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A PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR ESKOM'S PROPOSED MOKOPANE INTEGRATION PROJECT NEAR LEPAHALALE AND MOKOPANE IN THE LIMPOPO PROVICE OF SOUTH AFRICA

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EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study for Eskom's proposed Mokopane Integration Project was conducted according to Section 38 of the National Heritage Resources Act (No 25 of 1999). The aims with the Phase I HIA study were the following:

- To establish whether any of the types and ranges of heritage resources ('national estate') as outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999) (see Box 1) do occur in or near the Eskom Project Area.
- To determine the nature, the extent and the significance of these heritage resources and whether these remains will be affected by the Eskom Project.
- To evaluate what appropriate mitigation measures could be implemented to reduce the impact of the proposed Eskom Project on these heritage resources.

The Phase I HIA study for the options for the proposed Mokopane Substation and for the various corridors for the Mokopane Integration Project identified the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) in or near the Eskom Project Area namely, (Figure 7; Tables 1-11):

- Scatters of stone tools occur along the Vaalsloot, Klein Sandsloot and Mohlosane Rivers in the Langa Ndebele sphere of influence. LSA sites are more common along the central parts of both Corridor 01 and Corridor 08 in the mountainous Waterberg areas and include open sites as well as sites which are located in rock shelters. These sites mainly date from the last two millennia.
- Rock painting sites occur in the northern mountainous part of the Eskom Project Area, particularly along the central stretches of Corridor 01 and Corridor 08. A cluster with five rock art sites occurs near the start of both these corridors in the west. Here, the mountains of Ga Mabula and Tafelkoppe also hold high heritage significance as rock art sites (not documented as yet) occur in these mountain ranges. These rock art sites date from the last two millennia.
- EIA Eiland sites (AD1100 to AD1300) have been recorded near the central stretch of Corridor 08 and possibly also occur in or near the central stretch of Corridor 01. These sites are inconspicuous as they mostly cover small surface areas and are not associated with any stone walls. Their most characteristic feature, if visible on the surface of the land, is the presence of decorated potsherds.
- LIA Moloko sites (AD1600 to AD1880), some with stone walls and characterised by Moloko styled pottery as well as with Nguni types of pots, occur in and near the central stretches of both Corridor 01 and Corridor 08. These sites are also common in the Masebe Nature Reserve (e.g. Magagamatala) and in the Villa Nora area (e.g. Bobididi) between Corridors 01 and 08. These sites are also common in the Lange Ndebele sphere of influence in the south-east. The eastern stretch of Corridor 01 runs across this area. LIA Moloko stone walled sites in a poort in Thaba Tšweu falls inside Corridor 06 and are associated with the Langa Ndebele.

- Historical remains, mostly consisting of homesteads, occur along the eastern stretch of Corridor 01 along the Fonthane mountains in the Langa Ndebele sphere of influence. Widely dispersed colonial farm residences (historical houses) occur in low numbers along the western and central stretches of Corridors 01, 02 and 08.
- Graveyards occur along all stretches of all the power line corridors. Some of these graveyards are associated with villages which are scattered across the Project Area whilst others are associated with historical remains from the Langa Ndebele sphere of influence. Inconspicuous, undiscovered graves occur along the eastern stretch of Corridor 01. Graveyards in association with colonial farmsteads are generally low in numbers. Those that are associated with villages are higher in numbers considering the population numbers in these areas.
- A commemorative beacon has been erected in the Kloof Pass.
- Other heritage phenomena such as an open-air church occur near the village of Ga-Mathekgwa.

It is highly likely that more of the following types and ranges of heritage resources may occur in or near some of the power line corridors as they have been missed by this study, due to various reasons. The following types and ranges of heritage resources therefore may be underrepresented in this study and their presence may be revealed by the walk-through study, namely:

- Stone Age sites with scatters of stone tools may occur along any of the major rivers, streams or tributaries in the Eskom Project Area, particularly where these rivers and streams may be crossed by the power lines. Stone tools may also occur in eroded areas and dongas, such as south of Mašašane, or near outcrops that are suitable for the manufacturing of stone tools.
- More historical farmsteads may occur towards the central and western parts of the Eskom Project Area where colonial settlement was more prominent during the late nineteenth century and the early twentieth century. However, farmsteads are generally widely dispersed and therefore low in numbers so that the eventual figure will not rise significantly.
- Undetected graveyards may occur in or near the power line corridors. However, these graveyards will be limited in number as colonial graveyards are usually associated with historical houses. More common are graveyards for farm labourers which tend to be inconspicuous as they are mostly undecorated. Most of the graveyards associated with rural villages are located in these villages whilst those situated on the outskirts of villages, where the power lines may run, have been geo-referenced and mapped. The Lange Ndebele sphere of influence has proven to be an area which is marked with exceptionally high numbers of unmarked graves.

Heritage potential of the options for the Mokopane Substation

Three options are proposed for the Mokopane Substation. All three options for the proposed Mokopane Substation weigh equal with regard to a preference to be used as a site for the

proposed Mokopane Substation. No heritage resources with outstanding significance were observed near any of these options.

Heritage potential of the various power line corridors

Three corridors have been identified for the proposed 400kV power lines between the Delta Substation and the Witkop Substation, namely a northern corridor (Corridor 02), a southern corridor (Corridor 01), and a central corridor running along Eskom's existing power line (Corridor 08). The heritage potential of each of these corridors is briefly discussed:

Corridor 01

This southern corridor can be divided into three main stretches characterised by the following heritage resources, namely (Table 8):

- A western stretch running along the Waterberg flats which mainly holds graveyards and historical houses in low numbers. A cluster of five rock art sites occur on Grootfontein 501LQ.
- A central stretch with a sharp bend which runs through the northern edge of the Waterberg. This stretch holds LSA sites in the open and in rock shelters and rock art sites in shelters, overhangs and on isolated boulders. It is marked by EIA Eiland and LIA Moloko settlements as well as historical houses and graveyards in low numbers. A beacon is located in the Kloof Paas.
- An eastern stretch which runs across the Fonthane mountain range and the historical sphere of influence of the Langa Ndebele. This area is characterised by remains dating from the Late Iron Age and Historical Period in moderate numbers. Graveyards are scattered throughout this area and many undiscovered graves still occur where settlements dating from the more recent past were located.

Corridor 02

This northern corridor can be divided into the following stretches with different heritage significance, namely (Table 9):

- A western stretch that runs across the Waterberg flats to the farm Pieterman 445LR which holds graveyards and historical houses in low numbers and a few graveyards in the Shongwane area. A rock art site is located on Grootfontein 501LQ.
- An eastern stretch that runs near and along several graveyards located in or near the fringes of villages. This stretch skirts the northern boundary of the Masebe Nature Reserve and the farm Haakdoringdraai 711LR where several rock art sites and LIA settlements occur. It can be expected that LSA sites (open and in shelters) will also occur in the reserve.

Corridor 08

This central corridor can be divided into the following stretches which are characterised by the following types and ranges of heritage resources (Table 10);

- A western stretch that runs across the Waterberg flats to the mountains Tafelkoppe and Ga Mabula on Smithfield 536LQ and surrounding farms. These mountains hold high heritage significance. This stretch also holds graveyards and historical houses in low numbers.
- A central stretch that runs across the northern tip of the Waterberg mountains. This stretch holds historical houses and graveyards in low numbers. Several rock art sites and LSA sites occur along this stretch as well as a highly significant EIA Eiland site and LIA Moloko sites. This stretch skirts the southern boundary of the Masbebe Nature Reserve and the farm Haakdoringdraai 711LR where several rock art sites and LIA settlements occur. It can be expected that LSA sites (open and in shelters) will also occur in the reserve.
- An eastern stretch that is marked by a limited number of graveyards.

Corridors 04-06

Three possible corridors have been identified between the new Mokopane Substation and the Witkop Substation, namely Corridor 04, 05 and 06.

Corridor 06 holds the highest number and most significant heritage resources. A cluster of stone walled sites which are already impacted by the presence of 132kV power lines is located along this corridor which runs through a poort in Thaba Tsweu.

Corridor 07

Corridor 07, which runs from the Delta Substation to the Medupi Power Station, is characterised by the presence of low numbers of historical houses and graveyards.

Ranking the substation sites and the power line corridors

Considering the presence of the various types and ranges of heritage resources in and near the three options for the Mokopane Substation and for the various power line corridors, the options for the substations and for the various power line corridors can be ranked. This ranking is based on the considering of pre-mitigation as well as post-mitigtation measures for any of the types and ranges of heritage resources that may be affceted by the proposed substation or the various power line corridors (Table 11).

The scale that was used to rank the substation sites and the power line corridors was graded in three levels, namely: one (1) (least preferred); two (2) medium preferred and three (3) (most preferred).

Ranking the options for the substation

Options 01, 02 and 03 are equally preferred as possible sites for the Mokopane Substation.

Ranking the power line corridors

The three longest power line corridors are ranked as follow:

Corridors 01, 02 and 08

- Corridor 02 is most preferred as it seems as if this corridors will affect the lowest number of heritage resources; the least types and ranges of heritage resources as well as no outstanding significant heritage resources (Figure 7, Tables 9 & 11).
- Corridor 08 is medium preferred as it seems as if this corridors will affect the second lowest number of heritage resources; the second lowest number of types and ranges of heritage resources as well as no outstanding significant heritage resources (Figure 7, Table 10). This ranking applies to Corridor 08 if the follwing deviations can be implemented in order to consider current technical constraints and appeals, namely: Corridor 08 must be constructed to the north of Tafelkoppe and Ga Mabula (along the R518); follow the dirt road to the north of Kleindenteren 485 and Kirstenbosch 497 [avoiding the kloof and reserve]; constructed slightly further to the north or south on Klipbank [in order to avoid the second kloof] and follow its existing corridor in order to avoid crossing the Masbe Nature Reserve.
- Corridor 01 is the least preferred as it seems as if this corridors will affect the highest number of heritage resources; the highest number of types and ranges of heritage resources as well as heritage resources with possible high significance (Figure 7, Tables 8 & 11).

Corridors 04, 05 and 06

When considering Corridors 04, 05 and 06 it is clear that Corridor 06 can be identified as the least preferred corridor amongst these three corridors as it holds the following:

- A cluster of stone walled sites which are already impacted by Eskom's existing 132kV power lines as they run through a poort in Thaba Tsweu in which the power lines are located.
- This corridor is also associated with a possible graves located in a sisal bush.

No specific preference, from a heritage point of view, can be made between Corridor 04 and Corridor 05 (Figure 7; Table 11).

Corridor 07

Corridor 07 has no alternatives. However it appears as if this Corridor holds no outstanding significant heritage resources other than one or more historical houses and a few graveyards. These heritage resources can either be avoided by Corridor 07, can be incorporated in the power line corridors.

The significance of the heritage resources

The proposed power line corridors hold a number of heritage resources. Undiscovered heritage resources may raise this number although it is generally accepted that this number will decrease after a walk-through study has been done and the power lines

have been realigned in order to avoid some of these heritage resources whilst others may continue to exist (unaffected) in the power line corridors. The exact number of heritage resources that may be affected by the proposed power lines and the significance of each of these heritage resources therefore are not yet known.

The significance of heritage resources is usually determined according to criteria such as the following: the scientific, research, esthetical, educational, ideological, tourism, etc value of heritage resources. Other criteria which may apply are the repeatability (scarcity); condition (dilapidated, restored, altered, disturbed) and inherent cultural, historical, industrial, economic and contextual value that each and every heritage resource possesses.

The level of significance of each heritage resource will determine what mitigation measures have to be applied before this heritage resource may be affected by the Eskom Project. The nature and extent of the mitigation measures will again determine the permitting process that has to be followed with the South African Heritage Resources Authority (SAHRA).

The protective status of the various types and ranges of heritage resources that may be affected by the Eskom Project is indicated by means of various sections of the National Heritage Resources Act (No 25 of 1999).

Stone Age sites (including rock paintings)

A limited number of Stone Age sites have been identified in and near the Eskom Project Area. This is primarily the result of the fact that the survey was not done with the same meticulousness and thoroughness that are characteristic of scientific archaeological surveys. Stone Age sites also are difficult to detect as they may be (partly) buried under the ground and that they mostly consist of stone tools that are scattered across the surface of the land.

Stone Age sites are underrepresented in this study and it is clear that some of these sites will be found during the walk-through study or even at a later stage, e.g. when the power line corridors are constructed. Stone tools may be excavated when towers are erected.

Rock paintings sites also occur in moderate numbers along the central stretches of both Corridor 01 and Corridor 08. A cluster of five rock art sites are also located near the western end of these two corridors while unrecorded rock art sites exist in association with the mountains of Ga Mabula and Tafelkoppe. Any impact on these rock painting sites may either be physically or visually, or both.

Stone Age sites, including rock art sites, qualify as archaeological remains and are protected by Section 38 of the National Heritage Resources Act (No 25 of 1999).

Iron Age sites

Most of the Iron Age sites recorded in the Project Area occur towards the central parts of both Corridors 01 and 08. These sites include EIA Eiland and LIA Moloko settlements, the latter with and without stone walls. LIA Moloko settlements also occur near the eastern end of Corridor 01 in the Langa Ndebele sphere of influence. A cluster of stone walled sites occur in a poort in Thaba Tsweu along Corridor 06 which is part of the sphere of influence of the Langa Ndebele.

Iron Age settlements qualify as archaeological and historical remains and are protected by Section 38 of the National Heritage Resources Act (No 25 of 1999).

Historical structures

A low number of widely distributed colonial farmsteads have been recorded in the western and central parts of the Eskom Project Area where colonial settlement took place during the late nineteenth century and the early twentieth century. Many of these farmsteads do not necessarily qualify as historical significant structures as they either have been altered (renovated) in the past whilst others have been abandoned and have fallen into disrepair.

Most of these residences are single structures and are not associated with outbuildings such as wagon sheds or rondavels which then may constitute cultural landscapes of smaller proportions. Criteria such as chronological age (sixty years or older), condition (altered, renovated, dilapidated), etc. determine the level of significance of these structures.

Homesteads with rectangular stone walls in the Langa Ndebele sphere of influence along the eastern end of Corridor 01 have historical significance as many are sixty years old. Several of these homesteads are associated with graves as the occupants of some of these homesteads were interred within the confines of the homesteads after they have been abandoned.

Historical structures such as individual farmsteads (sometimes with outbuildings) and in some instances constituting cultural landscapes of smaller proportions which are older than sixty years are protected by Section 34 and Section 38 of the National Heritage Resources Act (No 25 of 1999).

Memorabilia

At least one commemorative beacon was distinguished in the Project Area, namely the beacon commemorating the opening of the Kloof Pass.

Memorabilia which include monuments, commemorative beacons or Gardens of Remembrance qualify as heritage memorials which are protected by Section 37 of the National Heritage Resources Act (No 25 of 1999).

Graveyards

A significant number of graveyards were recorded which are associated with rural villages in the Eskom Project Area; historical homesteads in the Langa Ndebele sphere of influence; near the village of Phetole in the Luxemburg area, and with colonial farmsteads. These graveyards and graves occur throughout the Eskom Project Area and were found along all three major power line corridors. However, the number of graveyards which were recorded is probably not a true reflection of the real number of graveyards which may exist in the Eskom Project Area. Undetected graves or graveyards may occur anywhere as informal and abandoned graveyards are difficult to detect.

It is therefore likely that more graveyards than those which have been recorded will be discovered during the walk-through study.

All graveyards and graves can be considered to be of high significance and are protected by various laws. Legislation with regard to graves includes Section 36 of the National Heritage Resources Act (No 25 of 1999) whenever graves are older than sixty years. The act also distinguishes various categories of graves and burial grounds.
Other legislation with regard to graves includes those which apply when graves are exhumed and relocated, namely the Ordinance on Exhumations (No 12 of 1980) and the Human Tissues Act (No 65 of 1983 as amended).

Possible impacts on the heritage resources

Some of the types and ranges of heritage resources in or near the proposed sites for the Mokopane Substation and in or near the proposed power line corridors, including those that hitherto have been undetected, may be impacted (affected, altered, damaged) by the Eskom Project whilst the walk-through study on the other hand may result in the lowering of the impact on the heritage resources.

The number of heritage resources which may be affected by the Eskom Project can be decreased if the power lines are realigned after the walk-through study has been completed.

The significance of possible impacts on the various types and ranges of heritage resources is indicated in Tables 12-16. The tables considers the affects of the impacts during the pre-mitigation phase as well as during the post-mitigation phase.

Stone Age sites

Stone Age sites are underepresented in this study and more sites will be found when the walk-through study is done or when the power line corridors are surveyed and constructed. Stone Age sites may be impacted when towers are constructed on top of concentrations of stone tools. This manily applies to Stone Age sites which are located in the open. Several LSA sites in the Project Area occur in rock shelters and overhangs where they will not be affected by the Eskom Project.

Stone tools are not destroyed by this action but are usually scattered from a an archaeological context which already have been disturbed as a result of natural environmental occurrences in the past. However, the impact that may be caused by the Eskom Project will be due to human intervention and will not be caused by natural environmental processes.

Iron Age sites

The surface of land that is covered by single or clusters of Iron Age sites dating from the EIA Eiland phase and from the LIA Moloko phase (with or without stone walls) vary considerably. The cluster of LIA Moloko stone walled sites in Corridor 06 in a poort in Thaba Tšweu cover a considerable surface area. These stone walled sites have been impacted in the past when Eskom erected towers for 132kV power lines within the perimeters of these sites.

Some of these Iron Age sites may be impacted by the Eskom Project if the towers for the power lines are erected within the perimeters of these sites or when the power lines cuts across these sites which, together, may constitute small cultural landscapes.

Historical structures

The relatively low number of widely distributed colonial homesteads in the Eskom Project Area needs not to be affected by the Eskom Project, also when considering that most of these houses are single structures (without outbuildings) and therfore not constituting cultural landscapes. The homesteads in the Langa Ndebele sphere of influence (some with graves) are mainly concentrated in the Fonthane mountains.

These remains will be affceted if the towers are erected on top of these remains. This impact may be more significant if the homestead also holds graves.

Memorabilia

It is highly unlikely that the commemorative beacon in the Kloof Pass will be affected by the Eskom Project as Corridor 01 will not be constructed along this kloof due to technical reasons and aesthetics.

Graveyards

Any of the recorded graveyards or graves or those detected during the walk-through study of the Eskom Project Area may be impacted when towers are erected on top of these structures.

Mitigating the heritage resources

Different mitigation measures have to be followed for different types and ranges of heritage resources that may be affected by the Eskom Project. Mitigation measures for various types and ranges of heritage resources are usually conducted by specialists qualified in

various disciplines and accredited with the Association for Southern African Professional Archaeologists (ASAPA) or with other professional orginisations.

An important aspect relating to the mitigation (conservation) of heritage resources in power line corridors is the undertaking of walk-through studies which are done before transmission lines are constructed and have the following benefits, namely:

- Transmission lines can be rerouted or realigned in order to avoid (conserve) heritage sites.
- Heritage resources can be conserved unaffected (*in situ*) underneath power lines and can subsequently be managed as long as power lines are operational.

Stone Age sites

Stone Age sites can in some instances be avoided by means of placing towers on opposite ends (outer perimeters) of these sites. Stone Age sites therefore can be kept underneath (*in situ*) any number of power lines.

It is also possible that stone tools which may be affected by the Eskom Project can be collected from the surface before the power lines are constructed. These stone tools can be donated to museums (preferably closest to the project area) or to an accredited institution such as a national museum or a university. Here, it can be safe-kept and be used in displays or in educational programmes.

Rock art sites mostly occur in mountainous areas (overhangs and shelters) where power lines are not preferred to be constructed due to technical reasons. However, some rock art are located on single boulders in more open areas where power lines may be constructed.

When power lines are constructed above or near rock art sites they may cause a physical and/or visual impact on the rock art. However, it may also be possible that rock art on boulders may be conserved below power lines.

Phase II investigations for Stone Age sites can only be conducted by archaeologists accredited with the Association for Southern African Professional Archaeologists (ASAPA). Rock art sites that are impacted by power lines must be investiagted by specialists from the Rock Art Research Institute (RARI) at the University of the Witwatersrand. These archaeologists have to obtain permits from the South African Heritage Resources Authority (SAHRA) which will authorise the collection of the stone artefacts and the investiagtion of the rock art sites *prior* to the construction of the power lines and any subsequent affect on these heritage resources.

Iron Age sites

Iron Age sites can in some instances be avoided by means of placing towers on opposite ends (outer perimeters) of single or small clusters of sites. Incorporation of a small

cluster of sites underneath any number of power lines may impact on these sites if they constitute cultural landscapes. However, the impact will be visual and not necessarly physical. No fixed prescriptions exist for 'safe distances' that has to be maintained between power lines and Iron Age sites.

If Iron Age sites have to make way for towers for power lines these sites must be subjected to Phase II investigations. These investigations require that the sites be documented by means of mapping the sites and possibly by means of small test excavations of sites. Phase II investigations are done by archaeologists accredited with ASAPA. The archaeologist has to obtain a permit from SAHRA which will authorise the Phase II investigation and the subsequent destruction of the stone walled sites before the construction of the power lines commences.

Historical structures

Historical houses (sometimes with outbuildings) which may constitute cultural landscapes can in some instances be avoided by means of routing power lines around these structures. Historical infrastructure, however, can not be preserved underneath power lines.

Power lines that avoid historical structures may still impact visually on these remains. No fixed prescriptions exist that outline 'safe distances' between power lines and historical structures.

Historical structures may not be affected (demolished, renovated, altered) by the Eskom Project *prior* to their investigation by a historical architect in good standing with SAHRA. The historical architect has to acquire a permit from SAHRA before any historical structures may be impacted as a result of the Eskom Project.

Memorabilia

The commemorative beacon in the Kloof Pass will probably not be affected by the Eskom Project. If the monument, which can also be conserved beneath the power line, has to be moved it must be shifted to a location where it is accessible to the public, tourists and other interested individuals or groups as its holds educational and other values.

Graveyards

Graves and graveyards in the Eskom Project Area can be mitigated by following one of the following strategies, namely:

- Graveyards and graves can be conserved *in situ* beneath power lines. Towers should be erected on opposite ends of graves or graveyards. Consequently, power lines can be strung across and above graves and graveyards. Conserving graves and graveyards in power line corridors create the risk that they may be damaged, accidentally, and that Eskom may be held responsible for such damages. Controlled access must exist for any relatives or friends who wish to visit graves or graveyards in power line corridors.

- Graveyards can also be exhumed and relocated. The exhumation of human remains and the relocation of graveyards are regulated by various laws, regulations and administrative procedures. This task is undertaken by forensic archaeologists or by reputed undertakers who are acquainted with all the administrative procedures and relevant legislation that have to be adhered to whenever human remains are exhumed and relocated. This process also includes social consultation with a 60 days statutory notice period for graves older than sixty years. Permission for the exhumation and relocation of human remains have to be obtained from the descendants of the deceased (if known), the National Department of Health, the Provincial Department of Health, the Premier of the Province and the local police.

General comments with regard to mitigation

Two main types of impacts can be distinguished with regard to heritage resources and power lines, namely:

- Physical impacts which occur when towers are constructed on top of heritage resources which occur on the surface of the earth..
- Visual impacts occur when power line infrastructure affect the aesthetic and visual appearance, sense of place, context, or other aspects relating to heritage resources in a negative way.

However, it is generally assumed that impacts caused by linear developments such as power lines on heritage sites may be less severe than impacts which occur as a result of more drastic kinds of development. This assumption can be explained by the fact that long, narrow power lines (and their corridors) which extend across short, medium or long distances offer opportunities with regard to the protection of heritage sites by means of the following:

- Power lines are strung on top of towers which cause the only footprints on the landscape after the power line have been constructed.
- Power lines hang above the surface of the land in which heritage sites were deposited many years ago and primarily may cause a visual impact on these sites if the heritage sites are retained beneath the power lines.
- Towers (and power lines) can be planned and constructed in such a way that they can avoid heritage sites and cultural landscapes.
- Heritage sites can be conserved under power lines if towers are spaced in such a way that they do not affect (remove, damage, alter) heritage sites which then are left *in situ*, (unaffected) underneath power lines.
- Although mitigation measure do exist for all types and ranges of heritage resources, mitigation measures do not have to be applied when heritage sites can be left unaffected in power line corridors.

Walk-through studies and the mitigation of heritage resources

The protection and conservation of heritage resources in power lines corridors are advanced by means of walk-through studies which are conducted before the final alignments for power lines are fixed and before the construction of power lines commence. During the walk-through study, the real (factual) impact on recorded heritage resources as well as on earlier undetected heritage resources may be determined. By rerouting the power lines or changing the placement of towers possible impacts on heritage sites can either be minimised or can be avoided.

General

If any heritage resources of significance is exposed during the mining extension project the South African Heritage Resources Authority (SAHRA) should be notified immediately, all development 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.

CONTENTS

1 BACKGROUND TO THE PROJECT

Eskom is expanding transmission and generation infrastructure to ensure a sufficient generation capacity to sustain South Africa's economic growth. Eskom transmission therefore proposes the implementation of the Mokopane Integration Project in the Limpopo Province of South Africa.

The Mokopane Integration Project involves the following:

- The construction of the proposed 400/132kV Mokopane Substation on one of three possible sites.
- The integration of the new substation into the transmission system by looping-in and-out of one of the existing Matimba-Witkop 400kV lines (two lines running parallel for a distance of approximately 10km).
- Construction of a new 400kV power line between the Delta Substation in Lephalale and the new Mokopane substation (approximately 150km).
- Construction of a new 400kV power line between the Delta Substation in Lephalale and the Witkop Substation (approximately 200km).
- Construction of a new 400kV power line between the new Mokopane Substation and the existing Witkop Substation (approximately 60km).
- Associated works to integrate the new Mokopane Substation and transmission lines into the transmission grid.

The Mokopane Integration Project is hereafter referred to as the Eskom Project and the areas to be affected by this project, namely the sites for the Mokopane Substation as well as the various power line corridors, as the Eskom Project Area.

2 AIMS WITH THIS REPORT

Eskom's proposed Mokopane Integration Project may impact on South Africa's 'national estate' which comprises a wide range of heritage resources, some of which may occur in the Eskom Project Area (see see Box 1). Therefore, a Phase I Heritage Impact Assessment (HIA) has to be undertaken for the Mokopane Integration Project as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999).

Savannah Environmental, the company responsible for compiling an Environmental Impact Assessment (EIA) report for the Eskom Mokopane Integration Project, therefore commissioned the author to conduct a Phase I Heritage Impact Assessment (HIA) study as required by Section 38 of the National Heritage Resources Act (No 25 of 1999) for the Eskom Project Area in order to obtain an understanding of the heritage character of this vast area. This knowledge base regarding the presence and significance of heritage resources in the Eskom Project Area will enable Eskom to take pro-active measures with regard to any heritage resources that may be affected by the proposed project.

Box 1: Types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).

The National Heritage Resources Act (Act No 25 of 1999, Art 3) outlines the following types and ranges of heritage resources that qualify as part of the national estate, namely:

(a) places, buildings structures and equipment of cultural significance;
(b) places to which oral traditions are attached or which are associated with living heritage;
(c) historical settlements and townscapes;
(d) landscapes and natural features of cultural significance;
(e) geological sites of scientific or cultural importance;
(f) archaeological and paleontological sites;
(g) graves and burial grounds including-
  (i) ancestral graves;
  (ii) royal graves and graves of traditional leaders
  (iii) graves of victims of conflict
  (iv) graves of individuals designated by the Minister by notice in the Gazette;
  (v) historical graves and cemeteries; and
  (vi) other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)
(h) sites of significance relating to the history of slavery in South Africa;
(i) moveable objects, including -
  (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
  (ii) objects to which oral traditions are attached or which are associated with living heritage;
  (iii) ethnographic art and objects;
  (iv) military objects;
  (v) objects of decorative or fine art;
  (vi) objects of scientific or technological interest; and
  (vii) books, records, documents, photographs, positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

The National Heritage Resources Act (Act No 25 of 1999, Art 3) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value …'. These criteria are the following:

(a) its importance in the community, or pattern of South Africa's history;
(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
(g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
(h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;
(i) sites of significance relating to the history of slavery in South Africa

The aims with this Phase I HIA study were the following:

- To establish whether any of the types and ranges of heritage resources ('national estate') as outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999)

(see Box 1) do occur in or near the Eskom Project Area.

- To determine the nature, the extent and the significance of these heritage resources and whether these remains will be affected by the Eskom Project.
- To evaluate what appropriate mitigation measures could be implemented to reduce the impact of the proposed Eskom Project on these heritage resources.

3 APPROACH AND METHODOLOGY

The approach that was followed to obtain information for this Phase I HIA study for the Eskom Project was based on the following methodology. Information with regard to the heritage character of the Eskom Project Area was obtained from the following sources and by means of the following activities:

- Consulting archaeological (heritage) data bases.
- Consulting relevant literature regading the pre-history and history of the Eskom Project Area.
- Utilising standard governmental maps to compile heritage sensitivity and detailled heritage maps to meet the aims with this report
- Synthesising the results derived from fieldwork over a period of time in the Eskom Project Area.
- Consulting spokespersons in the field in order to discover, identify and to map heritage sites in the Eskom Project Area.
- Using the ILISO Questionnaire to collect information from interested and affected parties about the possible presence of heritage resources on the properties of affected landowners.
- Geo-referencing and mapping known heritage resources and sites on a heritage map.
- Collecting information during a helicopter fly-over of the Eskom Project Area.

3.1 Databases

Various databases were utilised to obtain information regarding the possible presence of heritage phenomena in the Eskom Project Area. These included data bases housed and maintained at institutions such as:

- The South African Heritage Resources Agency (SAHRA) in Cape Town and in the Limpopo Province.
- The Archaelogical Data Recording Centre at the National Flagship Institute in Pretoria (Tshwane), namely Museum Africa.
- The Department of Anthropology and Archaeology at the University of South Africa (UNISA)
- The Rock Art Research Institute (RARI) of the University of the Witwatersrand.

3.2 Literature survey

Literature relating to the pre-historical and historical unfolding of the Eskom Project Area was briefly reviewed. These incuded academic text books; research articles; post-graduate studies; ethnographic literature; encyclopedia and a historical atlas.

Research articles and post-graduate studies provided information on surveys and excavations in the region whilst ethnographic literature outlined the origins and settlement history of Late Iron Age and historical groups such as the Langa Ndebele, Seleka Ndebele and Shongwane (Batlhalerwa) who occupied the Eskom Project Area. A historical atlas illuminated the most important events and occurrences in the region on a geographical scale. The background and historical unfolding of individual towns in the Eskom Project Area is outlined in encyclopedia, travel journals and a historical atlas.

This literary review contextualised the region in a pre-historical, historical, cultural, ethnographic and economic context which was necessary to gain an understanding of the meaning and significance of the heritage character of the Eskom Project Area (See Part 6, 'The heritage potential of the Eskom Project Area' and Part 10, 'Select bibliography').

3.3 Maps

Two kinds of maps were used in this project, namely standard maps that are provided by the governmental printer and maps that were compiled to meet the aims of this report.

The following governmental maps were used in this study, namely:

- A set of approximately twenty-three individual and compositions of 1:50 000 topographical maps which outline the full extent of the Eskom Project Area.
- Three maps of the 1: 250 000 series on which the Eskom Project Area is demarcated.

These standard maps were used to study the physiographical character of the Eskom Project Area. The physiographical features of the Eskom Project Area revealed four areas of interest each of which is characterised by unique ecological, prehistorical and historical attributes and characteristics.

A detailled heritage map was compiled by means of plotting the coordinates of all the discovered types and ranges of heritage resources in the Eskom Project Area. Heritage resources that are known to exist, as they were indicated by landowners in response to the ILISO questionnaire, but whose coordinates are not known are also indicated in the tables summarising the findings of heritage resources in the Eskom Project Area.

The detailled heritage map appears as Figure 6 in this report.

3.4 Fieldwork

The Eskom Project Area covers a very large surface area covering hundreds of square kilometres. This area is too large to be covered by means of a systematically planned archaeological reconnaissance considering the time frames allowed for this project. Fieldwork was conducted by means of surveys with vehicles, reconnaissance on foot and a helicopter fly-over of the Eskom Project Area.

The fieldwork also considered the results of earlier fieldwork which was done for the Eskom Project Area as well as other heritage impact assessment studies which were undertaken during the following periods and for the following purposes:.

- Fieldwork done during the scoping phase for the Eskom Project was aimed at familiarising one with the region and focussed on identifying critically important sites such as no go areas.
- During the impact assessment phase for the Eskom Project fieldwork was undertaken at the proposed stands (sites) for the Mokopane Substation as well as along the proposed routes for the power lines corridors. The transmission line corridors were followed with a vehicle where access were possible while stretches which the archaeologist deemed sensitive according to various criteria were surveyed on foot.
- The author has done fieldwork for Eskom's Rural Power Line Project as well as for other Eskom power lines across the Eskom Project Area since 2003 (see Part 9, 'Select Bibliography').

3.5 Spokespersons

Spokespersons such as farmers and farm workers were consulted in order to help with establishing the location and identity of heritage sites. This was particularly the case with regard to graveyards and historical structures such as houses in the Eskom Project Area.

Information was also collected during the public participation process from interested and infected parties who made the presence of heritage sites on their properties known in the ILISO questionnaire which was handed to interested individuals and parties. The respones on these questionnaires, with regard to heritage, can not be described as limited.

The list of spokespersons included in this report refers to spokespersons that were consulted during the surveys that were done during the months of May to September 2009 (see Part 10, 'Spokespersons consulted').

3.6 ILISO Questionnaire

A questionnaire compiled by the archaeologist in cooperation with ILISO Consulting who handled the public participation process for the Mokopane Integration Project was used to obtain information from landowners regarding the possible presence of heritage reources on their properties.

Information provided in the questionnaire was follwed up with visits to land owners who claimed to have historical houses, graveyards and other heritage phenomena on their properties. However, not all of these spokespersons were visited due to reasons such as farm owners (or their representatives) caught-up in a busy hunting season or lack of any respones from farm owners on enquiries regarding the presence of heritage on their properties or requests to visit their properties.

3.7 Other sources utilised

Aerial photography and Google imagery are useful to detect heritage sites but only when these sites are exceptionally large, such as large stone walled settlements that date from the Late Iron Age. These types of sites are scarce in the Eskom Project Area and are limited to the central and south-eastern extent of this area where the limited number of sites observed can be associated with the Late Iron Age Langa Ndebele.

Infrastructure such as farmstead can be identified with Google imagery and with maps. However, these buildings cannot be accurately identified as being of historical significance as each and every structure in such a complex has to be evaluated by means of first-hand field observations of each and every structure.

A helicopter fly-over of the Eskom Project Area was undertaken during 2008. The fly-over confirmed what maps and field observations indicated, namely that the Eskom Project Area was composed of four physiographic zones which each corrolates with certain dominant types and ranges of heritage resources.

3.8 Some remarks on terminology

Terminology that may be used in this report is outlined in Box 2 (below, next page).

Box 2. Terminologies that may be used in this report

The Heritage Impact Assessment (HIA) referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage Resources Act, 1999 (Act No 25 of 1999) (See Box 1).

Heritage resources (cultural resources) include all human-made phenomena and intangible products that are the result of the human mind. Natural, technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyles of the people or groups of people of South Africa.

The term 'pre-historical' refers to the time before any historical documents were written or any written language developed in a particular area or region of the world. The historical period and historical remains refer, for the Eskom Project Area, to the first appearance or use of 'modern' Western writing brought to the Mokopane (Potgietersrust) and Lephalale (Ellisras) areas by the first Colonists who settled here during the 1830's.

The term 'relatively recent past' refers to the 20th century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains, however, may be close to sixty years of age and may, in the near future, qualify as heritage resources.

It is not always possible, based on observations alone, to distinguish clearly between archaeological remains and historical remains, or between historical remains and remains from the relatively recent past. Although certain criteria may help to make this distinction possible, these criteria are not always present, or, when they are present, they are not always clear enough to interpret with great accuracy. Criteria such as square floor plans (a historical feature) may serve as a guideline. However, circular and square floors may occur together on the same site.

The term 'sensitive remains' is sometimes used to distinguish graves and cemeteries as well as ideologically significant features such as holy mountains, initiation sites or other sacred places. Graves in particular are not necessarily heritage resources if they date from the recent past and do not have head stones that are older than sixty years. The distinction between 'formal' and 'informal' graves in most instances also refers to graveyards that were used by colonists and by indigenous people. This distinction may be important as different cultural groups may uphold different traditions and values with regard to their ancestors. These values have to be recognised and honoured whenever graveyards are exhumed and relocated.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age peoples lived in South Africa well into the historical period. The Stone Age is divided into an Earlier Stone Age (3 million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years to 40 000 years ago) and the Late Stone Age (40 000 years to 200 years ago).

The term 'Late Iron Age' refers to the period between the 17th century and the 19th century and can therefore include the historical period.

Mining heritage sites refer to old, abandoned mining activities, underground or on the surface, which may date from the pre-historical, historical or the relatively recent past.

The term 'study area', or 'Eskom Project Area' refers to the area where the developer wants to focus its development activities (refer to plan).

Phase I studies refer to surveys using various sources of data in order to establish the presence of all possible types of heritage resources in any given area.

Phase II studies include in-depth cultural heritage studies such as archaeological mapping, excavating and sometimes laboratory work. Phase II work may include the documenting of rock art, engraving or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation of bodies and the relocation of graveyards, etc. Phase II work may require the input of specialists and requires the co-operation and approval of SAHRA.

4 ASSUMPTIONS AND LIMITATIONS

4.1 Lack of research and data

The tempo and frequency with which archaeological research has been conducted in the Eskom Project Area over the past decades is disappointing and explains the lack of heritage data for certain parts of this region. The larger part of the Eskom Project Area has never been subjected to any dedicated archaeological surveys which have been published. Archaeological data that do exist is derived from the University of South Africa's (UNISA) archaeological program in the Lephalale region which constitutes the centre of the Waterberg Biosphere. Around sixty archaeological sites constituting unexcavated Stone Age sites, rock shelters and numerous rock art localities, initiation sites with stone cairns and African farmer sites with and without stone walling have been recorded on the 1:50 000 Melkrivier 2328CD topographical map). This area falls to the south and therfore outside the Eskom Project Area.

Whilst the south-eastern part of the Eskom Project Area serves as an important mining hub for the Limpopo Province, the north-western part has become an energy creating nucleus. Most of the heritage data available for the far western and south-eastern parts of the Eskom Project Area therfore is derived from heritage impact assessment studies. Consequently, several heritage impact assessment studies have been done in these two areas whilst the central part, which is characterised by game farming, eco-tourism and crop irrigation along the banks of major rivers, is only now receiving more archaeologically research orientated attention.

4.2 Information gaps

Although this project gained an adequate understanding of the heritage character of the Eskom Project Area, it could not establish the full extent of all the types and ranges of heritage resources that may be present in the proposed sites for the Mokopane Substation and for the various transmission lines considering the size and extent of these areas. These information gaps can only be filled by means of rigorous and extended periods of fieldwork covering all the land which defines the Eskom Project Area. Thorough fieldwork (pedestrian surveys) is the backbone of most scientific archaeological research programmes but not necessarily of all heritage impact assessment studies.

However, it is felt that the understanding which has been gained about the heritage character of the Eskom Project Area is sufficient to make recommendations regarding the placement of Eskom's propose substation and the corridor for the power line in such a way that outstanding significant heritage sites can be avoided through detailled fieldwork during the planning and construction phases.

4.3 Undiscovered heritage resources

The vast Eskom Project Area could not be subjected to a well planned and executed archaeological reconnaissance program which is usually part and parcel of long-term archaeological projects. Such programmes are undertaken by teams of specialists stretching over prolonged periods of time which allow for surveys and excavations to correspond with seasons when receded vegetation cover allows for higher visibility of archaeological remains. Survey and excavations are followed with periods during which fieldwork results could be processed and analysed.

However, the combination of fieldwork conducted by the author and other researchers; data derived from heriatge data banks; desktop work; the compilation of maps; feedback from the ILISO questionnaire; consultation with spokespersons; studying Google imagery in conjunction with maps and a helicopter fly-over enabled the author to obtain an understanding of the heritage character and features of the region.

Despite the methodology that was followed to attain the current knowledge base regarding the heritage character and features of the Eskom Project Area, it is hereby also acknowledged that heritage sites (tangible and intangible), graveyards and other features, structures and occurrences of heritage significance, inside or near the Eskom Project, may have been missed by this study.

4.4 Chance finds

Heritage resources can be found in the most unexpected places. While some remains may simply be missed during surveys others may occur below the surface of the earth and may only be exposed once the Eskom Project commences.

Consequently, when chance finds of heritage resources are made during the Eskom Project, the South African Heritage Resources Agency (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.

4.5 Confidentiality

In order to ensure that the integrity of all heritage resources and sites which are discussed and mapped in this publication is maintained, no coordinates for sites are published in this report.

5 THE ESKOM PROJECT AREA

The Mokopane Integration Project involves the construction of the following components:

» A new transmission substation on a site near Mokopane
» Two 400kV transmission power lines in parallel looping in and out of one of the existing Matimba-Witkop 400kV transmission lines (i.e. two lines in parallel for a distance of up to 10 km) in order to integrate the new substation into the transmission system
» Two new 400kV transmission power lines in parallel between the Delta Substation (a new substation to be located near the Medupi Power Station) and the existing Witkop Substation (near Polokwane), as follows:
  * A new 400kV transmission power line between the Delta Substation and the new Mokopane Substation (a distance of approximately 150 km); and a new 400kV transmission power line between the new Mokopane Substation and the Witkop Substation (a distance of approximately 60 km).
  * A new 400kV transmission power line between Delta Substation and the Witkop Substation (a distance of approximately 200 km).
» Associated works to integrate the new transmission power lines and substation into the Transmission grid (such as access roads, communication tower, etc) and accommodate the new lines at existing substations (such as the construction of new feeder bays within the existing Witkop substation site).

From the Scoping Study undertaken, three feasible sites have been identified for investigation for the establishment of the proposed substation, i.e. (Options 01, 03 and 04), namely on the border between Aronsfontein 722 and Doornfontein 721 (Option 01), on Zuid-Holland 733 (Option 03) and on Noord Brabant 774 (Option 04).

The following corridors have been identified for the proposed 400kV power lines between the Delta Substation and the Witkop Substation:

- A northern corridor (Corridor 02), a central corridor (Corridor 01), or a corridor running along Eskom's existing power line, namely Corridor 08.
- Three possible corridors between the new Mokopane Substation and the Witkop Substation (Corridors 04, 05 and 06)

The Eskom Project Area covers a considerable piece of land in the Limpopo Province of South Africa as it runs from Eskom's existing Matimba (and Medupi currently under construction) Power Stations near Lephalale in the north-west across the northern edge of the Waterberg mountain range to the Witkop Substation located near Polokwane in the south-east (2326 Lephalale, 2328 Polokwane & 2428 Modimolle 1:250 000 maps).

Four areas of interest can be distinguished in the Eskom Project Area. Each of these areas represent a different ecological zone with each characterised by different pre-historical and historical peoples and circumstances. These areas are:

- The vast plain which is dotted with scattered mountains ranges, isolated kopjes and syenite knolls which is located between Bakenberg (Ga-Mapela) in the north-west and Mokopane in the south-east.
- The northern edge of the Waterberg mountain mass near Marken where it incorporates the Masebe Nature Reserve and Moepel farms in the central part of the Eskom Project Area.
- The outstretched bush and sand veldt to the north-west of the Waterberg near the emerging Medupi Power Station and,
- The isolated flat-topped sandtone hills (*mesa*) and rugged kopjes located on sandveld with thorn trees which covers the north-central part of the Eskom Project Area.

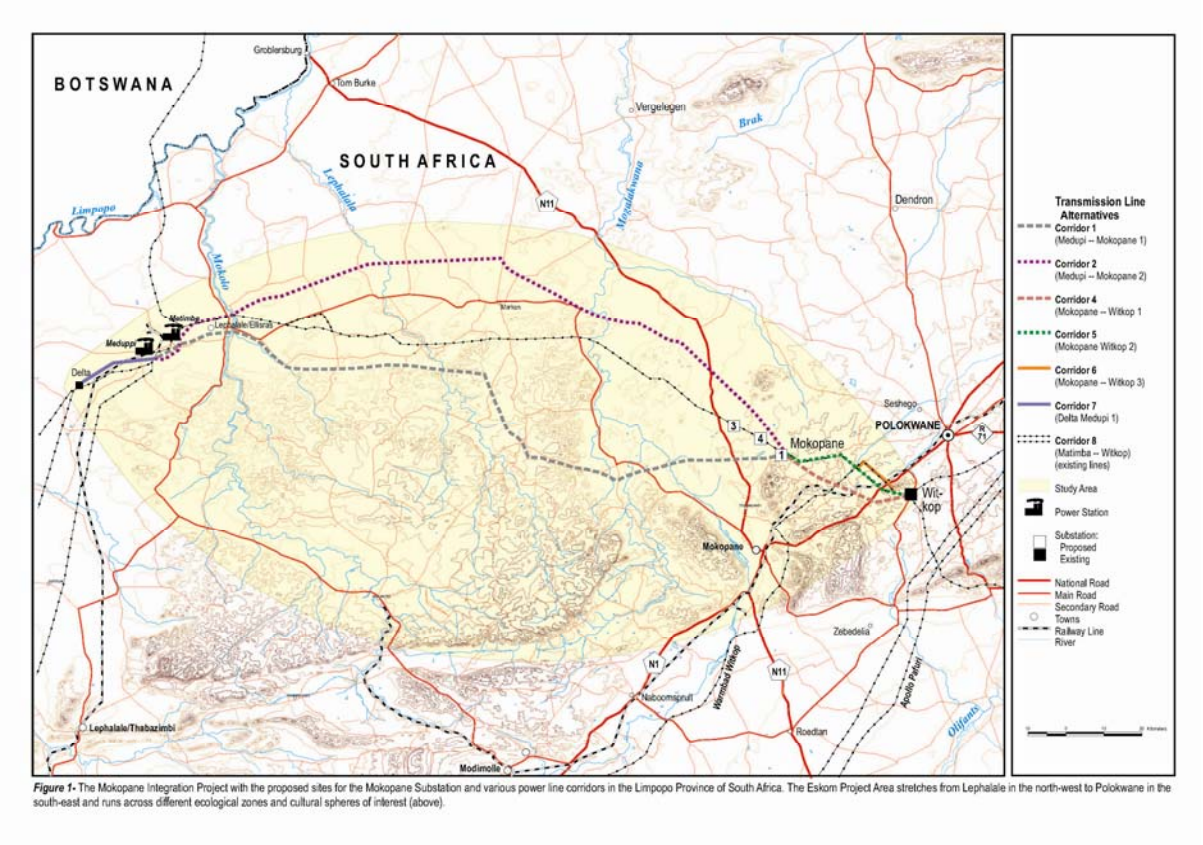

Figure 1- The Mokopane Integration Project with the proposed sites for the Mokopane Substation and various power line corridors in the Limpopo Province of South Africa. The Eskom Project Area stretches from Lephalale in the north-west to Polokwane in the south-east and runs across different ecological zones and cultural spheres of interest (above).

Figure 1- The Mokopane Integration Project with the proposed sites for the Mokopane Substation and various power line corridors in the Limpopo Province of South Africa. The Eskom Project Area stretches from Lephalale in the north-west to Polokwane in the south-east and runs across different ecological zones and cultural spheres of interest (above).

6 THE HERITAGE POTENTIAL OF THE ESKOM PROJECT AREA

The various components of the Mokopane Integration Project have an influence on heritage resources in each of the four areas of cultural interest that have been identified in the Eskom Project Area. These four areas and their heritage characteristics and features are now briefly discussed.

6.1 The south-eastern plains with mountains and kopjes

The first of these four areas is the sphere of influence of the Langa-Ndebele which is stretched out on the plains between Bakenberg and Mokopane in the south-eastern part of the Eskom Project Area. The Langa Ndebele is an Nguni group who settled in this area from as early as the sixteenth century. The area is characterised by a number of large mountains and smaller kopjes and knolls scattered over a vast plain. Some of the mountains bear historical names such as Mapela, Masenya and the historically well-known Fonthane and Thutlwane. Further to the north is Bankenberg and still further north in the Masebe Nature Reserve is the mountain of Magagamatala. Some of the mountains in this area serve as important historical settlements, battlefields and as graveyards for the Langa Ndebele.

The historical and present occupants of this area are the Langa Ndebele who has occupied this area for centuries. The names of some of their early settlements appear in bold. The Langa Ndebele subjugated a large number of clans in this region. (Note the 1:50 000 topographical maps of this area [2428BB Tinmyne & 2328DD Limburg]).

The Ndebele of Langa are of Hlubi (Nguni) origin. The name of their clan, Langa, was derived from the name of their original chief when the clans were part of the Hlubi. They originated from eNgungunglovu (Pietermaritzburg) where they occupied a place known as Langalibalele. (Other clans such as the Mbo [Mkize], Bhele, Phuti, Polane and Swazi also trace their genealogies back to a Chief Langa who lived during the latter half of the 17th century).

Figure 2- A Langa Ndebele settlement, possibly Thutlwane which was occupied during the nineteenth century. Note the extensive remains of stone walls on the two levels of the mountain. (The stone walls are visible as circles and lines in the yellow grass veld on top of the mountian) (above).

The second half of the 17th century seems to have been a turbulent period in Hlubi history, as the Langa clan hived off from the main body in AD1650. They were led by Langalibalele/Masebe I (Masebethêla) from Hlubi country through what is today Swaziland. Their first significant stop was near Leydsdorp or Mafefera. They moved to Bosega, an area around Bonye, east of Pietersburg, and the present territory of the Molepo chiefdom. After a short stay, the Langa moved to Thaba Tšweu (Witkoppen Mountain), a few kilometres to the south-east of Pietersburg, where they remained for four generations. The chiefs who ruled and died at **Thaba Tšweu** were Masebe I, Mapuso, Podile and Masebe II.

During their sojourn and stay in the Limpopo Province, the Langa adopted the Sotho language and culture fully. They adopted the custom of circumcision from the Matlala (Koni). The fact that they accepted 'medicated' (treated) pumpkin, a symbolic gesture by which seniority is acknowledged, from the Ndebele of Kekana (near Zebediela) proves that they acknowledged the seniority of this clan which had also moved to the Transvaal from the KwaZulu/Natal region.

Seritarita, who succeeded Masebe II at **Thaba Tšweu**, led the clan to **Maleoko** (on the farm Bultongfontein [239KR]), where he remained for three years. From here, the clan

moved to **Moumong-wa-Matswake** on the farm Zuid-Holland 773LR. Their settlement was known as **Mokgokong**. Seritarita was succeeded by Mapela, son of Seritarita's third ranking wife.

Two sons of Seritarita higher in rank than Mapela namely Mosogo (son of the second ranking wife) and Mamaala (Makgenene) established several villages around the royal lineage of Mapela during the 19th century, e.g. **Mabyanamatshwaana**, **Tsotsodi** and **Segodini**. These lineages still enjoy seniority, as can be seen during initiation lodges.

During Mapela's stay at **Moumong wa Matswake**, numerous smaller Sotho clans were subjugated and incorporated in the Langa tribe. (Clans that were incorporated before Mapela's rule were the Tlhaloga Kwena of Tshaba, the Bakwena of Lelaka and the Dikgomo of Lebelo). The Phalane Nareng of Mabuêla and the Pedi of Matlou were attacked before the Langa Ndebele settled at **Moumong wa Matswake**. Internal strife amongst the Phalane enabled the Langa to incorporate a section of this group, as well as the Pedi of Matlou. When the Phalane fled (to Ramakôka), the Bididi (or Tlhatlherwa) fled to **Bobididi** near Villa Nora.

Also incorporated amongst the Langa were the Kwena of Ramorulane and the Hurutshse of Molokomme, after the latter were defeated at Senta Hill and Swartkop (north of Thutlwane). Groups that voluntarily joined the Langa were the Koni of Masenya and Puka; the Tlôkwa of Pila; the people of Tshokwe and the Koni of Seema.

When Thulare of the Pedi undertook his great expedition up the Steelpoort River at the end of the 18th century, the move did not affect the Langa Ndebele. When Mzilikazi moved through Mpumalanga and the Bankeveld during the early 19th century, groups such as the people of Mabuela became dislocated and occupied mountains in the area.

When he was old, Mapela moved his village to **Fothane Hills** (Moordkopje) where he died in 1825. Maleya (a son of Mapela by a minor wife) ruled until Mankopane (the rightful heir) ousted him. Maleya fled to **Magagamatala** on Ruigtevlei 710LR but ruled from **Ditlotswana** hills.

Magagamatlala is a high flat-topped mountain with steep cliffs. On 14 April 1858 this stronghold was attacked by a punitive expedition sent by the Voortrekkers and 800 of Mankopane's subjects were killed. (This is known as the war of 'Nterekane' or the 'War of Maruputlase'). After the Langa's defeat, the Mankopane settled on **Thutlwane** Hill (Kromkloof 744 LR). The first mission stations of the Berlin Missionary Society were established in Langa country in 1867.

Other events were the following:

- The Langa expedition in 1837 aimed to expedite Mzilikazi's departure from what is today the North-West Province into Botswana.

- The Langa (and Kekana) were involved in the massacre of Voortrekker parties and the siege of the Makapans Caves in 1854.
- The Langa Ndebele (Lamola clan) scattered the copper miners of Mussina (Messina) with whom they bartered copper shortly before 1854.
- The Langa subjugated the Bididi (Songwana) until 1890, exacting heavy tribute from this clan.

The second encounter between the Voortrekkers and the Langa took place in 1868. At the time, the Langa were in an alliance with the Kekana Ndebele of Mogemi. Mogemi acted as regent for Mankopane. While the Boers besieged **Sefakaulo** Hill where Mogemi lived, Mankopane raided white farmers and outposts. The Voortrekkers attacked Mankopane on 12 June 1868 at **Thutlwane** and raided large numbers of cattle and small stock, but they could not take the highest part of the mountain where Mankopane's headquarters were. The Boers could also not achieve much success with their raids on Mogemi's mountain fortress. The Voortrekkers then evacuated Potgietersrus.

Mankopane died on 30 May 1877 and was buried in his cattle kraal on the mountain **Thutlwane**. Masebe III was proclaimed chief on 3 June 1877. Sporadic wars continued between the Langa and the Kekana chiefdoms from 1883 to October 1886, when President Paul Kruger summoned the two chiefs before him.

After the death of Masebe III on 4 May 1890, a succession dispute split the tribe into two sections, namely the Ndebele of Bankenberg and the Ndebele of Hans Langa. Hans Langa became chief of the southern portion and Bankenberg of the northern portion. As the ancient grounds of Mapela (**Fothane Hill**) fall in the southern portion, this section of the Langa became known as the Bagamapela.

The Ledwaba/Maune Ndebele clans, who are related to the Langa-Ndebele, live in the Bergzicht-Kalkspruit and Mašašane townships in the south-eastern part of the Eskom Project Area, near the proposed sites for the Mokopane Substation. The Witkoppen Mountains (Thaba Tšweu) near the Witkop Substation were also occupied by clans of the Langa Ndebele during the 17th century to the 19th century. According to oral tradition they lived here for four successive generations under the leadership of Masebe I, Mapuso, Podile and Masebe II. A concentration of stone walled sites is located in a southern poort of this mountain range.

Colonial towns in the south-eastern part of the Eskom Project Area include Potgietersrus (Mokopane) and Pietersburg (Polokwane). After the Voortrekker leaders Hendrik Potgieter and Andries Potgieter were reconciled in 1852, the former established a town at Makapanspoort, between the Waterberg and the Strydpoort Mountains, which he named ‘Vredenburg’ (‘town of peace’) to commemorate the reconciliation. The town was later renamed after Piet Potgieter (who was killed during the siege of the Makapans Caves in 1854) and was called Potgietersrus. Because of fever and trouble with the Ndebele, the

town was abandoned and deserted for about twenty years after 1868, but after 1890 it was re-established. Today, Potgietersrust is known as Mokopane.

The eastern parts of Corridor 01, Corridor 08 as well as Corridors 04 to 06 run across some of the remains that can be associated with the pre-historical and historical Langa Ndebele sphere's of influence that covered this part of the Eskom Project Area.

6.2 The northern edge of the Waterberg

The central part of the Eskom Project Area covers the northern edge of the extensive Waterberg mountain mass. This mountainous terrain is divided by the Mogol, Lephalale and Magalakwena Rivers which runs from the south to the north through the mountain range. Settlements dating from the Stone Age (SA) and the Iron Age (IA) occur in this area as well as rock art sites associated with the Late Stone Age (LSA). Dense concentrations of these heritage sites have been recorded on farms such as New Belgium 608LR, Kirstenbosch 497LR (both inside) and Buffelskraal 486LR and Haakdoringdraai 711LR (outside) the Eskom Project Area.

Some of the best preserved rock art sites in the Waterberg occur in rock shelters and in shallow overhangs on New Belgium 608LR and Haakdoringdraai 711. Various open sites with evidence of stone tool knapping and manufacturing activities have also been recorded on this farm. It is expected that similar finds may occur on Eyzerbeen 553LR which adjoins New Belgium 608LR to the west.

The numerous krantzes and rock faces as well as valleys that criss-cross the Waterberg mountains harbour rock paintings which occur in rock shelters and shallow overhangs. The rock art tradition of the Waterberg comprise of the following:

- Classical San rock art paintings which is typical to those that also occur on the flat areas of the Limpopo Province.
- Khoekhoe (herder) rock paintings are strikingly different as they comprise of geometric finger paintings in a colour spectrum that ranges from red and orange to white. (Some temporally overlaps with that of the San). Non-representative motiffs in early herder art include karosse, lioncloths, aprons and handprints in red and yellow.
- The late rock art of the Waterberg mainly consist of finger paintings which were done by African farmer communities. It co-occurs with classic San art (at most of the painted sites in the Waterberg). This art is linked to the rituals of the North-Sotho speakers of the region and were painted on the completion of initiation ceremonies.

Although South African rock art in all regions share fundamental commonalities, differences in regions illustrates distinct meanings to specific and also temporal themes, e.g. specific animals, postures or handprints. The central motif for rock art in the

Waterberg is handprints while paintings of sheep are also general (but uncommon elsewhere in the Limpopo Province).

Stylistic attributes specific to the Waterberg include the so-called Waterberg posture, the spread eagled or saurian motif and the emphasis on animals such as the red hartebees. The 'Waterberg posture' usually depicts a male in profile with only one leg and one arm, short, and angled out and upwards. The individual's penis also protrudes upwards and outwards like its arm.

These human figures are usually found in association with stylized hartebeest antelope images. The hartebeest, like the human figures, are also viewed in profile with only one front and back leg. These uncommon hartebeest forms a category of subtle therianthropes (part-human, part-animal) figures.

Most of the Waterberg rock art is associated with the LSA which implies that most of the rock art in the Waterberg may have been done within the last millennium AD. There is evidence that some San rock painting sites were used as ritual sites, such as for rain making, by later farming (agropastoralists) communities.

MSA (250 000 years to 35 000 years ago) and LSA (last millinnium AD) hunter-gatherers settlements are associated with the mountainous and flatter areas of the Waterberg. Many of these sites are associated with rock shelters and overhangs. The end of the MSA in the Waterberg is probably close to 35 000 years before present (BP). The Waterberg may have remained unoccupied for a long period between the MSA and the LSA. Later Stone Age activities in the Waterberg only started with the arrival of the first farming communities who settled on the plains around the Waterberg in AD570.

Bambata pottery, which is associated with Khoekhoe herders, were found at Ongelukskraal and at Olieboompoort, outside the Eskom Project Area. The Khoekhoe were herders who moved southwards from Angola/Botswana through South Africa during the early first millennium AD and therefore may have had a temporary presence in the Waterberg.

The first African farmers who settled more towards the more open parts of the Waterberg plateau were people of the Eiland Tradition. Their settlements date from the first centuries of the second millennium AD, namely 1100AD to 1300AD, and are usually characterised by the absence of stone walls and a distinct decorated pottery. One of the largest and best preserved EIA Eiland sites, which is located on a hilltop with terraces along the hillside, occurs on Kirstenbosch 497LR. No stone walls are associated with this site which dates from the middle to the late 13th century AD. Clusters of LSA tools occur near a rock shelter on the perimter of the Eiland site. This spatial association between LSA tools and Iron Age villagers reflect aspects of interaction between these groups.

Figure 3- The northern end of the Waterberg mountains was home to San hunter-gatherers who left some rock paintings on the walls of cliffs and rockshelters. The first farmers settled more towards the open parts in the Waterberg whilst colonial settlement of this part of the Eskom Project commenced from the last quarter of the nineteenth century but probably did not exceed more than two hundred individuals by AD1900 (above).

The appearance of Moloko pottery towards the middle of the second millennium AD in the Waterberg is associated with the arrival of the ancestors of the Sotho. A number of settlements dating from AD1600 were recorded near the Motlhabatsi River. From this time a number of stone walled sites appear in the Waterberg itself. Some seems to be defensive in nature as they occur along cliff edges and are surrounded with perimeter walls such as Bobididi, Buffelsfontein and Malore Hill. Some of the sites may be associated with the arrival of the ancestors of the Nguni-derived Ndebele and with the Batlhalerwa who originated from Zimbabwe.

The Waterberg was one of the last areas to be settled by the colonial Voortrekkers. Colonial families established themselves in the Waterberg where they practised a mixed farming existence during the latter part of the second half of the nineteenth century. These early colonials also hunted antelope and big game in order to supplement their food resources and to barter products from the hunt for other commodities.

Colonial presence in the Waterberg only became more marked from AD1870 onwards although it is estimated that there were less than two hundred white residents in the Waterberg by AD1900.

First generation homesteads, or 'hartbeeshuise' constructed with clay or clay bricks and thatched roofs, have all disappeared by now and have been replaced with second and third generation farm residences. Some of these may be older than sixty years.

Colonial family graveyards as well as informal graveyards for labourers, some with historical significance as they are older than sixty years, occur widely scattered throughout the area.

Short stretches of Corridor 01 and Corridor 08 run across the northern edges of the Waterberg mountain range.

6.3 The homogenous north-western sandveld

In the far north-west, after passing the last foothills of the Waterberg mountains, a homogenous area covered with sand veldt and thorn trees marks the Eskom Project Area. Early Iron Age (EIA) as well as Late Iron Age (LIA) communities did not prefer the flat outstretched sand veldt for habitation and for farming. The scarcity of drinkable surface water for humans and animals; low annual summer rainfalls, high temperatures with accompanying high evaporation rates and soils which lacked nutrients were not conducive to crop planting. The absence of all year round grazing also did not encourage mixed farming in this part of the Eskom Project Area.

The pre-historical San and historical Vaalpense roamed this area, and the wider Eskom Project Area, in small family groups acting as nomadic hunters and herders. Small groups of Vaalpense known as Kattea, Malesa, Masarwa, etc were of mixed descend (Negroid and San) and lived in this area from as early as 1875.

The Vaalpense were impoverished nomadic hunters and herders who probably did not occupy permanent settlements that have left traces on the landscape. They became subordinate to the Seleka, Langa Ndebele and colonial farmers who employed some of them as labourers.

Figure 4- The vast, homogenous plains to the west of the Waterberg where the Vaalpense and their predecessors and contemporaries, the San, lived as nomadic hunters and foragers.

These pre-historic and historical communities lived in ephemeral types of settlements which left little or no traces on the landscape (above).

Evidence for the first African farmers in this area occur at the base of the Waterberg, on the farm Diamand 228, which date to AD570, and on farms near the Bulge and Mamba Rivers. These communities herded with cattle and sheep, domesticated crops such as sorghum and millet and smelted iron on a substantial scale.

The establishment of the massive Onverwacht Open Cast coal mine in this area during the 1960's introduced a new economic dimension to the region with consequences not yet fully realised. The town of Lephalale also came into being during this time period. Primarily mined and transported away for the smelting of iron ores, low-grade coal is now also used locally by the Matimba Power Station to generate electricity. Coal mining in the region is too young to warrant any mining heritage value, except when considering that the coal fields were actually discovered in the 1920's when exploration for water was initiated.

Corridor 07, running between the Delta Substation and the Matimba Power Station, runs across the far western extent of the Eskom Project Area.

6.4 Flat-topped sandstone hills in the north-west and west

Isolated flat-top sandstone hills (mesa) and kopjes on sandveldt that is covered with thorn trees occur towards the north-western and northern parts the Eskom Project Area. Here, these topographical features correspond with the spheres of influence of the Seleka-Ndebele and the Batlhalerwa (Shongwane) clans who have their origins in the Late Iron Age and Historical Period. These flat-topped mountains, as other mountains in the Waterberg, also featured as places where rock art was done in shelters or overhangs and where rituals such as rain ceremonies were conducted.

The Ndebele of Seleka is a remnant of the Southern Ndebele people who moved from the Pretoria area into their present homeland during the 18th century.

The Batlhalerwa, also known as the Shongwane, today lives in the Rustenburg (Bafokeng) District in the North-West Province. The clan is also known as the Babididi a name which is derived from their former settlement Bobididi Hill on the banks of the Lephalale River where they lived under a chief named Shongwane. Their totem is the Tlhalerwa or wild dog.

It is said that the Batlhalerwa originally were Karanga and that they arrived from Bokgalaka (Zimbabwe) north of the Limpopo River. Their firts settlement took place at Haernertsburg (Tzaneen) and it is said that the group, at this time, was identical to or formed a section of the Batlou tribe of Makgoba. Ramoitoi ruled during the 18th century, *prior* to the Ndebele invasion. His eldest son Ranare was taken prisoner by the Mapela Ndebele and his brother left the tribe with his followers in AD1860 and joined the Bakgatla Bagakgafela under chief Kgamanyane who recognised him as headman of the village Mamatwantwa on the Mothlabe River near Rustenburg.

These two clans are historically associated with flat-topped sandstone hills such as Bobididi, Magagamatala, Tafelkoppe and others. Both Bobididi and Magagamatala hold remains that may be associated with these clans as well as with the Langa Ndebele. These Late Iron Age and historical communities probably practised a mixed farming existence as well as metal working in this harsh environment as remains at some of these sandstone hills still attest.

Rain control ceremonies by farmer communities in the Waterberg may be associated with localities whre rock art occurred as rock art contributed to the power of places. Stone cairns, grindstones and clay pots frequently occur in rock shelters and overhangs where there are no little occupational debris.

Figure 5- Flat-topped sandstone hills in the northern and north-western parts of the Eskom Project Area. Here, the Seleka-Ndebele and Shongwane clans established spheres of influence during the Late Iron Age and historical period (above).

The Berlin missionary Schlömann observed ritual practices by a group of Vaalpense who took him to the prominenet Tafelkoppe Mountain (who commands a prominent view on part of the Lephalale River) in 1898. Here, they described their ritualised behaviour and how the painted shelter at this mountain features prominently in their rituals.

Corridor 02 runs to the north of the flat-topped hills of Bobididi and Thabaneng located on opposite banks of the Lephalale River. Further to the south Eskom's existing 400kV power lines (Corridor 08) runs between the flat topped hills of Ga-Mabula and Tafelkoppe.

6.5 Summary

Each of the four areas of interest in the Eskom Project Area is therefore associated with certain pre-historical and historical communities as wel as with particular types of heritage resources. Some of the heritage resources characteristic of these areas were identified in or near some of the proposed power line corridors but not near the proposed sites for the Mokopane Substation.