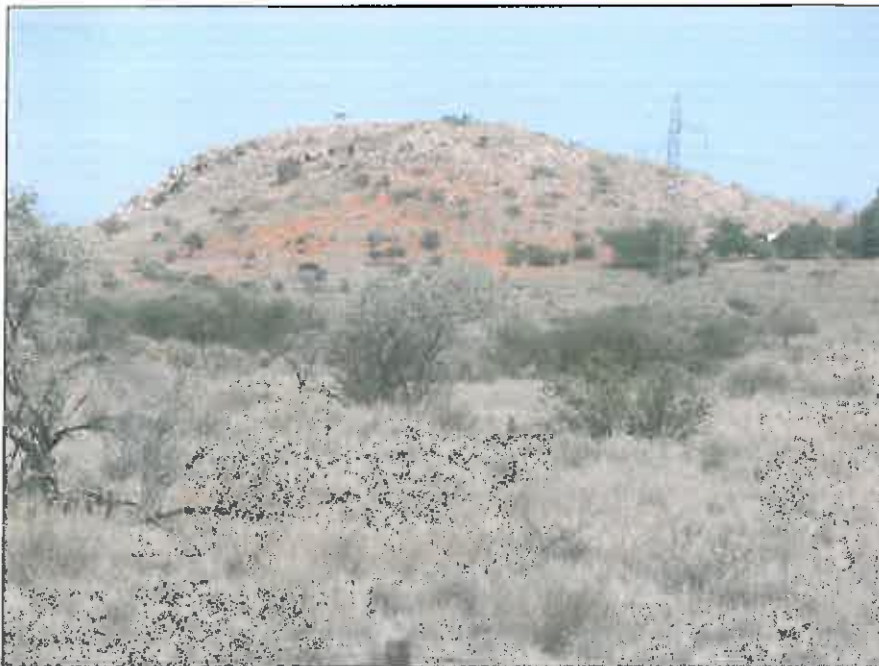


Fig.3 Bokpoort farm house against the red sandy hill.



Fig.4 Bokpoort facing towards the power line and the Eskom Garona Substation (2006).



Fig.5 View across the Bokpoort site (2006).



Fig.6 Witgat or Shepherds Tree against the red sandy dune.



Fig.7 Point A along the railway line from Garona to Sanddraai.



Fig.8 Point A along the railway line from Garona to Sanddraai.



Fig.9 Point B along the railway line from Garona to Sanddraai.



Fig.10 Point B along the railway line from Garona to Sanddraai.



Fig.11 Point B along the railway line from Garona to Sanddraai.



Fig.12 Point C along the railway line from Garona to Sanddraai.



Fig.13 Point C along the railway line from Garona to Sanddraai.



Fig.14 Point D at Sanddraai.



Fig.15 Point E along the railway line from Garona to Sanddraai.



Fig.16 Point E along the railway line from Garona to Sanddraai.



Fig.17 Stone flakes from Bokpoort made out of chalcedony, banded ironstone and meta-quartzite. (Pocketknife = 84mm).