

14 October 2022

Ref: 671HIA-001

Environmental Impact Management Services Pty Ltd  
8 Dalmeny Road,  
Pine Park,  
Randburg,  
South Africa

**Attention: GP Kriel**

**PART 1 ENVIRONMENTAL AUTHORISATION (EA) AMENDMENT PROCESS FOR EXTENDING THE VALIDITY OF THE EA BY AN ADDITIONAL 3 YEARS FOR THE AUTHORISED MULILO STRUISBULT PV2 FACILITY, LOCATED NEAR PRIESKA IN THE SIYATHEMBA LOCAL MUNICIPALITY, PIXLEY KA SEME DISTRICT MUNICIPALITY IN THE NORTHERN CAPE PROVINCE OF SOUTH AFRICA – HERITAGE SPECIALIST OPINION**

**1. INTRODUCTION**

PGS Heritage (Pty) Ltd (PGS), a heritage specialist consultancy, was requested to evaluate the request to extend the validity of the Environmental Authorisation by an additional 10 years for the Mulilo Struisbult PV2 facility (DFFE Reference No.: 12/12/20/2502). Dr Jayson Orton completed the original Heritage Impact Assessment in 2012

**2. PROJECT DESCRIPTION**

Mulilo Renewable Project Developments (Pty) Ltd (Mulilo), was issued with an Environmental Authorisation (EA) for the proposed Struisbult PV2 Facility close to Prieska in the Siyathemba Local Municipality, Pixley ka Seme District Municipality in the Northern Cape Province of South Africa on 01 October 2012 (DFFE Reference No.: 12/12/20/2502).

After the issuing of the original EA in October, the following amendments have been undertaken and granted for the authorised SEF:

- 2013/03/28: Name Change Amendment: 12/12/20/2502
- 2013/10/01: Name Change Amendment: 12/12/20/2502
- 2015/10/07: Struisbult PV2 EA Extension: 12/12/20/2502/AM2
- 2017/12/11: Struisbult PV2 EA Extension: 12/12/20/2502/AM3

- 2020/12/10: Struisbult PV2 EA Extension: 12/12/20/2502/AM4

The last EA Extension extended the validity of the EA to 2 January 2023.

The Struisbult PV2 (PV) Solar Energy Facility is to be constructed on Portion 1 of the Farm No 104, near Copperton in the Northern Cape Province.

The following infrastructure have been authorised by the DFFE:

- Solar PV facility with a capacity to generate 100MW
- Upgrading of existing internal farm roads and construction of new roads to accommodate construction vehicles and access to the site;
- Construction of a 132 kV transmission line to connect the proposed PV plant with Eskom's grid via the Cuprum Substation located to the southwest of the study area;
- Construction of an electrical fence to prevent illegal trespassing, as well as to keep livestock from roaming between the solar arrays and causing accidental damage; and
- Construction of an office, connection centre and a guard cabin.

### **3. SPECIALISTS' TERMS OF REFERENCE**

- A detailed motivation as to why the Department should extend the commencement period of the authorised development, including the advantages and disadvantages associated with the approval or refusal to the request for extension.
- The status (baseline) of the environment (social and biophysical) that was assessed during the initial assessment (by the relative specialist, if applicable);
- The current status of the assessed environment (social and biophysical) (by the relative specialist, if applicable).
- A review of all specialist studies undertaken, and a detailed assessment, including a site verification report providing an indication of the status of the receiving environment (by the relative specialist, if applicable);
- The terms of reference for the specialist reports and declaration of interest of each specialist must be provided.
- The report mentioned above, must indicate if the impact rating as provided in the initial assessment remains valid; if the mitigation measures provided in the initial assessment are still applicable; or if there are any new mitigation measures which need to be included into the EA, should the request to extend the commencement period be granted by the Department.
- An indication if there are any new assessments/guidelines which are now relevant to the authorised development which were not undertaken as part of the initial assessment, must be taken into consideration and addressed in the report.

- A description and an assessment of any changes to the environment (social and biophysical) that has occurred since the initial EA was issued;
- A description and an assessment of the surrounding environment, in relation to new developments or changes in land use which might impact on the authorised project, the assessment must consider the following:
  - similar developments within a 30km radius.
  - Identified cumulative impacts must be clearly defined, and where possible the size of the identified impact must be quantified and indicated, i.e., hectares of cumulatively transformed land.
  - Detailed process flow and proof must be provided, to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project.
  - The cumulative impacts significance rating must also inform the need and desirability of the proposed development.
  - A cumulative impact environmental statement on whether the proposed development must proceed.

#### **4. ANY NEW GUIDELINES/ PROTOCOLS**

None

#### **5. CURRENT BASELINE HERITAGE STATUS**

No significant change to the baseline heritage environment has occurred since the original assessment. PGS has completed various other studies in the surrounding area and for the grid connection associated with the Struisbult PV2 facility (2022).

Findings relating to cultural heritage and palaeontology (2012) for the project are still applicable.

#### **6. MOTIVATION FOR EXTENDING THE VALIDITY EXTENSION**

The Struisbult PV2 facility was issued an Environmental Authorisation (EA) during 2013 by the Department of Forestry, Fisheries and the Environment (DFFE Ref: 12/12/20/2502). The Applicant wishes to extend the validity of the Environmental Authorisation to 02 January 2025.

The proposed project was earmarked for construction to commence in 2022 for a private off-taker until an Eskom Cost Estimate Letter (CEL) greatly increased the scope of self-build infrastructure required for the project to connect to the grid. The cost implications of the CEL scope increase made the project

unfeasible for the proposed private off-taker. EA validity extension is being sought to allow this project which is near construction-readiness to be bid in upcoming renewable energy tender processes, specifically Bid Window 6 and 7 of the REIPPP programme.

Extension of the validity of the EA will ensure that the EA remains valid for the undertaking of the authorised activities such that the project can be bid into future bidding rounds of the REIPPP Programme or similar programmes.

## 7. SPECIALIST COMMENT

We note that no changes to the layout and infrastructure from the original layouts are proposed and only the extension of the EA.

Our evaluation of the original HIA and PIA and subsequent documentation has shown that we envisaged no changes to the projected impact. We have further evaluated the cumulative impact related to the number of other proposed wind and solar renewable projects in the vicinity of the approved Struisbult PV2 Facility (**Figure 1**).

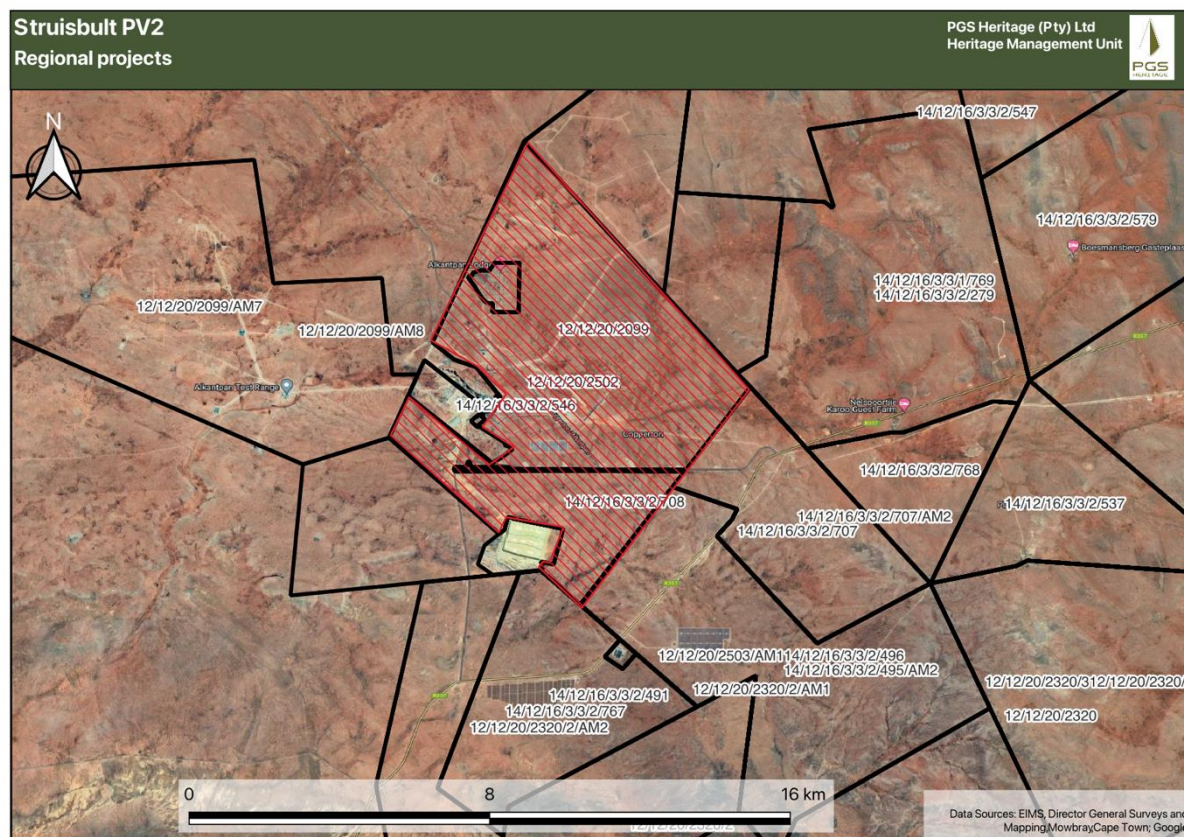


Figure 1 - Surrounding projects

The cumulative impact on cultural heritage resources would potentially change since the project's inception in 2012. However, no cumulative impact assessment was done in 2012. It must be considered that the whole of the Copperton area is being developed for Renewables Energy Projects. Still, the occurrence of cultural heritage resources is considered to be low and localised and managed through the recommendation from the HIA and PIA contained in the EMPR for the project.

The management measures as included in the HIA and PIA (2012) remain true and need to be implemented and are listed below:

### **Palaeontology**

*As far as fossil heritage is concerned, the impact significance of the proposed solar energy facility is considered to be LOW for the following reasons:*

- *The Precambrian basement rocks are entirely unfossiliferous;*
- *The Karoo Supergroup bedrocks here are deeply weathered and at most sparsely fossiliferous;*
- *The development footprints for both the preferred and alternative sites are small and largely underlain by superficial deposits of low palaeontological sensitivity;*
- *Significant fossil material (e.g. mammal remains) at or near surface is probably very sparsely distributed within the study area; and*
- *Extensive, deep bedrock excavations are not envisaged during the construction phase.*

*Potential impacts on fossil heritage are confined to the development footprint and are only anticipated, if at all, during the construction phase. There is no preference on fossil heritage grounds for the preferred versus alternative development area within the boundaries of Struisbult Farm. Neither of these sites has fatal flaws in palaeontological heritage terms. A number of other alternative energy projects – including both wind energy and solar energy facilities – have been proposed for the Copperton area (cf Almond 2010a, 2010b, 2011a, 2011b, 2012a, 2012b; Gresse & Corbett 2012). Given the generally low palaeontological sensitivity of the Karoo bedrocks and Pleistocene to Recent superficial sediments in the region as a whole, the cumulative impact of these developments is not considered to be of high significance.*

*It is recommended that:*

- *The ECO responsible for the development should be aware of the possibility of important fossils (e.g. mammalian bones, teeth) being present or unearthed on site and should monitor all substantial excavations into superficial sediments as well as fresh (i.e. unweathered) sedimentary bedrock for fossil remains;*
- *In the case of any significant fossil finds (e.g. vertebrate teeth, bones, burrows, petrified wood) during construction, these should be safeguarded - preferably in situ - and reported*

*by the ECO as soon as possible to the relevant heritage management authority (SAHRA, Cape Town) so that any appropriate mitigation (i.e. recording, sampling or collection) by a palaeontological specialist can be considered and implemented, at the developer's expense; and*

- *These recommendations should be incorporated into the EMP for the Struisbult PV2 solar energy facility project.*

## **Archaeology**

*A background scatter of Early Stone Age (ESA) and Middle Stone Age (MSA) artefacts was found across the site and is of very low archaeological significance. Several discrete Later Stone Age (LSA) sites were found focused around Perdepan. These sites are more significant and would require mitigation should they be under threat. Furthermore, evidence from elsewhere suggests that the possibility of finding important subsurface material close to pans exists. No buildings exist on the site and no cultural landscape elements were noted.*

*Visual impacts to scenic routes and sense of place will be limited due to the partial screening effect from a large berm and the presence of existing abandoned mining infrastructure in the vicinity.*

*Archaeological impacts are assessed as being of high significance for both alternatives but Low with mitigation. Impacts of visual concern are rated as of Low significance and no mitigation is suggested. Impacts to heritage resources are not considered to be highly significant and it is thus concluded that the project may proceed but subject to the following recommendations:*

- *The suggested archaeological mitigation should be implemented as necessary;*
- *Test excavations around the pan should be done to check for buried archaeological material (if development encroaches within 100 m of the pan margin but excluding for access roads);*
- *Transmission lines should stay at least 100 m away from the edge of any pans implicated in the final route; and*
- *If any human remains are uncovered during development then work in the immediate vicinity should*

## **8. CONCLUSION**

It is our considered opinion that the extension of the EA for the authorised Struisbult PV2 Facility will not have any additional impacts on the heritage resources inventory identified for the project as part of

the original heritage studies. We conclude that this proposed extension of the EA can proceed from a heritage perspective.

Any enquiries can be submitted to Wouter Fourie at [wouter@pgsheritage.com](mailto:wouter@pgsheritage.com).



Wouter Fourie

*Accredited Professional Heritage Practitioner (APHP), Accredited Professional Archaeologist (ASAPA)*

**Director – PGS Heritage**

## **APPENDICES**

**Appendix 1:** Specialists declaration of Interest (signed by a Commissioner of Oaths)

**Appendix 2:** Specialist CVs

**Appendix 1: Specialists declaration of Interest (signed by a Commissioner of Oaths)**



## Appendix 2: Specialist CVs



# WOUTER FOURIE

Professional Heritage Practitioner

### PROFILE

I am involved in heritage resources management for the past 20 years acting as a specialist consultant on various high-profile projects involving heritage and archaeology. I aim to develop tailor-made heritage solutions to the mining, water and oil and gas industries. I have worked in various African countries, including South Africa, Lesotho, Mozambique, Mauritius, Malawi and the DRC.

I thrive on developing and implementing heritage projects in new territories and with these securing local partnerships that enable skill development for local graduates.

### CONTACT

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## EDUCATION

### University of Pretoria

1993-1996

BA Degree - Majors in Archaeology, Anthropology and Geography

### University of Pretoria

1997

BA Hon Archaeology, with further specialisation in environmental management.

### University of Cape Town

2016 - present

MPhil Conservation of the Built Environment

## WORK EXPERIENCE

### PGS Heritage Group of Companies - Director - Heritage Specialist

2003- present

I am actively involved in the management of the business and focus on marketing and new business for PGS, specifically the broader SADC region. Acting as heritage specialist in multidisciplinary teams

### The University of the Witwatersrand - Project Manager - Archaeological Contracts Unit

2007-2008

Responsible for conducting heritage and archaeological impact studies, archaeological excavations and general management of the unit

### Matakoma Consultants - Director - Heritage Specialist

2000 - 2008

Heritage specialist and Director responsible for heritage and archaeological impact studies

### Randfontein Estate Gold Mine - Environmental Coordinator

Oct 1998- Feb 2000

Coordinating all environmental Rehabilitation work

### Department of Minerals and Energy Environmental Officer

Oct 1997 - Sept 1998

## PROFESSIONAL AFFILIATION

### Accredited Professional Heritage Practitioner

Association of Professional Heritage Practitioners  
Since 2014

### Accredited Professional Archaeologist

Association of Southern African Professional Archaeologists -  
Since 2001