

# BACKGROUND INFORMATION DOCUMENT

Mnambithi 132/88kV 80MVA Substation, 132 kV single circuit power line and 88Kv turn-in lines, Ladysmith in Kwa Zulu Natal.

EIA REF: 14/12/16/3/3/1757

AUGUST 2012

Prepared for:  
Eskom Holdings (Ltd)



Prepared by:  
EYETHU ENGINEERS (PTY) LTD



# **MNAMBITHI 132/88kV 80MVA SUBSTATION, 132 kV SINGLE CIRCUIT POWER LINE AND 88kV TURN-IN LINES, LADYSMITH IN KWA-ZULU NATAL.**

**(EIA REF: 14/12/16/3/3/1757)**

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## **1. BACKGROUND**

Colenso Main Distribution Station (MDS) has a single 132/88kV 80MVA transformer which will overload in future due to expected load growth. The Mnambithi, 132/88kV substation will “deload” Colenso MDS transformer. The proposed new Mnambithi substation will also serve to improve voltage regulation on substations fed from Colenso-Groenkop 88kV line and ensure that no load shedding to be implemented during Colenso or Estcourt 132/88kV transformer contingency.

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## **2. PROJECT SCOPE**

- **132/88KV SUBSTATION**

Establishment of a 2x132/88kV 80MVA Mnambithi Substation with the following:

- 132/88kV Double Busbar System
- 5x88kV fully equipped bays,
- 1x88kV spare feeder bay
- Control room

We are applying for a 150mx150m substation yard.

- **ASSOCIATED 132/88KV POWER LINES**

The power lines associated with the proposed project are:

- 2 x 6km of 132kV Kingbird Single Circuit Powerline from Danskraal MTS to the proposed Mnambithi Substation
  - 2km Mnambithi 88kV turn in Lines to a site tying into CRAIGSIDE/INGANGANE (CRG/ING) 88KV power line
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### **3. ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**

The regulations promulgated in terms of the Environmental Impact Assessment regulations 2010 and Listing Notice 1, require that the proposed activity be subjected to a Basic Assessment process.

Accordingly, Eskom has appointed Eyethu Engineers (PTY) Ltd to undertake an EIA for the proposed Mnambithi substation. The findings of the EIA will be considered by the National Department of Environmental Affairs, Department of Water and Forestry, KZN Ezemvelo and other stakeholders such as local and district municipalities and KZN Department of Environmental affairs and Agriculture.

At the end of the process Department of Environmental Affairs (DEA) will issue an Environmental Authorisation (EA) that will either approve the proposed project with conditions or ultimately reject the project.

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### **4. SITE SELECTION**

Two (2) sites have been proposed for the new substation will be assessed during the EIA process, with input from the affected landowners, the public, the relevant authorities, other stakeholders and the EIA team including specialists.

A preferred site has been selected, with the other one (1) sites being the alternative.

Four power line corridors will be assessed during the EIA process. One (1) 88kV power line corridor from the proposed Mnambithi substation to CRG/ING 88kV has found to be most preferential as it will have less negative impacts on the environmental, while two (2) will remain alternatives.

One (1) 132kV power line corridor from the existing Danskraal MTS to proposed Mnambithi Substation to has been selected as route A. Due to the growing industrial, residential infrastructure in the eZakheni-Modelkloof area, only one corridor route was found to be most preferential.

The range of specialists selected for this study includes people with expertise in the natural environment (e.g. plants, birds and ecology) and cultural heritage resources (e.g. archaeological)

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The following specialist studies will be conducted.

- AVIFAUNAL (BIRDS)
- CULTURAL HERITAGE
- VEGETATION  
WETLAND

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## 5. INVITATION TO PARTICIPATE

Public Participation is an intergral part of an EIA process. Anyone who is or may be interested or affected by the proposed project has the right to participate.

Please make use of the following opportunities.

- Study the information made available in this Background Information Document (BID), which will also be made available in the Draft Basic Assessment Report.
- Interact on a one-on-one basis with the Project Team to raise any concerns.
- Contact the Independent Environmental Consultant to obtain further information, and/or raise concerns.
- Register as an Interested & Affected Party (I&AP) and be included in the database in order to receive future project information and/or formally record issues and concerns.
- Complete the comment sheet and return it either in person, mail, fax or email.

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## 6. WILL YOU BE AFFECTED BY THE PROPOSED PROJECT

A study area wherein the proposed substation could be constructed has been identified, and has independently been labelled as SITE A, SITE B.

Proposed power line corridor has also been independently labelled as Route A, Route B, Route C and Route D. It is necessary to determine the constraints within the study area, before a decision can be made.

Please see attached Annexures to see out proposed substation sites and power line route options.

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If you are unsure whether you may be affected, please contact the Independent Environmental Consultant for assistance.

- **Eyethu Engineers (PTY) Ltd**  
**Anele Ngcongo**  
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**Morningside**  
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## **7. ANNEXURES**

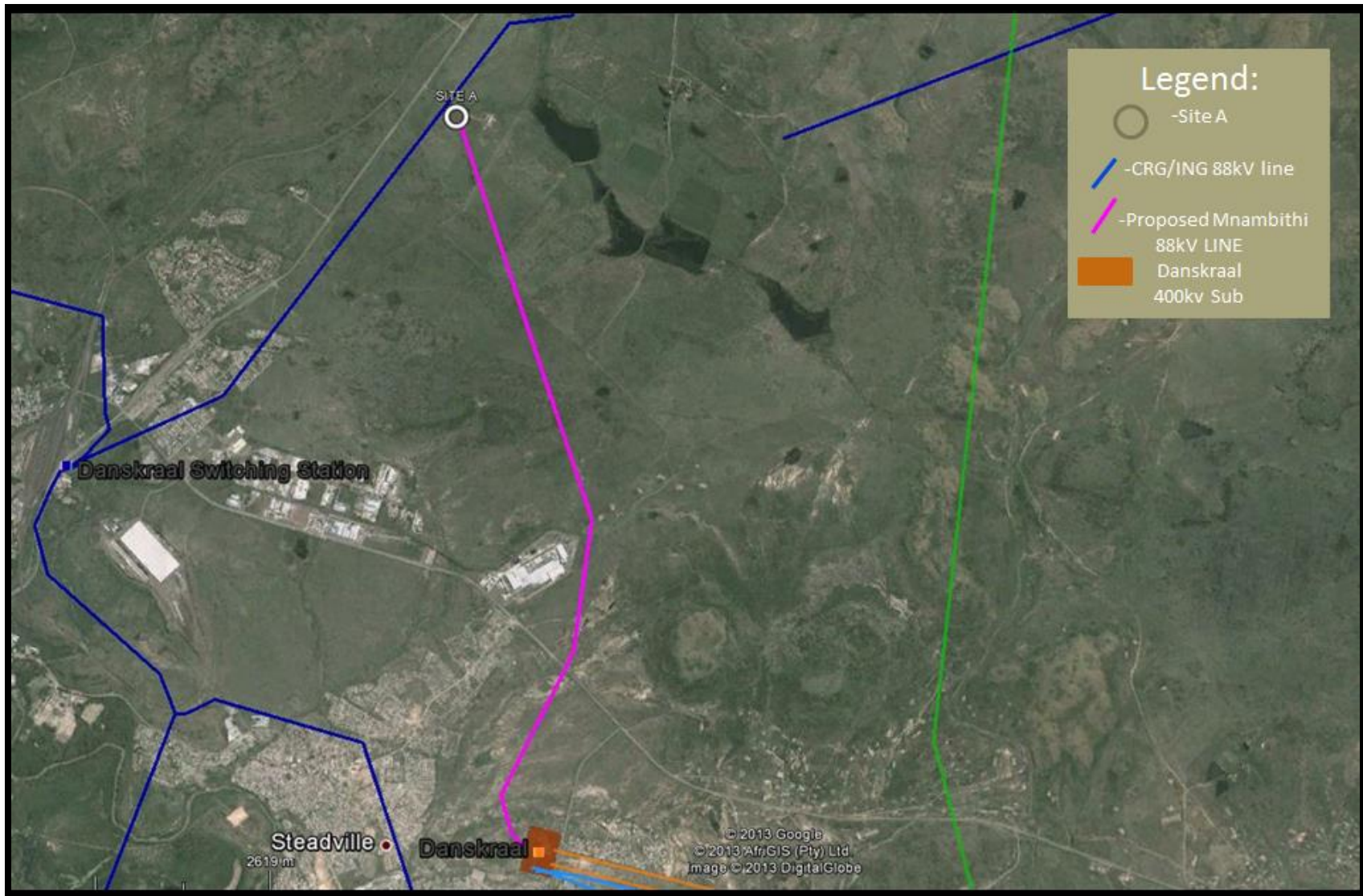
Preferred Sites and corridors:

- Annexure A
  - Preferred Site A and Power line corridor A
  - Preferred Site A and power line corridor B
  - Preferred Site A and power line corridor C
  - Preferred Site A and power line corridor D

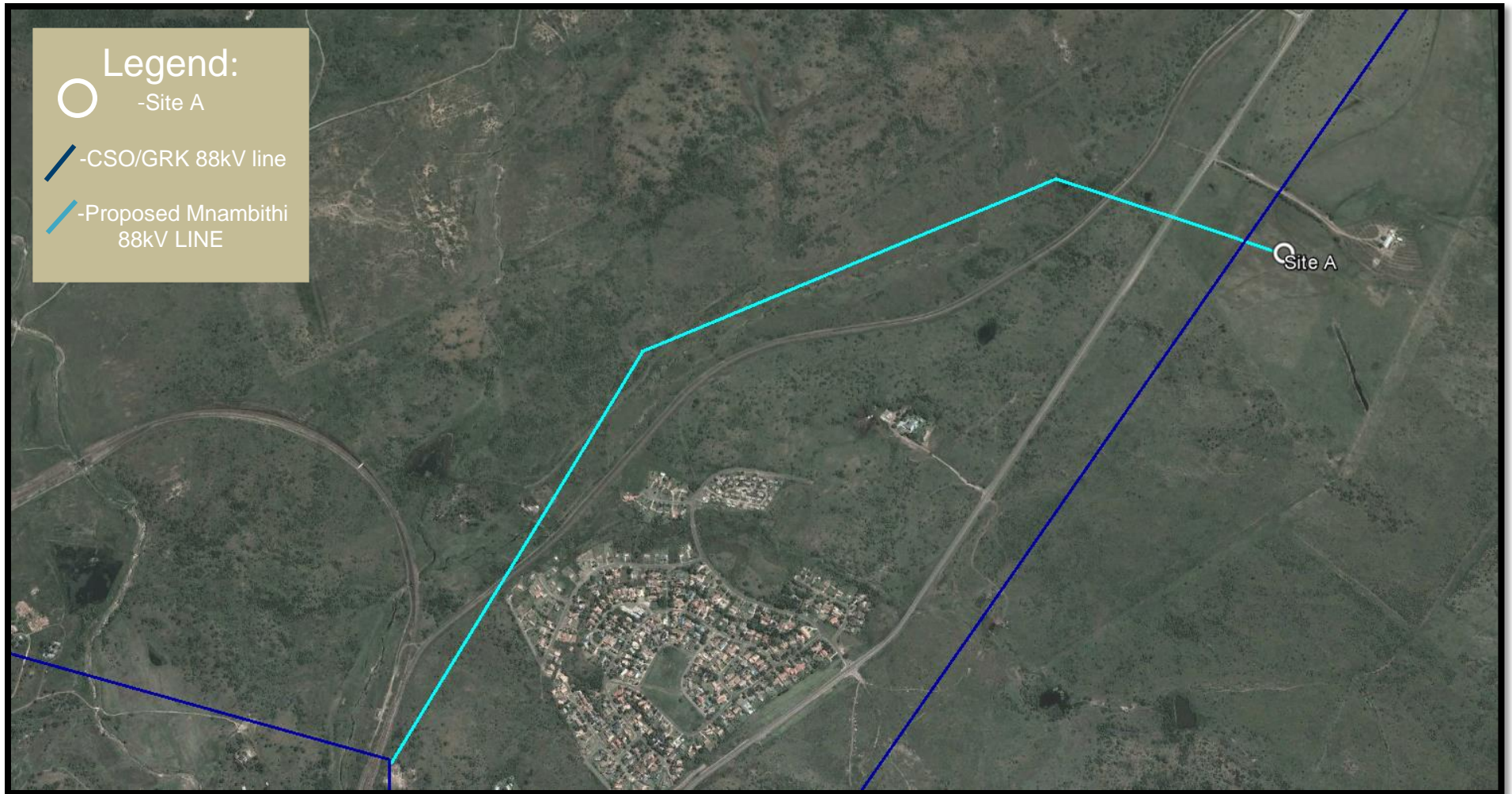
Alternative site and power line corridors:

- Annexure B
    - Annexure B- Alternative Site B
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# **ANNEXURE A: (Preferred A)**

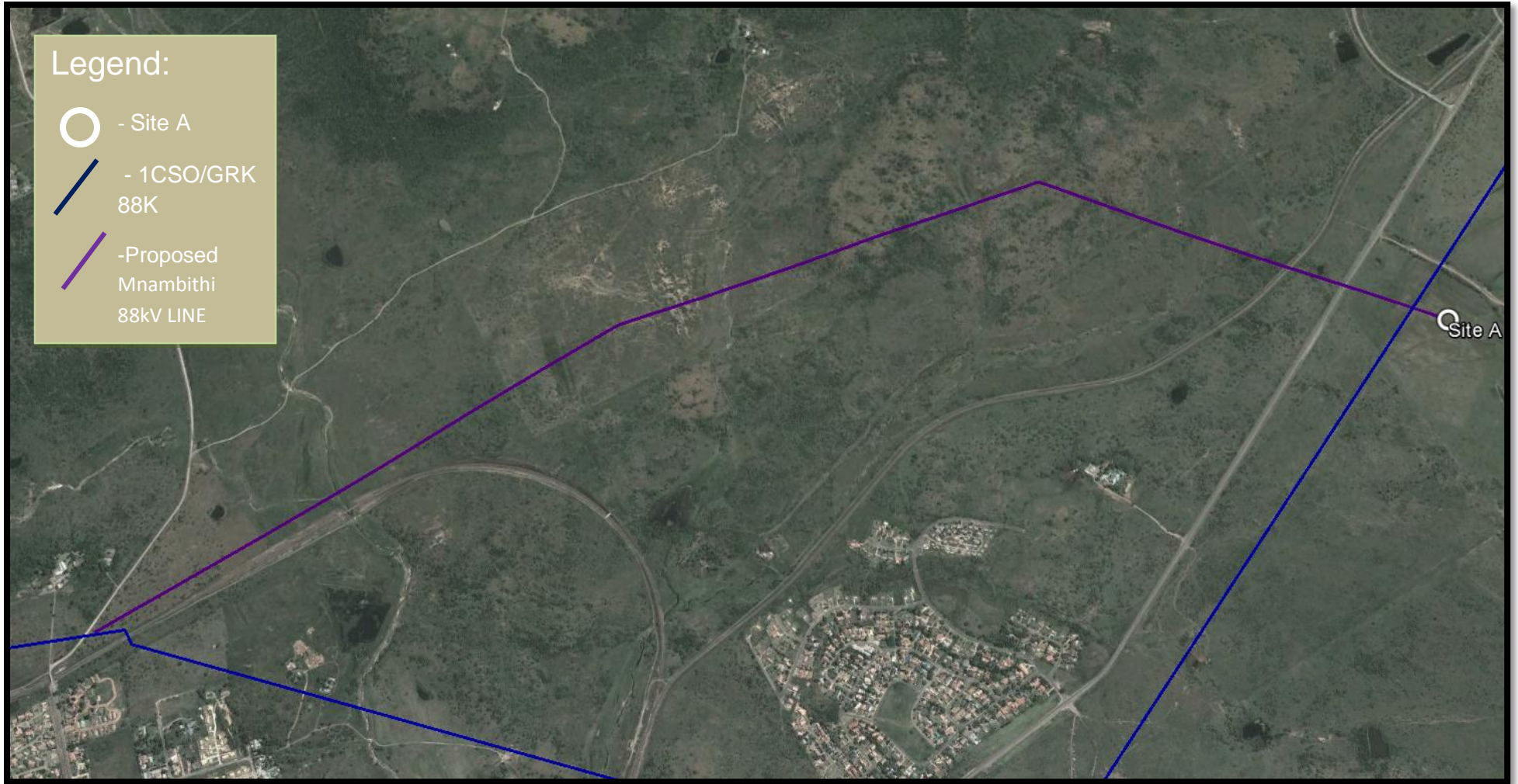


**Figure 1: Preferred Site A and Power line corridor A**

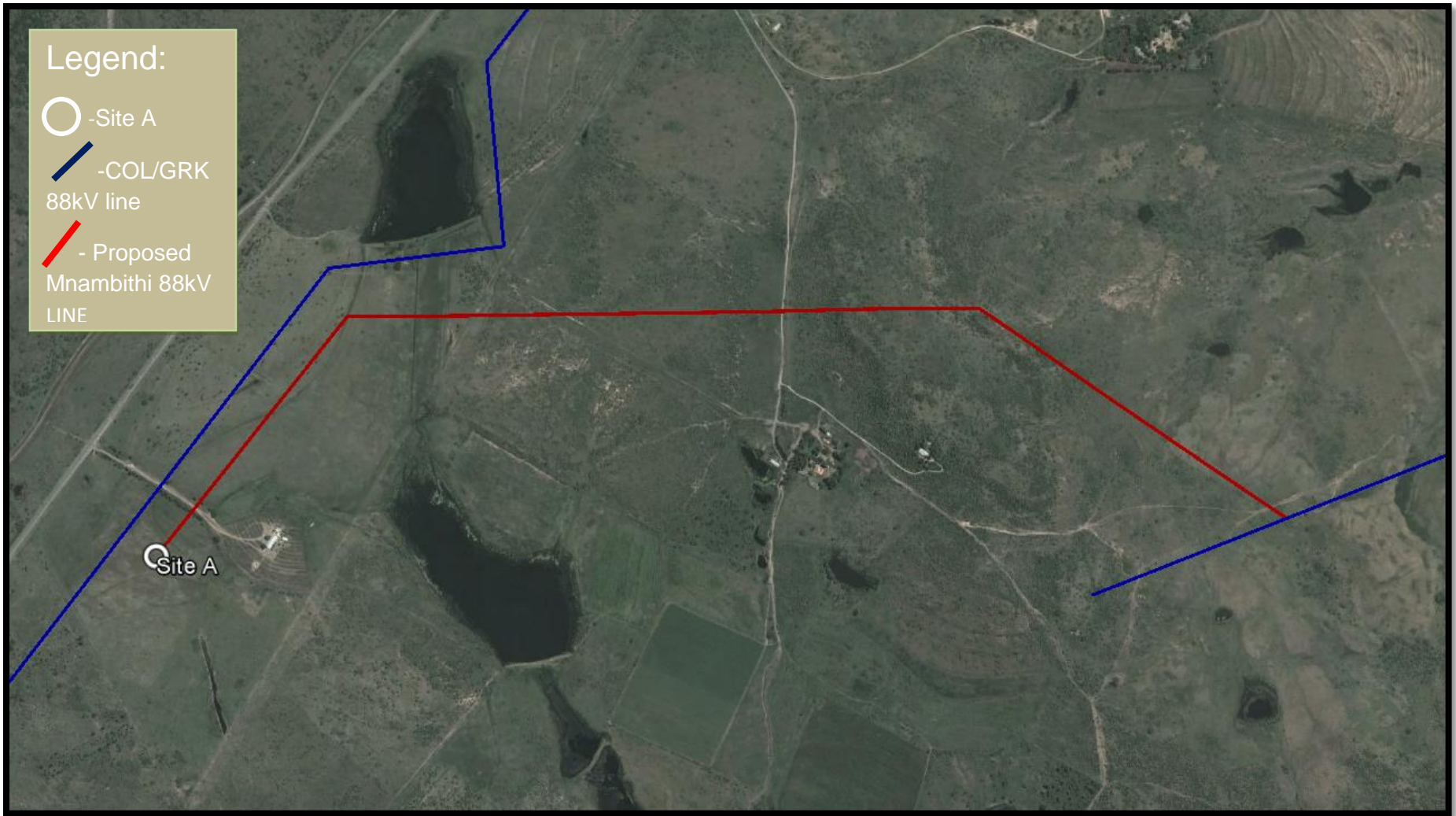


**Figure 2: Preferred Site A and Power line corridor B**

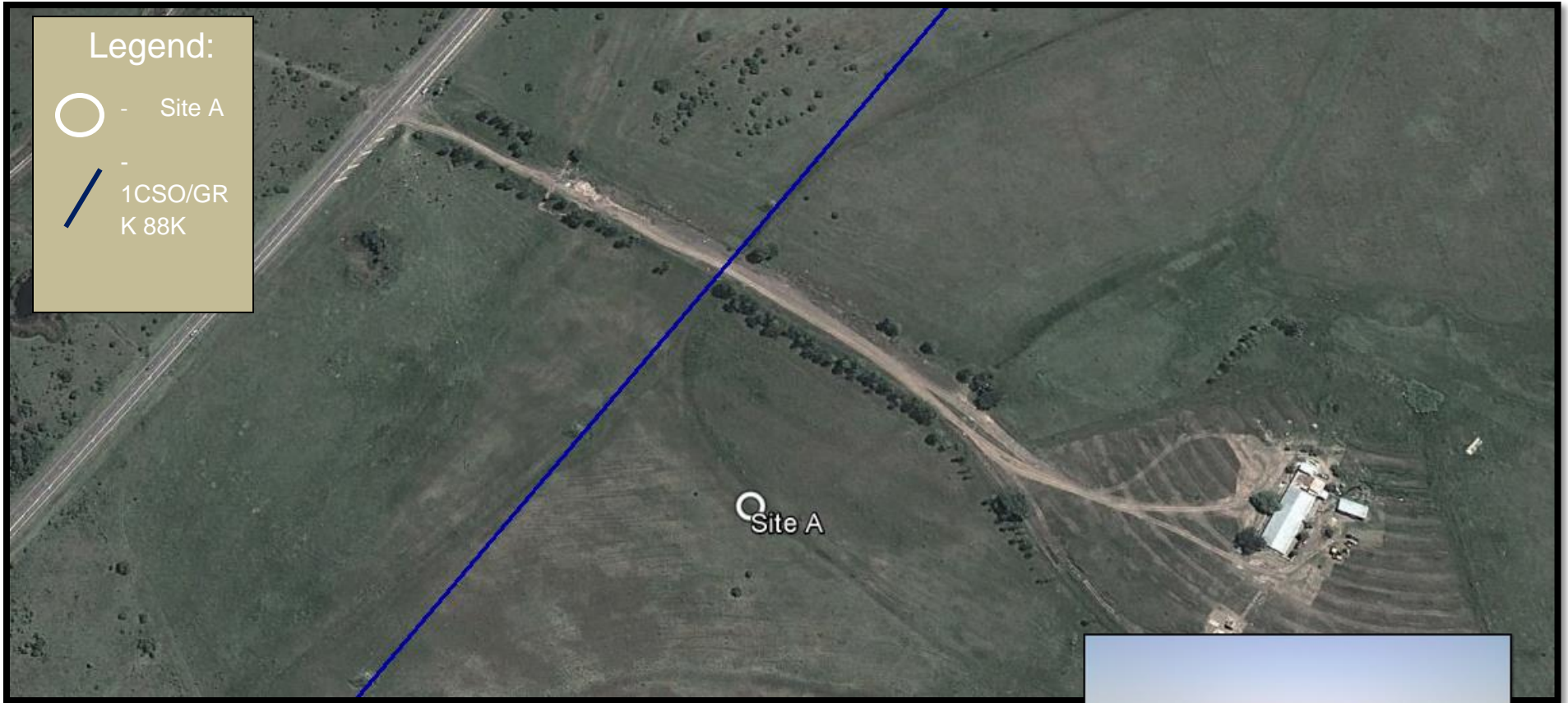




**Figure 3: Preferred Site A and Power line corridor C**



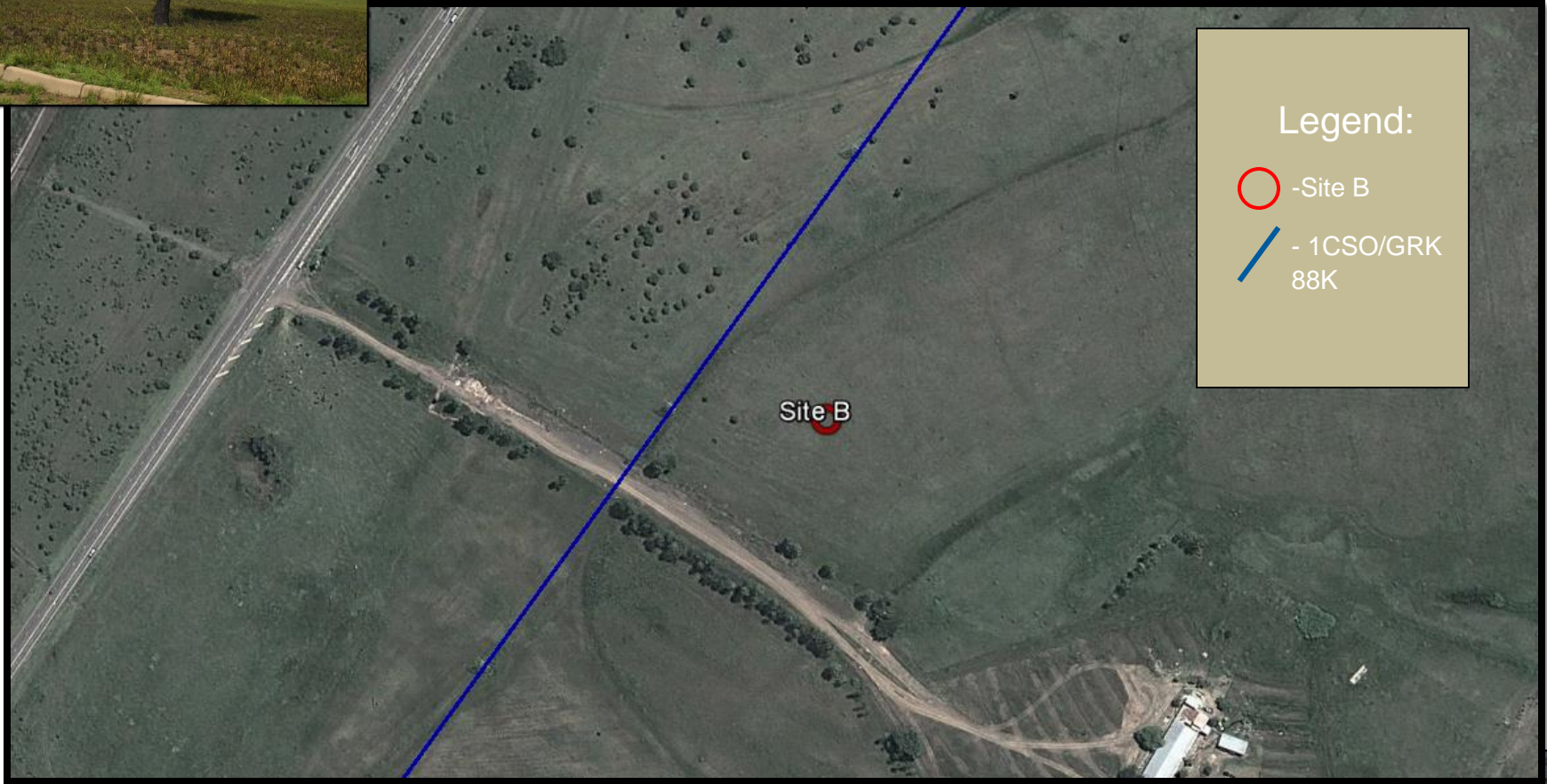
**Figure 4: Preferred Site A and Power line corridor D**





**Figure 5: Preferred Site A**



**ANNEXURE B:  
(Alternative B)**



Legend:

-  -Site B
-  - 1CSO/GRK 88K

**Figure 6: Alternative Site B**

