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LIMPOPO WATER INITIATIVE

**PROPOSED Eskom POWERLINE FROM EXISTING
MIDDLEPUNT SUBSTATION TO NEW SUBSTATION SITE
AT SELETENG AREA IN LEPELLE-NKUMPI LOCAL
MUNICIPALITY, LIMPOPO PROVINCE**

**PHASE 1 CULTURAL AND ARCHAEOLOGICAL HERITAGE ASSESSMENT
SPECIALIST STUDY**

AUGUST 2006, POLOKWANE

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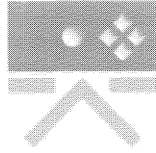
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REPORT DETAILS

PROJECT NAME: Proposed construction of 40km powerline from the existing Middlepunt substation to a new substation site in Lebowakgomo/Seleteng area in Lepelle-Nkumpi Local Municipality

REPORT TITLE: CULTURAL AND ARCHAEOLOGICAL HERITAGE ASSESSMENT SPECIALIST STUDY

AUTHOR: McEdward Murimbika

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PROFESSIONAL SERVICE PROVIDER (PSP) Nzumbululo Heritage Solutions (South Africa) cc.

MANAGEMENT SUMMARY

BACKGROUND

Eskom Northern Distribution commissioned the erection of a 40km powerline from the existing Middlepunt substation to the new proposed substation site in Lebowakgomo/Seleteng area of Lepelle-Nkumpi local municipality. Limpopo Water Initiative (LWI) was appointed to handle the environmental aspects of this project. LWI appointed Nzumbululo Heritage Solutions (South Africa) (HeSSA) to conduct the heritage impact assessment (HIA) study for the project. This HIA study focus on potential impacts on archaeological, cultural, and historical heritage resources associated with the proposed construction's receiving environment.

SUMMARY RESULTS

The field survey covered the proposed powerline route and the proposed site for substation construction. Burial grounds were identified within the vicinity of the proposed powerline route. However; because of the nature of the proposed development, it is not possible not to interfere with the identified burial grounds. In some sections of the proposed powerline route we identified light scatters none diagnostic pottery remains.

SUMMARY RECOMMENDATIONS

The likelihood of affecting Late Iron Age site in this area is very high. We concluded that the proposed development of the transmission line may proceed subject to the following recommendations:

- That an archaeologist inspects each specific site selected for the erection of a pylon once such information is made available.
- A monitoring programme is essential since there are LIA sites across the landscape affected by the proposed development. Should archaeological site be identified during development, heritage authorities should be informed.
- Communities living close to the proposed power line route should be consulted and kept informed about the development. The local communities may come forward with relevant information on heritage resources such as previously unidentified graves, as well as sites that do not show any structures, but have emotional significance, such as battlefields, etc.

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ABBREVIATIONS

CHA	Cultural Heritage Assessment
EIA	Environmental Impact Assessment
HeSSA	Nzumbululo Heritage Solutions (South Africa)
LIA	Late Iron Age
LWI	Limpopo Water Initiative
SAHRA	South African Heritage Resources Agency

DEFINITIONS

Archaeological Material remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures.

Chance Finds Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

Cultural Heritage Resources Same as Heritage Resources as defined and used in the South African Heritage Resources Act (Act No. 25 of 1999). Refer to physical cultural properties such as archaeological and palaeontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or *graves* and their associated materials; geological or natural features of cultural importance or scientific significance. Cultural Heritage Resources also include intangible resources such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

Cultural Significance The complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

Grave A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery.

Historic Material remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

In Situ material *Material culture* and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Late Iron Age this period is associated with the development of complex societies and state systems in southern Africa.

Material culture Buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Site A distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

**CULTURAL HERITAGE ASSESSMENT STUDY FOR PROPOSED
CONSTRUCTION OF POWERLINE FROM THE EXISTING MIDDLEPUNT
SUBSTATION TO NEW SUBSTATION SITE AT LEBOWAKGOMO/SELETENG
AREA IN LEPELLE-NKUMPI LOCAL MUNICIPALITY, LIMPOPO PROVINCE**

1 INTRODUCTION

This Heritage Impact Assessment (HIA) study was conducted to fulfill the requirements of the National Heritage Resources Act, Act 25 of 1999 Section 36 and 38. It was conducted as part of the Environmental Impact Assessment (EIA) for the proposed powerline route and substation site. The HIA study focus on identifying and assessing archaeological, cultural, and historical heritage resources associated with the proposed project. Table 1 present the general terms of reference for the study.

Table 1: Terms of Reference for the Cultural Heritage Study for the proposed Transmission line and substation construction project.

PURPOSE	ACTIVITIES
<ul style="list-style-type: none"> <input type="checkbox"/> Fulfill the statutory requirements of the National Heritage Resources Act, Act 25 of 1999, Section 38. <input type="checkbox"/> To identify and describe (in terms of their conservation and / or preservation importance) sites of cultural and archaeological importance that may be affected by the proposed powerline and substation construction project at Lebowakgomo/Seleteng area. This study should include the identification of gravesites. <input type="checkbox"/> Identify and describe impacts to archaeological and cultural resources. <input type="checkbox"/> Make recommendations on mitigation measures. <input type="checkbox"/> Identify and describe management measures. 	<ul style="list-style-type: none"> <input type="checkbox"/> Identify, describe and map sites of archaeological, historical or cultural interest affected by the proposed powerline and substation construction project. <input type="checkbox"/> Identify, where possible, the gravesites affected by the development. <input type="checkbox"/> Liaise with the local communities (if applicable) with regards to the impact of the development on the heritage resources. <input type="checkbox"/> Describe the importance or significance of these sites and whether these sites need to be conserved, protected or relocated. <input type="checkbox"/> Describe the procedures for mitigation or relocation of sites and provide an indication of time required for these management measures to be implemented. <input type="checkbox"/> Document findings and recommendations.

2 AIMS OF THE CHA STUDY

This HIA study primarily seeks to fulfil the requirements of South African Heritage Resources Act (Act No. 25 of 1999) Section 38 by:

- Identifying heritage resources affected by the proposed power line and the associated infrastructural development.
- Assess the significance of the resources.
- Evaluate the impact thereon with respect to the socio-economic opportunities and benefits that would be derived from the proposed power line and substation construction.
- Consult with the affected and other interested parties in regard to the impact on the heritage resources in the project's receiving environment.
- Make recommendations on mitigation measures with the view to reduce specific adverse impacts and enhance specific positive impacts on the heritage resources.
- Identify and discuss with local communities (where applicable) on potential impacts of the proposed powerline and substation construction on graves and burials sites within the affected area and make the necessary recommendations on how to handle the matter.
- Take responsibility for communicating with the SAHRA and other authorities in order to obtain the relevant permits and authorization.

3 BACKGROUND SUMMARY

The proposed power line development consists of construction of A 40km transmission line from existing substation at Middlepunt to a new proposed substation in the Lebowakgomo/Seleteng area in the Lepelle-Nkumpi Local Municipality, Limpopo Province. The proposed project is a linear development that would traverse through residential properties, communal grazing land and agricultural fields. In some sections, the proposed line would run parallel to an existing transmission power line and along existing local roads.

From culture-historical perspective, Sekhukhuneland, within which the project falls, has yielded evidence of human settlement extending into thousands of years of prehistory going back as far as the hunter-gatherer communities. General archaeological studies indicate that the region contains archaeological materials. The area received different migrating Northern Sotho speaking farming communities

(Hammond-Tooke 1993). In recent colonial history, the area played host to different competing local settler communities. The area was a scene of series of colonial wars. By the end of the 19th century, the region was placed under British rule and the local Pedi people were placed in a number of official reserves. In the mid-1960s, Sekhukhune land was incorporated into a homeland for Northern Sotho People. Today most the land is used for residential, agricultural activities and grazing. It is within this cultural landscape that the project area is located.

4 CHA STUDY METHODS

We began the CHA study with a desktop survey of archaeological databases. We then proceeded to a field reconnaissance study of the proposed power line construction route. In the third segment we conducted an archaeological and cultural heritage field survey of the affected area and finally conducted an assessment and report production for the study.

4.1 ARCHIVAL AND DATABASE SEARCH

The first step in this process was to identify and evaluate all previous archaeological studies conducted in the study area. Previous archaeological investigations, including overviews, inventories, impact assessments etc., were reviewed prior to initiating the field component of this study.

4.2 FIELD SURVEY

We conducted reconnaissance study in the company of the Project Environmentalists. We gathered geographical and topographical background information along the proposed powerline route from Middlepunt to Lebowakgomo/Seleteng site. We subsequently conducted a detailed field survey of the affected landscape. The survey was aimed at identifying archaeological sites and physical cultural resources signatures as well as other cultural heritage sites such as graves, burial and religious or sacred sites that may be affected by the proposed powerline construction project.

A team of two archaeologists systematically transacted the transmission powerline route in most parts on foot and in sections from slow-moving field vehicle. We started from the existing Middlepunt substation (Plate 1) just south of Atok Mine in Molomonye

Village and ended at the proposed site for Lebowakomo/Seleteng Eskom Power substation.

Distribution of archaeological sites across the landscape depends on a number of related factors, such as preservation conditions over time, the degree to which sites are exposed through erosion or lack of vegetation and the actual decisions of the people who created the sites and deposited the materials originally (Bickford and Sullivan 1977). Using the preliminary findings from the reconnaissance study we applied a judgement surveying strategy (stratified sampling). We divided the landscape through which the proposed power line would pass into geographical zones (built up sections, hills, gully, ridge, and stream or river valley section). Naturally, we placed more emphasis on areas we believed had potential of archaeological, historical or other physical cultural resources.

Identification of archaeological sites during surveying also depends on visibility and accessibility. All areas along the proposed power line route are generally accessible. In some sections the proposed powerline route will run parallel to existing transmission line transecting through communal grazing and agricultural land, parallel to local fence lines. Heading to the proposed substation site towards Lebowakomo/Seleteng area, the line would go through heavily degraded communal lands leading to a proposed substation site (Plate 2). Under these disturbed conditions, the chances for archaeological material preserved *in situ* were very slim.

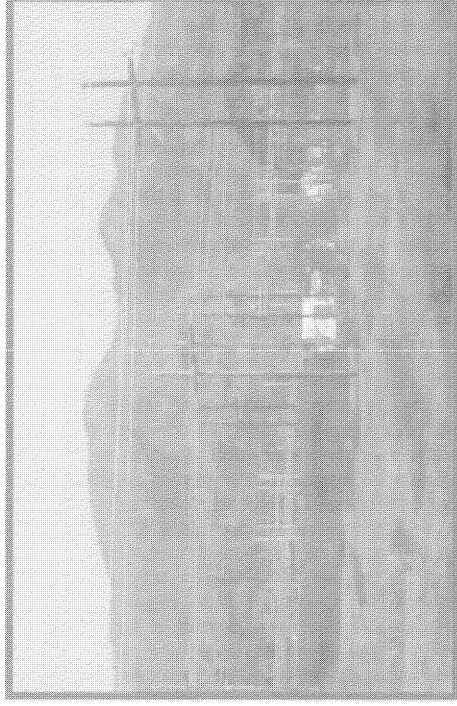


Plate 1: Proposed transmission lines will connect at this Middlepunt substation.



Plate 2: In some sections, the proposed powerline route will cut through communal fields.

5 RESULTS OF ARCHAEOLOGICAL EXAMINATIONS

LOCATION DETAILS

Province: Limpopo

Local Municipalities: Part of Fetakgomo and Lepelle-Nkumpi

Name Properties affected: Communal Land.

Proposed development: Construction of 40 kilometres transmission lines; new 132/22kv Substation and erection of 36m communication tower at the new substation.

1:50 000 map name: 2429BB (see attached Map)

GPS Co-ordinates and description of proposed transmission lines route:

- S24.30420° E29.85052° (proposed transmission lines connecting point from existing Middlepunt substation);
- S24.30310° E29.84603° (proposed powerline will cut through archaeological site characterized by pottery remains);
- S24.29913° E29.83174° (isolated historic grave situated next to existing and proposed powerline route);
- S24.29877° E29.77403° (Gravel road from Maphaneng to Malogeng Village);
- S24.29941° E29.77223° (archaeological site characterized by Late Iron Age pottery remains on the ground surface);
- S24.29619° E29.82506° (area adjacent to two rocky hills where the proposed powerline will cut through agricultural land before crossing the river);

- S24.32381° E29.59055° (Contemporary house remains at about 100 meters away from existing pole number; STRTHA77, where the proposed powerline will make the fourth turn at the southern side of Mphahlele Village heading to the proposed site for new substation);
- S24.32834° E29.56752° (Proposed powerline will cross a small stream before reaching the proposed site for new substation);
- S24.32803° E29.56481° (Proposed site for new substation located near the gravel road).

Archaeological and Cultural Sites

Two archaeological sites were identified in course of field investigations. The identified sites are characterized by pottery remains scattered on the ground. Although several recent historic period sites and features associated with the recent peopling of the area were observed, these were not documented in any detail since such sites lacked any significance threshold as defined by the heritage act.

Site 1: This site might have been considerably larger than it now appears. From our observations, it appears that the original archaeological deposits have either been totally disturbed by the construction of residential properties and related facilities, or have been eroded away since the area is characterized by dongas (S24.30310° E29.84855°).

Site 2: This site is marked by a small scatter of pottery remains deposited about hundred meters away from the existing gravel road from Maphaneng to Malogeng Village. The site measures 15 meters (northeast) by 6 meters (southwest) and is characterized mainly by undiagnosed pottery remains (Plate 3) (S24.29941° E29.7722°).



Plate 3: Identified Late Iron Age pottery remains within the vicinity of proposed powerline route

Historic Monuments

There is no listed monument in the area affected by the proposed powerline route. However, we identified remains of contemporary mud house structures along the existing and proposed powerline route (plate 4). Most of these contemporary mud house remains are located along the road and they will not be affected during the construction of proposed powerline.

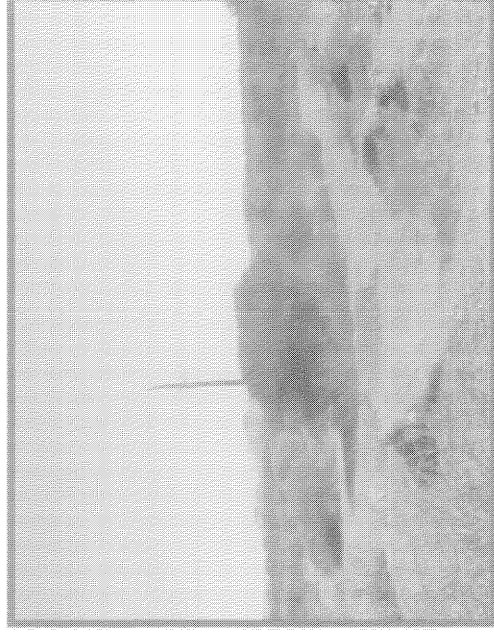


Plate 4: Remains of a historic mud house located along the existing and proposed powerline route at about 40 meters away.

Cemeteries and burial sites

A burial ground associated with site No.1 was identified within or near the existing and proposed transmission line route (plate 5). Burial grounds and grave sites are accorded the highest social significance threshold. They have both historical and social significance and are considered sacred. They may not be tempered with or interfered with during the proposed powerline construction.

There is a possibility of discovering more previously unmarked burial sites in the course of subsurface construction activities along the powerline route in sections that were previously occupied either in prehistory or history.

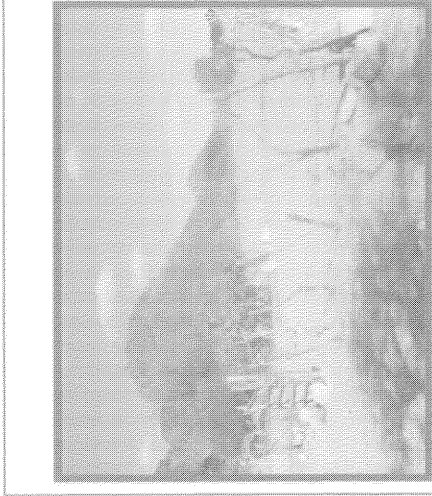


Plate 5: Isolated historic burial within the vicinity of proposed powerline route.

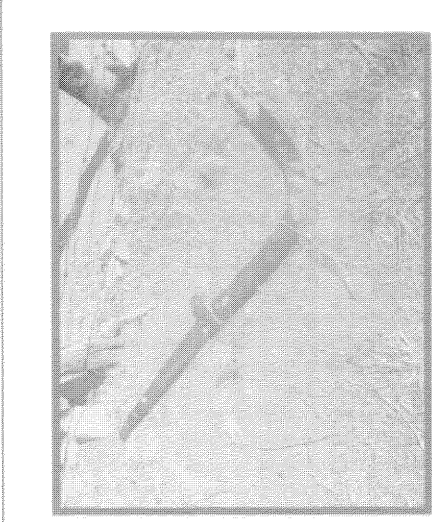


Plate 6: Some of the metal objects associated with Late Iron Age farming communities were identified near the historic burial ground.

6 STATEMENT OF OVERALL IMPACTS

In principle, the proposed transmission line and substation construction project has the potential to impact upon any cultural heritage resources including graves, historical and archaeological resources in its direct path. The impact will be permanent in nature, extent and duration. Cultural heritage resources are fixed in space and are directly affected by any activity that threatens to alter the status quo in the landscape within which they are situated.

From a cultural heritage point of view, the overall impact of the proposed transmission lines is considered to be low. Any direct impact on sites may easily be minimised by carefully placing pylons and access routes on areas without indicators of sites.

However, some areas have a very high density of archaeological sites and it is therefore of great importance to be careful on these areas during the construction work.

7 OVERALL RECOMMENDATIONS

- The identified sites and burial ground should not be disturbed during the construction period.
- An archaeologist should be appointed to inspect each site selected of erection of individual pylon foundations, especially in area that yielded sites with pottery remains and burial grounds.
- All archaeological cultural heritage sites must be protected and we recommend that a monitoring plan be put in place to ensure that the proposed construction of transmission lines will not interfere with known sites and that a chance finds plan is in place during the development.
- Furthermore, the construction team should be workshopped about the value of the cultural heritage resources in general so as to ensure that they do not destroy the archaeological sites they may encounter during working on powerline route.
- The local communities should be engaged in information sessions with regards to the proposed powerline construction and potential impacts on graves close to the transmission line route. Community should be ensured that their burials will not be destroyed and the Project Community Liaison Officer for the project should regularly interact with the community in this regard.
- Should the identified grave require relocation to safe site during powerline construction, all procedures and notifications should be sent to the South African Heritage Resources Agency (SAHRA) for permits and relevant clearances and approvals. If the grave is confirmed as recent, efforts should be made to identify the custodians. Therefore, the applicable ordinances and regulations should be followed. The same would apply to previously unidentified burials that may be encountered in the course of the development.

8 CONCLUDING REMARKS

From a heritage perspective, when taking into consideration the socio-economic and other values of the proposed transmission lines development it is not always possible to recommend an alternative site for the proposed development. Therefore, the cultural landscape under potential threat from the proposed development does not have high significance threshold to call for total protection of the landscape. Nonetheless, detailed monitoring procedures should be scheduled in order to adequately respond to chance finds that may be found accidentally during the powerline development activities and be able to rescue or salvage any resources.

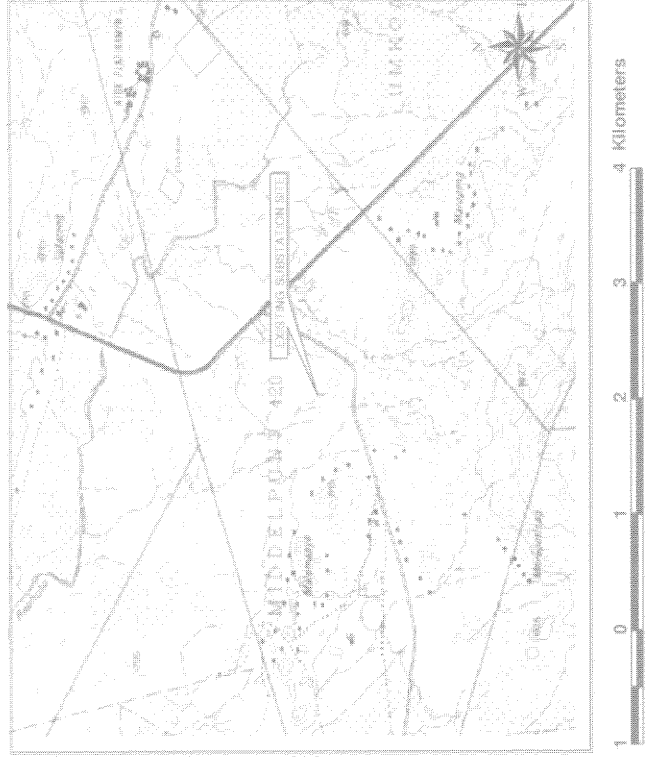
There are no significant cultural heritage resources barriers to the proposed transmission lines and substation construction project. The proposed project may proceed as planned subject to a heritage monitoring programme. This would ensure that the construction work does not invade the identified archaeological and grave/burials sites near the proposed powerline route through associated construction work.

With the constraints herein discussed and appropriate monitoring measures adopted, there are no objections to the proposed transmission powerline development between Middlepunt and the new proposed substation site at Lebowakgomo/Seleteng area.

9 REFERENCES

- Bickford, A and Sullivan, S. 1977. "Assessing the research significance of historic sites" in S Sullivan and S Bowdler (eds) Site Surveys and Significance assessment in Australian Archaeology. Canberra: ANU.
- Hammond-Tooke, D.1993 *The roots of Black South African*. Johannesburg: WUP.
- The National Heritage Resources Act (Act No 25 of 1999).

TOPOGRAPHICAL MAP



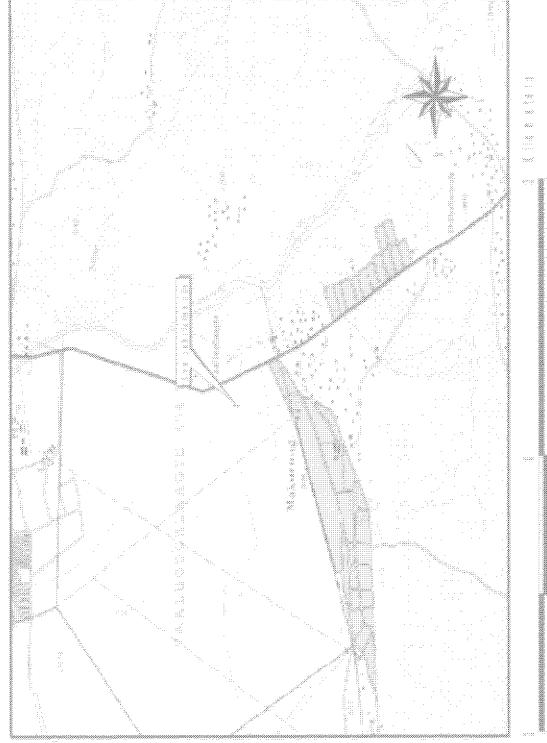
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HA STUDY FOR PROPOSED POWERLINE FROM MIDDLEBURG TO LESIMANGONGI SELECTING OF LESIMA SUBSTATION LOCAL MUNICIPALITY, LIMPOPO PROVINCE

PREPARED FOR: LIMPOPO WATER INFRASTRUCTURE

DATE: 16 AUGUST 2018

TOPOGRAPHICAL MAP



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