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

1 INTRODUCTION

ABO Wind Renewable Energies (Pty) Ltd (ABO Wind) proposes to develop Ujekamanzi 1 Wind Energy Facility (WEF), on-site substation(s), Battery Energy Storage Systems, associated grid infrastructure and internal roads, roughly 30 km south of Ermelo, in the Dr Pixley Ka Isaka Seme Local Municipality, in Mpumalanga Province (the project - Figure 1)[1]. The WEF is anticipated to have a maximum output of ~325 MW over a developable area of ~2 872 ha extending over roughly 54 properties. Internal 33 kV powerlines installed overhead or underground will evacuate power produced by the wind turbine generators (WTG) to the on-site substation hubs.

SRK Consulting (South Africa) (Pty) Ltd (SRK) has been appointed by SiVEST (SA) (Pty) Ltd (SiVEST) to undertake a Shadow Flicker Impact Assessment (FIA) to inform the required Environmental Impact Assessment (EIA) process required in terms of the National Environmental Management Act 107 of 1998 (NEMA) conducted by SiVEST for Ujekamanzi 1 WEF.

A site sensitivity verification has been undertaken, in accordance with the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014, to confirm the current land use and environmental sensitivity of the proposed project area. The National Web-Based Environmental Screening Tool (Screening Tool) does not identify flicker sensitivity, nevertheless this site sensitivity verification report will confirm the sensitivity.

[1] ABO Wind also proposes to develop Ujekamanzi 2 WEF and associated infrastructure. Ujekamanzi 2 WEF will be subject to a separate EA Application. Both properties combined will have a developable area of 5 744 ha and a combined output of 650 MW over a total of 108 properties. For the purposes of this report it is assumed that these specifications are split equally between both projects.

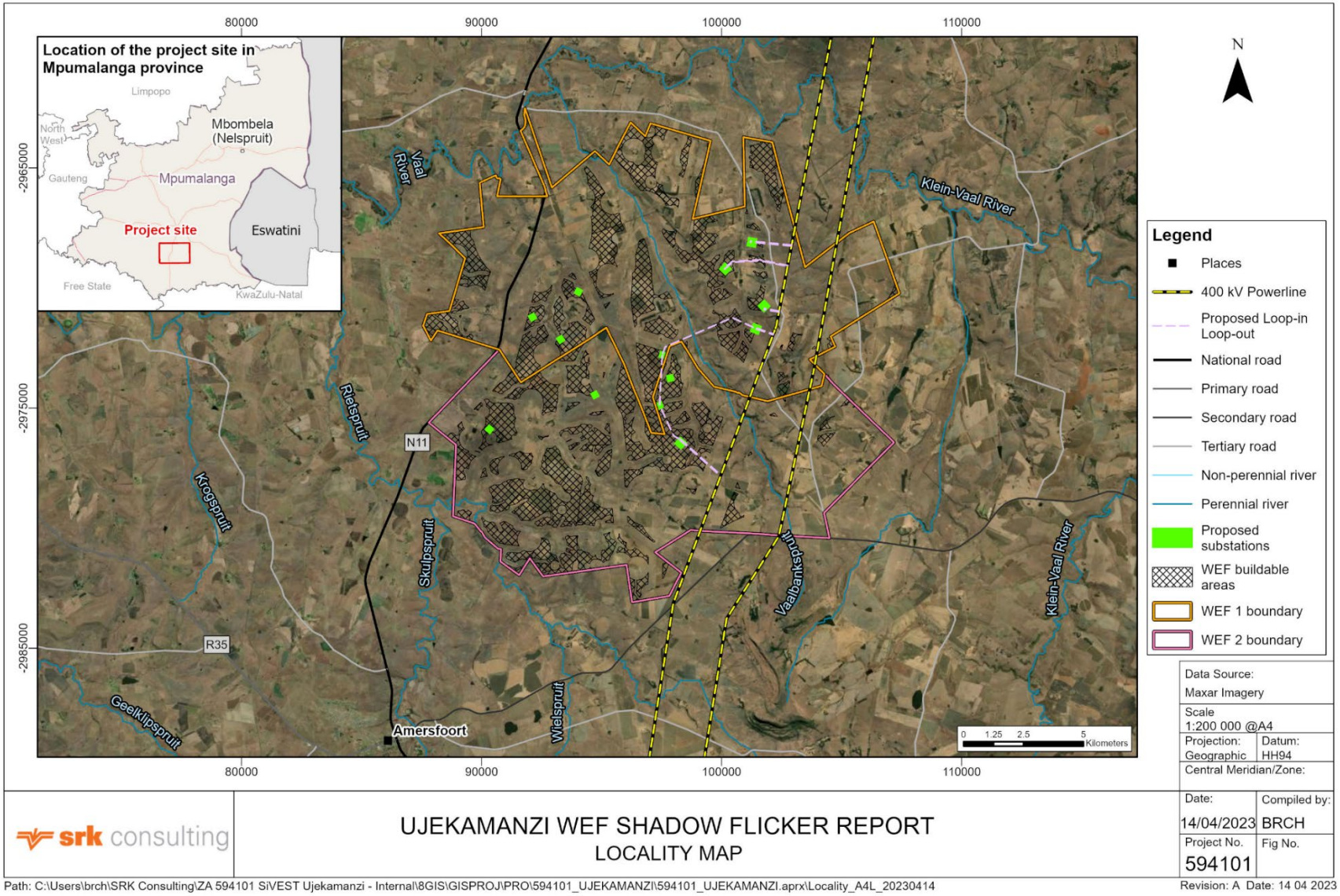

Figure 1: Locality map

2 SITE SENSITIVITY VERIFICATION

This report has been compiled based on the review of desktop information. No site visit was conducted.

The following information sources were used to inform the baseline and potential impacts:

- Maps indicating the developable area 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 pertaining to geology, vegetation, land use, receptors etc.

The information is sufficiently recent and detailed to provide appropriate inputs into the report.

3 OUTCOME OF SITE SENSITIVITY VERIFICATION

The sensitivity of the visual receptors surrounding the proposed buildable area are considered when determining and verifying the site sensitivity.

Potentially sensitive receptors were identified based on surrounding land uses and through a desktop-based search primarily using GoogleEarth aerial imagery. The following receptors were identified:

- **Residents**: 84 dwellings and / or farmsteads were identified within and in close proximity to the project area for Ujekamanzi 1 WEF; and
- **Motorists:** The N11 national road bisects Ujekamanzi 1 WEF. Several regional and farm roads also traverse the Ujekamanzi 1 WEF.

Due to the number of potential receptors identified, the sensitivity of the project area to flicker is considered ***moderate***.

It is acknowledged that the identified buildable area was informed by, *inter alia,* areas sensitive to shadow flicker, and has excluded areas sensitive to shadow flicker. The areas considered sensitive to shadow flicker were informed by international guidelines are as follows:

- 300 m[2] from public roads – based on the guideline that WTG should be setback from public roads by a distance 1.5x the hub height; and
- 500 m from offices and houses - based on the Best Practice Guidance to Planning Policy Statement 18 ‘Renewable Energy’.

[2] The WTG expected hub height of the WTG is 180 m

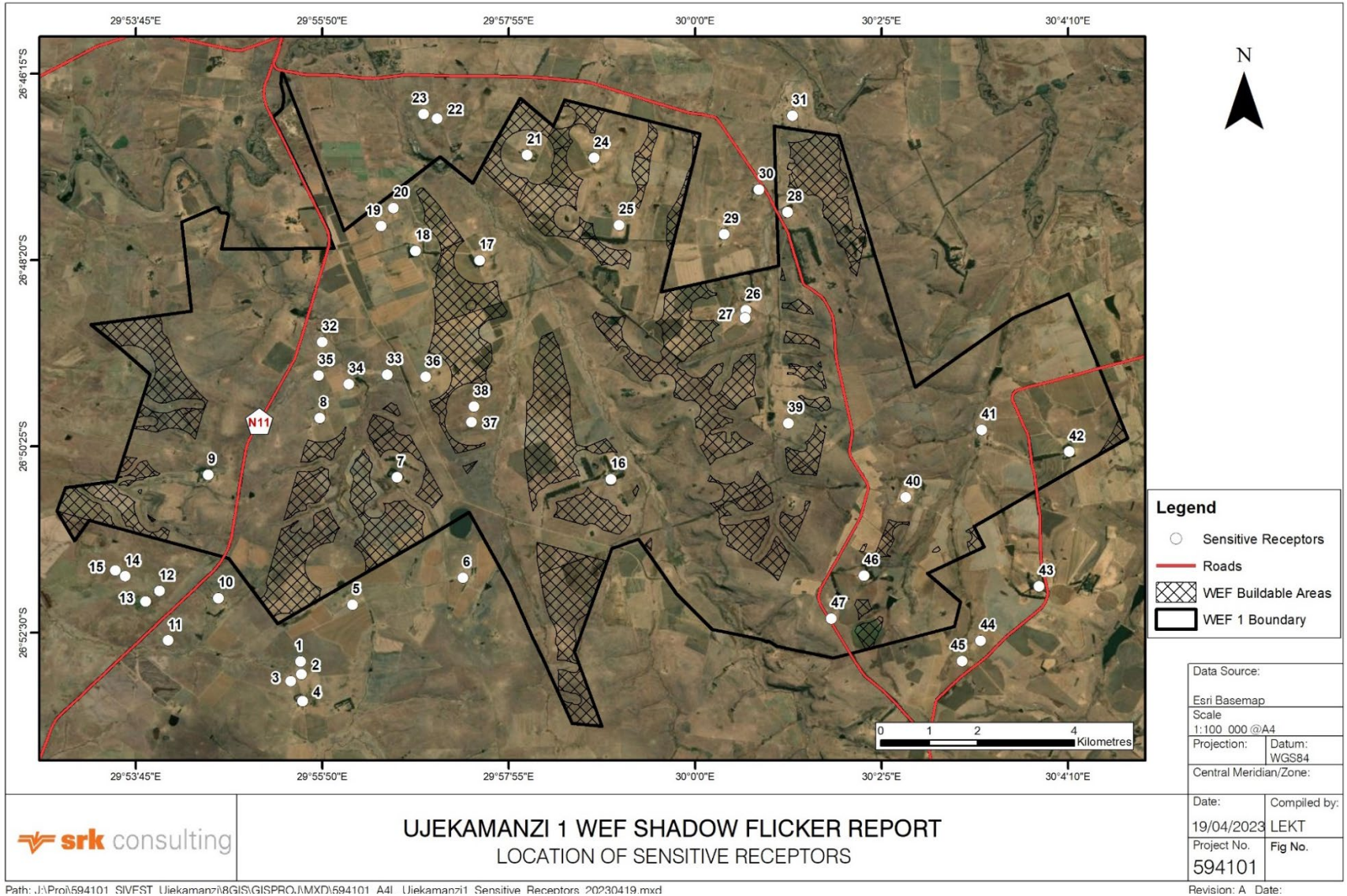

Figure 2: Location of sensitive receptors

4 CONCLUSION

The Screening Tool does not identify a flicker sensitivity theme for projects. Nevertheless, this site sensitivity verification finds the site to be of ***moderate*** sensitivity to shadow flicker.