

Prepared for:

LANDSCAPE DYNAMICS

**A PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR A
PROPOSED NEW 132kV POWER LINE RUNNING BETWEEN THE
NKOMAZI SUBSTATION AND THE PROPOSED NEW FIG TREE
SUBSTATION IN THE MPUMALANGA PROVINCE OF SOUTH AFRICA**

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April 2008

EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study as required in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999) was done for a proposed new 132kV power line to be established between the Nkomazi Substation and the proposed new Fig Tree Substation in the Mpumalanga Province of South Africa. The aims with the HIA study were the following:

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999) do occur in or near the proposed new power line corridor and substation (Eskom Project Area) (Box 1) and, if so, to establish the significance of these heritage resources.
- To establish whether such heritage resources will be affected by the proposed new power line and, if so, to determine possible mitigation measures that can be applied to these heritage resources.

No heritage resources of significance were observed in the Eskom Project Area (Fig Tree Substation or along Alternative 01 or Alternative 02). Consequently, no mitigation measures are required as no heritage resources are present in the Eskom Project Area.

If any heritage resources of significance is exposed during this development project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all construction activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

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1 TERMS OF REFERENCE

Eskom intends to construct a proposed new 132kV power line between the Nkomazi Substation and the new proposed Fig Tree Substation in the Limpopo Province of South Africa. The construction of the proposed new power line and substation may affect some of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Box 1). Consequently, Eskom and Landscape Dynamics commissioned the author to undertake a Phase I Heritage Impact Assessment (HIA) study for the proposed new power line and substation (Eskom Project Area). The aims with the Phase I HIA were the following:

- To establish whether any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999) do occur in the proposed Eskom Project Area and, if so, to establish the significance of these heritage resources.
- To establish whether such heritage resources will be affected by the proposed Eskom Project and, if so, to determine possible mitigation measures that can be applied to these heritage resources.

2 METHODOLOGY

This Phase I HIA study was conducted by means of the following:

- Surveying with a vehicle the Eskom Project Area at large and focusing on sensitive spots which were surveyed on foot.
- Briefly surveying literature relating to the pre-historical and historical context of the Eskom Project Area.
- Interviewing spokespersons to establish the presence or existence of certain heritage resources such as graveyards in the Eskom Project Area.
- Consulting maps of the Eskom Project Area as well as peripheral areas adjoining the Project Area.
- Consulting archaeological (heritage) data bases such as the ones kept at the Mpumalanga Provincial Heritage Resources Agency as well as at Museum Africa in Pretoria (Tshwane).
- Synthesising all information obtained from the literature survey, maps, data bases and spokespersons with the evidence derived from the fieldwork in this report.

It is possible that this Phase HIA study may have missed heritage resources in the Eskom Project Area as heritage remains may occur in thick clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during this development project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all construction activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

3 THE ESKOM PROJECT AREA

Eskom's proposed new 0132kV power line between the Nkomazi Substation and the proposed new Fig Tree Substation will be constructed in the Bombela District Municipality near the villages of Mzinti, Ntunda, Mangweni, Madadeni and Sibange in the Mpumalanga Province of South Africa (1: 250 000; 2527 Pretoria) (Figure 1).

Two options are proposed for the new 132kV power line running between the two substations, namely:

- Option 01(Red): Runs between the Nkomazi Substation and the proposed new Fig Tree Substation to the north-east of the village of Mangweni before it bends southwards in order to run along the R571 to the proposed new Fig Tree Substation near Sibange village.
- Option 02 (Blue): Runs between the Nkomazi Substation and the proposed new Fig Tree Substation to the south of the village of Mangweni before joining the R571 in order to run for a short distance along this road to the south to the proposed new Fig Tree Substation.

The proposed new Fig Tree Substation will be established on the eastern shoulder of the R571, opposite the village of Madadeni.

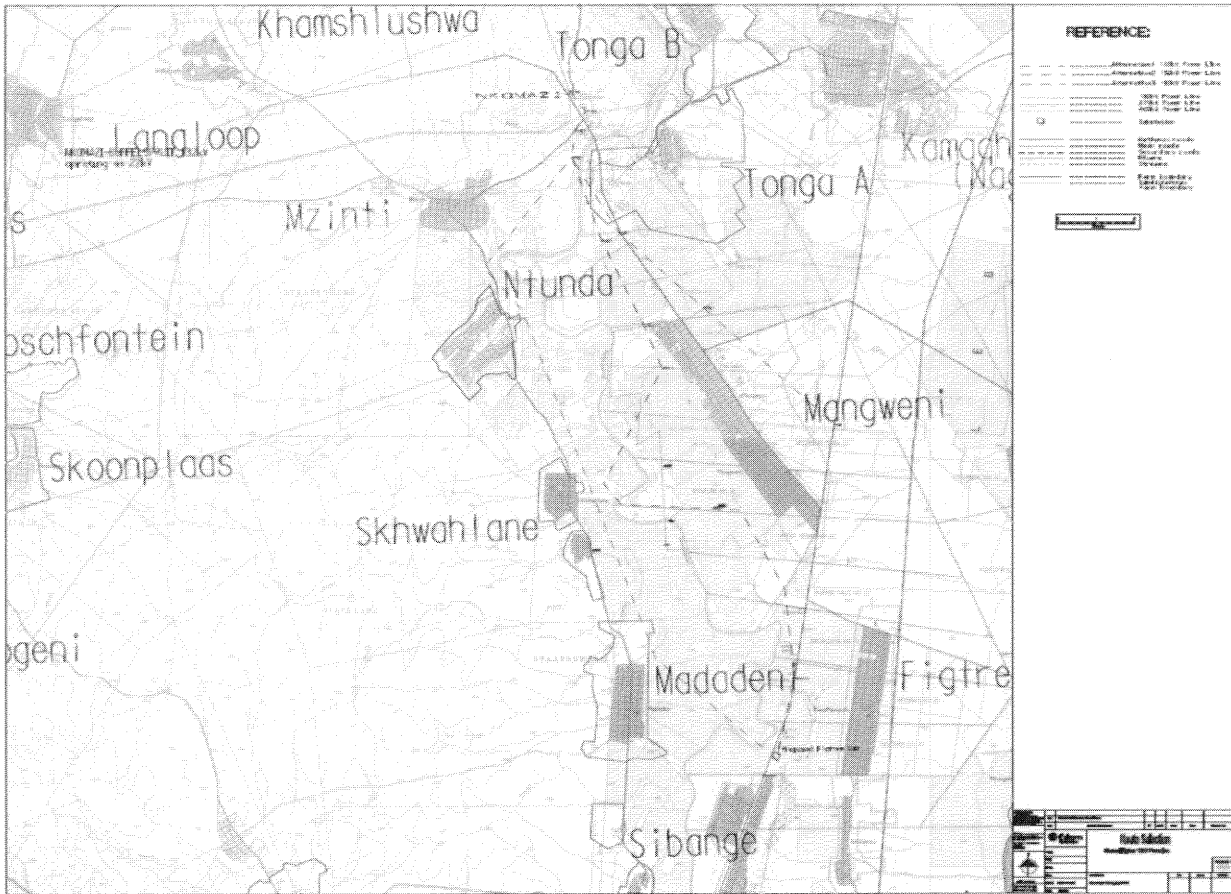


Figure 01- Eskom's proposed two options (red and blue) for a new 132kV power line running between the Nkomazi Substation and the proposed new Fig Tree Substation in the Bombela District Municipality in the Mpumalanga Province of South Africa (above).

4 THE PHASE I HERITAGE IMPACT ASSESSMENT

The Phase I HIA study for Eskom's proposed new 132kV power line and the proposed new Fig Tree Substation revealed none of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).

The Phase I HIA study for the proposed new 132kV power line and Fig Tree Substation is now briefly discussed and illuminated with photographs.

4.1 Alternatives for the 132kV power line

The two options for the proposed new 132kV power line are the following:

4.1.1 Alternative 01 (red)

Option 01 runs to the north-east of the village of Mangweni before it bends southwards in order to run along the R571 to the proposed new Fig Tree Substation near Sibange village.

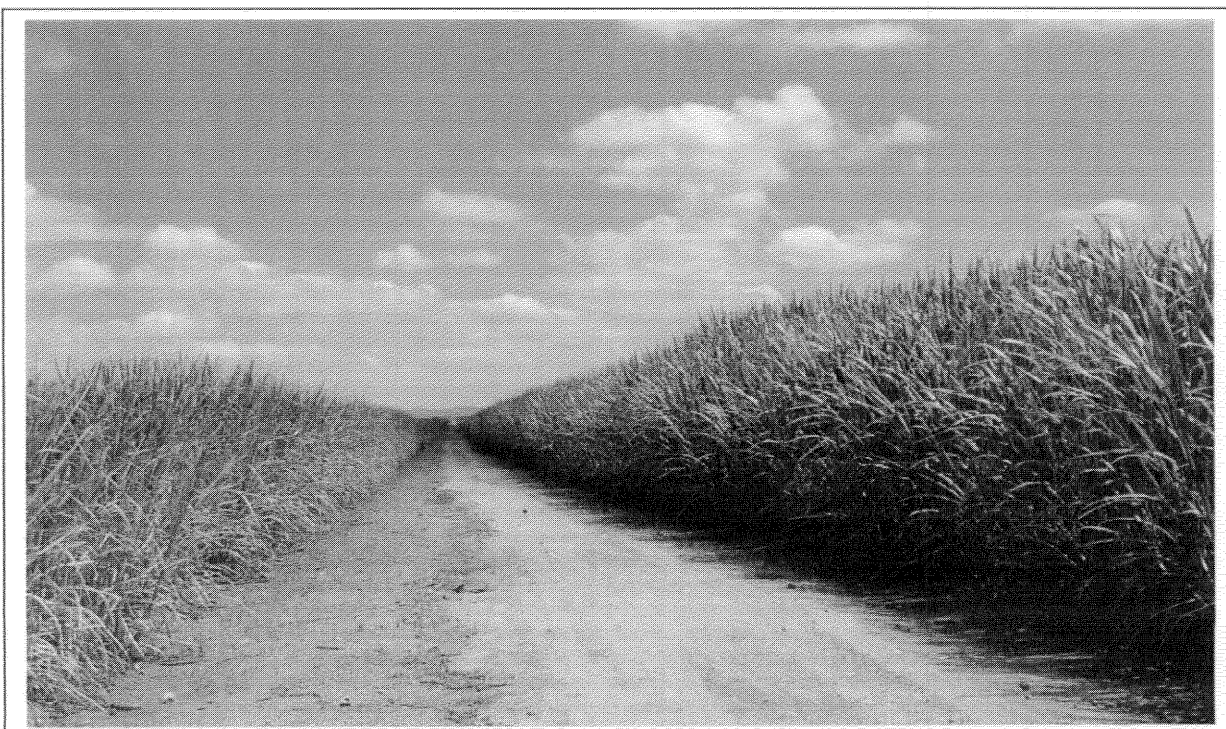
This option is marked by the following stretches:

- The first three stretches run from the Nkomazi Substation southwards before crossing the Nkomati River.
- The fourth stretch runs from the Nkomati River south-eastwards across land which have not been affected by agricultural activities before bending further towards the south-east.
- The sixth stretch runs across cane fields to the east of the village of Mangweni and across pieces of land which have not been utilized for agriculture in the past before running across the R571.

- The seventh stretch runs southwards along the eastern shoulder of the R571 crossing cane and maize fields as well as a tributary of the Nkomati River before it reaches the proposed new Fig Tree Substation opposite the village of Madadene.



Figures 2 & 3- The fourth stretch along Alternative 01 crosses the Nkomati River near KwaZbukwane and Mzinti villages (above) while the fifth and sixth stretches respectively cross pieces of undisturbed veldt and sugar cane fields (below).



4.1.2 Alternative 02 (Blue)

The first three stretches of Alternative 02 follow that of Alternative 01 before this power line crosses the Nkomtai River in order to run to the west of the village of Mangweni before it bends south-westwards in order to avoid coal mining activities west of Mangweni. Hereafter Alternative 02 bends back to the east running towards Mangweni and then south-westwards and southwards to the R571. Alternative 02 then crosses the R571 in order to run along the eastern shoulder of this road to the proposed new Fig Tree Substation north of Sibange village.

This option is marked by the following stretches:

- The first three stretches run from the Nkomati Substation southwards before crossing the Nkomati River. (These stretches follow a similar route that the three stretches of Alternative 01)
- The fourth to the tenth stretch primarily cross cane fields before crossing the R571.
- The last stretch follows the eastern shoulder of Road 571 for a short distance before reaching the proposed new Fig Tree Substation.

4.2 Fig Tree Substation

The proposed new Fig Tree Substation is located in the midst of a maize field where no heritage resources of significance were observed.



Figure 4- The various stretches of Alternative 02 mainly cross sugar cane fields before crossing the R571 in order to run along the eastern shoulder of this road to the proposed new Fig Tree Substation (above).

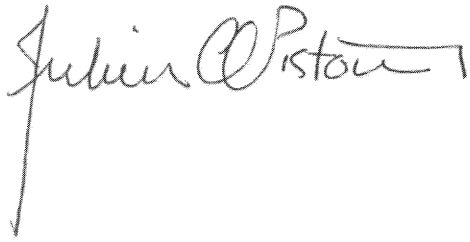
5 CONCLUSION AND RECOMMENDATION

A Phase I Heritage Impact Assessment (HIA) study was done according to Section 38 of the National Heritage Resources Act (No 25 of 01999) for Eskom's proposed new 132kV power line between the Nkomazi Substation and the proposed new Fig Tree Substation in the Mpumalanga Province of South Africa.

The aims with the Phase I HIA study were to establish if any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) do occur in the Eskom Project Area, and, if so, to establish the significance of the heritage resources and to propose mitigation measures for those heritage resources which may be affected by the Eskom Project.

No heritage resources of significance were observed in the Eskom Project Area (Fig Tree Substation or along Alternative 01 or Alternative 02). Consequently, no mitigation measures are required as no heritage resources are present in the Eskom Project Area.

If any heritage resources of significance is exposed during the implementation of this Eskom Project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all construction activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

A handwritten signature in black ink, reading "Julius C C Pistorius". The signature is written in a cursive style with a long vertical line extending downwards from the 'P'.

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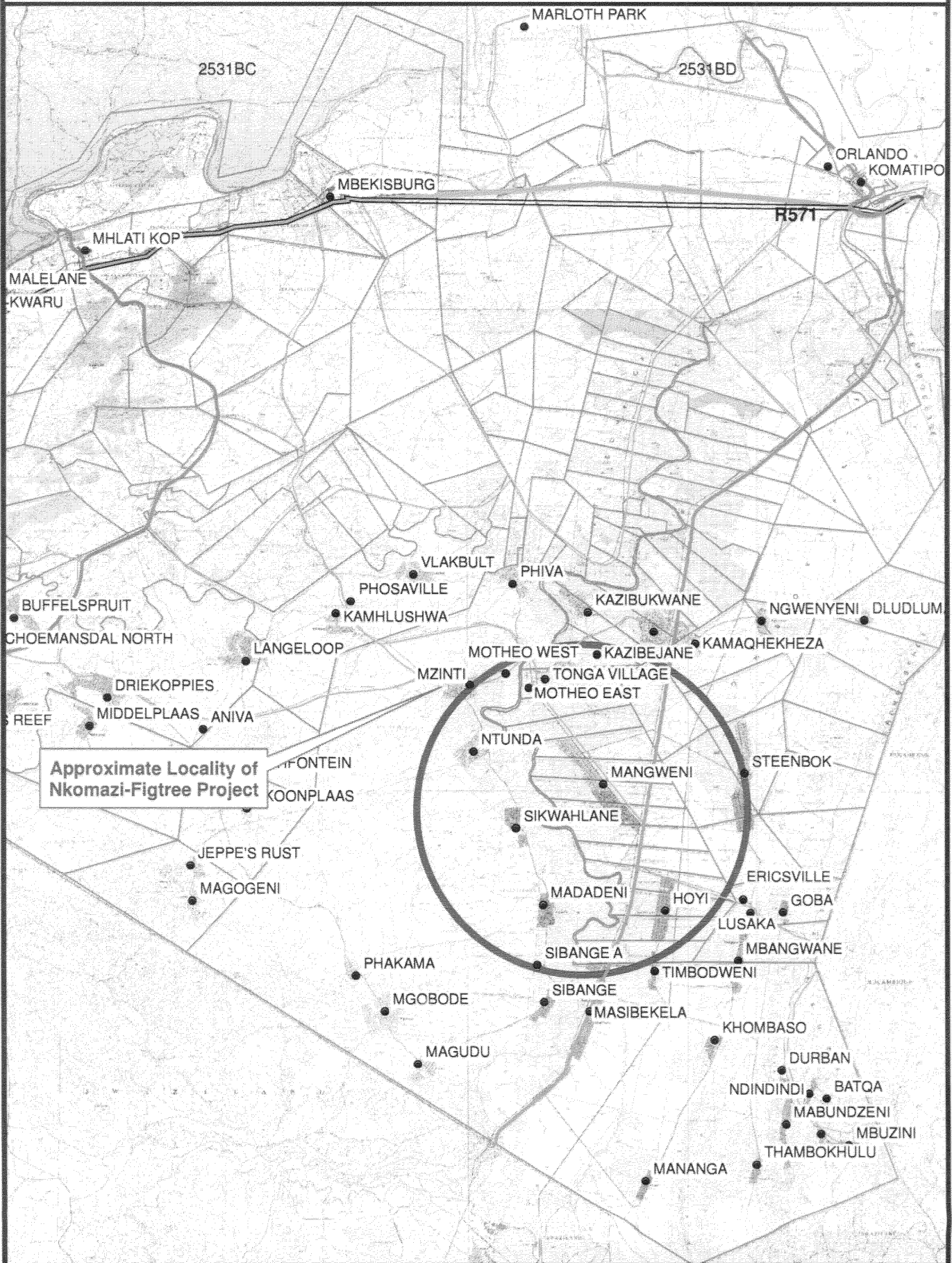
LOCALITY MAP: Nkomazi-Figtree Project



LANDSCAPE DYNAMICS

Environmental Impact Assessment Process undertaken by:
Landscape Dynamics Environmental Consultants

Scale 1 : 300 000
2.5 0 2.5 5 Kilometers



Approximate Locality of
Nkomazi-Figtree Project