

HERITAGE IMPACT ASSESSMENT FOR A PROPOSED SOLAR ENERGY FACILITY ON ONDER RIETVLEI 18/3 NEAR AURORA, PIKETBERG MAGISTERIAL DISTRICT, WESTERN CAPE

(Assessment conducted under Section 38 (8) of the
National Heritage Resources Act (No. 25 of 1999) as part of an EIA)

Prepared for

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24 June 2011



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EXECUTIVE SUMMARY

The UCT Archaeology Contracts Office was requested by Aurecon to conduct an Archaeological Impact Assessment for a proposed solar energy facility on the farm Onder Rietvlei 18/3 some 7 km north of Aurora. It is proposed to construct a 10 MW photo-voltaic facility over an area of approximately 20 ha of disused agricultural land. A 22 kV power line would run some 14 km north along the road servitude to link to the Vredelust substation.

The site was examined on 23rd June 2011. It comprised of disused agricultural land in a valley. The road servitude is either densely vegetated with fynbos or disturbed to some degree by road building activities. A telephone line and small power line run along the servitude.

No archaeological material of any significance was found within the proposed footprint of the solar array. The only archaeological resources of concern are two semi-ruined structures, a house and a barn, located in the farm complex very close to the road. Although not archaeological in nature, a large tree line falling partly within the road reserve was also noted along the power line route.

Given the existence of other overhead lines along the western side of the road it seems prudent to cluster the lines to reduce disturbance.

Subject to the approval of Heritage Western Cape, the project should thus be allowed to proceed.

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1. INTRODUCTION

The UCT Archaeology Contracts Office was requested by Aurecon to conduct an Archaeological Impact Assessment for a proposed solar energy facility on the farm Onder Rietvlei 18/3 some 7 km north of Aurora (Figure 1). It is proposed to construct a 10 MW photo-voltaic facility over an area of approximately 20 ha of disused agricultural land. The panels would stand up to 1.5 m from the ground surface. The facility would link in to the Vredelust substation some 14 km to the north via a 22 kV power line that would be situated within the servitude of the MR 534 road (Figure 2). Note that this substation has yet to be constructed but received approval in February 2011. No alternative sites for the solar array are being considered and alternatives for the power line are limited to which side of the road it will be built on, possibly crossing the road if necessary.

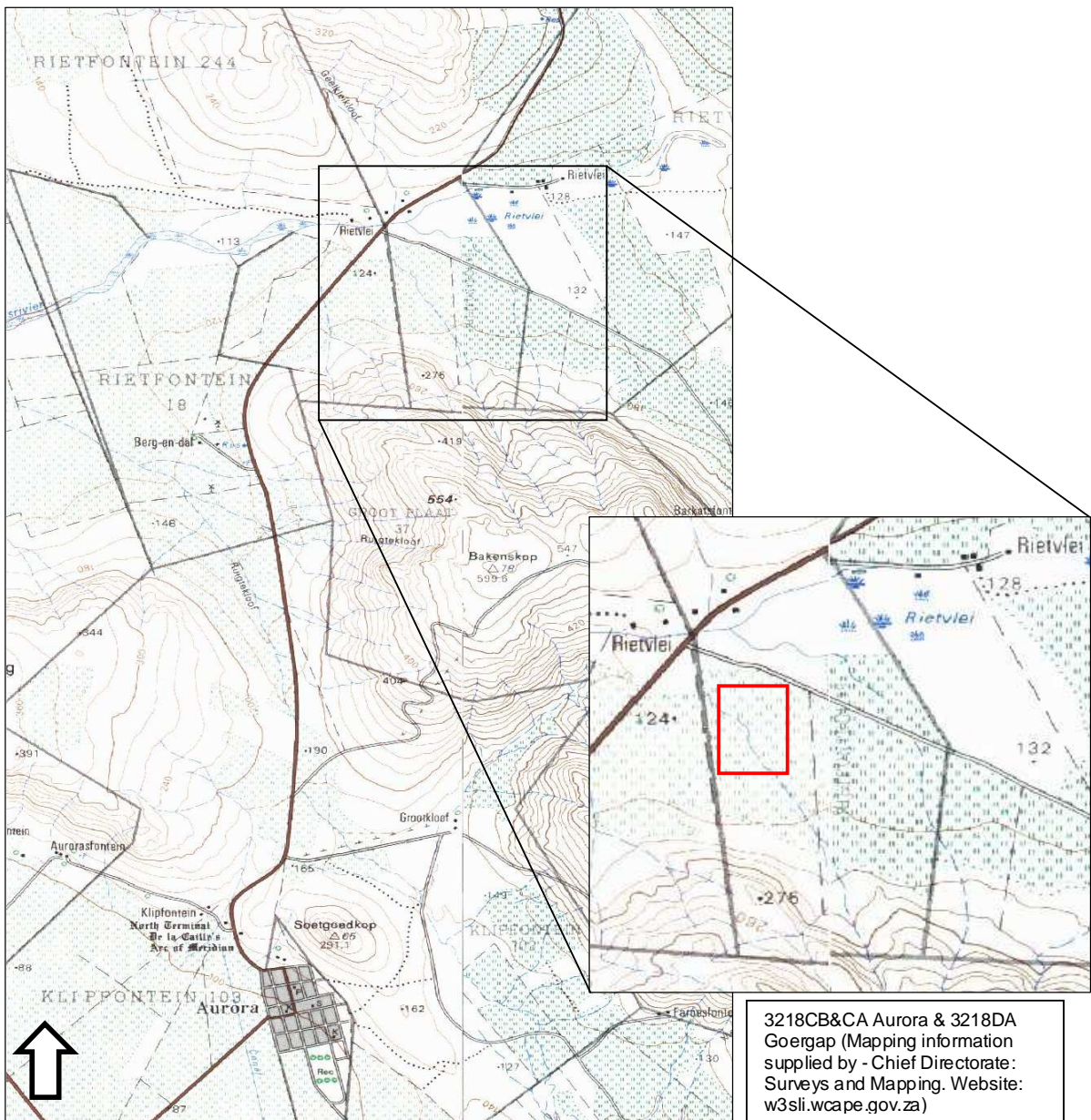


Figure 1: Map showing the location of the proposed solar facility 7 km north of Aurora.

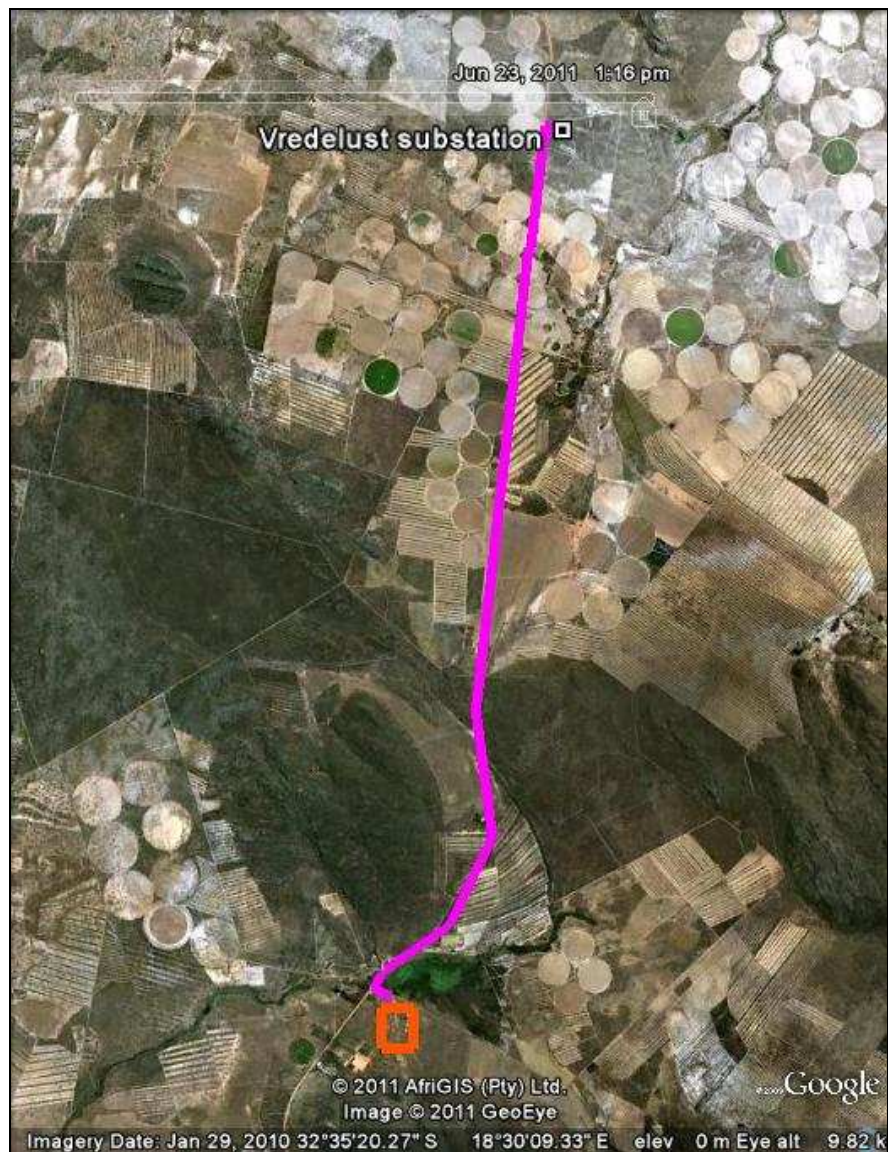


Figure 2: Aerial photograph showing the routing of the proposed 22 kV power line (pink) to the Vredelust substation. The solar array would be constructed within the orange rectangle in the south.

2. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources including palaeontological, prehistoric and historical material (including ruins) more than 100 years old (Section 35), human remains older than 60 years and located outside of a formal cemetery administered by a local authority (Section 36) and non-ruined structures older than 60 years (Section 34). Landscapes with cultural significance are also protected under the definition of the National Estate (Section 3 (3.2d)). Section 38 (2a) states that if there is reason to believe that heritage resources will be affected then an impact assessment resource must be submitted. This report fulfils that requirement.

Since the project is subject to an Environmental Impact Assessment, Heritage Western Cape (HWC) is required to provide comment on the proposed project in order to facilitate final

decision making by the Department of Environmental Affairs (DEA). A NID form was initially submitted to HWC and they in turn requested a Heritage Impact Assessment and a Visual Assessment. This report fulfils the former requirement.

3. METHODS

A field survey of the proposed solar array site and power line route was conducted on 23rd June 2011. A GPS-receiver was used to record finds and walk paths and the site and its surroundings were photographed. While the solar site was subjected to a detailed foot survey, the power line route was only examined from the vehicle with the exception of two areas that may have had increased potential to yield archaeological material. This included the stretch between the road and the substation site.

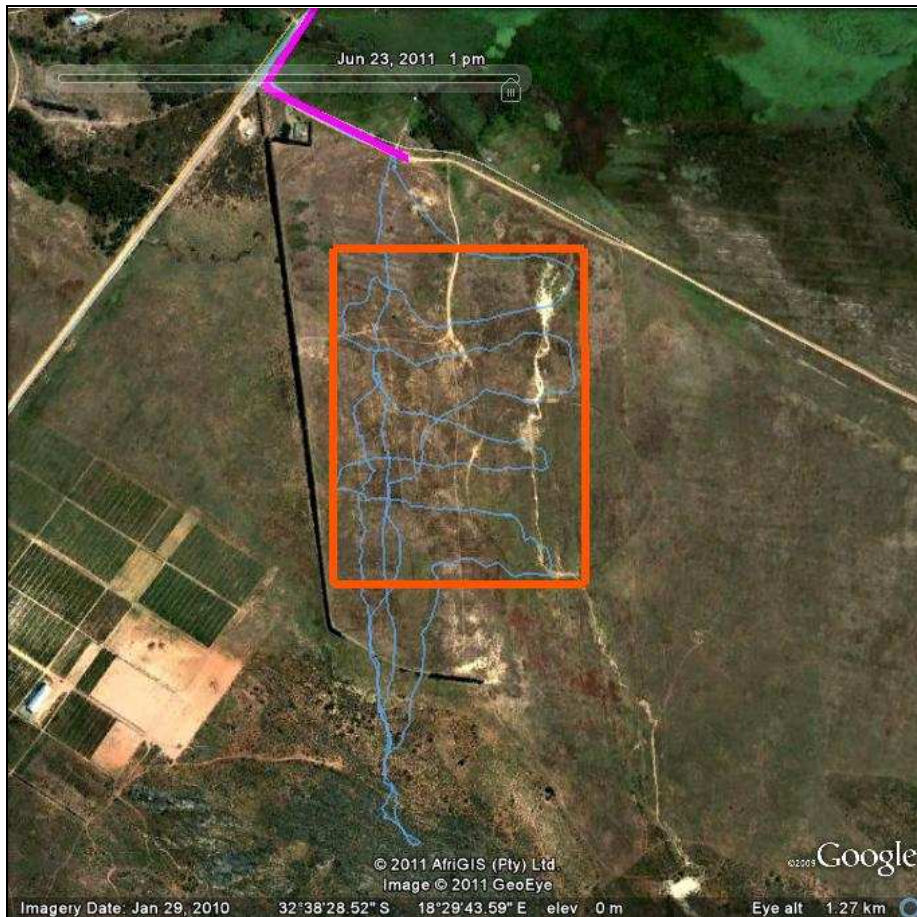


Figure 3: Aerial photograph showing the walkpaths recorded during the survey (blue lines).

3.1. Limitations

Although the power line route was not examined in detail, no impacts are expected as archaeological material is very sparse in the region and the road reserve is generally disturbed to some degree due to grading activities or very heavily vegetated. This limitation is not expected to have any bearing on the outcome of the report.

4. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The land scheduled for use for the solar array is currently disused farm land which lies along the southern edge of the Papkuilsrivier and a small wetland (Figure 3). It had earlier been used for citrus farming and then potato farming but is now lying fallow. The land owner is trying to encourage regrowth of the indigenous vegetation. Several small water run-off channels cross the eastern part of the site. Figures 4 to 6 show aspects of the site as it now stands.



Figure 4: View towards the north from the hill overlooking the site to show its context. The solar array would be located in the corner created by the tree lines.



Figure 5: View towards the south and southwest showing current ground covering and the line of Beefwood trees adjoining the site.



Figure 6: View towards the west showing one of the water run-off channels and the ground covering on the site.

The power line would follow the road servitude. Much of this servitude is either heavily overgrown or else disturbed through road works and related activities. A telephone line and small power line run along the servitude. One stretch in the far north has been recently excavated. Figures 7 to 12 show aspects of the power line route progressively from south to north.



Figure 7: View south along the road towards the farm with dense fynbos in the road reserve. The solar array would lie in the field visible to the far left.



Figure 8: View south showing dense indigenous vegetation in the road reserve.



Figure 9: View south showing disturbed road reserve.



Figure 10: View south showing fynbos in road reserve.



Figure 11: View south showing tree lines along road. That on the west (right hand side) is far more extensive.



Figure 12: View north showing sand in road reserve. Note also the disturbed strip along the east side of the road.

5. HERITAGE CONTEXT

Little archaeological work is known to have occurred in the immediate vicinity, but more broadly the UCT Archaeology Department has conducted surveys in the area to the north and northwest recording numerous scatters of rock paintings in the local hills and artefact scatters in sandy deflation hollows (Manhire 1987). A few impact assessments have also been conducted by the Archaeology Contracts Office (ACO) in the region and have only documented isolated artefacts or small scatters of artefacts either on the lower mountain slopes or in sandy contexts that might have been old deflations now ploughed for agriculture (Orton 2007a, 2007b). Although the majority of this material is ascribable to the Later Stone Age (LSA), Middle Stone Age (MSA) material is known in the region, particularly from Diepkloof Rock Shelter to the west of Rhedelinghuys (Parkington 1999) and Elands Bay Cave at the coast (Parkington 1988; Volman 1984).

Early European explorers in the area include Simon van der Stel who reached Verlorenvlei in 1679 and Olof Bergh who crossed the vlei in 1682 (Mossop 1931; Taylor 1990). Bergh crossed the vlei at “Wittedrift” close to Redelinghuys and it is no doubt in commemoration of this that the pass from Redelinghuys to Aurora (the MR534 – Olof Bergh Pass) is named after this explorer. In terms of historical settlement, white farmers are likely to have employed Khoekhoe herders to herd cattle in the area from about 1720 onwards, but are only likely to have settled in the region themselves and begun building houses from the 1770s (Taylor 1990). The early dwellings were built in the typical Cape vernacular style with many of these long houses still in existence today, albeit frequently in ruin. These houses have also attracted study from University of Cape Town students (e.g. Gribble 1987, 1990; Swanepoel 1996; Taylor 1990; UCT School of Architecture 1980). In general, the Sandveld area preserves a large number of vernacular buildings in various states of repair. Those in ruin are classified as archaeology in terms of the NHRA.

6. FINDINGS

6.1. Solar array site

Very little was noted at the site. In one area three small fragments of black mussel (*Choromytilus meridionalis*) were noted and at another point a single, very weathered silcrete flake was found. While the former perhaps represent items dropped by a LSA person crossing the landscape, the latter is likely MSA. A very obvious rock shelter is located just upslope of the proposed site and this was visited as well. It contained no archaeological remains at all besides one fragment of burnt bone. Its floor is water-washed, perhaps explaining the paucity of material. A few artefacts were noted on the lowermost slopes of the mountain though.

6.2. Power line route

Three old buildings of significance occur on the farm. One is some 80 m from the road and was not visited. The other two are about 30 m and 20 m from the road respectively and are in very poor condition and perhaps better classed as ruins. These are described below.

6.2.1. Ruined structures

An old house stands to the west of the road, about 30 m from the road surface amongst some very large gum trees. It is 19th century in age. A survey diagram from 1834 indicates a house present to the west of the land but this probably represents one of the other buildings.

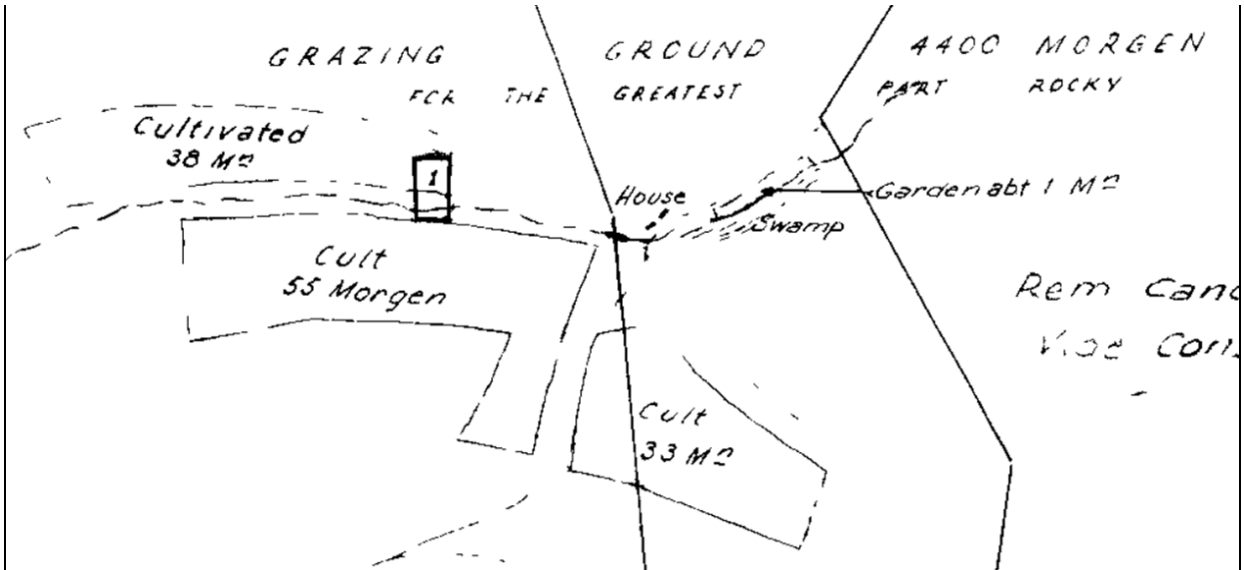


Figure 13: Extract from an 1834 survey diagram showing an early house at the western end of the wetland.

The house of concern here is in a very poor condition (Figures 14 to 16). Its external hearth has caved in and a large portion of the rear wall and adjoining Oregon pine woodwork has been removed to facilitate entry of a combine harvester. Some internal walls have also been removed and parts of the structure are unstable. Some joinery is still present but most is damaged to some degree. Plans are currently underway to attempt to restore this structure.



Figure 14: View of the front of the 19th century house.



Figure 15: View of the back and north end of the 19th century house showing the demolished section.



Figure 16: View of the south end of the 19th century house showing the caved in hearth.

The second building is an old barn, also 19th century in age. Although parts are still relatively sturdy, one side wall is in danger of collapsing which would likely result in much of the remainder falling down.



Figure 17: View of the 19th century barn east of the road.



Figure 18: View of the west end of the 19th century barn.

Also noted during the survey but under no threat is an historic graveyard dating to the 19th century and located some 115 m from the road. Its presence is mentioned only for the record.

6.2.2. Other

Although not covered within the ambit of an AIA, it seems prudent to note the presence of a large gum tree line located along and partly within the road servitude (Figure 11). This tree line has already been taken into account as the option of the power line switching sides of the road at this point is being considered. It is best to try to preserve as much of it as possible.

7. CONCLUSIONS

No direct archaeological impacts will occur as a result of the proposed project. As such, no objection to the proposed development is raised.

Given the presence of an Eskom power line in parts of the road servitude and a Telkom line, both of which run along the western side, it is felt that the new line would be better placed on the same side of the road to reduce the degree of disturbance.

8. RECOMMENDATIONS

No direct archaeological impacts will occur. Should other studies not dictate otherwise, it is recommended that the power line route pass through the farm complex on the east side of the road. Subject to the approval of Heritage Western Cape, the project should thus be allowed to proceed.

9. REFERENCES

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