

14<sup>th</sup> October 2022



## **PART 1 AMENDMENT TO EXTEND THE VALIDITY OF AN ENVIRONMENTAL AUTHORIZATION – SURFACE WATER**

### **1.1 Background**

South Africa Mainstream Renewable Power Mierdam (Pty) Ltd (hereafter referred to as "Mainstream") was issued with an Environmental Authorisation (EA) for the proposed 75MW Mierdam Photovoltaic (PV) 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 September 2012 (DFFE 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 (DFFE 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 have 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)

The original site sensitivity as identified by the National Web-Based Environmental Screening Tool showed that the aquatic biodiversity them is of **low sensitivity** for the specific PV area. This was confirmed through the original site sensitivity and compliance statement that assessed the greater area. The location of the Mierdam PV site can be seen in Figure 1. The proposed PV area and associated infrastructure has been placed to avoid any wetlands/watercourses.

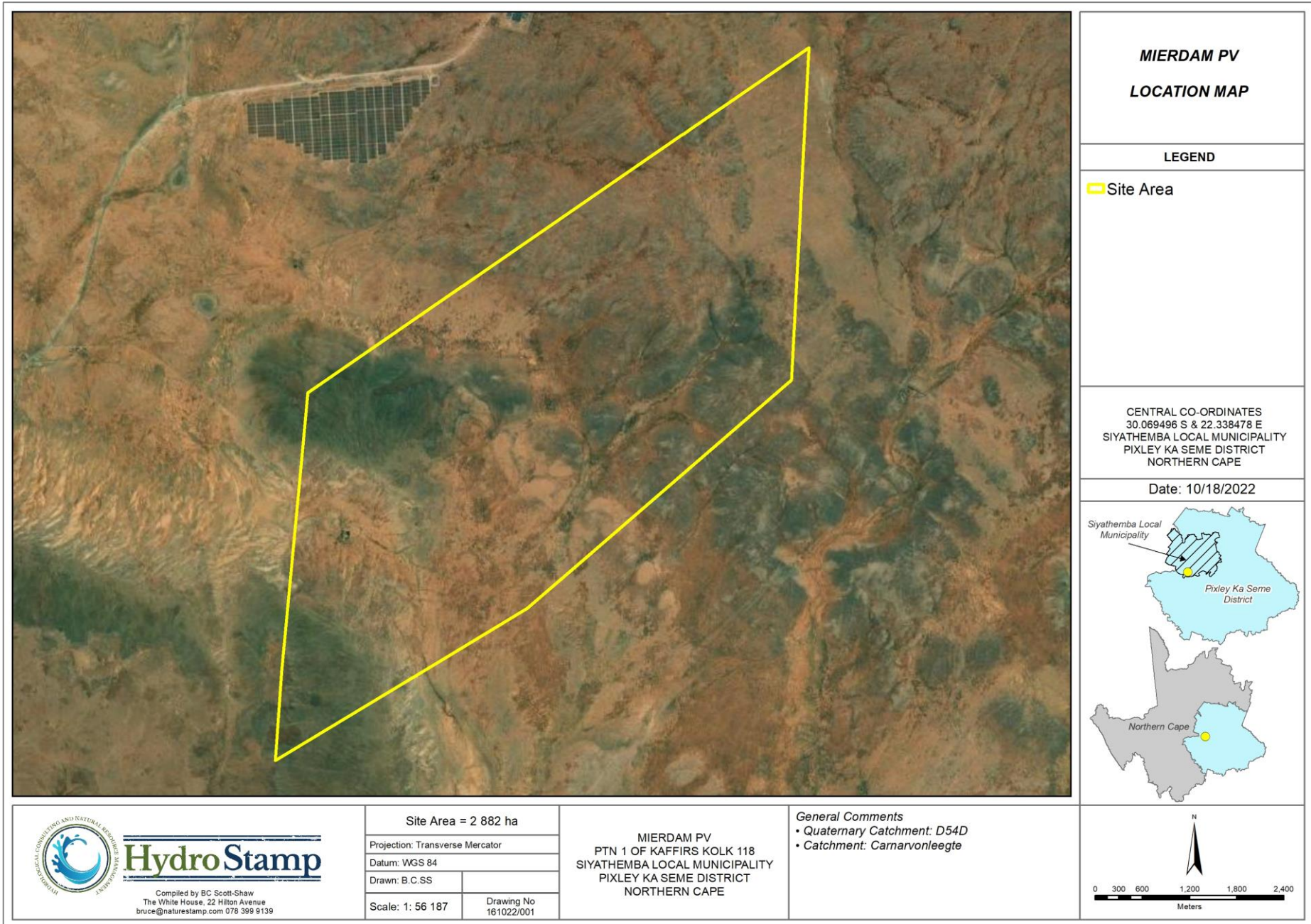


Figure 1 Location of the Mierdam PV

## 1.2 Aquatic Compliance Update

Through consideration of the proposed amendment to the EA for the Mierdam PV site, there are no changes to the PV layout and associated infrastructure. Since the initial assessment and subsequent reassessment, no changes in the baseline surface water state has occurred. This is largely due to the lack of water resources on site.

The entire extent of the PV area, access roads and associated infrastructure were previously assessed in terms of the EIA Regulations, 2014 (as amended). The aquatic biodiversity impact was confirmed to be very low. This is largely due to the lack of surface water resources within and around the site. The impacts and recommendations that were originally documented have not changed. Since the inception of the project, there have been no visible impacts from the existing PV areas, indicating that the impact of this activity is low and that the EMPr has been adhered to. It is hereby recommended that the validity of the Environmental Authorisation be extended and the original input to the EMPr be kept the same.

## 1.3 Cumulative Impacts

In relation to an activity, cumulative impact "means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may be significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities" (NEMA EIA Reg GN R982 of 2014). It is important to consider the bigger picture where numerous small impacts can lead to greater cumulative impacts. The projects were identified using the latest (2022) Renewable Energy EIA Application Database for SA from the Department of Fisheries, Forestry and Environment (DFFE).

Table 1 Approved and applied for solar energy facilities within 30 km of the Mierdam site

Name	DFFE registration	Status
8 Infinite energy (PTY) LTR 140mw wind energy facility near Copperton, Northern Cape Province	12/12/20/2099	Approved
Construction of a 40MW Solar Photovoltaic Facility on Mierdam Farm near Prieska, within the Siyathemba Local Municipality in the Northern Cape Province	12/12/20/2320/2	Approved
Proposed Helena Solar 3: 75mW Solar pV Energy Facility near Copperton within Siyathemba Local Municipality in Northern Cape Province	14/12/16/3/3/2/767	Approved
Proposed Helena Solar 2: 75 mW Solar pV Energy Facility near Copperton, Northern Cape Province	14/12/16/3/3/2/766	Approved
Proposed Helena Solar 3: 75mW Solar pV Energy Facility near Copperton within Siyathemba Local Municipality in Northern Cape Province	14/12/16/3/3/2/765	Approved
Proposed PV2 Photovoltaic (Solar) energy facility on farm Klipgats Pan near Cooperton, Northern Cape Province	14/12/16/3/3/2/491	Approved
Proposed PV6 energy plants o Farm Klipgats Pan near Copperton, Northern Cape Province	14/12/16/3/3/2/490	In process
Proposed PV5 energy plants o Farm Klipgats Pan near Copperton, Northern Cape Province	14/12/16/3/3/2/489	In process
Proposed PV4 energy plants o Farm Klipgats Pan near Copperton, Northern Cape Province	14/12/16/3/3/2/488	In process
Proposed PV3 energy plants o Farm Klipgats Pan near Copperton, Northern Cape Province	14/12/16/3/3/2/487	In process
Proposed PV2 energy plants o Farm Klipgats Pan near Copperton, Northern Cape Province	14/12/16/3/3/2/486	In process
100MW Photovoltaic (PV) Facility on portion 4 of the farm No 117, farm Klipgats Pan, Copperton, Northern Cape Province	12/12/20/2501	Approved
Proposed establishment of a PV Solar facility (Plamtsjambok) in Prieska, Siyathemba Local Municipality, Northern Cape Province	12/12/20/2320/3	In process
Construction of a Solar Photovoltaic Facility near Prieska, within the Siyathemba Local Municipality in the Northern Cape Province	12/12/20/2320	Approved
Construction of a 75MW Solar Photovoltaic Facility on the western portion of the Platsjambok Farm (Platsjambok West) near Prieska, within the Siyathemba Local Municipality in the Northern Cape Province	12/12/20/2320/5	Approved
Proposed RE Capital 14 (Pty) Ltd development within! Kai Garib LM	14/12/16/3/3/2/708	In process
Proposed PV11 PV solar energy plant on farm Hoekplaas, near Copperton, Northern Cape Province	14/12/16/3/3/2/502	In process
Proposed PV10 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/501	In process
Proposed PV9 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/500	In process
Proposed PV8 energy plants on Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/499	In process
Proposed PV7 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/498	In process
Proposed PV6 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/497	In process
Proposed PV5 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/496	In process

Name	DFFE registration	Status
Proposed PV4 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/495	In process
Proposed PV3 energy plants o Farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/494	In process
Proposed PV2 energy plants on farm Hoekplaas near Copperton, Northern Cape Province	14/12/16/3/3/2/493	In process
Mulilo Sonnedix Prieska PV	12/12/20/2503	Approved
75MW Hermanus PV3 solar energy facility and its associated infrastructure on the farm Hermansrus No 147 in the Northern Cape Province	14/12/16/3/3/2/888	In process
75MW Hermanus PV4 solar energy facility and its associated infrastructure on the farm Hermansrus No 147 in the Northern Cape Province	14/12/16/3/3/2/887	In process
Humansrus Solar PV Energy Facility (Pty) Ltd	14/12/16/3/3/2/707	In process
Proposed Garob Wind Energy fascility project near Copperton in the Northern Cape Province	14/12/16/3/3/2/279	Approved
The Proposed Garob Wind Farm To Kronos Substation, 132kv Power Line, Near Copperton, Within The Siyathemba Local Municipality, Of The Pixley Ka Seme District Municipality In The Northern Cape Province	14/12/16/3/3/1/769	Approved
Proposed Bosjesmansberg solar energy facility site near Copperton, Siyathemba Local Municipality, Northern Cape Province	14/12/16/3/3/2/579/3	Approved
Proposed Moiblox soar project within Pixley Ka Seme District Municipality, Northern Cape Province	14/12/16/3/3/2/547	In process
Proposed wind energy facility near Copperton, Northern Cape Province	12/12/20/2099	Approved
Proposed PV energy plant on farm Struisbult near Copperton, Northern Cape Province	12/12/20/2502	Approved
Proposed construction of a photovoltaic power generation facility, Prieska, Nothern Cape Province	12/12/20/1722	Approved
Proposed Badudex solar project withing Pixley Ka Seme District municipality, Northern Cape Province	14/12/16/3/3/2/546	In process
The proposed Mulilo photovoltaic solar energy plant Copperton Mine in the Northren Cape Province	14/12/16/3/3/1/454	Approved
Proposed renewable energy farm on portion 5 of farm Doonies Pan No. 106, Prieska within Siyathemba Local Municipality, Northern Cape Province	14/12/16/3/3/2/609	In process

The original surface water assessment considered existing and proposed facilities. These have increased. The closest facilities are the Platjamsbok East and West proposed SEF. The recommended mitigation measures are aligned with the identified construction and operation impacts. Key mitigation measures would be to minimize Stormwater runoff, share construction access roads, utilize the same spoil areas and utilize water efficiently while ensuring no contamination occurs.

#### 1.4 Conclusion

The overall significance of cumulative impacts is negligible and the proposed intervention measures and best practice guidelines would lead to the mitigation of any potential cumulative impacts. It is recommended by the author that the validity of the EA be extended in the context of surface water/aquatic biodiversity.

Kind regards, Bruce Scott-Shaw  
NatureStamp (Pty) Ltd



Signed \_\_\_\_\_ Date 14/10/2022

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