

21 October 2020

Dear Sir or Madam

RE: VRYBURG SOLAR 3 PART 2 AMENDMENT, NORTH WEST PROVINCE

Vryburg Solar 3 (Pty) Ltd is proposing the construction and operation of a Battery Energy Storage (BESS) for the authorised Vryburg Solar 3 Energy Facility, with a capacity of up to 500MW/500MWh into the project description of the Environmental Authorisation (EA). The project is located within the Vryburg Renewable Energy Development Zone (REDZ), within ward 4 of the Naledi Local Municipality and within the greater Dr Ruth Segomotsi Mompati District Municipality in the North West Province 10km south-west of Vryburg. The authorised solar energy facility and associated infrastructure will be located on the following farm portions:

- Portion 1 of Retreat Farm 671;
- Portion 2 of Frankfort Farm 672;
- Remaining extent of Frankfort Farm 672;
- Portion 1 of Frankfort Number Farm 672; and
- The Remainder of Rosendal Farm 673.

The BESS will be located on Portion 1 of Retreat Farm 671.

The following infrastructure is associated with the BESS:

- Electrochemical battery storage systems with a maximum height of 3.5m; and
- Multi-core 22kV or 33kV underground cables, to follow internal access roads of the PV facility, to connect the battery storage area to the on-site facility substation.

In addition, Vryburg Solar 3 (Pty) Ltd is also proposing a change in the description included in the Environmental Authorisation pertaining to the on-site substation. The change relates to the addition of collector infrastructure as part of the authorised on-site substation and within the authorised footprint of the substation.

The purpose of the letter is to discuss the anticipated impacts of the proposed construction and operation of the proposed BESS as well as the collector infrastructure additions to the authorised substation. The BESS will have an extent of no more than 5ha and will be developed within the authorised development footprint of Vryburg Solar 3, within the authorised 15ha construction compound/laydown area. The BESS will connect to the authorised on-site facility substation of Vryburg Solar 3 Facility via underground cables.

The environmental impact assessment process for Vryburg Solar 3 included a report by Johann Lanz (submitted on 16 July 2018) that describes the soil and agricultural properties of

the development area. Considering this report, the area consists mainly of shallow soils of the Coega and Gamoep forms with mainly moderate-low land capability. The agricultural activities of the development area has been described as grazing without any presence of cultivated land. As a result of the arid climate and shallow soil depth, the only agricultural activities considered to have long-term sustainability, is extensive livestock farming.

The report by Lanz (2018), identified the following impacts as a result of the project infrastructure associated with the Vryburg Solar 3 :

- Loss of agricultural land use
- Generation of alternative land use income
- Soil degradation

In addition to the original impacts identified and rated, soil pollution as a result of construction and operation of the BESS, is considered to be a potential risk that will require the implementation of mitigation measures. The significance of any potential soil pollution resulting from the project, is rated in the table below.

Nature: The following construction activities can result in the chemical pollution of the soil:

1. Petroleum hydrocarbon (present in oil and diesel) spills by machinery and vehicles during earthworks and the removal of vegetation as part of site preparation.
2. Spills from vehicles transporting workers, equipment, and construction material to and from the construction site.
3. The accidental spills from temporary chemical toilets used by construction workers.
4. The generation of domestic waste by construction workers.
5. Spills from fuel storage tanks during construction.
6. Pollution from concrete mixing.
7. Any construction material remaining within the construction area once construction is completed.
8. Containment breaches related to the battery units and any inadvertent chemical exposure therefrom.

During the operation phase of the BESS, maintenance and repairs can result in waste generation within the assessment zone.

	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Short-term (2)	Short-term (2)
Magnitude	Moderate (6)	Low (4)
Probability	Low (4)	Improbable (2)
Significance	Medium (36)	Low (14)
Status (positive or negative)	Negative	Negative

Reversibility	Low	Low
Irreplaceable loss of resources?	Yes	No
Can impacts be mitigated?	Yes	N/A
Mitigation:		
<ul style="list-style-type: none"> • Maintenance must be undertaken regularly on all vehicles and construction/maintenance machinery to prevent hydrocarbon spills. • Any waste generated during construction, must be stored into designated containers and removed from the site by the construction teams. • Any left-over construction materials must be removed from site. • Ensure battery transport and installation by accredited staff / contractors. • Adhere to a procedure for the safe handling of battery cells during transport and installation. 		
Residual Impacts:		
The residual impact from the construction and operation of the proposed project will be low to negligible.		
Cumulative Impacts:		
Any additional infrastructure that will be constructed to strengthen and support the operation of the Vryburg Solar 3 and where waste is not removed to designated waste sites, will increase the cumulative impacts associated with soil pollution in the area.		

Apart from the inclusion of mitigation measures to prevent soil pollution to ensure the significance of the impact remains low, it is my professional opinion that the findings and recommended mitigation measures of the specialist report (Lanz, 2018) for the development footprint of Vryburg Solar 3, is also applicable to the construction and operation of the BESS as well as the addition of collector infrastructure to the authorised on-site substation.

I therefore do not recommend any additional Soil and Agricultural Specialist Assessment as part of the Application for an amended Environmental Authorisation.

Yours sincerely,

