SITE SENSITIVITY VERIFICATION
(IN TERMS OF PART A OF THE ASSESSMENT PROTOCOLS PUBLISHED IN GN 320 ON 20 MARCH 2020

1 INTRODUCTION

Bonsmara Solar PV (RF) (Pty) Ltd proposes to develop the 100 MW Bonsmara Solar Photovoltaic (PV) Facility, Battery Energy Storage System (BESS) and associated infrastructure on a site approximately 12 km south-east of the town of Kroonstad, in the Free State Province (the project - Figure 1). The PV Facility and BESS will be located on Portion 0 of Farm 636 and Portion 1 of Farm 636 located in the Moqhaka Local Municipality, in the Fezile Dabi District Municipality. A 2 km long 132 kV powerline will evacuate power to the grid by connecting the on-site substation to the Kroonstad Switching Station.

SRK Consulting (South Africa) (Pty) Ltd (SRK) has been appointed by SiVEST (SA) (Pty) Ltd (SiVEST) to undertake the Visual Impact Assessment (VIA) to inform the Environmental Impact Assessment (EIA) process required in terms of the National Environmental Management Act 107 of 1998 (NEMA), conducted by SiVEST.

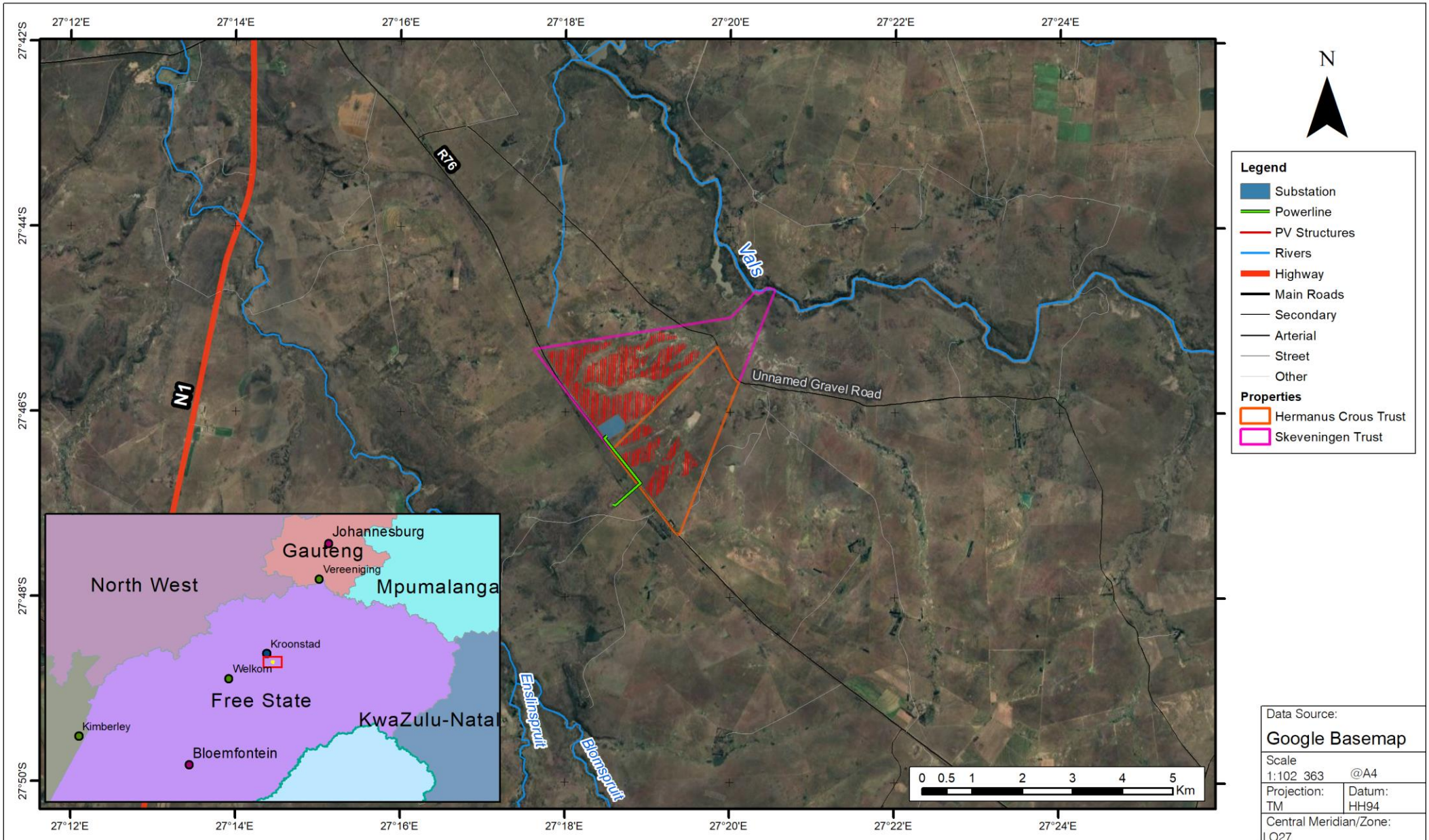
In accordance with Appendix 6 of the NEMA EIA Regulations of 2014, a site sensitivity verification has been undertaken in order to confirm the current land use and environmental sensitivity of the proposed project area as identified by the National Web-Based Environmental Screening Tool (Screening Tool).

2 SITE SENSITIVITY VERIFICATION

A site visit was undertaken on 13 September 2022. The site visit duration and timing were appropriate to provide the specialist with a representative impression of the site and surroundings.

The following additional information sources were used to inform the site sensitivity verification:

- Maps indicating the location and layout of the project;
- Topographic data, including spatial files with 5 m contours obtained from the Department of Rural Development and Land Reform;
- Aerial images; and
- Other available data on geology, vegetation, land use, receptors etc.



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Projection: TM	Datum: HH94
Central Meridian/Zone: LO27	
Date: 20/09/2022	Compiled by: GROS
Project No. 590893	Fig No.

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BONSMARA PV VIA
LOCALITY MAP

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3 OUTCOME OF SITE SENSITIVITY VERIFICATION

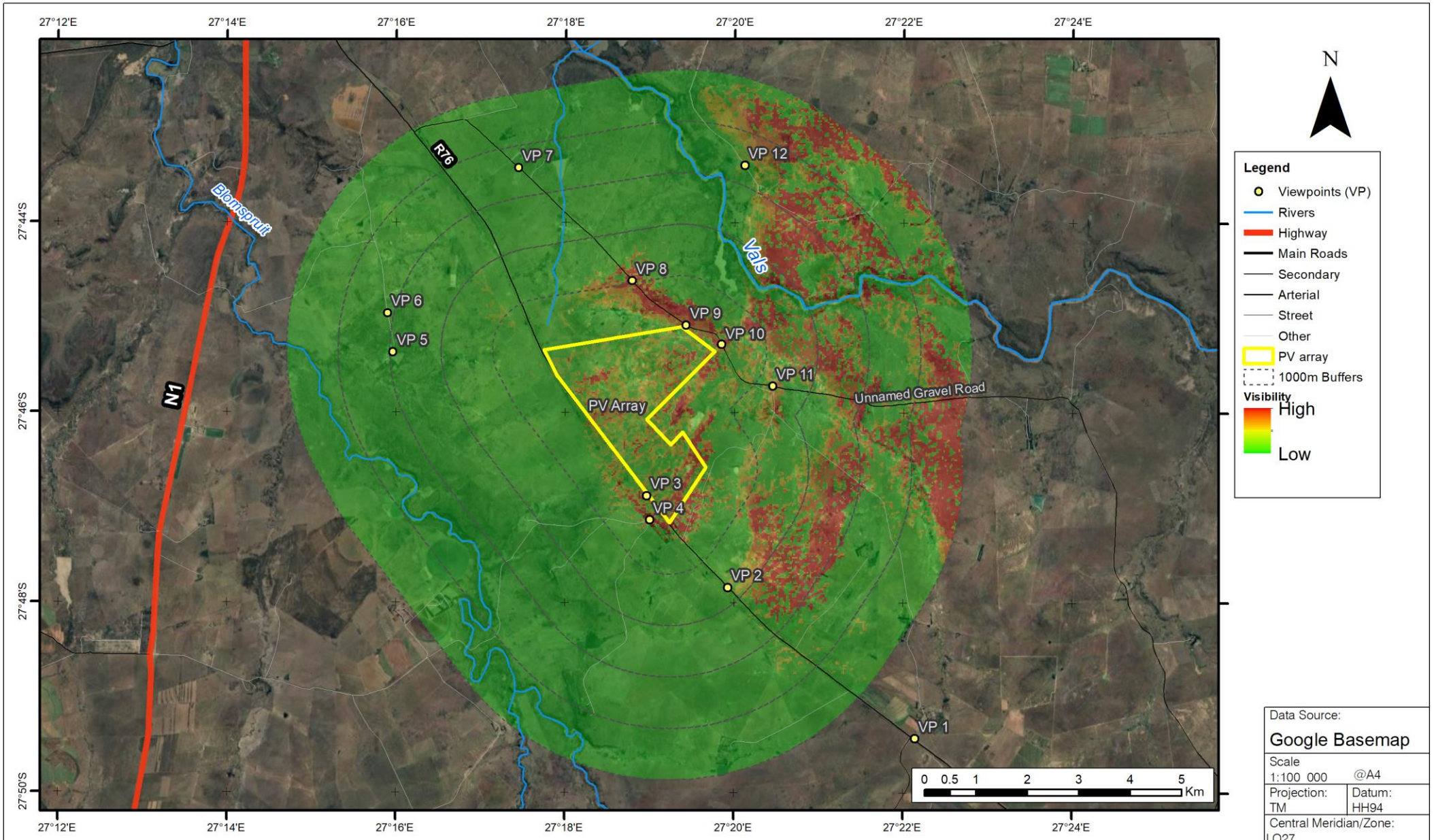
The magnitude or intensity of various factors are considered when determining and verifying the site sensitivity. These factors include:

- Visual exposure;
- Visual absorption capacity;
- Sensitivity of visual receptors;
- Visibility and viewing distance; and
- Integrity with existing landscape / townscape.

The magnitude or intensity of these factors are summarised below:

- Visual exposure:
    - The project area will be highly visible from the few elevated areas to the north-east, east and south-east of the site. Few of the isolated farmsteads surrounding the site are located within areas identified as having visibility of the site. Motorists on the R76 will have a view of the project when travelling adjacent to the south-western boundary of the site, beyond this portion of the R76 motorists will have limited visibility of the project (Figure 3).
    - The visual exposure of the proposed infrastructure is deemed ***moderate***.
- Visual Absorption Capacity (VAC):
    - The project area is marginally increased by undulating topography and – to a far more limited extent – by grasslands (veld) and small clusters of trees, providing screening to the project (Figure 2). The low vertical profile of the PV panels is anticipated to increase the screening potential of the vegetation and topography. Vegetation is not able to provide screening to the associated infrastructure such as the substation and pylons. The undulating topography will marginally absorb the associated infrastructure.
    - The study area has a ***low*** VAC for the PV facility and a ***moderate*** VAC for the proposed powerline.

Figure 2: Vegetation and topography of the surrounding landscape



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BONSMARA PV VIA

VIEWSHED AND VIEWPOINTS MAP

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- Visual Sensitivity of Receptors:
    - The moderately sensitivity receptors (farmsteads) are located some distance from the proposed PV facility site. Receptors travelling by road and rail are less sensitive, although they they are fleetingly within close proximity of the site. It is anticipated that the visual receptors will be more sensitive to the PV array, on-site substation and BESS than the proposed powerline due to the (familiarity with) existing powerlines in the landscape.
    - The sensitivity of the visual receptors potentially affected by the visual impact of the project is considered to be ***moderate.***
- Viewing Distance and Visibility:
    - The project is highly visible in the foreground to motorists to the east and west of the site. The project is marginally visible / not visible to surrounding residents largely due topography screening the site and distance from the site.
    - The visibility of the project is ***moderate*** due to the number of receptors in the foreground and middleground, albeit transient and temporary receptors.
- Landscape Integrity:
    - The proposed PV array will introduce a large, uniform, reflective facility into the area and will be discordant with the current land use, scale and texture of the surrounding area (Figure 4). The BESS will also introduce a novel structure into the landscape that is different and incongruent to the type, size and scale of the existing land use and development in the area. The on-site substation and proposed 132 kV powerline will be moderately consistent and congruent with the use, texture, size and form of existing infrastructure and land use surrounding the site.
    - The project is deemed to have ***low*** integrity with the surrounding landscape.

Figure 4: Land use of the project site and surrounding area

As result of the magnitude of the factors considered, the site is considered to be of ***high*** landscape (visual) sensitivity to the proposed PV facility and associated infrastructure.

4 CONCLUSION

The Screening Tool only identifies a landscape (visual) sensitivity theme for the PV facility component of the project. A landscape sensitivity theme is not provided for the 132 kV powerline component. The Screening Tool has identified that the site is of a ***very high*** Landscape (Solar) Sensitivity for the PV facility.

The site sensitivity verification therefore finds the site to be of ***high*** landscape sensitivity rather than ***very high*** as suggested by the Screening Tool.