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# FIRST PHASE ARCHAEOLOGICAL & HERITAGE ASSESSMENT OF THE PROPOSED PV SOLAR POWER INSTALLATIONS AT GLEN LENIE 183, HARRISMITH, FREE STATE

## EXECUTIVE SUMMARY

A Photo Voltaic Solar Power plant is planned at Glen Lenie 183 outside Harrismith.

The land was examined for the occurrence of archaeological, historical and other cultural material.

The proposed site is located next to the existing township of Tshiame. The area has already been disturbed by the activities of the people and farm animals from the township and by the installation of a sewer plant.

No cultural or historical materials were found on the surface.

The installation of a solar power plant will have no impact on any cultural and historical remains in the area. Further planning of the proposed project may continue, and no mitigation measures are required.

## INTRODUCTION & DESCRIPTION

### Scope and Limitations of the present project

The present investigation provided the opportunity to examine the land selected for the solar generator project at Glen Lenie 183. Except for a threatening thunderstorm, no other limitations were experienced during site inspection.

## Methodology

Standard archaeological survey and recording methods were applied.

1. The area was investigated on foot.
2. The different points were plotted by GPS and recorded on camera.

## INVESTIGATION

Ekhaya Solar Earth is planning a PV solar power plant on the farm Glen Lenie 183 at Makholokoeng, about 15km outside Harrismith. The proposed installation will cover about 18ha.

The provision of solar power will supplement electricity supply to the existing power grid. Solar power is considered a desirable energy production method as its utilisation has no adverse bi-products. The method of harnessing solar energy is relatively harmless compared to fossil fuel power production. Most existing land use practices can also continue with little interruption.

The PV solar power system will make use of flat panels of photo voltaic (PV) cells on frames about 1,5m above ground level. Minor earthworks may be required to ensure the correct angle and orientation of the panels.

The proposed site was examined on 9 February 2012. Lorato Tigedi from NSVT Environmental Consultants, Bloemfontein, gave directions to the site.

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).

The Iron Age archaeology of the Free State was described by Maggs (1976) and summarised by Dreyer (1996). Iron Age stone-walled sites are normally restricted to higher ground or hilly parts of the northern and eastern Free State and are normally not found in the low-lying open areas.

Stone Age lithic material is similarly not likely to be found on alluvial clay deposits of the flood plains or along water drainage courses.

## LOCALITY

The farm Glen Lenie 183 borders on the existing township of Tshiame, outside Harrismith, Free State (Map 1). The new installations will be next to an existing sewer plant. The site is reached along a turn-off from the N5 main road (Map 2).

The whole area is heavily disturbed by people and farm animals from the township.

A large sewerage plant is located in the area of development (Figs.8-10).

The following GPS coordinates (Cape scale) were taken (2828BD).

| | | |
|---|---|---|
| A | 28°16’51”S 028°59’17”E | Alt. 1613m (Figs.1&2). |
| B | 28°16’52”S 028°59’27”E | Alt. 1635m (Figs.3-5). |
| C | 28°17’11”S 028°59’29”E | Alt. 1624m (Figs.6&7). |

## RESULTS

## FINDS

No archaeological, cultural or historical material was found on the surface.

## ASSESSMENT OF IMPACT

The development of the solar power plant installation on Glen Lenie, Harrismith, will have no effect on any cultural and historical material in the area.

## MITIGATION

No mitigation measures will be required during the installation of the solar power plant at Glen Lenie 183.

## RECOMMENDATIONS

Further planning and development of the proposed project may continue.

**ACKNOWLEDGEMENTS**

I thank Lorato Tigedi, from NSVT Consultants, Bloemfontein, for directing us to the site.

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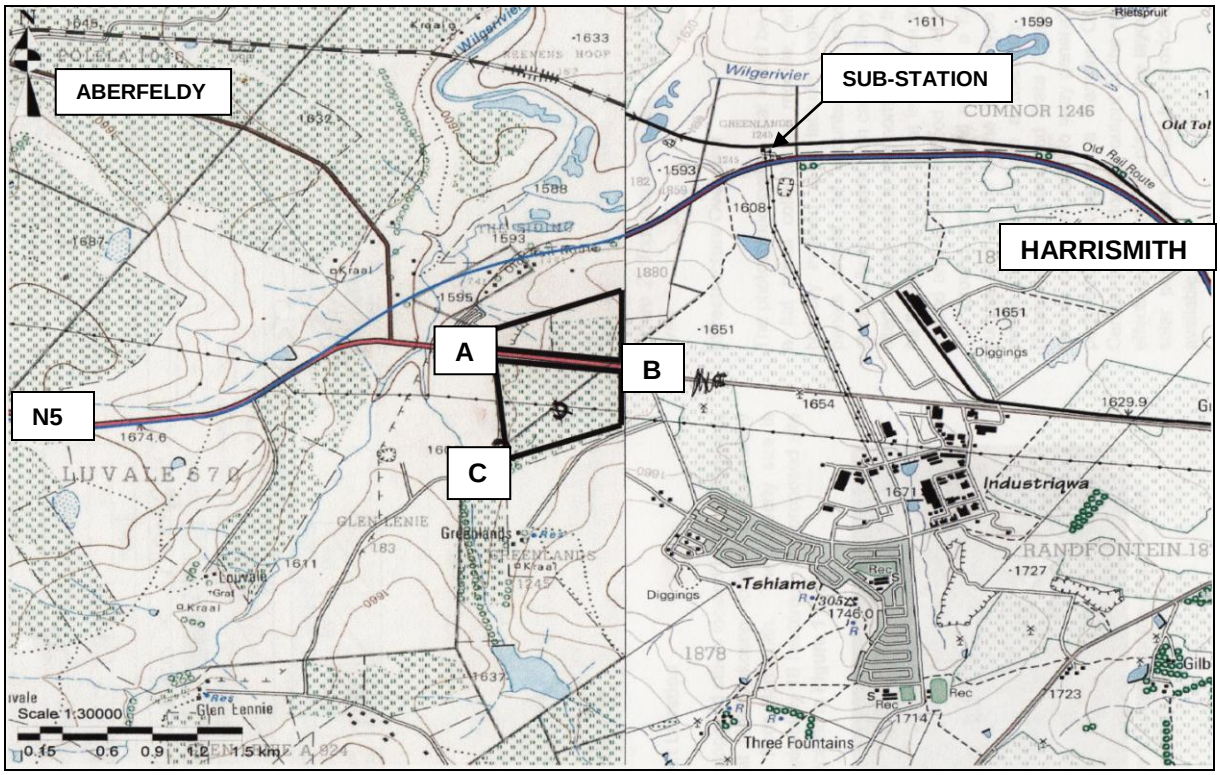
## LIST OF ILLUSTRATIONS


Map 1 Locality of Harrismith in relation to other towns along the Lesotho border.




Map 2 The new solar electricity plant at the farm Glen Lenie, Harrismith (2828BD).

Fig.1 Sewer dams at Point A, Glen Lenie, Harrismith.

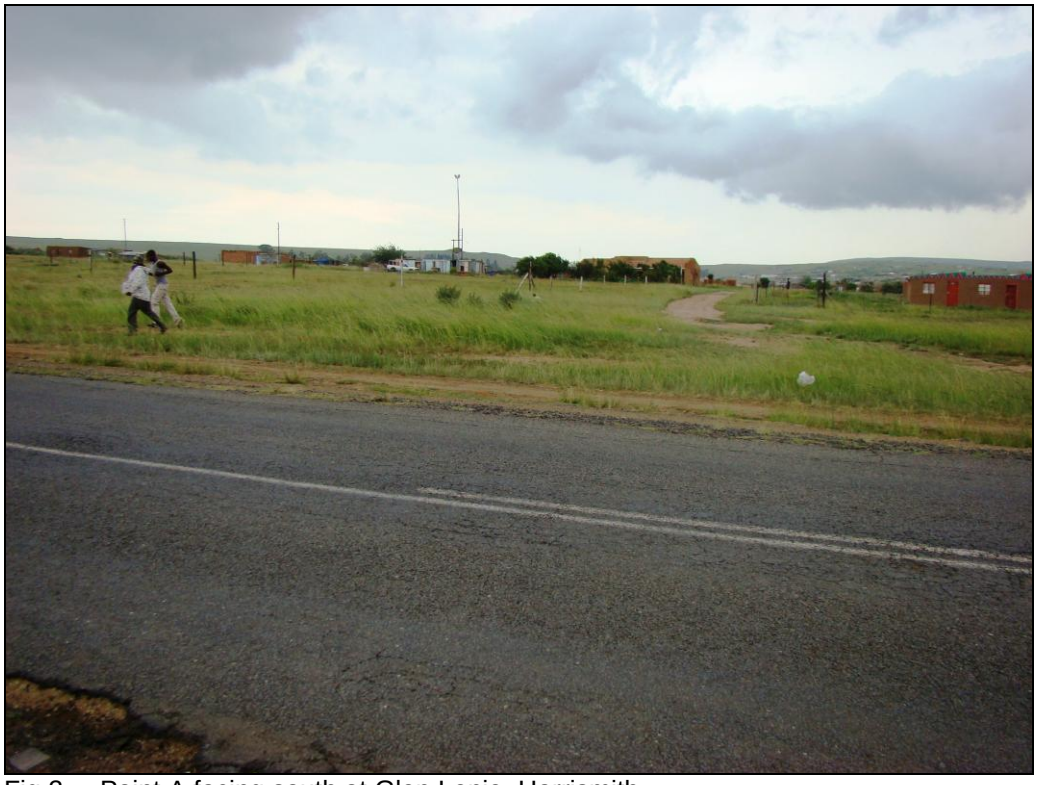


Fig.2 Point A facing south at Glen Lenie, Harrismith.

Fig.3 Point B facing Point C at Glen Lenie, Harrismith.

Fig.4 Point B facing the sewer plant at Glen Lenie, Harrismith.

Fig.5 Point B facing east at Glen Lenie, Harrismith.

Fig.6 Point C facing south at Glen Lenie, Harrismith.

Fig.7 Point C facing south at Glen Lenie, Harrismith.

Fig.8 The sewer plant at Glen Lenie, Harrismith.

Fig.9 The sewer plant at Glen Lenie, Harrismith.

Fig.10 The sewer plant at Glen Lenie, Harrismith.