

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

1 INTRODUCTION

Lesaka 1 Solar Energy Facility (Pty) Ltd propose to develop the Lesaka 1 Solar Energy Facility (SEF), with a maximum nameplate capacity of 240 MW. Lesaka 1 SEF will include a Battery Energy Storage System (BESS), on-site Independent Power Producer (IPP) substation and associated grid infrastructure. The SEF will be located on Farm Kluitjies Kraal No. 264, approximately 35 km north of Loeriesfontein, in the Hantam Local Municipality, in the Northern Cape Province (

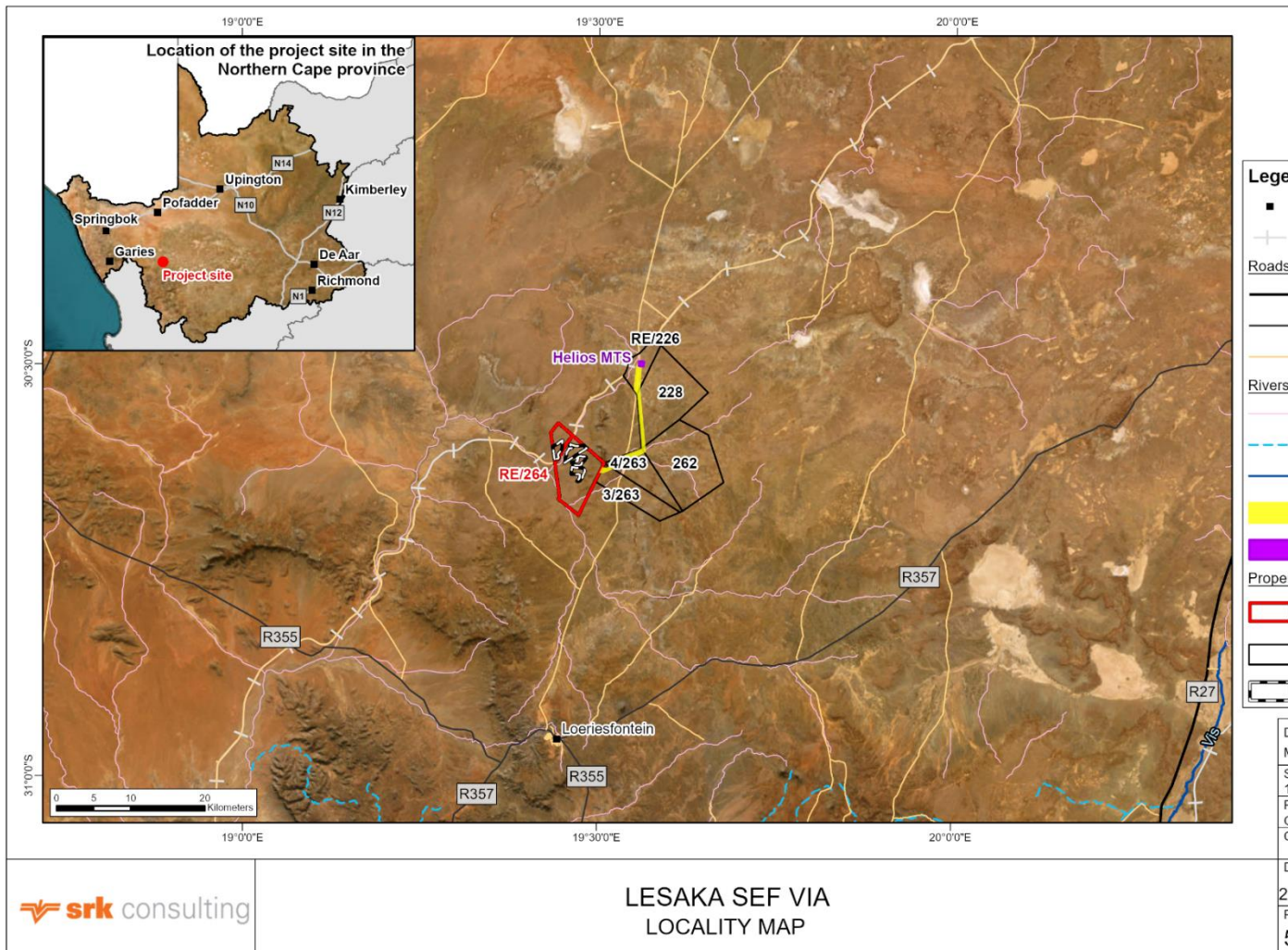


Figure 1). A ~ 21 km long 132 kV powerline will evacuate power produced by Lesaka 1 SEF to the grid by connecting the on-site switching station or the centrally located collector substation to the existing Helios Main Transmission Substation (MTS).

Enertrag South Africa (Pty) Ltd (Enertrag) on behalf of Lesaka 1 Solar Energy Facility (Pty) Ltd has appointed SiVEST (SA) (Pty) Ltd (SiVEST) to undertake separate Environmental Impact Assessment (EIA) processes required in terms of the National Environmental Management Act 107 of 1998 (NEMA)

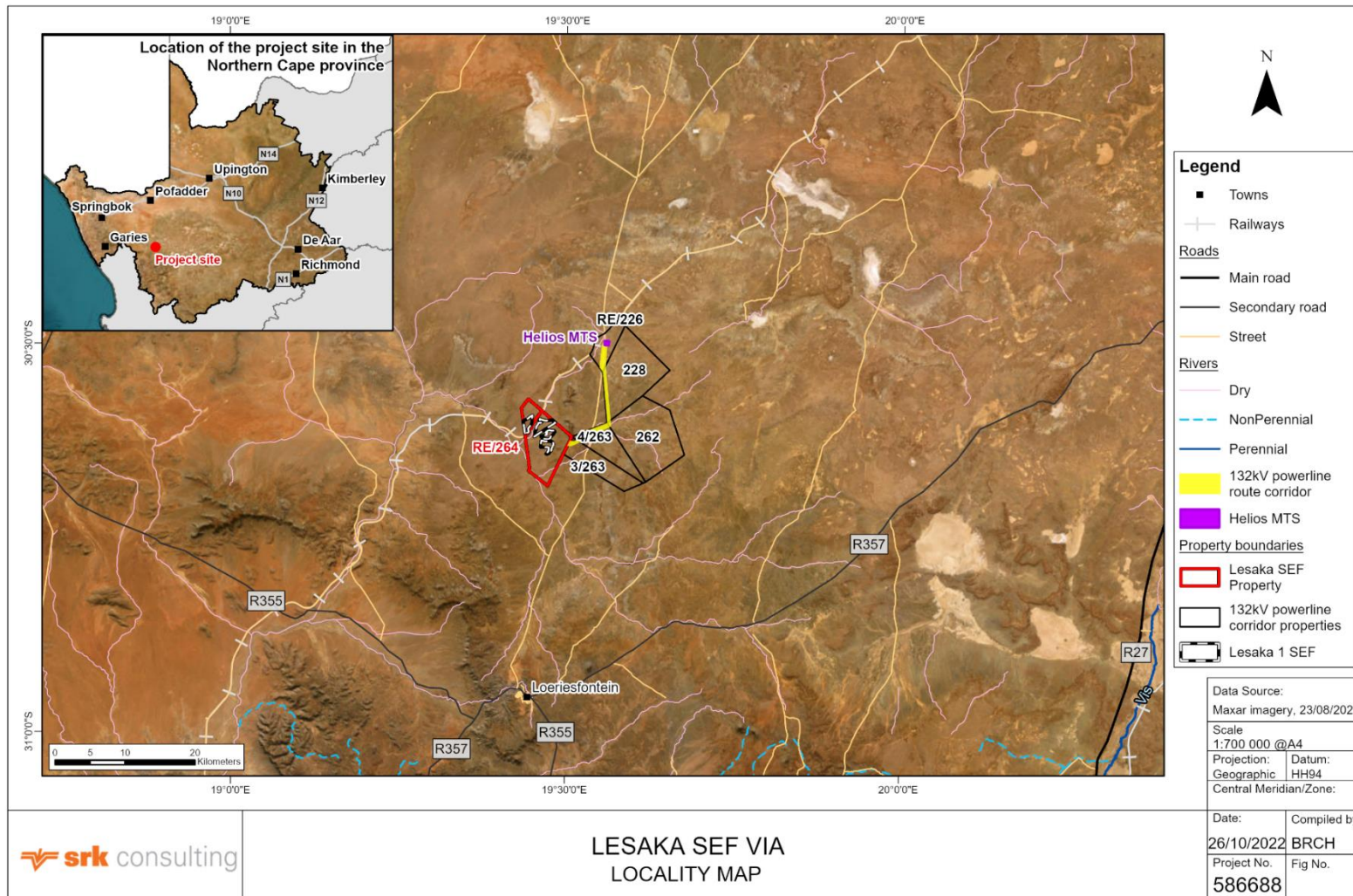
for Lesaka 1 SEF. SRK Consulting (South Africa) (Pty) Ltd (SRK) has been appointed by SiVEST to undertake Visual Impact Assessment (VIA) to inform the Lesaka 1 SEF EIA processes.

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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Revision: A Date: 23 01 2023

Figure 1: Locality map

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 viewshed indicates that beyond the SEF property the SEF cluster is moderately visible in the background to the north and west. The SEF cluster will also be visible to railway passengers to the north, and from the western bank of the Krom River, although there are no / few receptors located to the west (Figure 2). The SEF is highly visible from within the property, within 2 km of the SEFs. Beyond 5 km, the SEF will not be visible to receptors.
 - The visual exposure of the proposed infrastructure is deemed **moderate**.
- Visual Absorption Capacity (VAC):
 - Rural areas generally have a low VAC. The low VAC of the surrounding area is reduced by the wide flat, undeveloped, expanse between isolated ridges for both the powerline and SEF. The vertical profile of the pylons further reduces the VAC of the surrounding area. The vegetation of the surrounding area is not expected to screen the SEF, powerline and pylons from receptors.
 - The study area has a **low** VAC for the proposed project.

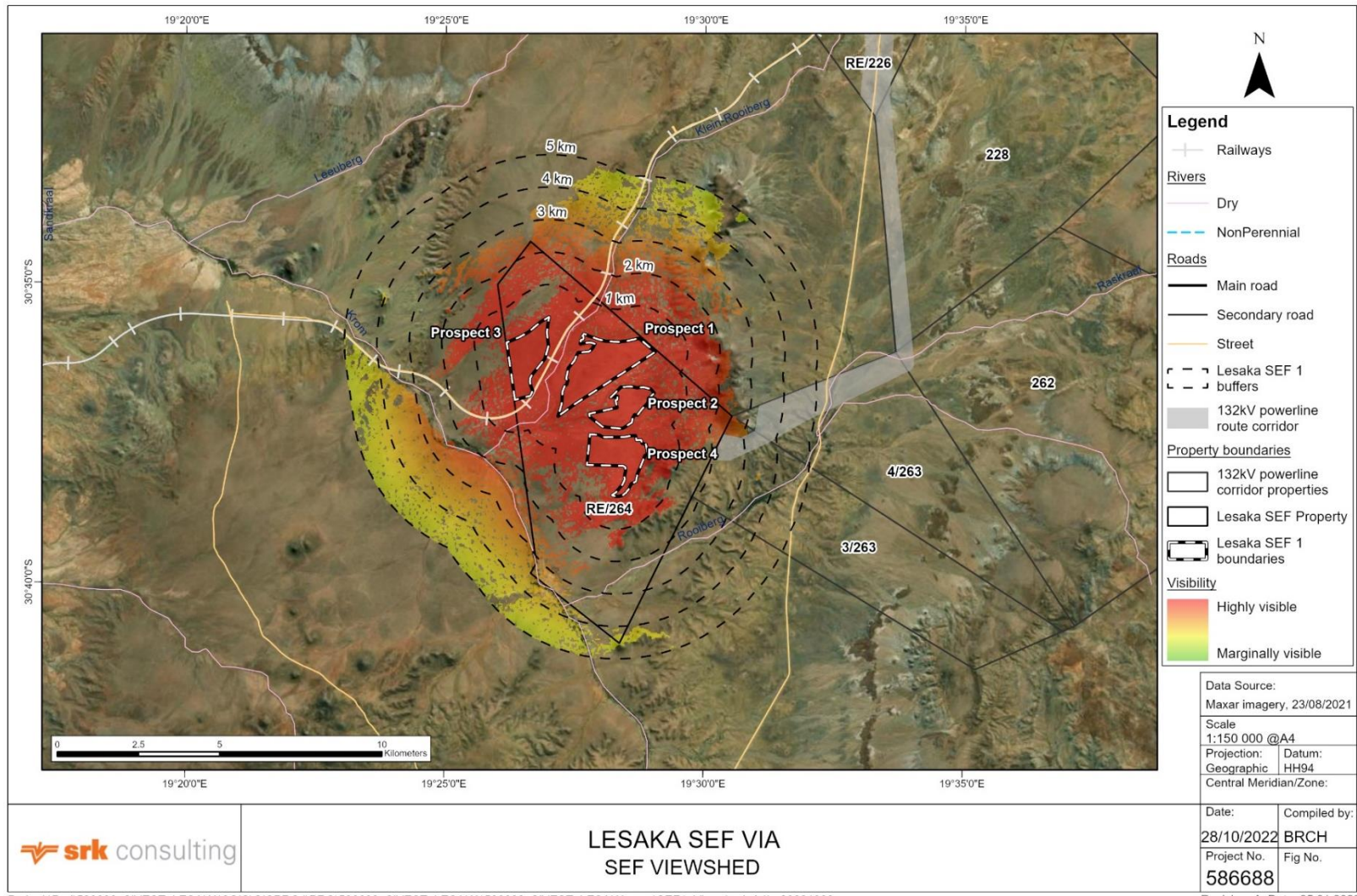


Figure 2: Viewshed

- Visual Sensitivity of Receptors:
 - The limited number of highly sensitive visual receptors is further moderated by the large number of motorists with fleeting views, as well as receptors' familiarity with and acceptance of views of renewable energy projects and powerlines in the surrounding landscape.
 - The sensitivity of the visual receptors potentially affected by the visual impact of the project is considered to be **low**.
- Viewing Distance and Visibility:
 - Overall, the proposed SEF is marginally visible in the background to receptors. The proposed powerline alignment is to be confirmed. As such the visibility of the project is **low**.
- Landscape Integrity:
 - The proposed project is located within a rural area comprising large, undeveloped farms with natural vegetation predominantly used for grazing. The vast, undeveloped expanse of arid landscape can be experienced by receptors as desolate. Existing powerlines converge on the Helios MTS to the north of the proposed SEF. The two existing WEFs (Khobab and Loeriesfontein 2) are visible in the background, to the north of the proposed SEF. Another SEF located between the proposed Lesaka 1 SEF site and the Helios MTS is under construction.
 - Grid infrastructure such as substations and powerlines are and will become increasingly more common in the area around the proposed project, with existing small and large powerlines traversing the landscape throughout the project area. As such, the proposed powerline infrastructure is consistent with type, scale and size of the existing infrastructure in the landscape.
 - The project is deemed to have **moderate** integrity with the surrounding landscape.

The overall magnitude of the visual impact that is expected to result from the project is rated as **low**. The moderate visual exposure and landscape integrity and low VAC are moderated by the low viewer sensitivity and visibility.

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 **moderate** landscape sensitivity rather than **very high** as suggested by the Screening Tool.