

**JUNO-GROMIS 400kV POWER LINE
DEVIATIONS
(WESTERN CAPE & NORTHERN CAPE)**

**PALAEONTOLOGICAL
REPORT**

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1. Introduction

This report augments the desk top report on the Juno-Gromis line and should be read in conjunction with the desk top report on the entire line.

The focus of this report is on the impact of the deviations on the proposed new 400kV transmission line between the Juno substation in the vicinity of Vredendal in the Western Cape and the Gromis substation west of Springbok in the Northern Cape.

The palaeontological heritage of South Africa is unsurpassed and can only be described in superlatives. The South African palaeontological record gives us insight in *i.a.* the origin of life, early vertebrates, mammals, dinosaurs and humans. Fossils are also used to identify rock strata and determine the geological context of the sub region with other continents and to study evolutionary relationships, sedimentary processes and palaeoenvironments.

The Heritage Act of South Africa stipulates that fossils and fossil sites may not be altered or destroyed. The purpose of this document is to detail the probability of finding fossils in the study area which may be impacted by the proposed development. The impact of the development can be ameliorated in several ways in the areas where fossils are common.

2. Position of the deviations on the Juno-Gromis line:

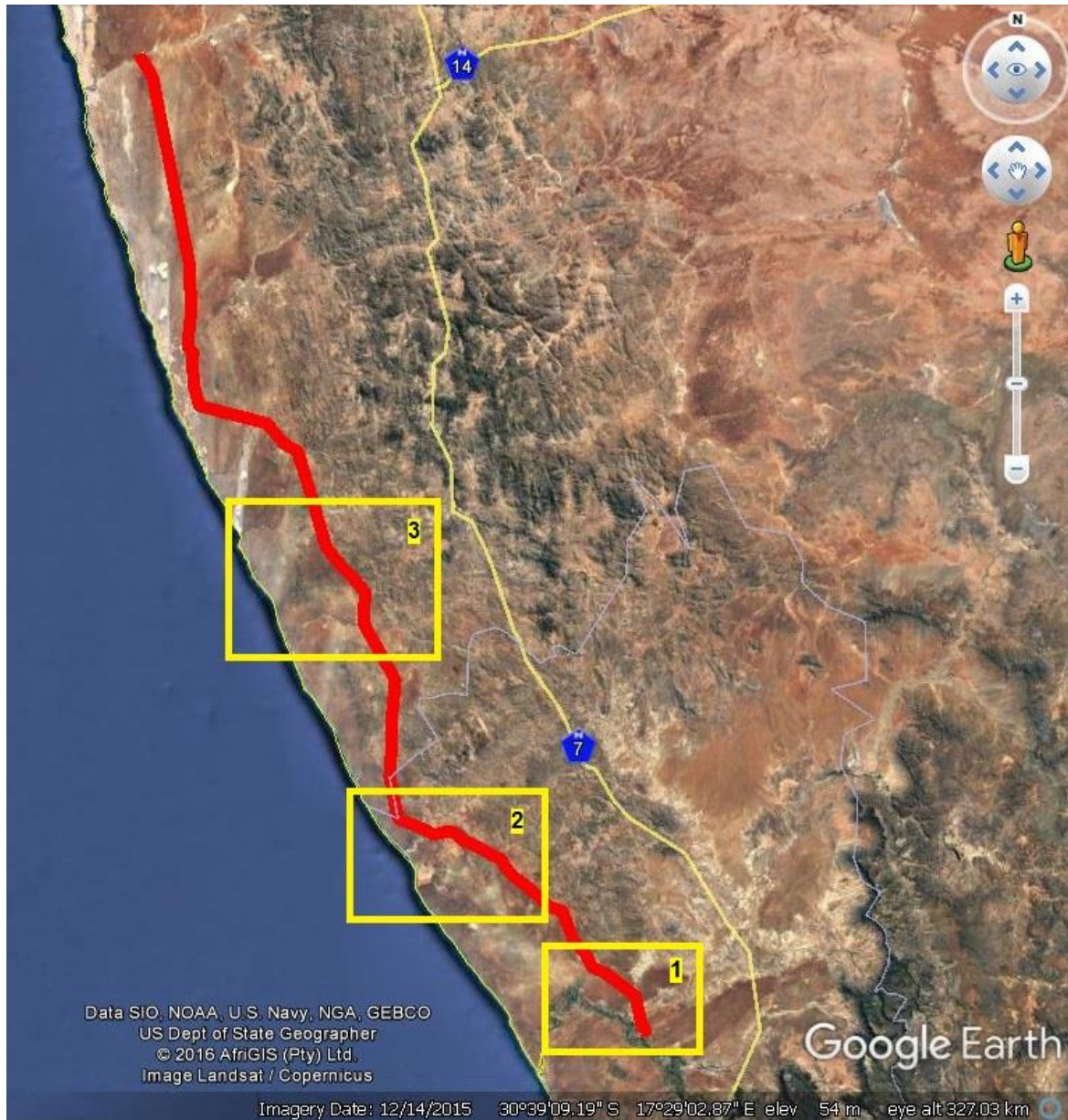


Figure 1: Google Earth photo of the study area.

The red line indicates the position of the proposed power line between Juno substation in the vicinity of Vredendal in the Western Cape and the Gromis substation west of Springbok in the Northern Cape. The yellow rectangles indicate the sections of the line which are classified as deviations

3. Palaeontological sensitivity of the study area

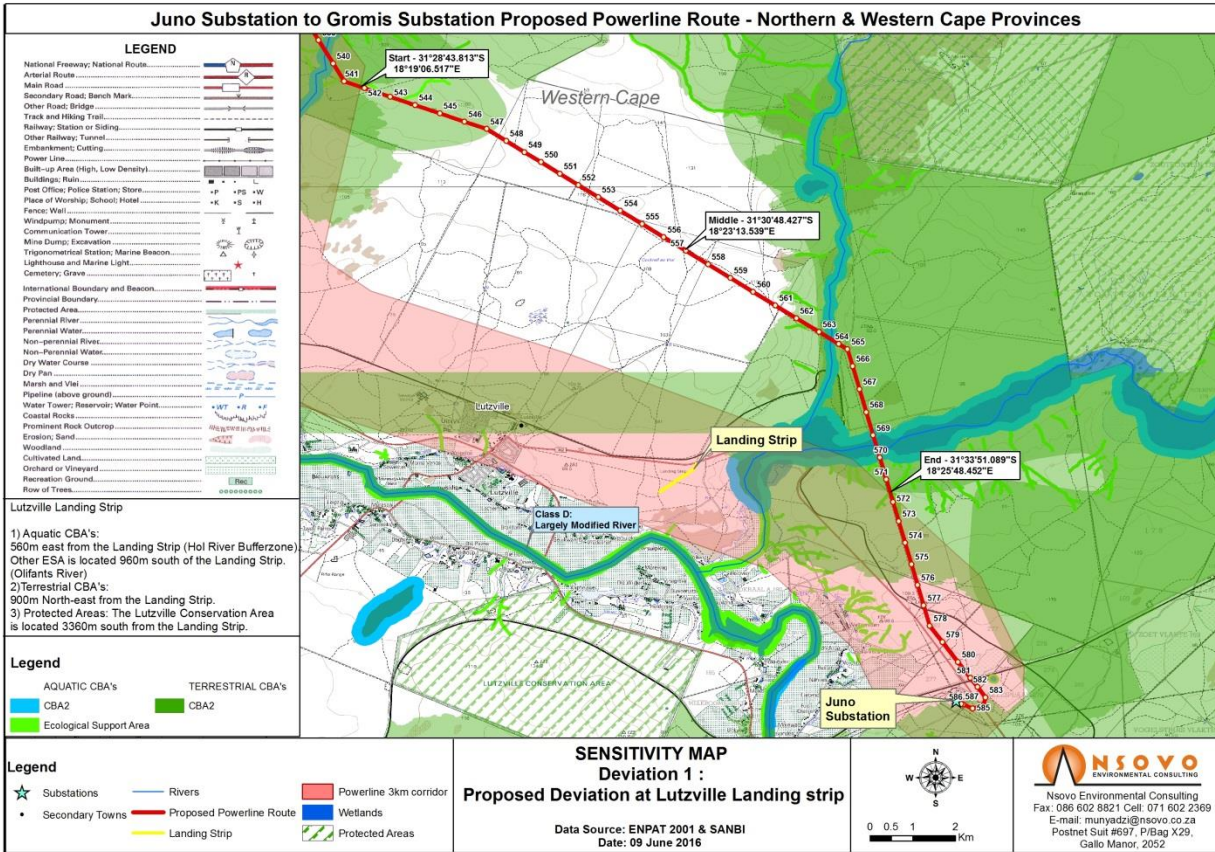


Figure 2: Deviation 1

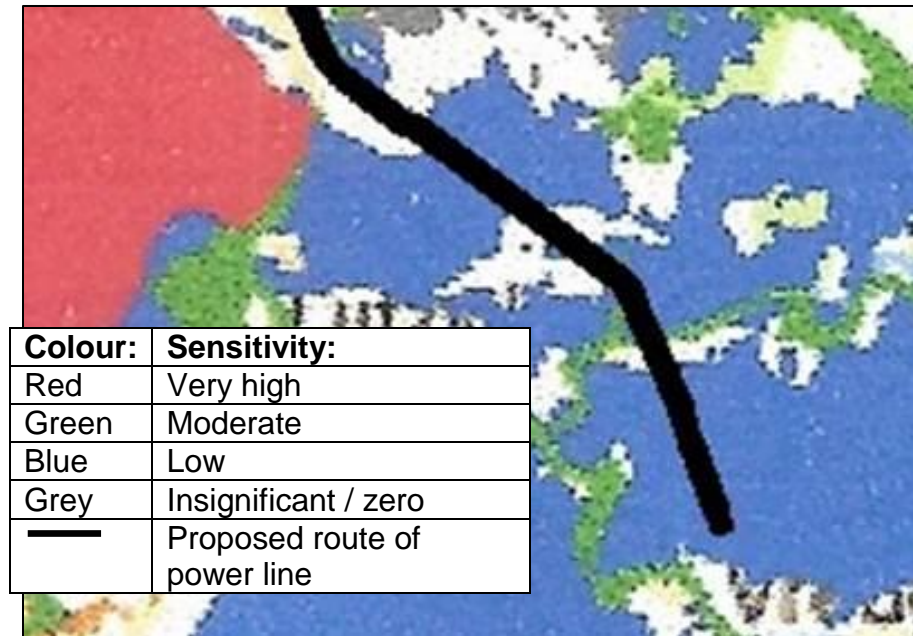


Figure 3: Palaeontological sensitivity for Deviation 1

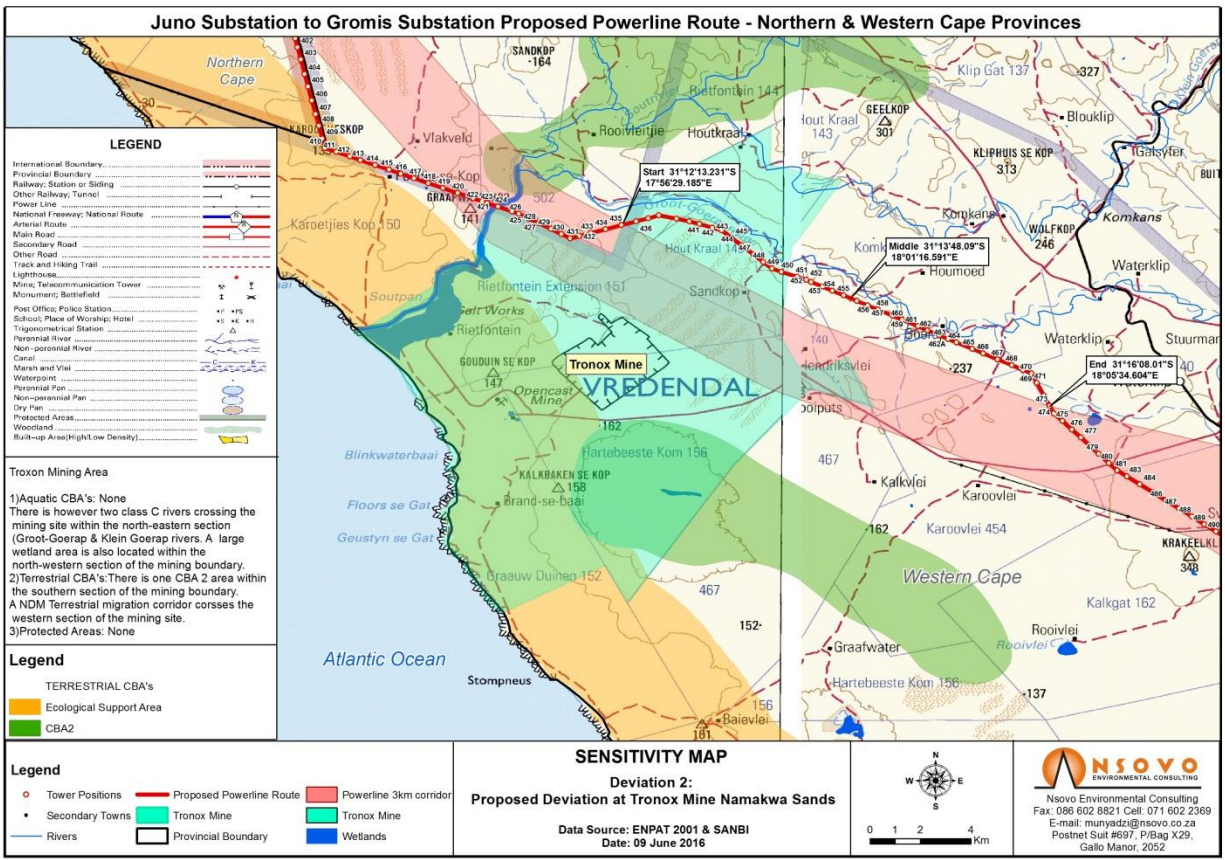


Figure 4: Deviation 2

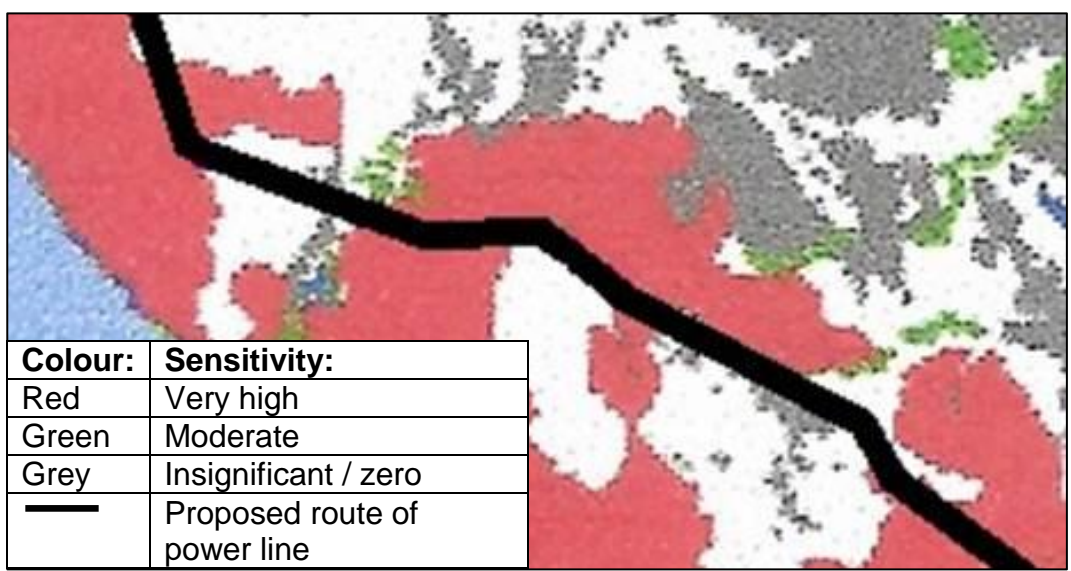


Figure 5: Palaeontological sensitivity for Deviation 2

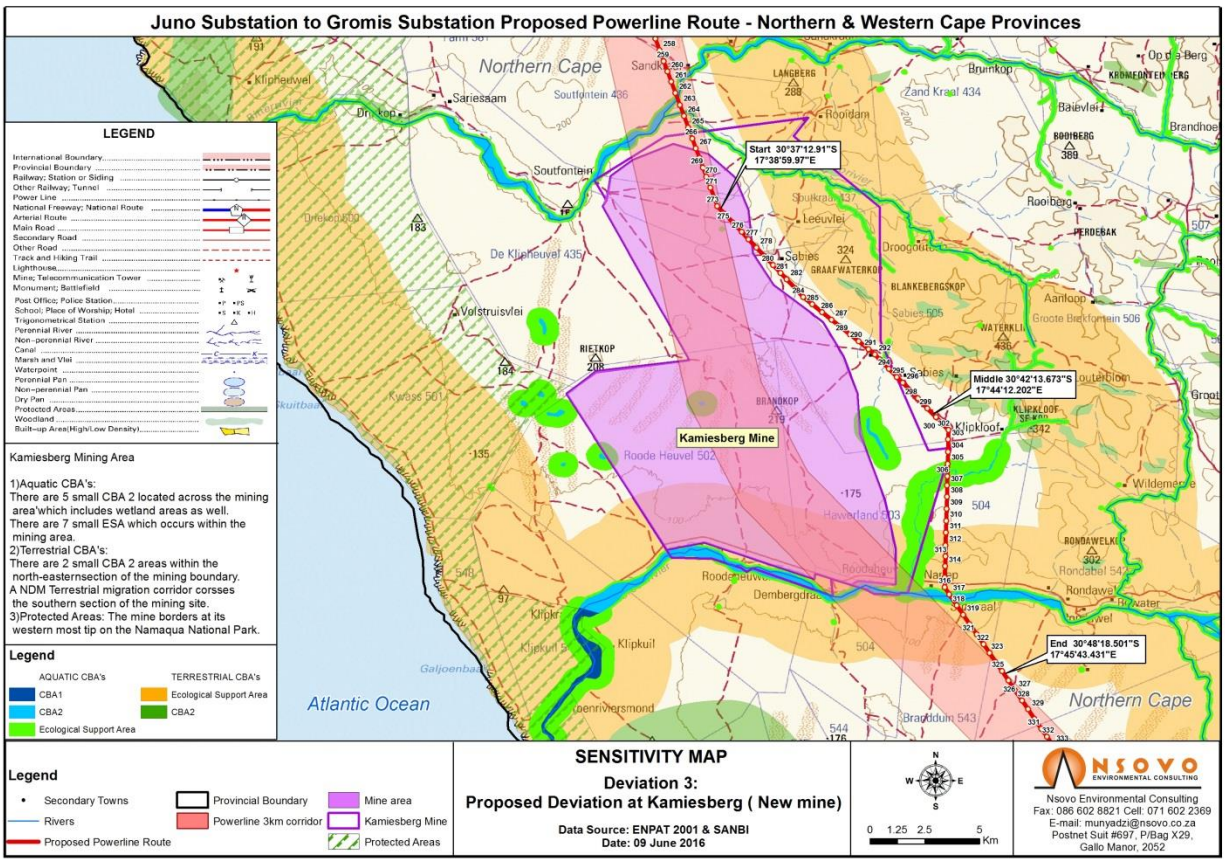


Figure 6: Deviation 3

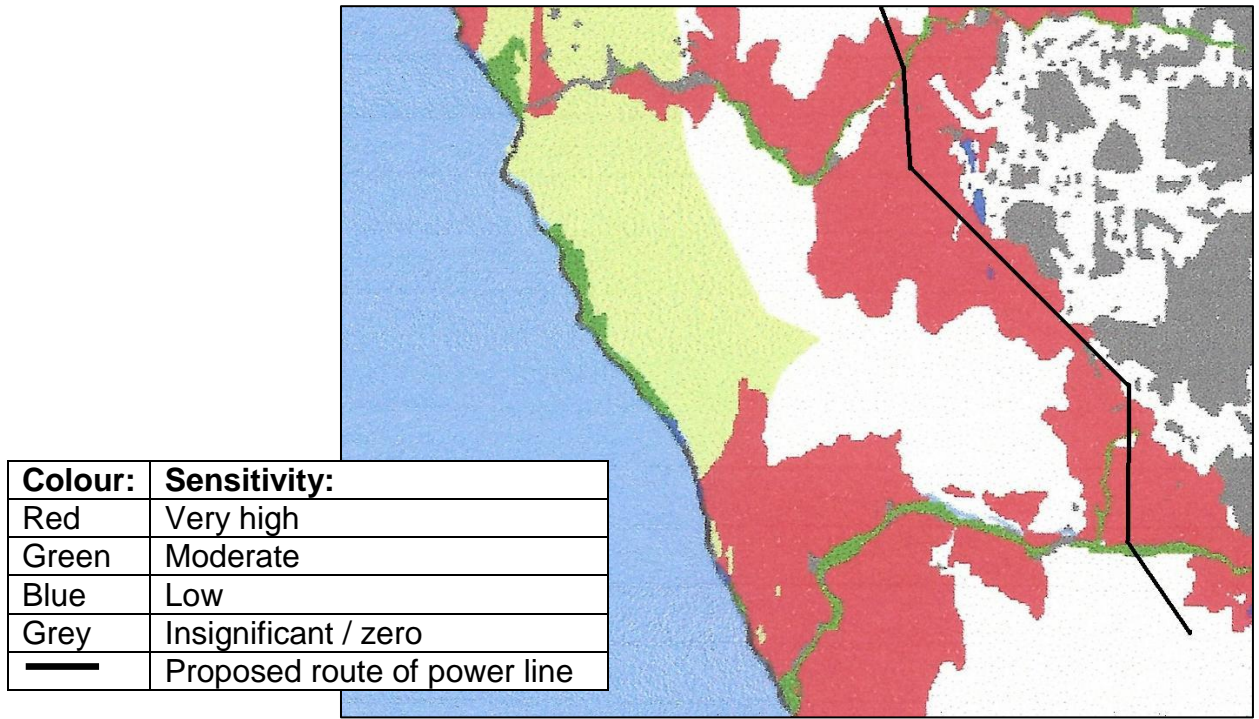


Figure 7: Palaeontological sensitivity map for Deviation 3

4. Conclusion and Recommendations:

Deviation 1:

This portion of the route runs over an area of low to moderate palaeontological sensitivity.

Deviation 2 and 3:

These portions of the route run over areas of high palaeontological sensitivity.

Mitigation

It is essential that an accredited palaeontologist with the necessary experience of Cenozoic deposits is appointed to do a surface inspection of the whole route, including these three deviations of the power line.

A palaeontologist has to be present when excavations are done along Deviations 2 and 3 however because of the high palaeontological sensitivity of these two sections.

In all cases fossil discoveries should be documented. Fossil localities should be GPS-validated and recorded. Fossils should be salvaged as far as possible. The fossils that are collected should be catalogued and taken to a recognised fossil repository such as the Iziko South African Museum for Natural History in Cape Town.



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