

16 October 2022

South Africa Mainstream Renewable Power Mierdam (Pty) Ltd  
PO Box 45063,  
**CLAREMONT,**  
7735

**ATTENTION: Eugene Marais**

Dear Sir,

## **VISUAL SPECIALIST COMMENT IN RESPECT OF PROPOSED AMENDMENTS TO THE ENVIRONMENTAL AUTHORISATION FOR THE 75MW MIERDAM PHOTOVOLTAIC (PV) PLANT NEAR PRIESKA, NORTHERN CAPE PROVINCE**

### **1. INTRODUCTION**

South Africa Mainstream Renewable Power Mierdam (Pty) Ltd (hereafter referred to as “Mainstream”), received Environmental Authorisation (EA) for the proposed construction of the 75MW Mierdam Photovoltaic (PV) Solar Energy Facility (SEF), near Prieska in the Northern Cape Province. Authorisation was originally granted on 6 September 2012 by way of **EA Reference No 12/12/20/2320/2** and several amendments to this EA (as outlined below) have been granted in the intervening years. As this EA will lapse in September 2022, Mainstream is proposing to submit a Part 1 EA amendment to extend the EA validity period.

A Visual Impact Assessment (VIA) was undertaken in respect of this project by SiVEST in February 2012 as part of the original Environmental Impact Assessment (EIA) process and the findings of the VIA were presented in the Visual Impact Assessment Report – EIR Phase, dated 1 March 2012 (Da Cruz, 2012). This VIA was revised in 2013 as part of the amendment application in respect of the proposed increase in output capacity from 40MW to 75MW. The findings of the revised VIA were presented in the Visual Impact Assessment Report - Mierdam Amendment Application, dated 16 January 2013 (Gibb, 2013).



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SiVEST has appointed SLR Consulting South Africa (Pty) Ltd (hereafter referred to as “SLR”) to provide visual specialist comment in respect of proposed amendments.

The findings of the original VIA and the revised VIA are still considered to be valid and form the basis of the comments presented hereunder. As such, this letter must be read in conjunction with the VIA reports dated 1 March 2012 and 16 January 2013.

## 2. PROJECT DESCRIPTION

As stated, Mainstream was issued with an Environmental Authorisation (EA) for the proposed 75MW Mierdam Solar Energy Facility (SEF), located near Prieska in the Siyathemba Local Municipality, Pixley ka Seme District Municipality in the Northern Cape Province of South Africa on 6th of September 2012 (DEFF Reference No.: 12/12/20/2320/2/1).

Subsequent to the issuing of the original EA in September 2012, the following amendments have been undertaken and granted for the authorised SEF:

- The EA was amended on 19 June 2015 to extend the validity of the EA as well as to amend the contact details of the holder of the EA (DFFE Reference No.: 12/12/20/2320/2/AM1).
- The EA was amended on 22 September 2017 to extend the validity period of the EA (DEFF Reference No.: 12/12/20/2320/2/AM2).
- The EA was amended on 26 of August 2020 to extend the validity period of the EA (DFFE Reference No.: 12/12/20/2320/2/AM3).
- The EA was amended on 21 May 2021 to split the EA into two portions, the IPP portion (DFFE Reference No.: 12/12/20/2320/2/1).
- The EA was amended on 21 May 2021 to split the EA into two portions, the Eskom portion (DFFE Reference No.: 12/12/20/2320/2/2).

The Mierdam Photovoltaic (PV) Solar Energy Facility is to be constructed within the project site which comprises the following farm portion:

- Portion 1 of Kaffirs Kolk No. 118
- The following infrastructure has been authorised by the DFFE:
  - A solar PV facility with a capacity to generate 75MW
  - The panel arrays of approximately 15m x 4m in the area
  - Office and maintenance buildings
  - Internal access roads
  - Cables/strings to connect PV arrays to DC to AC inverters
  - On site substation (IPP Portion of the shared on-site substation)

Mainstream is now proposing to undertake a Part 1 EA Amendment process to extend the validity of the Environmental Authorisation by an additional 3 years.

## 3. SPECIALIST COMMENT

In considering the proposed amendments to the EA for the Mierdam SEF, it is noted that the amendments do not involve any changes in the power line route alignment, PV layout or the positioning of the other authorised elements of the facility. Given the fact that the last VIA for the Mierdam SEF was undertaken in 2013 however, it is important to assess the degree of change in the receiving environment in the intervening years to determine whether the development as proposed will result in additional visual impacts or exacerbate the impacts previously identified.

### 3.1 CHANGES IN THE RECEIVING ENVIRONMENT

A desktop assessment was undertaken using Google Earth Imagery in conjunction with information drawn from more recent VIAs undertaken (by SiVEST SA (Pty) Ltd) in the vicinity of the Mierdam SEF project (VIA for Aletta140MW Wind Energy Facility, 2017 and VIA for Aardvark Solar Facilities 1 – 6, 2021). From this assessment, it was established that although the landscape immediately north of Mierdam SEF development area has undergone some transformation as a result of the development of Solar PV facilities adjacent to the R357 Main Road, there has been little significant change in the baseline characteristics or the number of sensitive receptors across the remainder of the Mierdam SEF VIA study area since 2013.

### 3.2 CUMULATIVE IMPACTS

Although the previous VIAs considered the likely cumulative impacts resulting from renewable energy facility (REF) developments in the vicinity of the Mierdam SEF project, it should be noted that, in the interim, EAs have been granted in respect of several new REFs in the vicinity of the Mierdam SEF project. These projects were identified using the DFFE's Renewable Energy EIA Application Database for SA (incremental release Quarter 2 2022) in conjunction with information provided by Independent Power Producers operating in the broader region (Figure 1). Two of these projects are Wind Energy Facilities (WEFs) while the remaining projects are all SEFs. Although the different technologies are expected to have different impacts, all renewable energy developments and associated grid connection infrastructure are relevant as they contribute to the alteration of the visual character of the broader area. Three of the SEF projects have been constructed and are in operation and Garob WEF is under construction. Hence the landscape has already undergone noticeable change.

The previous VIA recognised the development of the Mierdam SEF in this area as the extension of human infrastructural influence in the landscape that is currently centred on the old Copperton Mine and Kronos Substation. This would represent an extension of an already visually altered component of the landscape, rather than the creation of a marked change in an otherwise "unaltered" context. Accordingly, cumulative impacts were rated as **LOW**.

However, the development of the additional REFS as proposed would result in the area becoming a renewable energy node, further changing the visual character of the area and altering the inherent sense of place, extending an increasingly industrial character into the broader area, and potentially resulting in significant cumulative impacts. It is however anticipated that these impacts could be mitigated to acceptable levels with the implementation of the relevant mitigation measures. In addition, it is possible that these developments in close proximity to each other could be seen as one large Renewable Energy Facility (REF) rather than several separate developments. Although this will not necessarily reduce impacts on the visual character of the area, it could potentially reduce the cumulative visual impacts on the landscape.

Having considered the new information relating to renewable energy developments in the broader area, the overall significance of cumulative impacts is increased from **LOW** to **MODERATE**.

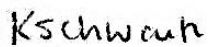
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## 4. CONCLUSION

There has been little significant change in the baseline characteristics or the number of sensitive receptors across the Mierdam SEF VIA study area since 2013. There has however been an increase in the number of approved REF projects in the area, thus increasing the significance of cumulative impacts in the broader area. It is however anticipated that these impacts could be mitigated to acceptable levels with the implementation of the relevant mitigation measures

The proposed changes to the EA are therefore considered to be purely administrative and SLR is of the opinion that, from a visual perspective, the Environmental Authorisation (EA) should be amended. The impacts associated with the construction, operation and decommissioning phases can be mitigated to acceptable levels. No additional recommendations or mitigation measures will be required and all of the mitigation measures set out in the original VIA remain valid.

Yours faithfully



Kerry Schwartz  
**Visual Specialist**



Liandra Scott-Shaw  
**Reviewer**

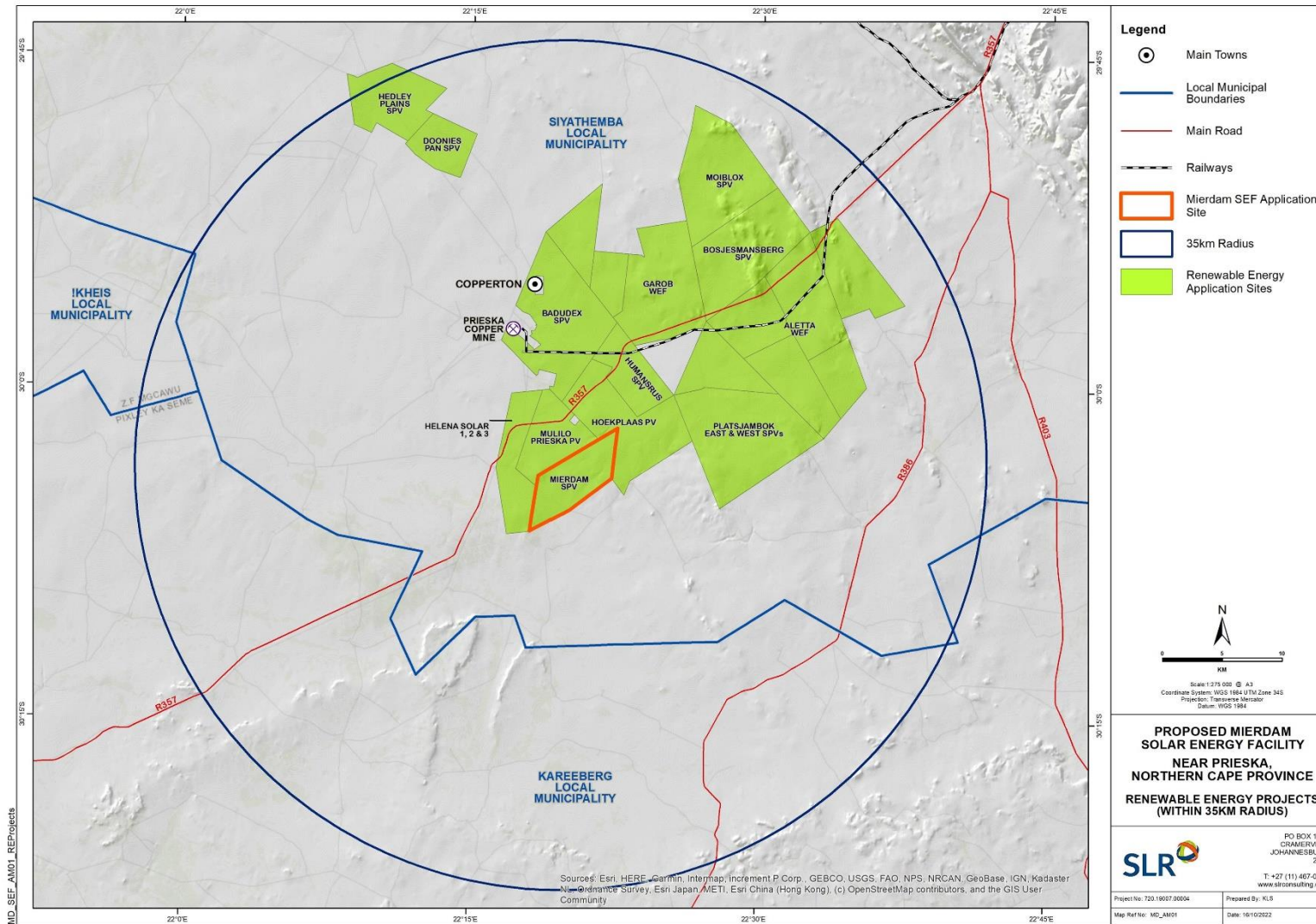


Figure 1: Renewable Energy Projects near Mierdam SEF