

CTS HERITAGE

HERITAGE SCREENER

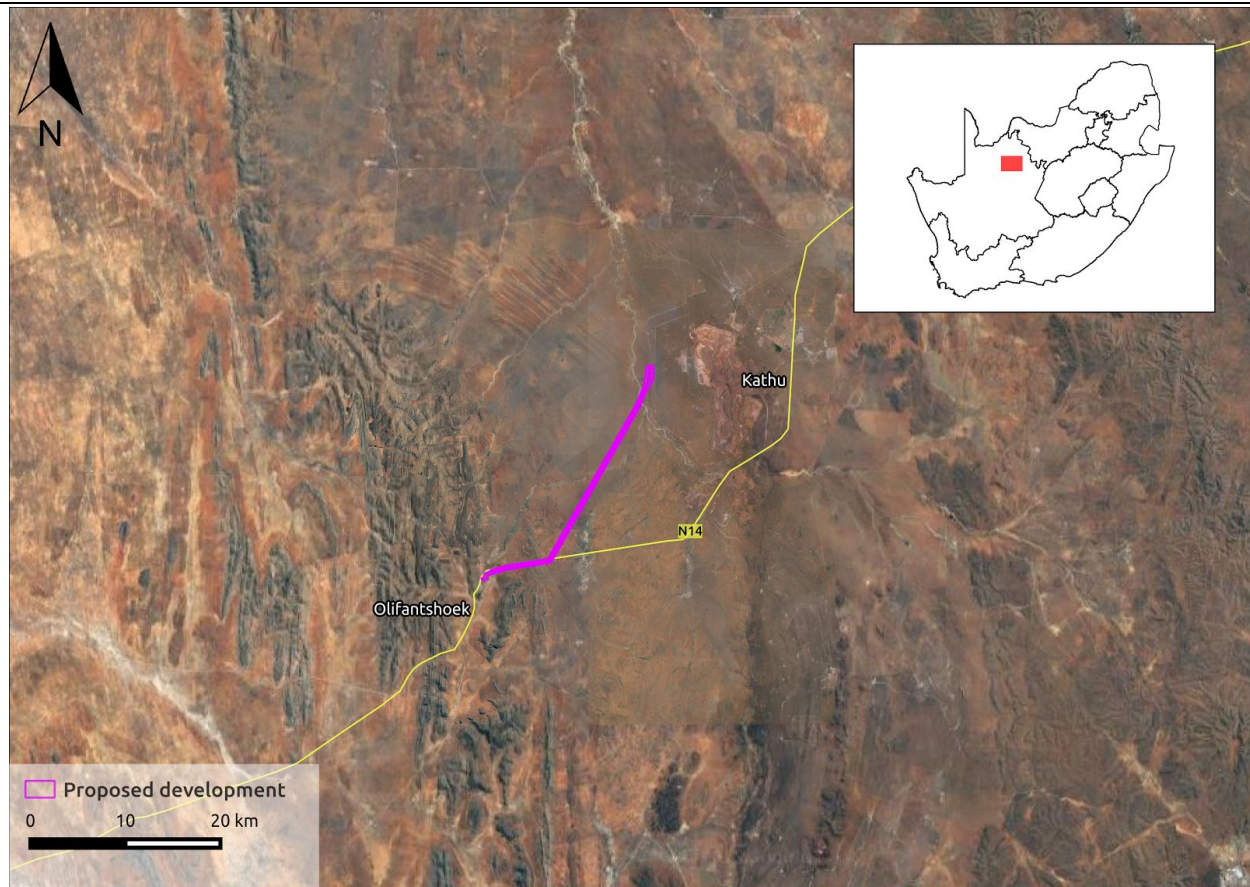
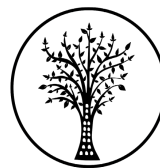
CTS Reference Number:	CTS16_048	
SAHRIS CaseID	10127	
Client:	Savannah Environmental	
Date:	23 May 2017	
Title:	Update to Eskom Substation & Power line Olifantshoek, Northern Cape	
Recommendation by CTS Heritage Specialists: (Type 1)	<p>RECOMMENDATION: The heritage resources in the area proposed for development are sufficiently recorded - The disturbed nature of the development area suggests that heritage resources are unlikely to be impacted by this development. A HIA has already been undertaken in this specific region for a different power line. As such, it is recommended that</p> <ul style="list-style-type: none">- No further heritage studies are required- If any heritage resources are discovered during the construction phase of the proposed development, the SAHRA APM unit should be contacted immediately	

Figure 1a. Satellite Map indicating the location of the proposed development in the Northern Cape Province.

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1. Proposed Development Summary

Eskom is proposing to establish a substation and power line which will be used to increase customers Notified Maximum Demand (NMD) from 2.5MVA to 10 MVA as a provision for future developments within the Olifantshoek region. This project is referred to as the Olifantshoek Substation and power line. The Olifantshoek Substation and power line will be comprised of the following:

- A new 10MVA on-site substation (100m X 100m) to be constructed adjacent to the existing 22/11kV Olifantshoek substation
- A new overhead 132 kV power line approximately 31 km long to connect directly to the Emil switching station via the new on site substation. The majority of the new power line route will follow the existing Ferrum/Nieuwehoop 400kV and Ferrum/Lewensaar 132kV power lines. The corridor of the new power line will be 300 m with a servitude of 31 m wide.
- The decommissioning of the existing 22/11kV Olifantshoek Substation

2. Application References

Name of relevant heritage authority(s)	South African Heritage Resources Agency (SAHRA)
Name of decision making authority(s)	Department of Environmental Affairs (DEA)

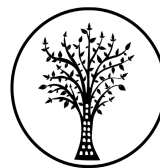
3. Property Information

Latitude / Longitude	-27.8495764493 S ; 22.8562184256 E
Erf number / Farm number	Lanham 539, Fritz 540, Wright 538, Bredenkamp 567, Brooks 568, Beaumont 569, Murray II 570, Cox 571, Hartley 573, Neylan 766, Neylan 574
Local Municipality	Ward 3, 4 and 5 of the Gamagara Local Municipality
District Municipality	Kgalagadi, Siyanda
Previous Magisterial District	Postmasburg
Province	Northern Cape
Current Use	Rural, servitude
Current Zoning	NA
Total Extent	Approximately 31 km

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4. Nature of the Proposed Development

Surface area to be affected/destroyed	Substation footprint: 10 000m ² (100 x 100m) Linear activities (including power line, access roads and all alternatives): 31km Servitude (m): 31km Corridor (m): 300m
Depth of excavation (m)	None anticipated
Height of development (m)	22-24m
Expected years of operation before decommission	NA

5. Category of Development

Triggers: Section 38(8) of the National Heritage Resources Act	X
Triggers: Section 38(1) of the National Heritage Resources Act	
1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.	X
2. Construction of a bridge or similar structure exceeding 50m in length.	
3. Any development or activity that will change the character of a site-	
a) exceeding 5 000m ² in extent	
b) involving three or more existing erven or subdivisions thereof	
c) involving three or more erven or divisions thereof which have been consolidated within the past five years	
4. Rezoning of a site exceeding 10 000m ²	
5. Other (state):	

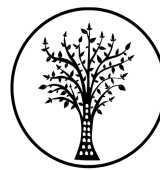
6. Additional Infrastructure Required for this Development

- Bird-friendly monopile tower (22-24m high)
- Access roads (44 x 9m, with beam edge 35m wide)
- Voltage power lines (132kv)
- Single circuit
- Substation (71 x 49m)

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7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)

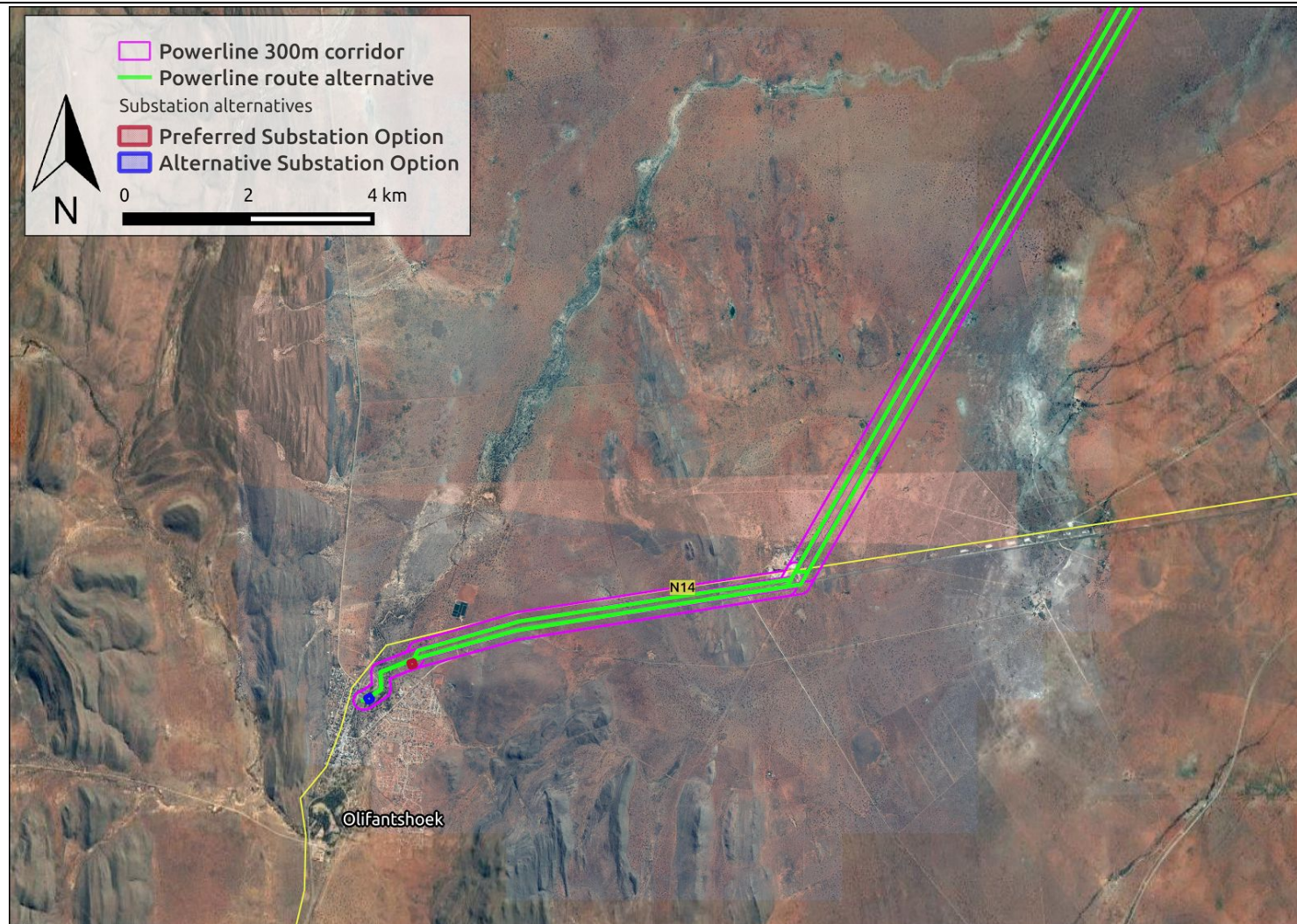
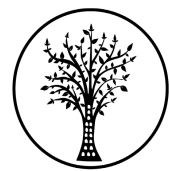


Figure 1c. Overview Map. Satellite image indicating the southern portion of the proposed powerline, route alternatives and substation alternatives in relation to Olifantshoek and the N14 highway (see Figure 1d for substation alternatives).

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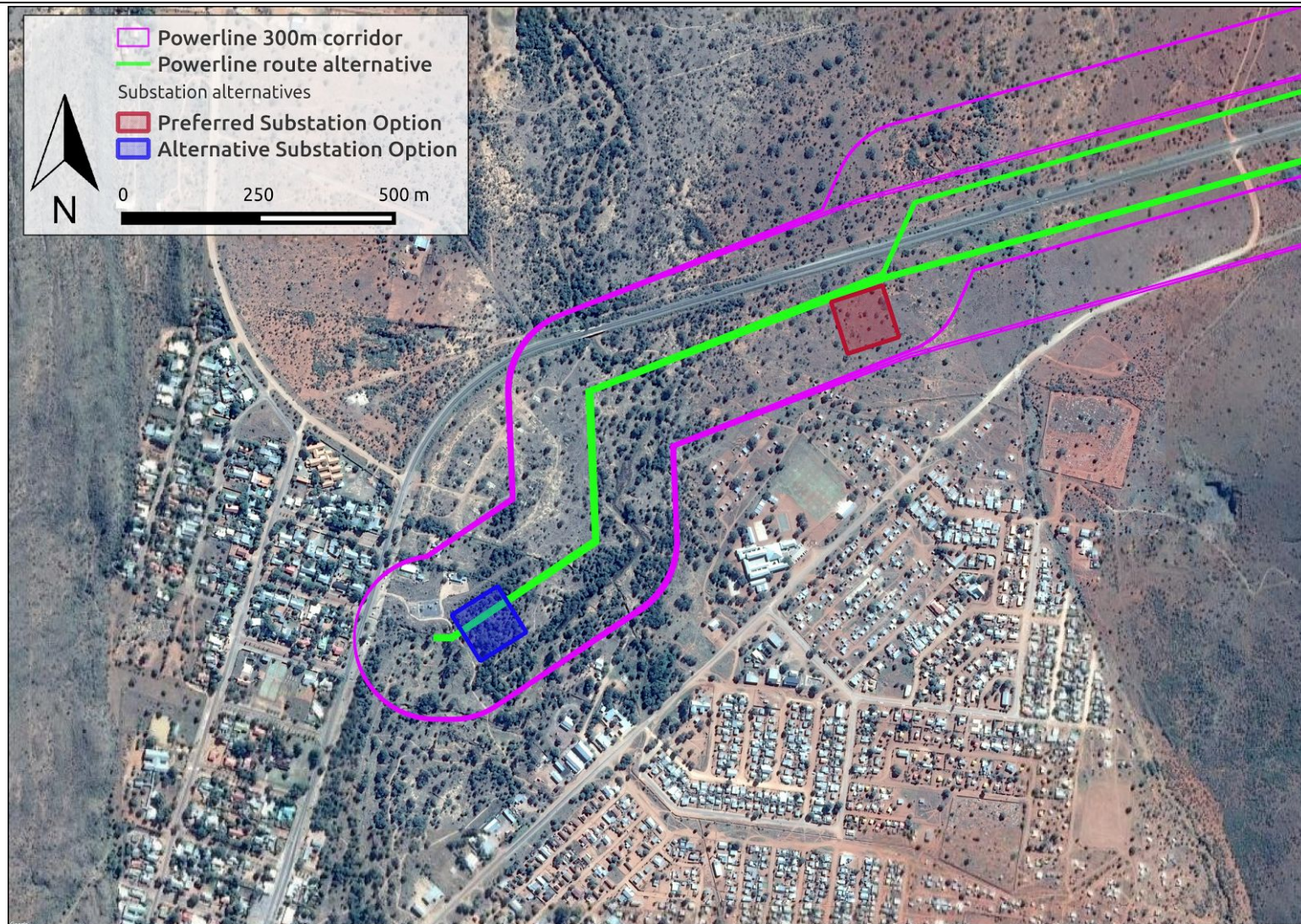
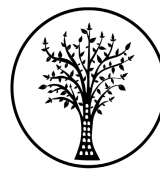


Figure 1d. Overview Map. Satellite image indicating the substation alternatives at close range, adjacent to the town of Olifantshoek.

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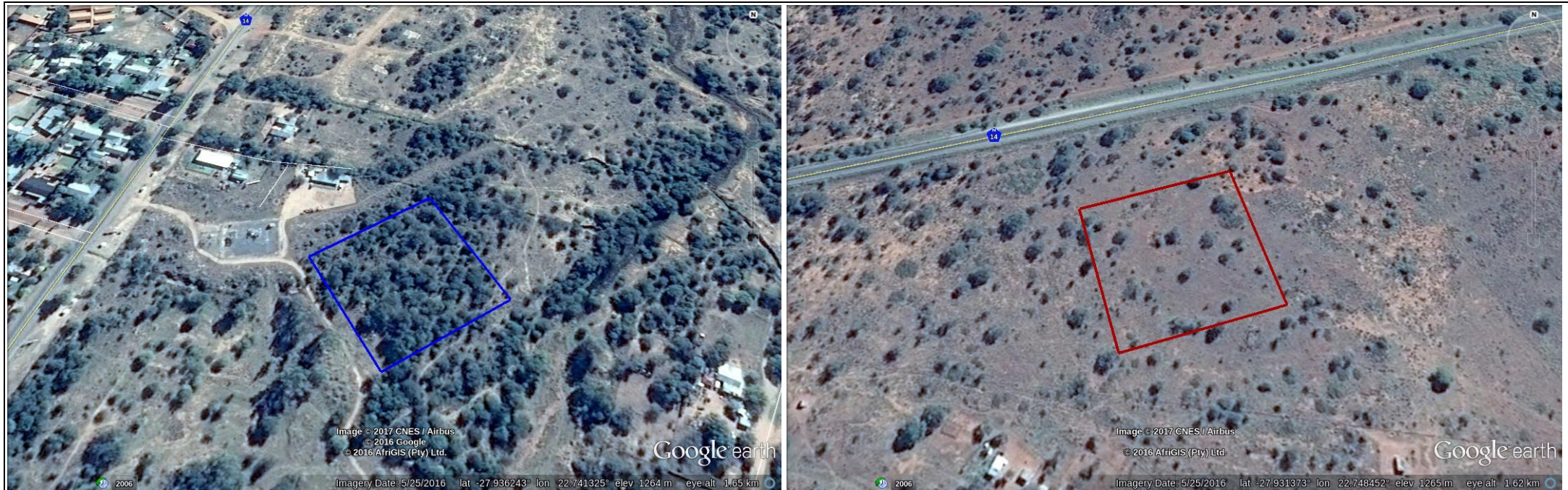
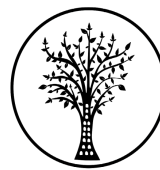


Figure 1e. Google satellite image, indicating the substation options (Alternative Option in blue and Preferred Option in Red) in proximity to the town of Olifantshoek and the N14 highway. North is directed upward.

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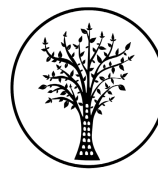
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Figure 1f. Google Street View Image, indicating the rough position of the alternative substation option in relation to the existing substation and disturbed area of the town of Olifantshoek.



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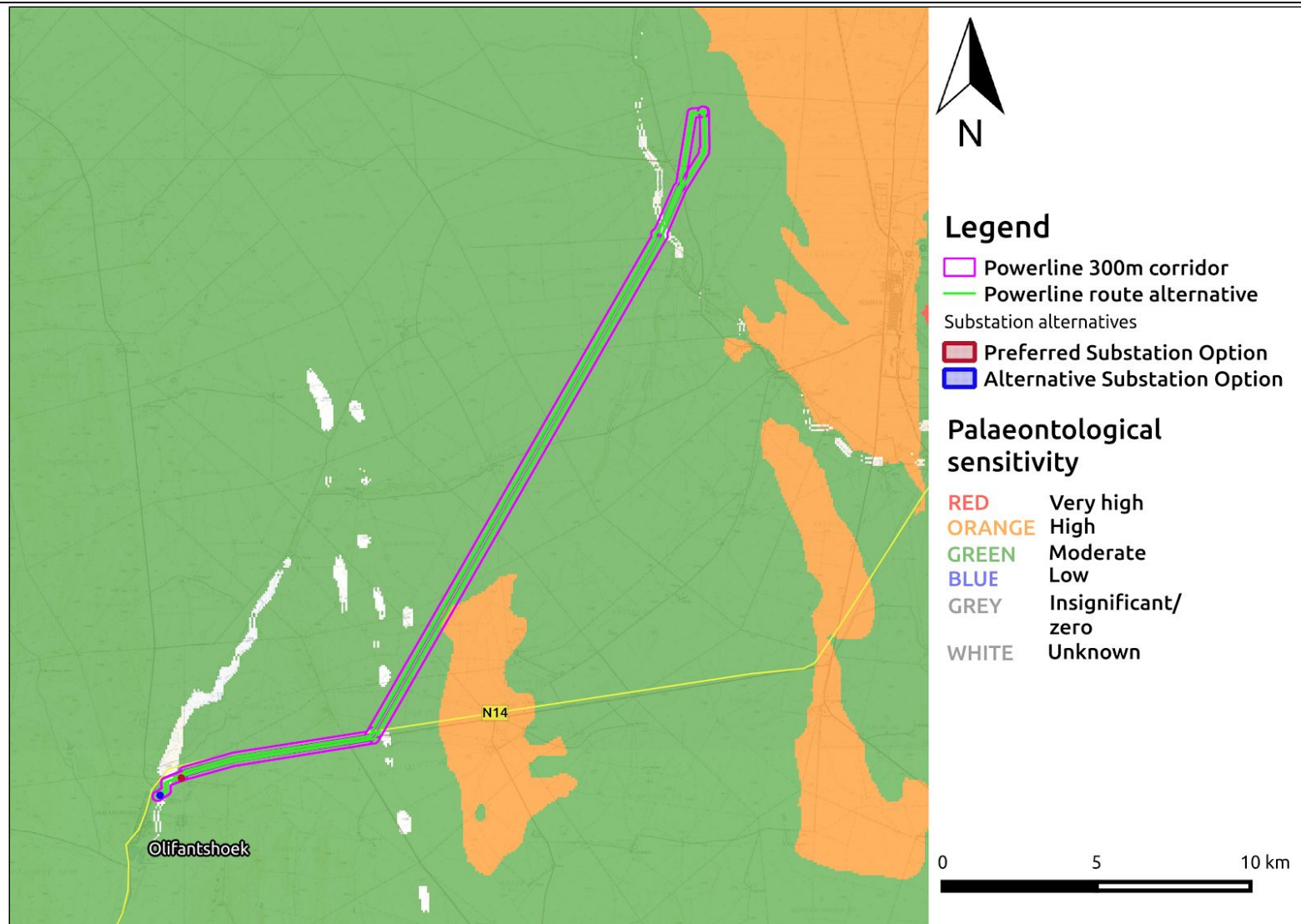
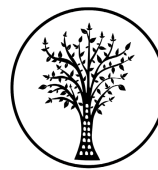


Figure 3a. Palaeo-Map. Palaeosensitivity of the study area, indicating the underlying moderate (green), high (orange) and unknown (white) palaeontologically sensitive areas. See Appendix 3 for full guide to the legend.



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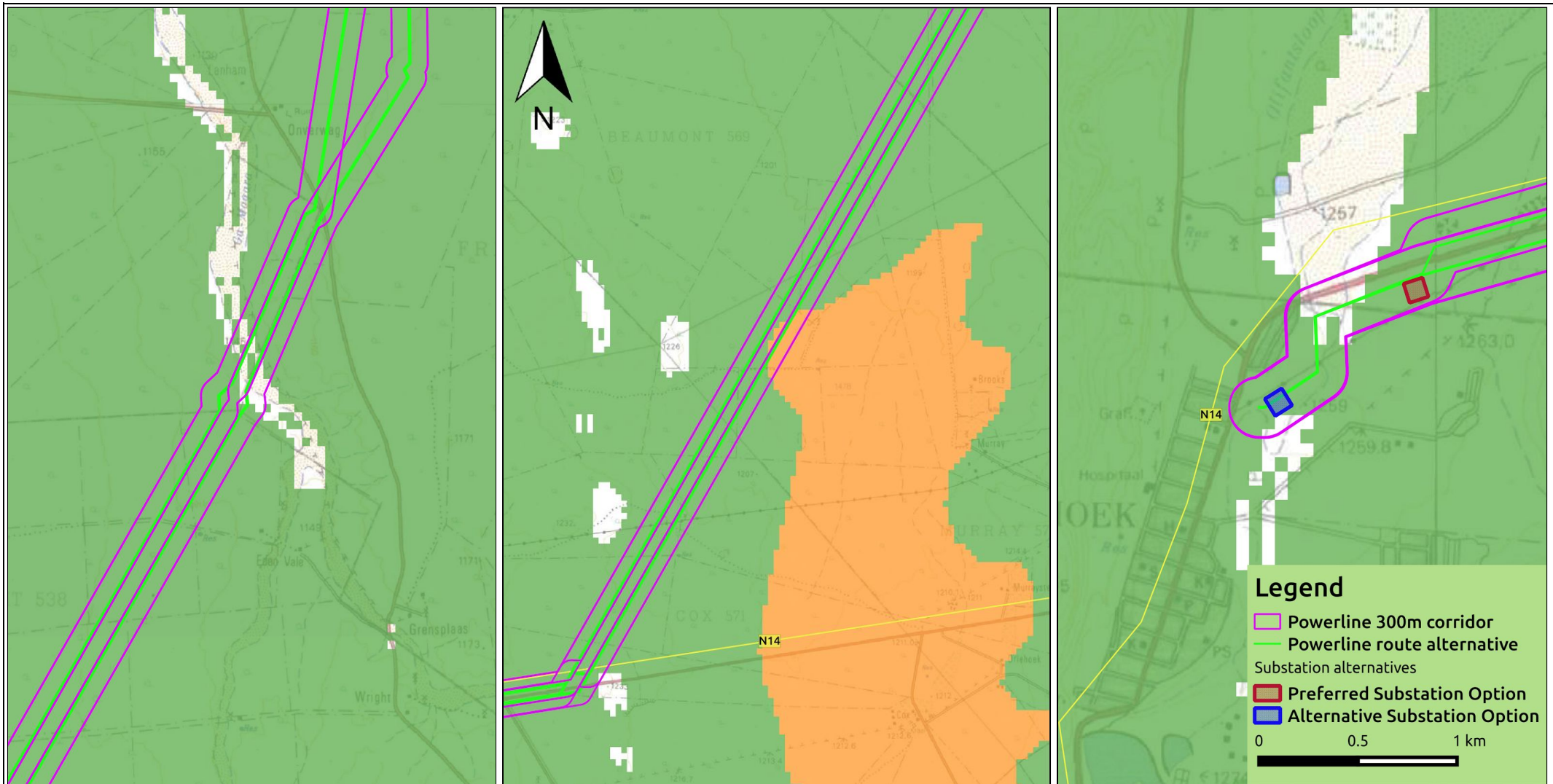
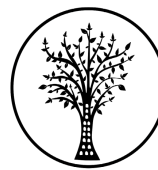


Figure 3b. Palaeo Map. Close up of areas with high (left panel) palaeosensitivity, and unknown (middle & right panels) palaeosensitivity.



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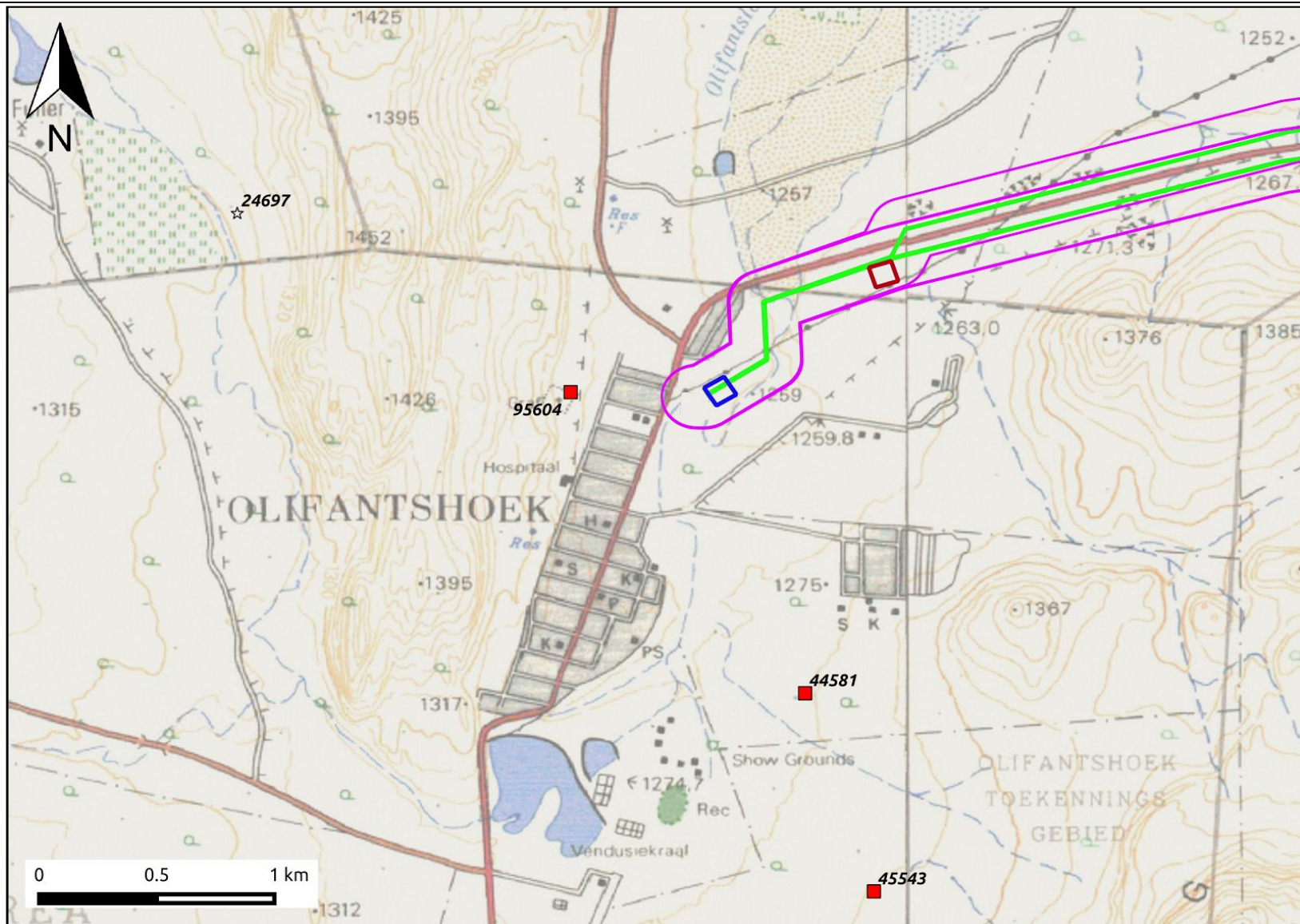


Figure 4g. Heritage Resources Map, indicating the distance of the proposed development from the Olifantshoek cemetery and surrounding heritage sites.

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8. Updated Heritage statement and character of the area

Savannah Environmental is managing the Basic Assessment process for a proposed Eskom substation and power line within the Olifantshoek region. This project entails the construction of a substation, an overhead power line, and the decommissioning of the existing Olifantshoek substation.

The scale of the development covers a large area (see Figure 1a and Section 4). The proposed power line route runs along an existing gravel road, and further south along the existing N14 highway, as well as an existing 275kV power line and a newly constructed 400kV power line, ending on the outskirts of the town of Olifantshoek. The proposed development area is therefore already largely disturbed (Figure 1f). The location of the pylon footprints supporting the 31km power line will be spaced at specific intervals and will not have a large impact.

As can be seen in Figures 1d, 1e and 1f, the substation alternatives lie in close proximity to Olifantshoek town, in a previously disturbed context. In the Heritage Screener dated September 2016, it was indicated that Alternative 1 and 2 were the preferred options for the location of the new substation from a heritage perspective, as there is an existing substation adjacent to this area, it is closer to the town and is more disturbed. Alternative 3 was the less preferred location from a heritage perspective, being slightly further from the town on less disturbed land. As a result of the findings of other specialist assessments, Alternative 1 has been removed. What was previously Alternative 2 is now the Alternative Option for the substation (blue) while Alternative 3 is now the Preferred Substation option (red). The findings of the botanical studies, faunal studies and visual impact studies have all identified Alternative 3 as the Preferred Option for the proposed substation. In terms of impacts to heritage resources, due to the already disturbed nature of the Preferred Alternative (red), it is unlikely that the development of the substation in this location will impact on significant heritage resources.

The remaining aspects of the proposed development remain as discussed in the Heritage Screener dated September 2016.

Due to the previously disturbed nature of the proposed development area, as well as the extensive HIA coverage for the area from previous assessments, it is unlikely that the proposed 132kV power line and substation will impact on significant heritage resources. As such, it is recommended that no further heritage studies are required. Should any heritage resources be discovered during the construction phase of the Olifantshoek Substation and Power Line, work must cease and the SAHRA APM unit should be contacted immediately.

RECOMMENDATION: The heritage resources in the area proposed for development are sufficiently recorded - The disturbed nature of the development area suggests that heritage resources are unlikely to be impacted by this development. A HIA has already been undertaken in this specific region for a different power line. As such, it is recommended that

- No further heritage studies are required
- If any heritage resources are discovered during the construction phase of the proposed development, the SAHRA APM unit should be contacted immediately