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Palaeontological Impact Assessments & Heritage Management,
Natural History Education, Tourism, Research

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Palaeontological Heritage Resources Comment on Proposed Amendment:

PROPOSED BATTERY ENERGY STORAGE SYSTEM FOR FIVE AUTHORISED MULILO SOLAR PV FACILITIES (KLIPGATS SOLAR PV3, KLIPGATS SOLAR PV7, HOEKPLAAS SOLAR PV2, HOEKPLAAS SOLAR PV3, HOEKPLAAS SOLAR PV FOUR) NEAR PRIESKA, SIYATHEMBA LOCAL MUNICIPALITY, NORTHERN CAPE

Combined desktop and field-based palaeontological heritage assessments (PIAs) for five Mulilo solar PV facility projects near Copperton, Siyathemba Municipality, Northern Cape were submitted by Almond (2013a, 2013b). Details of these five renewable energy developments - the Klipgats Solar PV3, Klipgats Solar PV7, Hoekplaas Solar PV2, Hoekplaas Solar PV3 and Hoekplaas Solar PV Four facilities - are provided in Table 1 and the locations of the project areas are shown in Figures 1 and 2. In all five cases the author concluded that:

- Potential impacts on fossil heritage of the proposed solar facility developments are confined to the development footprint and are only anticipated during the construction phase;
- As far as fossil heritage is concerned, the impact significance of the proposed solar PV facilities is LOW (with or without mitigation).

The five solar PV facility projects have all subsequently received Environmental Authorization (EA) (See Table 1 for details). The respective project applicants now intend to apply for a further Amendment to the currently valid EAs to make provision for a Battery Energy Storage System (BESS) for each facility. This will be situated within the laydown area which was assessed and authorized as part of the Solar PV EIA applications (Figures 1 & 2). The proposed development area for the BESS is approximately 20 hectares in extent but the final footprint will be approximately 5 hectares in size. The BESS will comprise multiple battery units or modules housed in shipping containers and/or an applicable housing structure which is delivered pre-assembled to the project site. Containers are usually raised slightly off the ground and can be stacked if required. Supplementary infrastructure and equipment may include power cables, transformers, power converters, buildings & offices, HV/MV switch gear, inverters and temperature control equipment that may be positioned between the battery containers.

In view of (1) the generally LOW palaeontological heritage sensitivity of the five Mulilo solar PV facility project areas near Prieska, as assessed by Almond (2013a, 2013b), and of (2) the small additional footprint of the proposed BESS, it is concluded that:

- the inclusion of a BESS within each of the authorised laydown areas will not change the nature or significance of any of the impacts assessed in the original PIA studies;
- the proposed BESS installations are unlikely to result in any additional direct, indirect or cumulative impacts that were not previously assessed; and
- there are no additional management outcomes or mitigation measures in terms of palaeontological heritage that would be applicable to the proposed BESS.

There are no objections on palaeontological heritage grounds to the proposed amendment of the EAs for the five listed Mulilo solar PV energy facilities near Prieska.

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REFERENCES

ALMOND, J.E. 2013a. Proposed PV2 to PV7 photovoltaic energy plants on Farm Klipgats Pan (Portion 4 of Farm 117) near Copperton, Northern Cape Province. Palaeontological specialist assessment: combined desktop & field assessment study, 50 pp. Natura Viva cc, Cape Town.

ALMOND, J.E. 2013b. Proposed PV2 to PV11 photovoltaic energy plants on the Farm Hoekplaas near Copperton, Northern Cape. Palaeontological specialist assessment: combined desktop & field assessment study, 50 pp. Natura Viva cc, Cape Town.

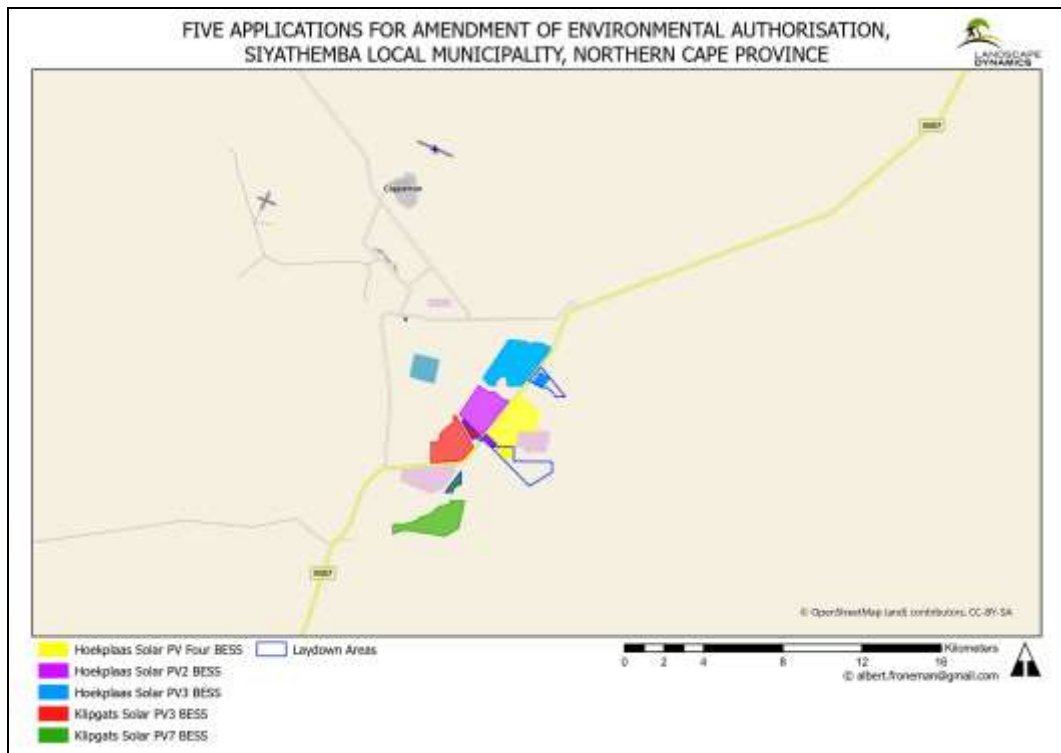


Figure 2: Map of the area south of Copperton near Prieska, Northern Cape, showing the location of the five Mulilo solar PV facilities and associated BESS (Image provided by Landscape Dynamics).

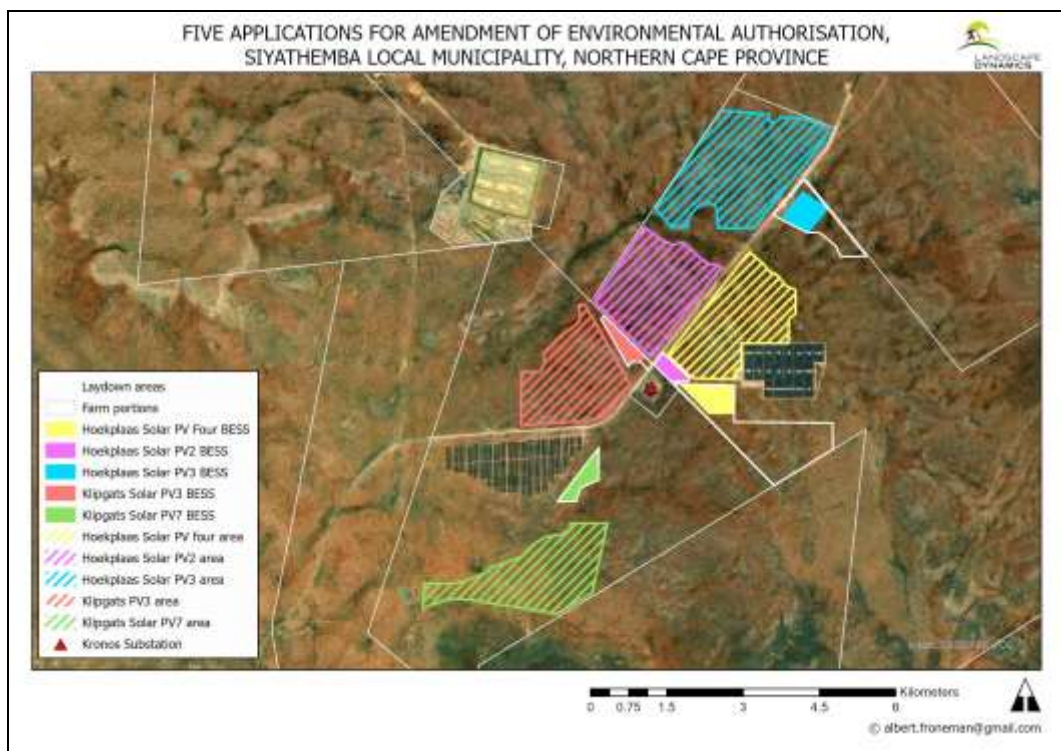


Figure 2: Satellite image of the region near Copperton, Northern Cape showing the five Mulilo solar facility project areas as well as the footprint of the proposed BESS within each (Image provided by Landscape Dynamics).

Table 1: Details of the five Mulilo solar PV projects near Prieska, Northern Cape

Applicant	Property	DEA Ref Nr	EA information
Klipgats Solar PV3 (Pty) Ltd	Remainder of Portion 4 of the farm Klipgats Pan No 117	14/12/16/3/3/2/487	The EA was issued on 8 August 2014 with reference number 14/12/16/3/3/2/487. The EA was subsequently amended on 3 May 2017, 6 June 2017, 10 July 2017 and 10 August 2020. The EA is valid until 8 August 2024.
Klipgats Solar PV7 (Pty) Ltd	Portion 4 of the farm Klipgats Pan No 117	14/12/16/3/3/2/491	The EA was issued on 8 August 2014 with reference number 14/12/16/3/3/2/491. The EA was subsequently amended on 25 May 2017, 21 June 2017, 18 August 2017 and 3 August 2020. The EA is valid until 8 August 2024.
Hoekplaas Solar PV2 (Pty) Ltd	Farm Hoekplaas No 146	14/12/16/3/3/2/493	The EA was issued on 27 October 2015 with reference number 14/12/16/3/3/2/493. The EA is valid for a 5 year period and lapses on 26 October 2020. An application for the extension of the validity period of the EA was made together with the Part 2 EA amendment application.
Hoekplaas Solar PV3 (Pty) Ltd	Farm Hoekplaas No 146	14/12/16/3/3/2/494	The EA was issued on 27 October 2015 with reference number 14/12/16/3/3/2/494. The EA is valid for a 5 year period and lapses on 26 October 2020. An application for the extension of the validity period of the EA was made together with the Part 2 EA amendment application.
Hoekplaas Solar PV Four (Pty) Ltd	Remainder of Farm Hoekplaas No 146	14/12/16/3/3/2/495	The EA was issued on 27 October 2015 with reference number 14/12/16/3/3/2/495. The EA was subsequently amended on 10 October 2014, 25 April 2016, 6 April 2017 and 9 July 2020. The EA is valid for a 3 year period and lapses on 9 July 2023.

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