Defence Site Sensitivity Verification

Proposed New Wolf-Skilpad-Grassridge 132KV overhead transmission line near Kariega and Kirkwood, Easter Cape Province

Umoyilanga (Pty) Ltd Submission date: 2021/09/212022/04/06

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Document prepared by:

Zutari (Pty) Ltd
Reg No 1977/003711/07
Suite 201, 2nd Floor Bloemhof Bldg,
65 York Street, George
South Africa
PO Box 509, George 6530
Docex: DX42

T +27 44 874 2165
F +27 44 873 5843
E george@zutari.com

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Author signature		Approver signature	
Name	Patrick Killick	Name	Wynand Loftus
Title	Senior Environmental Practitioner	Title	Senior Environmental Practitioner

Contents

1 Introduction....4
2 Methodology....4
3 Project description....5
4 Project Location....7
5 Findings of the Screening Tool....13
6 Site Visit Findings....13
7 Details of the Environmental Assessment Practitioner....4
8 Conclusion....13

Appendices

Annexure A: EAP's CV
Annexure B: EAP's declaration
Annexure C: Comment by the Department of Defence (awaited)
Annexure D: Defence Assessment Report (to be determined)

Figures

Figure 1-1: Overview locality map of the proposed Wolf-Skilpad-Grassridge 132 kV transmission line near Kirkwood and Kariega, Northern Cape. Refer to Annexure A for high resolution A3 maps.
Figure 3: Map indicating the farm portions in relation to the transmission line
Figure 4: Map of Relative Defence Theme Sensitivity

1 Introduction

Wolf Wind Farm (RF) (Pty) Ltd appointed Zutari (Pty) Ltd to undertake the requisite Basic Assessment (BA) process for the upgrading of the Wolf-Skilpad-Grassridge transmission line. Eskom requires that Wolf Wind Farm (RF) (Pty) Ltd, a preferred bidder selected as part of the REIPPP's round 5 bud window, construct a new transmission line to replace the existing 132 kV Wolf-Skilpad-Grassridge transmission line as part of the works required for connecting the new Wolf Wind Farm project to the grid.

A draft Basic Assessment Report (BAR) has been compiled which pertains to the application for environmental authorisation for the project.

The purpose of this report is to provide Site Sensitivity Verification and Compliance Statement in terms of the Defence Protocol of the *Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in Terms of Sections 24(5)(a) and (h) and 44 of the NEMA, when applying for Environmental Authorisation*, as set out in GN320 of 20 March 2020.

GN 320 specifically includes a protocol that provides the criteria for the specialist assessment and minimum report content requirements for impacts on defence installations for activities requiring EA. This protocol replaces the requirements of Appendix 6 of the 2014 NEMA Environmental Impact Assessment (EIA) Regulations (as amended). When the National Web-Based Environmental Screening Tool (Screening Tool) of the Department of Forestry, Fisheries and the Environment (DFFE) identifies a site as Low sensitivity in terms of the Defence Protocol, as is the case with this proposed development, no further assessment is required, however a Site Sensitivity Verification is required.

2 Details of the Environmental Assessment Practitioner

This Site Sensitivity Verification and compliance statement was undertaken by Wynand Loftus, an EAP with Zutari with over 7 years' of experience in Environmental Management. The declaration of the EAP is provided in Appendix B. Note the EAP does not carry "expertise in radar" as specified by the protocol, however, since the project is the replacement existing infrastructure, we do not foresee a change to the status quo, and thus the expertise is not required. An RFI compliance statement also forms part of the basic assessment..

3 Methodology

This Site Sensitivity Verification Report has been compiled based on the following methodology:

- The proposed project site was plotted on the Screening Tool to identify the sensitivity allocated;
- A site visit was undertaken from 7 to 11 February 2022 to confirm the current land use and the environmental sensitivity as it relates to Defence;
- Additional research was undertaken to substantiate the Site Sensitivity Verification process; and
- A Site Sensitivity Verification Report was compiled (i.e. this report).

Information	Source	Date	Description
National Web-Based Environmental Screening Tool (Screening Tool)	Department of Forestry and Fisheries and the Environment, (DFFE)	2021	The Screening Tool is a geographically based web-enabled application which allows a proponent intending to submit an Application for EA in terms of the

Information	Source	Date	Description
			2014 NEMA EIA Regulations (as amended) to screen the proposed site for any environmental sensitivity
RSA Airspaces in 3D	Air Traffic and Navigation Services SOC Limited (ATNS)	2021	The RSA Airspaces in 3D data KMZ file is an initiative undertaken by the ATNS to illustrate the definitions and complexities of airspace, routes, aerodromes and navigational facilities within South Africa to the public in the interest of safety.

4 Project description

The proposed new 132 kV transmission line will run from the Grassridge substation in a north-westerly direction to the Skilpad- and Wolf substations for approximately 46km and 44km respectively, as illustrated in Figure 1. In an effort to minimise the potential negative environmental and social impacts of the project, this transmission line is proposed to, as far as possible, run adjacent to an existing 132 kV transmission line and has an approximate length of 90km.

The servitude for this new transmission line will be 31m wide. A new 3.5m wide access track will be developed within the new servitude and will run for the full length of the proposed transmission line. The servitude will be accessed via existing access tracks used for the existing 132 kV transmission line and farm roads and tracks.

The proposed pylon structures will be a combination of monopole and lattice structures, depending on engineering requirements, and up to 40m high. Special structures with horizontal configuration are proposed be used where the new transmission line will need to cross other existing powerlines.

Although the assessment of alternative routing options for this transmission line were initially considered by the technical team, the consideration of alternatives was ultimately to be unfeasible when comparing the potential alternative options with the preferred alternative of constructing the new transmission line adjacent to the existing 132 kV line as far as possible. As such, further costs related to preliminary designs and layouts, as well as specialist assessments of alternative options were spared, since such alternatives could not be justified when compared to the preferred alternative.

Therefore, only two project alternatives have been included in this report, namely,

1) Alternative 1 (preferred): Construction of a new 132 kV transmission line adjacent to the existing 132 kV transmission line; and
2) No-Go option: The proposed project does not proceed, resulting in the existing (and failing) 132 kV line to be used for the Wolf Wind Farm.

The existing 132 kV transmission line will be kept operational until such time as this new 132 kV transmission line (preferred alternative) is completed and ready for connection to the Eskom power grid.

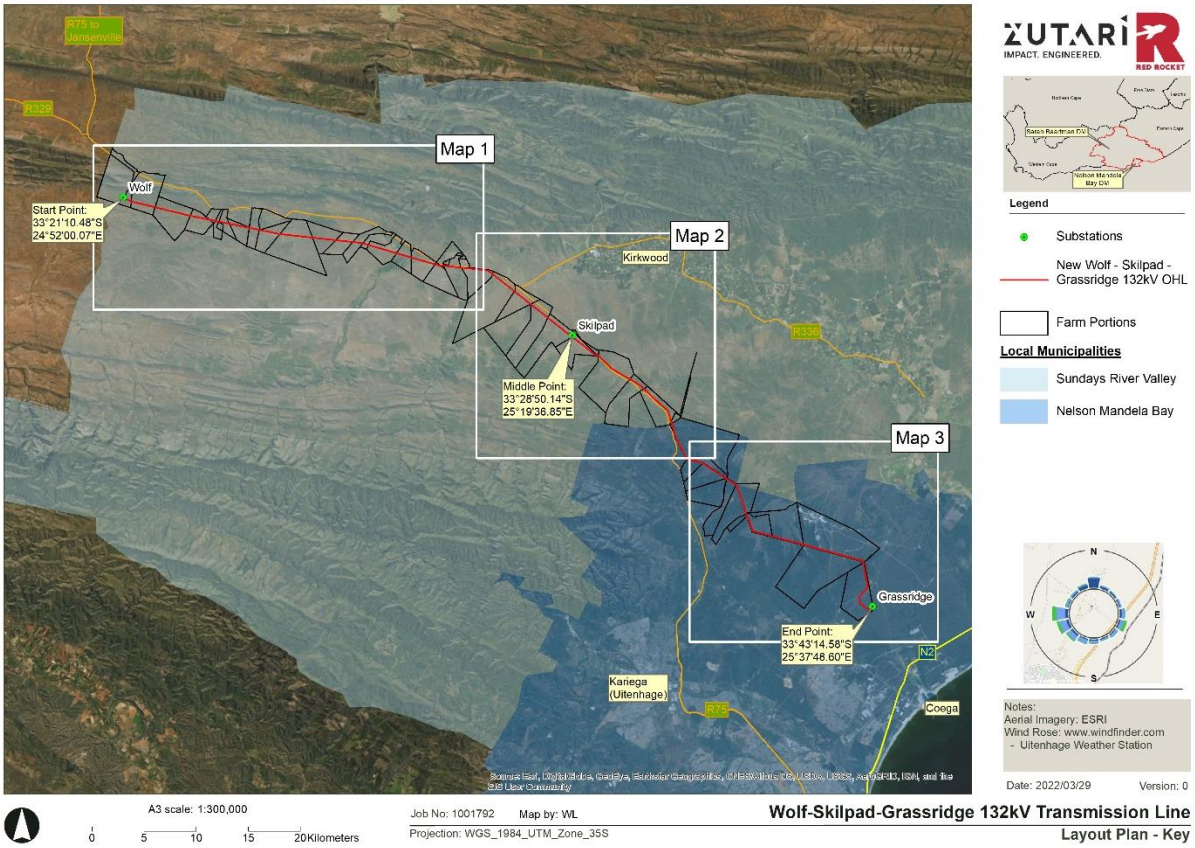
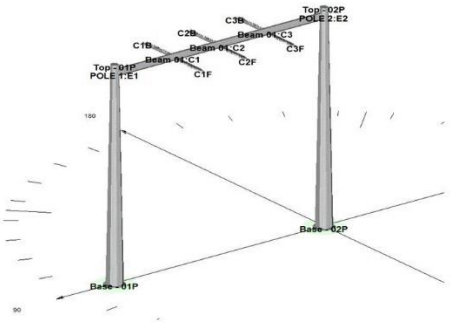
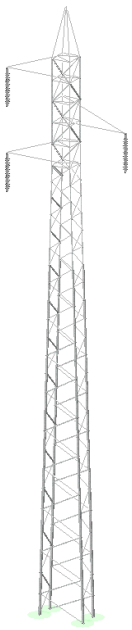
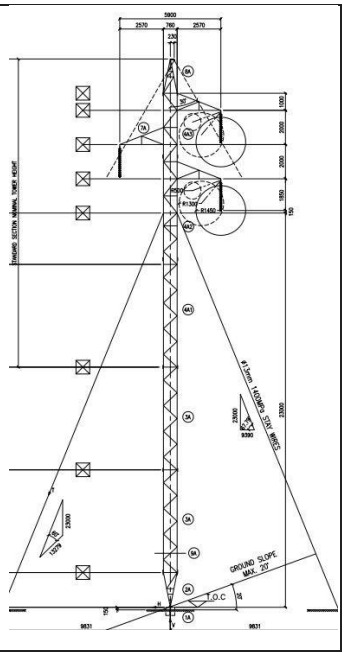


Figure 4-1: Overview locality map of the proposed Wolf-Skilpad-Grassridge 132 kV transmission line near Kirkwood and Kariega, Northern Cape. Refer to Annexure A for high resolution A3 maps.

Table 4-1: Example drawings of pylon structures likely to be used for the proposed 132 kV transmission line.

Monopole structure	Horizontal structure	Lattice structure
		

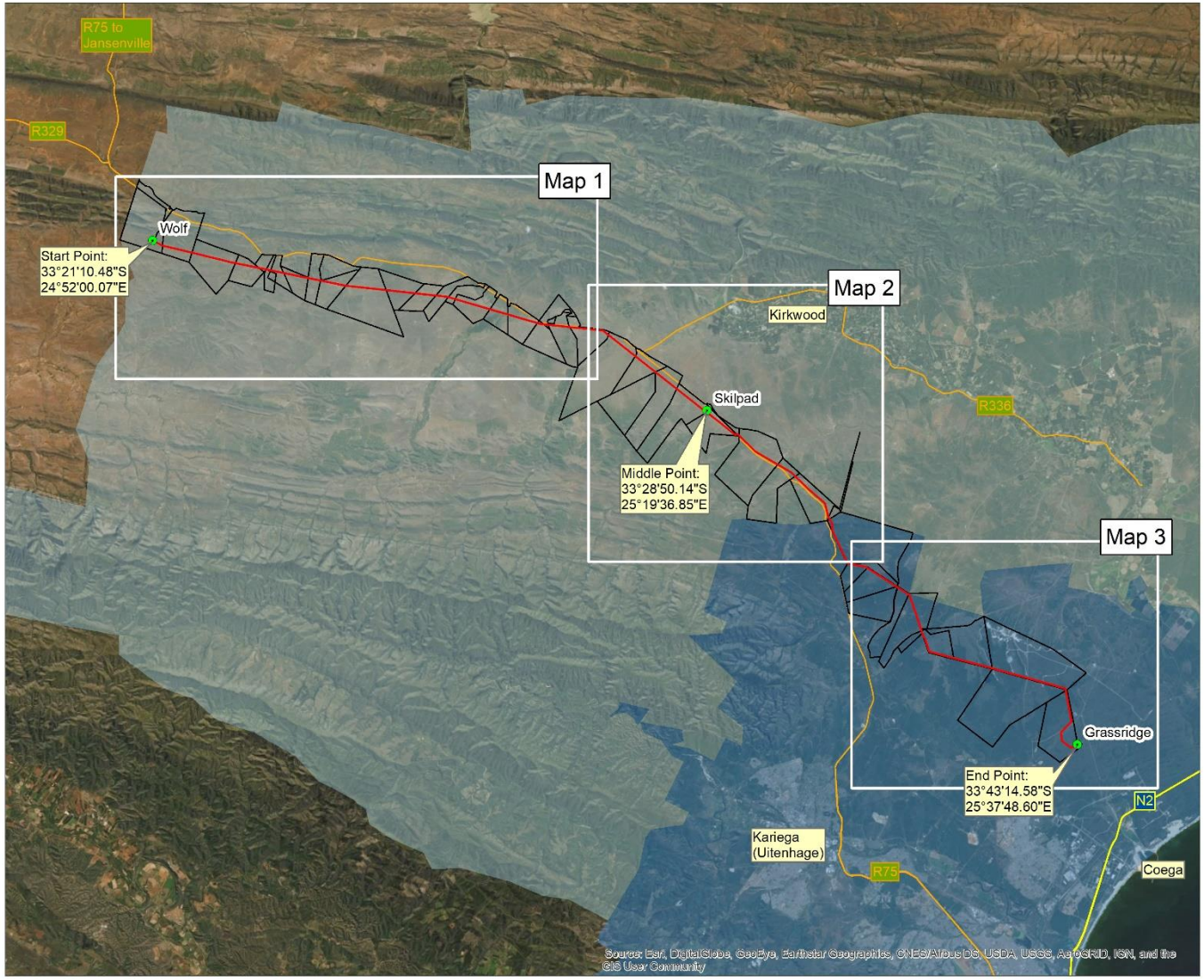


5 Project Location

Table 5-1: Farm details

Farm Portion and Number	21-digit SG code
590	C07600000000059000000
228	C07600000000022800000
RE/227	C07600000000022700000
RE/190	C07600000000019000000
1/190	C07600000000019000001
1/231	C07600000000023100001
RE/231	C07600000000023100000
715	C07600000000071500000
2/233	C07600000000023300002
3/233	C07600000000023300003
16/233	C07600000000023300016
15/233	C07600000000023300015
14/233	C07600000000023300014
4/233	C07600000000023300004
187	C07600000000018700000
2/135	C07600000000013500002
136	C07600000000013600000
1/139	C07600000000013900001
RE/139	C07600000000013900000
RE/141	C07600000000014100000
6/142	C07600000000014200006
7/142	C07600000000014200007
692	C07600000000069200000
RE/144	C07600000000014400000
1/144	C07600000000014400001

RE/147	C07600000000014700000
1/147	C07600000000014700001
RE/81	C07600000000008100000
1/81	C07600000000008100001
RE/79	C07600000000007900000
RE/148	C07600000000014800000
2/151	C07600000000015100002
1/151	C07600000000015100001
RE/156	C07600000000015600000
4/156	C07600000000015600004
6/156	C07600000000015600006
1/156	C07600000000015600001
5/156	C07600000000015600005
157	C07600000000015700000
3/72	C07600000000007200003
2/72	C07600000000007200002
RE/72	C07600000000007200000
3/71	C07600000000007100003
RE/71	C07600000000007100000
1/70	C07600000000007000001
RE/70	C07600000000007000000
21/61	C07600000000006100021
6/70	C07600000000007000006
1/62	C07600000000006200001
RE/10	C07600000000001000000
RE/669	C07600000000066900000
10/669	C07600000000066900001
612	C07600000000061200000
7/231	C07600000000023100007
188	C07600000000018800000
137	C07600000000013700000
1/140	C07600000000014000001
144	C07600000000014400000
1/669	C07600000000066900001
137/15	C07600000000000000001



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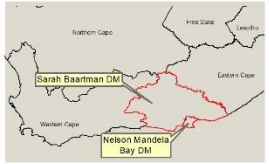
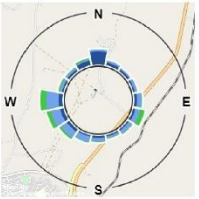


Legend

- Substations
- New Wolf - Skilpad - Grassridge 132kV OHL
- Farm Portions

Local Municipalities

- Sundays River Valley
- Nelson Mandela Bay



Notes:
Aerial Imagery: ESRI
Wind Rose: www.windfinder.com
- Uitenhage Weather Station

Date: 2022/03/29 Version: 0

A3 scale: 1:300,000

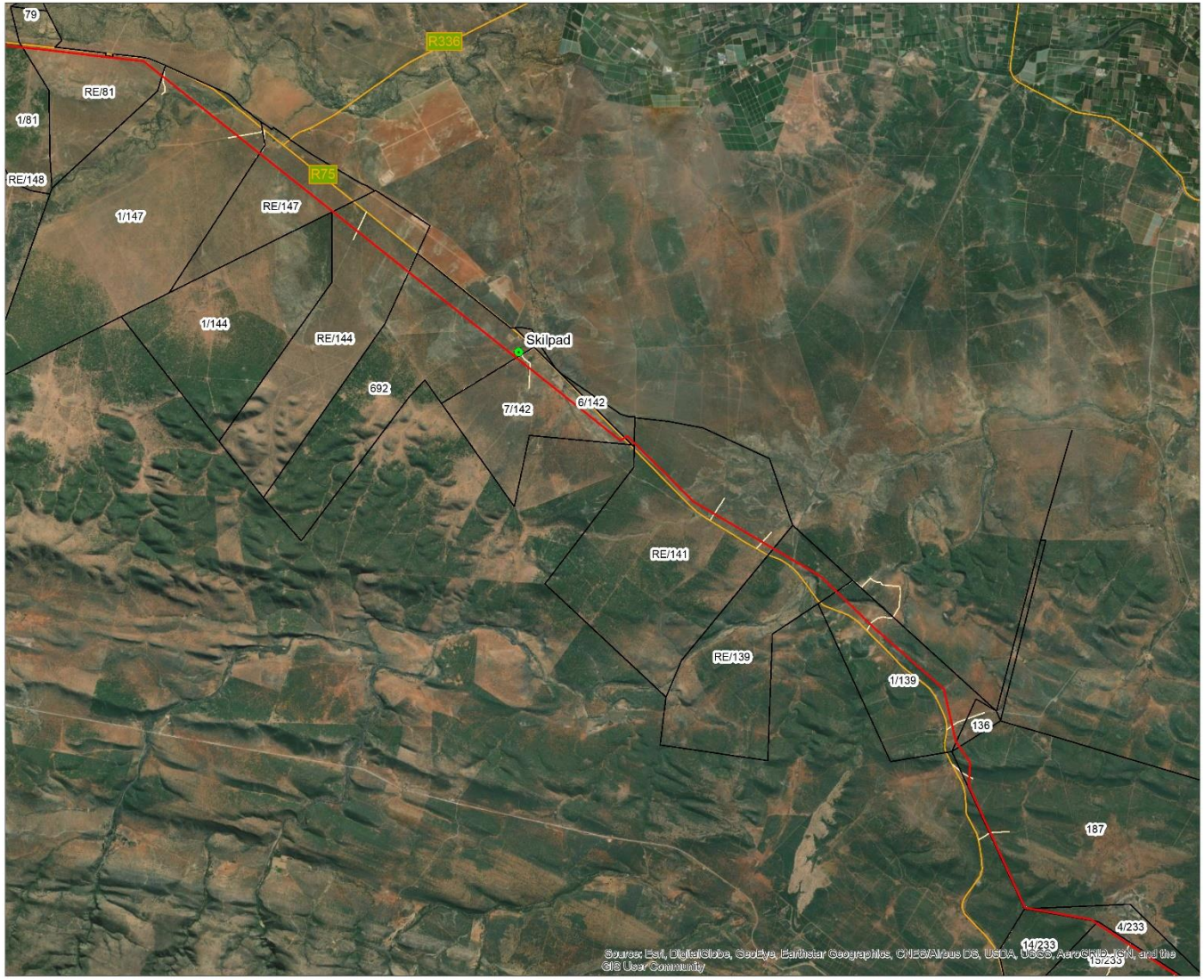
0 5 10 15 20 Kilometers

Job No: 1001792 Map by: WL

Projection: WGS_1984_UTM_Zone_35S

Wolf-Skilpad-Grassridge 132kV Transmission Line

Layout Plan - Key



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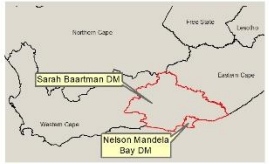


Legend

- Substations
- New Wolf - Skilpad - Grassridge 132kV OHL
- Farm Portions
- Existing Access Roads/Tracks

Notes:
Aerial Imagery: ESRI

Date: 2022/03/29 Version: 0

A3 scale: 1:82,884

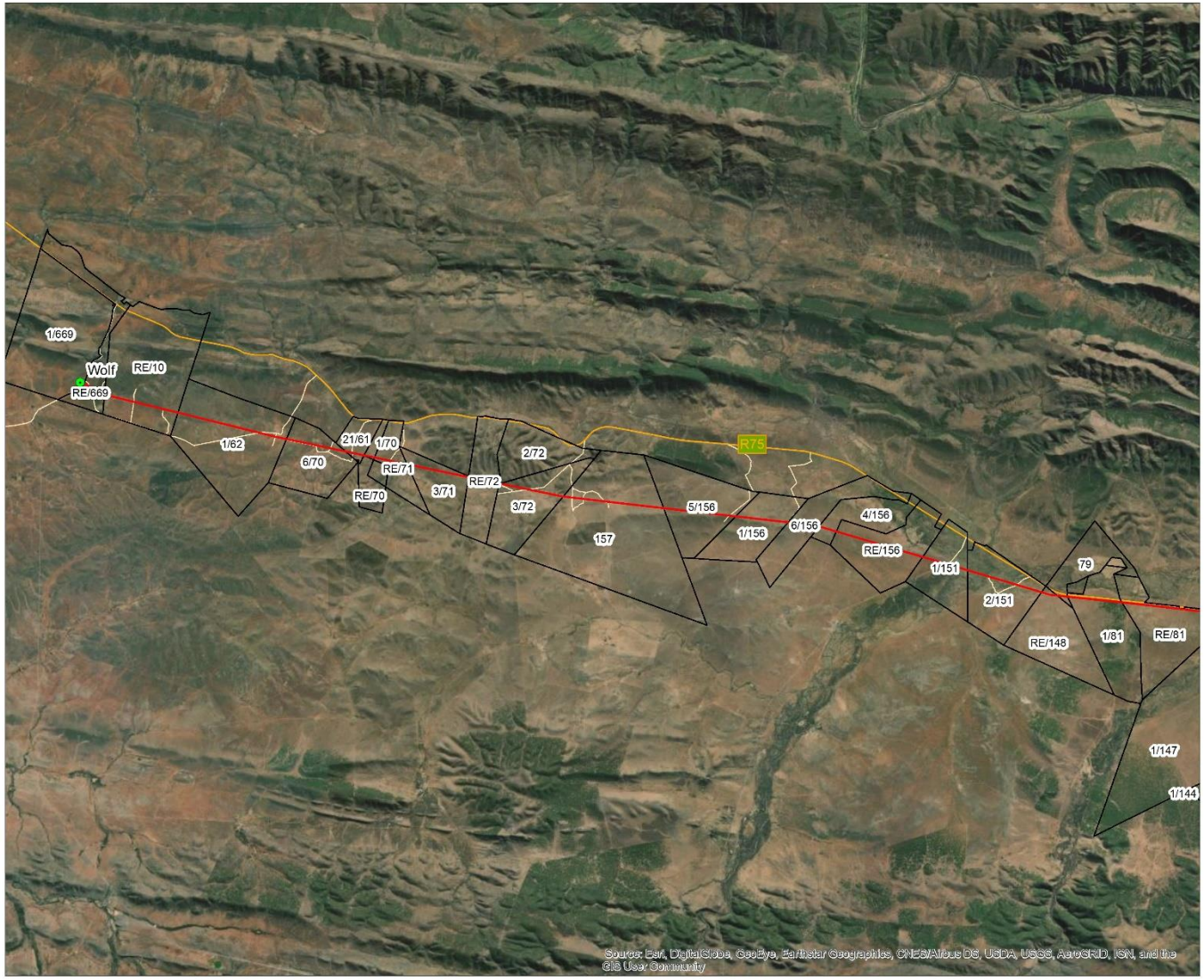
0 2 4 6 Kilometers

Job No: 1001792 Map by: WL

Projection: WGS_1984_UTM_Zone_35S

Wolf-Skilpad-Grassridge 132kV Transmission Line

Layout Plan - Map 2



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Legend

- Substations
- New Wolf - Skilpad - Grassridge 132kV OHL
- Farm Portions
- Existing Access Roads/Tracks

Notes:
Aerial Imagery: ESRI

Date: 2022/03/29 Version: 0

A3 scale: 1:120,000

0 2.5 5 7.5 Kilometers

Job No: 1001792 Map by: WL

Projection: WGS_1984_UTM_Zone_35S

Wolf-Skilpad-Grassridge 132kV Transmission Line

Layout Plan - Map 1

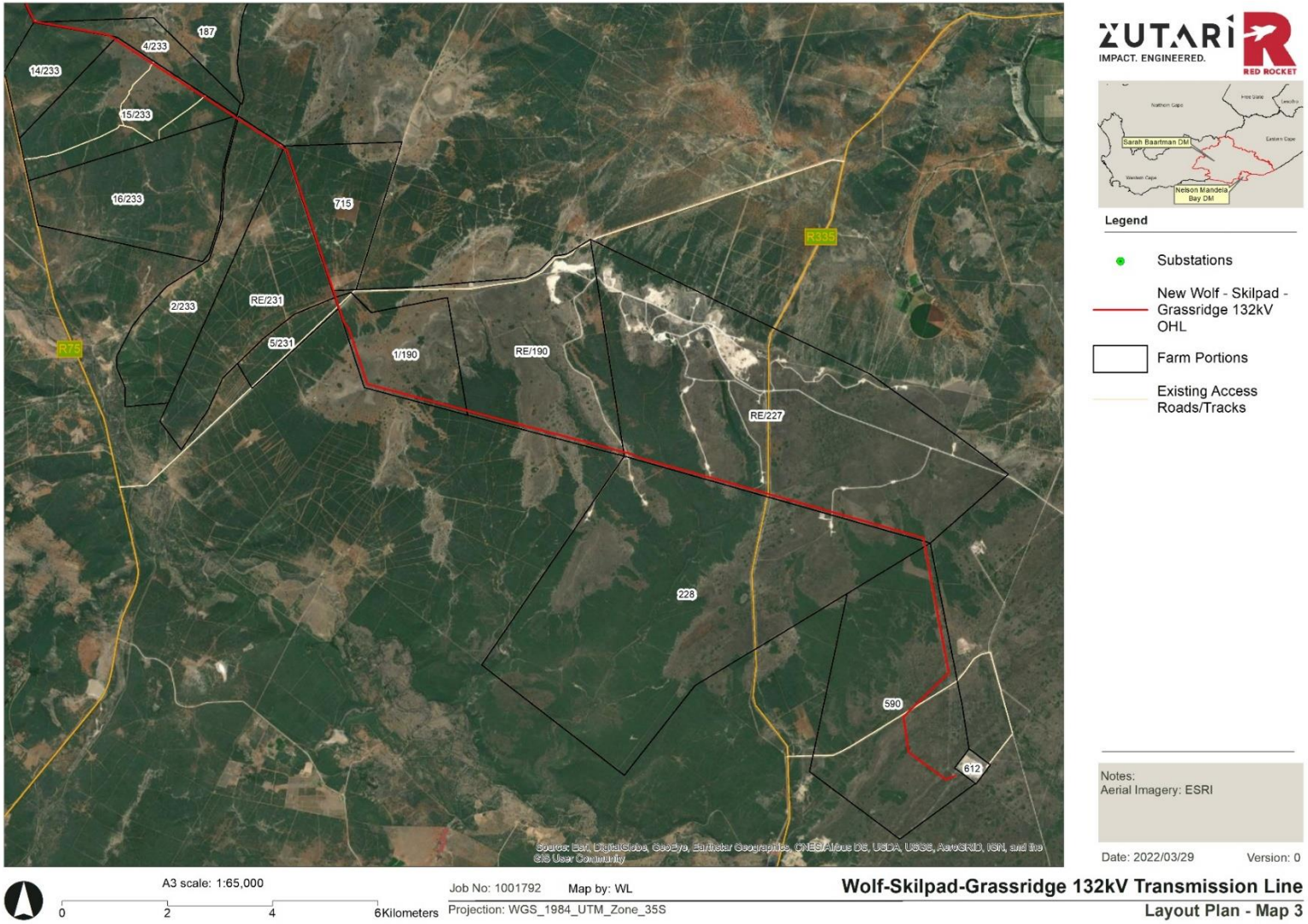

Figure 2: Map indicating the farm portions in relation to the transmission line

6 Findings of the Screening Tool

A DFFE Screening Tool Report was generated on the website: **https://screening.environment.gov.za/screeningtool/#/pages/welcome**.

The map of Relative Defence Theme Sensitivity generated by the Screening Tool indicated that the proposed 132 kV Wolf-Skilpad-Grassridge transmission line transects some high only transects areas indicated as low sensitivity in terms of defence and no further studies are therefore recommended.

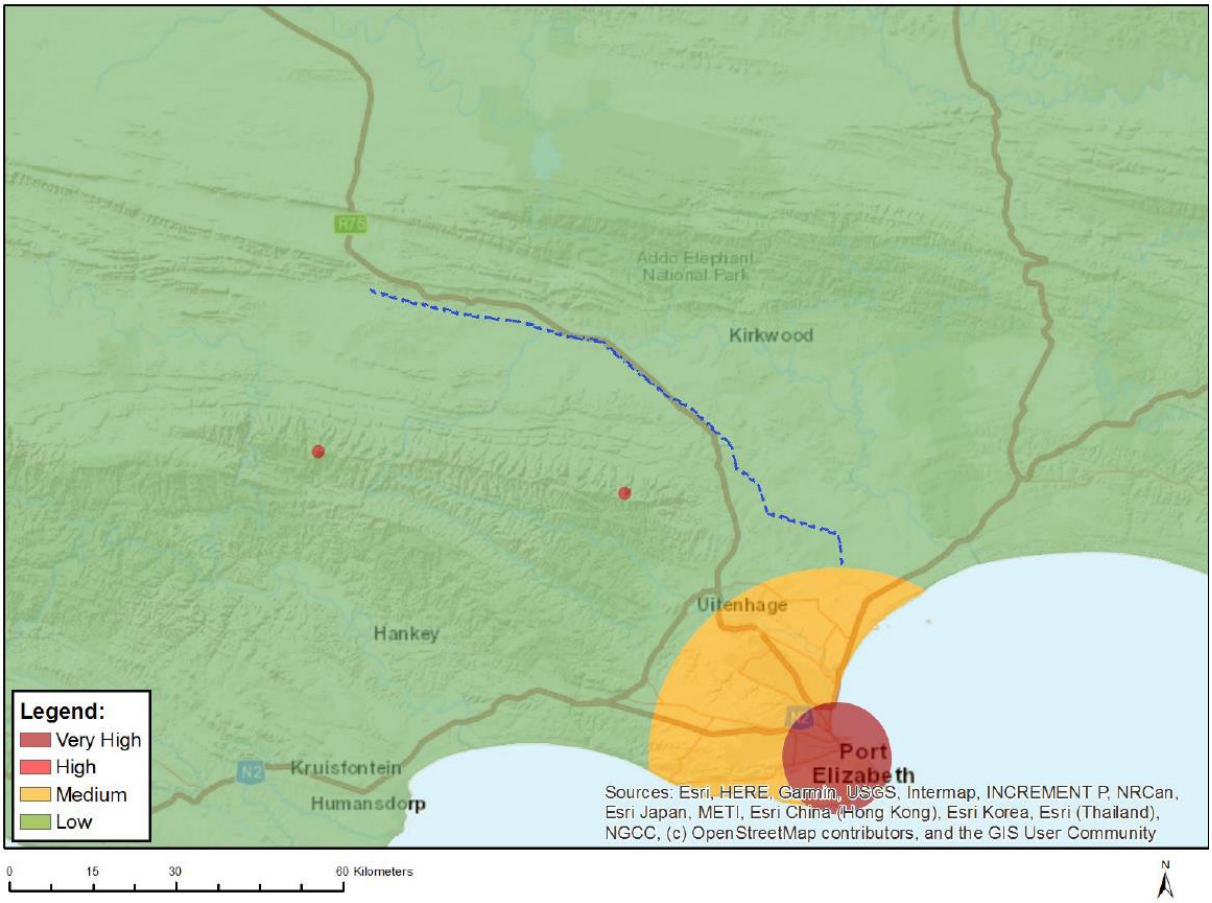

Figure 3: Map of Relative Defence Theme Sensitivity

According to the protocol for the Defence Theme in GN 320 a compliance statement must be compiled.

7 Site Visit Findings

The EAP and Specialists visited the site on 7 – 11 February 2022. The low sensitivity of the area was confirmed. The EAP noted no features in the near vicinity of the site that would warrant any further study, the sensitivity is therefore confirmed as low..

8 Conclusion

Using the DFFE Screening tool the proposed project was found to transect low sensitivities with regard to defence installations.

Based on the Defence protocol in GN 320, a Compliance Statement is required. This screening verification report includes the requisite information and therefore doubles as a compliance statement.

The EAP therefore confirms the sensitivity to be low.

Annexure A: EAP’s CV

Annexure B: EAP’s declaration

Annexure C: Comment by the Department of Defence (awaited)

Annexure D: Defence Assessment Report (to be determined)

In diversity there is beauty and there is strength.

MAYA ANGELOU

Document prepared by:
Zutari (Pty) Ltd
Reg No 1977/003711/07
Suite 201, 2nd Floor Bloemhof Bldg,
65 York Street, George
South Africa
PO Box 509, George 6530
Docex: DX42

T +27 44 874 2165
F +27 44 873 5843
E george@zutari.com

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