

Prepared for:

Nkateko Msimango

Eskom Land Development

Limpopo Operating Unit

PO Box 3499 Street Polokwane 0700

Tel: 015 299 0508 (8451 5508)

**A PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY FOR
ESKOM'S PROPOSED COMMUNITY NETWORK CENTRE IN
LEPHALALE IN THE LIMPOPO PROVINCE**

Prepared by:

Dr Julius CC Pistorius

Archaeologist & Heritage Consultant

352 Rosemary Street Lynnwood 0081

PO Box 1522 Bela Bela 0480

August 2013

Tel and fax: 0147362115

Cell: 0825545449

Member ASAPA

EXECUTIVE SUMMARY

A Phase I Heritage Impact Assessment (HIA) study as required in terms of Section 38 of the National Heritage Resources Act (No 25 of 1999) was done for Eskom's proposed new Customer Network Centre (CNC) for Lephalale in the Limpopo Province of South Africa. The construction of the proposed new CNC is hereafter referred to as the Eskom Project whilst the area to be affected by the power line is referred to as the Eskom Project Area.

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 (No 25 of 1999) do occur in the Eskom Project Area and, if so to determine the significance of these heritage resources.
- To make recommendations regarding the mitigation and management of significant heritage resources that may be affected by the Eskom Project.

The Phase I HIA study for the proposed Eskom Project did not reveal the presence of any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) in the Eskom Project Area.

There is consequently no reason from a heritage point of view why the development of the proposed Eskom Project should not continue.

General (disclaimer)

This Phase I HIA study may have missed other heritage resources in the Eskom Project Area as heritage sites may occur in thick clumps of vegetation while others may lie below the surface of the earth and may only be exposed once development commences.

If any heritage resources of significance is exposed during the Eskom 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

	EXECUTIVE SUMMARY	2
1	INTRODUCTION	4
2	TERMS OF REFERENCE	6
3	THE ESKOM PROJECT AREA	7
3.1	Location	7
3.2	Development components of the Eskom Project	8
3.3	The nature of the Eskom Project Area	8
4	METHODOLOGY	11
4.1	Fieldwork	11
4.2	Databases, literature survey and maps	12
4.3	Assumptions and limitations	12
4.4	Some remarks on terminology	13
5	CONTEXTUALISING THE ESKOM PROJECT AREA	17
5.1	The Stone Age (hunter gatherers)	17
5.2	The Iron Age (earliest farmers)	18
5.3	The Historical Period	21
6	THE PHASE I HERITAGE IMPACT ASSESSMENT STUDY	23
6.1	The field survey	23
7	CONCLUSION AND RECOMMENDATIONS	28
8	SELECT BIBLIOGRAPHY	29
	APPENDIX A: DETAILS OF THE SPECIALIST	32
	APPENDIX B: DECLARATION OF INDEPENDENCE	33

1 INTRODUCTION

This document contains the report on the results of the Phase I Heritage Impact Assessment (HIA) study that was done for Eskom's proposed new Customer Network Centre (CNC) for Lephalale in the Limpopo Province of South Africa.

Focused archaeological research has been conducted in the Limpopo Province for several decades. This research consists of surveys and of excavations of Stone Age and Iron Age sites as well as of the recording of rock art and historical sites in this area. The Limpopo Province has a rich heritage comprised of remains dating from the pre-historical and from the historical (or colonial) periods of South Africa. Pre-historical and historical remains in the Limpopo Province form a record of the heritage of most groups living in South Africa today.

Heritage resources in the Limpopo Province therefore constitute a rich and wide diversified range (comprising the 'national estate') as outlined in Section 3 of the National Heritage Resources Act (Act 25 of 1999) (see Box 1, next page).

Box 1: Types and ranges of heritage resources (the national estate) as outlined in Section 3 of the National Heritage Resources Act, 1999 (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 palaeontological 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 Tissues Act, 1983 (Act No 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including -
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological 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;
- (a) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (b) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (c) 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)
- (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

2 TERMS OF REFERENCE

Eskom intends to construct a Customer Network Centre (CNC) for Lephalale in the Limpopo Province. This Eskom Project may have an influence on any of the types and ranges of heritage resources which are listed in Section 3 of the National Heritage Resources Act (No 25 of 1999).

In order to comply with heritage legislation, Eskom requires knowledge of the presence, relevance and the significance of any heritage resources that may be affected by the Eskom Project. Eskom needs this knowledge in order to take proactive measures with regard to any heritage resources that may be affected, damaged or destroyed when the Eskom Project is implemented. Eskom Land Development (Limpopo Operating Unit) therefore commissioned the author to undertake a Phase I HIA study for the Eskom Project Area.

The aims with the Phase I HIA were the following:

- To establish whether any of the types and ranges of heritage resources ('national estate') as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) do occur in the Eskom Project Area and, if so to determine the significance of these heritage resources.
- To make recommendations regarding the mitigation and management of significant heritage resources that may be affected by the Eskom Project.

3 THE ESKOM PROJECT AREA

3.1 Location

The Eskom Project involves the construction of a proposed Community Network Centre (CNC) near Lephalale in the Limpopo Province. The Eskom Project is located approximately 20km to the west of the town of Lephalale in close proximity of the Grootegeluk Open Cast Mine and Eskom's existing Matimba Power Station and the new Medupi Power Station which is currently under construction (2326 Lephalale; 1:250 000 map & 2327 Lephalale 1:50 000 topographical map).

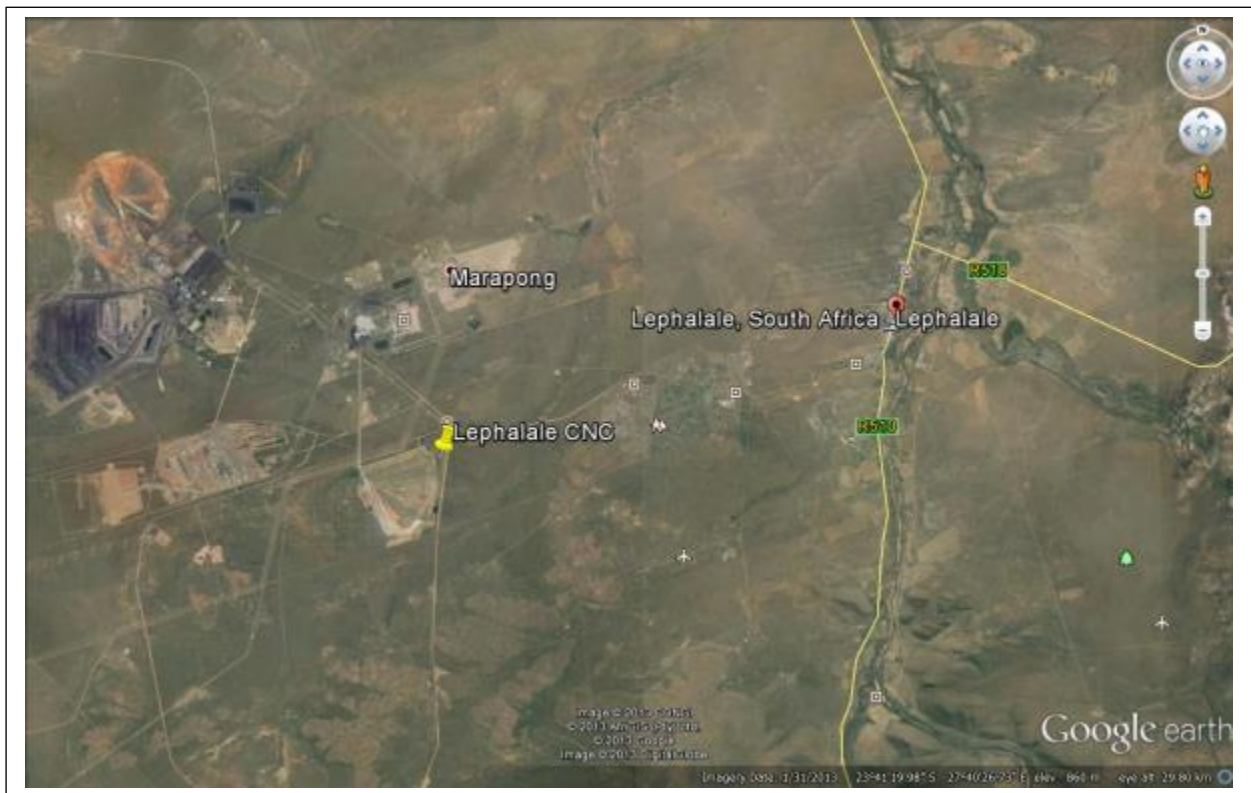


Figure 1- Regional map indicates the Eskom Project which involves the construction of Eskom's Customer Network Centre (CNC) to the south of Grootegeluk Mine and to the east of the Medupi Power Station near Lephalale in the Limpopo Province (above).

3.2 Development components of the Eskom Project

The key development components of the Eskom Project include the construction of a proposed Community Network Centre (CNC) to the west of Lephale in the Limpopo Province. A CNC comprises of the following: *inter alia* a new office building, a new store, 26 LDV car ports, 4 truck ports, 103 680 litre water tank, chemical sewer plant and the erection of a new transformer storage plinth.

The proposed Lephale CNC will facilitate the rendering of services and maintenance by Eskom officials to existing customers and structures as *inter alia* emergency personnel will be based at the CNC and will be close at hand in case of any electricity problems.

The construction of the proposed new Lephale CNC is hereafter referred to as the Eskom Project whilst the area to be affected by the power line is referred to as the Eskom Project Area.

3.3 The nature of the Eskom Project Area

The Eskom Project Area is part of a level land mass in the north-western corner of the Limpopo Province which is marked by three major water courses namely, the Limpopo River further to the north-west, the Matlabas River to the south and the Mogol River to the east. The project area is part of a consistent level sandy plain which is covered with open savannah bush. A few scattered pans occur around the Eskom Project Area whilst some agricultural fields do occur across the larger region.

The Eskom Project Area was sparsely populated by humans in the past. However, occupation started at an early period so that humans may have been present in the area over a long time span but on a limited scale. This occupation occurred from the Stone Age, hundreds of thousands of years ago, throughout the Early Iron Age which covers the first millennium AD and the Historical Period which commences with the arrival of the first colonial hunters, traders and farmers. A solitary kopje known as Nelsonskop occurs near the Eskom Project Area which is associated with human occupation in the past (see Part 5, 'Contextualising the Eskom Project Area').

The proposed Lephalale CNC will be established on a piece of land which is situated between the eastern edge of Eskom's massive ash dump and some of Eskom's existing 400kV power lines. The Eskom Project Area therefore is a triangular piece of land which is covered with sandveld and with indigenous trees. The nature of the Eskom Project Area is illuminated by means of photographs in the report ('Part 6.1 The field survey').

A number of Phase I HIA studies were done near the Eskom Project Area during the past decade, the results of which were published in several reports (see 'Select Bibliography', Part 8).

- Pistorius, J. C.C.. 2007. *A Phase I Heritage Impact Assessment study for the Eskom Mmamabula Delta Project near Lephalale in the Limpopo Province of South Africa*. Unpublished report prepared for PBA International.
- Pistorius, J.C.C.. 2009. *A Phase I Heritage Impact Assessment study for Eskom's proposed new 6x675kV power lines running from the Delta (Masa) Substation in Lephalale to the Epsilon (Selomo) Substation in the Gauteng Province of South Africa*. Unpublished report prepared for PBA International.
- Pistorius, J.C.C.. 2009. *A Phase I Heritage Impact Assessment study for Eskom's proposed new 132kV power line running between the Waterpoort and the Toulon Substations near Lephalale in the Limpopo Province of South Africa*. Unpublished report prepared for Landscape Dynamics.
- Van Schalkwyk, J. 2005. *A Phase Heritage Impact Assessment for Eskom's proposed new Matimba B Power Station near Lephalale in the Limpopo Province of South Africa*. Unpublished report prepared for Bholweki Environmental and Eskom Megawatt Park.



Figure 2- The larger Eskom Project Area seen from the air during the winter. Outstretched open savannah veldt with little surface water is a dominant feature of the landscape. This inhospitable environment was not conducive for human settlement in the past (above).

4 METHODOLOGY

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

4.1 Fieldwork survey

The proposed new Lephalale CNC was surveyed on foot. The results of the field survey are illuminated in some photographs in this report. These photographs also illustrate the nature and the characteristics of the Project Area ('Part 6.1 The field survey').

A route which was recorded with a mounted GPS instrument outlines the Eskom Project Area and some terrain which extends beyond the borders of the Lephalale CNC (Figure 3).



Figure 3- A track log was registered during the survey for Eskom's proposed Lephalale CNC. The Eskom Project Area is located in the triangular area between the eastern edge of Eskom's ash dump (west) and Eskom's existing 400kV power lines (east) (above).

4.2 Databases, literature survey and maps

Literature relating to the pre-historical and the historical unfolding of the Lephalale region was reviewed. This review focused primarily on the pre-history as well as the Historical Period of the Lephalale region. It also provided a chronological history of the region stretching from the pre-historical to the historical period which contributes to a better understanding of the identity and meaning of heritage sites which occur in and near the Eskom Project Area.

The desktop study also involved consulting heritage data banks maintained at institutions such as the Limpopo Provincial Heritage Resources Agencies, the Archaeological Data Recording Centre at the National Flagship Institute (Museum Africa) in Pretoria and the national heritage resources register at the South African Heritage Resources Agency (SAHRIS) in Cape Town.

In addition, the Eskom Project Area was also studied by means of maps on which it appears (2326 Lephalale; 1:250 000 map & 2327 Ellisras 1:50 000 topographical map & Google imagery).

4.3 Assumptions and limitations

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

If any heritage resources of significance is exposed during the Eskom 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 authorization (permits) from SAHRA to conduct the mitigation measures.

4.4 Some remarks on terminology

Terms that may be used in this report are briefly outlined below:

- **Conservation:** The act of maintaining all or part of a resource (whether renewable or non-renewable) in its present condition in order to provide for its continued or future use. Conservation includes sustainable use, protection, maintenance, rehabilitation, restoration and enhancement of the natural and cultural environment.
- **Cultural resource management:** A process that consists of a range of interventions and provides a framework for informed and value-based decision-making. It integrates professional, technical and administrative functions and interventions that impact on cultural resources. Activities include planning, policy development, monitoring and assessment, auditing, implementation, maintenance, communication, and many others. All these activities are (or will be) based on sound research.
- **Cultural resources:** A broad, generic term covering any physical, natural and spiritual properties and features adapted, used and created by humans in the past and present. Cultural resources are the result of continuing human cultural activity and embody a range of community values and meanings. These resources are non-renewable and finite. Cultural resources include traditional systems of cultural practice, belief or social interaction. They can be, but are not necessarily identified with defined locations.
- **Heritage resources:** The various natural and cultural assets that collectively form the heritage. These assets are also known as cultural and natural resources. 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.

- In-Situ Conservation: The conservation and maintenance of ecosystems, natural habitats and cultural resources in their natural and original surroundings.
- Iron Age: Refers to the last two millennia and 'Early Iron Age' to the first thousand years AD. 'Late Iron Age' refers to the period between the 16th century and the 19th century and can therefore include the Historical Period.
- Maintenance: Keeping something in good health or repair.
- 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 Project Area, to the first appearance or use of 'modern' Western writing brought to the Eastern Highveld by the first Colonists who settled here from the 1840's onwards.
- Preservation: Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource.
- 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.
- Protected area: A geographically defined area designated and managed to achieve specific conservation objectives. Protected areas are dedicated primarily to the protection and enjoyment of natural or cultural heritage, to the maintenance of biodiversity, and to the maintenance of life-support systems. Various types of protected areas occur in South Africa.
- Reconstruction: Re-erecting a structure on its original site using original components.

- Replication: The act or process of reproducing by new construction the exact form and detail of a vanished building, structure, object, or a part thereof, as it appeared at a specific period.
- Restoration: Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components.
- 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).
- Sustainability: The ability of an activity to continue indefinitely, at current and projected levels, without depleting social, financial, physical and other resources required to produce the expected benefits.
- Translocation: Dismantling a structure and re-erecting it on a new site using original components.
- Project Area: refers to the area (footprint) where the developer wants to focus its development activities (refer to Figure 3).
- Phase I studies refer to surveys using various sources of data in order to establish the presence of all possible types and ranges of heritage resources in any given Project Area (excluding paleontological remains as these studies are done by registered and accredited palaeontologists).
- 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 human remains and the relocation of graveyards, etc. Phase II work involve permitting processes,

require the input of different specialists and the co-operation and approval of SAHRA.

5 CONTEXTUALISING THE ESKOM PROJECT AREA

A brief overview of pre-historical and historical information below contextualises the Eskom Project Area. This information is necessary to understand the meaning and significance of heritage resources which may exist in the Eskom Project Area.

5.1 The Stone Age (hunter gatherers)

Stone Age sites are marked by stone artefacts that are found scattered on the surface of the earth or as parts of deposits in caves and rock shelters. The Stone Age is divided into the Early Stone Age (ESA) (covers the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (MSA) (refers to the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (LSA) (the period from 22 000 years ago to 200 years ago).

The LSA is also associated with rock paintings and engravings which were done by the San, Khoi Khoi and in more recent times by Iron Age farmers.

In and near the Eskom Project Area

Hunter gatherers from the Stone Age, including the few who left rock paintings during the last 20 000 years in the mountainous Waterberg to the east of the Project Area, occurred throughout the larger region from as early as the MSA. MSA and LSA tools were observed along the banks of the Mokolo (Mogol) River and on farms in the Waterberg Mountains (Van Der Ryst 1996, 1998).

Surveys, although limited, have recorded scattered finds of Stone Age sites, rock paintings and engravings in the larger region. At least one rock shelter (Olieboompoort) with MSA and LSA assemblages in the mountainous Waterberg has been researched. At Nelsonskop, a small protrusion near the Grootegeluk Mine engravings of animal spoor, cupules and other incisions were found on a face of this kopje (Van Der Ryst 1998).

Most of the Stone Age sites can be classified as open (surface) sites which imply that most of the artefacts occur 'out of context'. (Such assemblages have less significance than artefact types which occur in closed stratigraphic layers). MSA and LSA collections also occur in rock shelters and caves. Hunter-gatherers preferred caves as settlements from the MSA onwards as these shelters provided warmth and safety. No mountains or ridges with caves occur in the Project Area.

Small protrusions or hills such as Nelsonskop and Bulkop - outside the Eskom Project Area - may have served as outlook points or places where rituals (such as rain making ceremonies) may have been conducted (Van Schalkwyk 2005).

Rock shelters and caves with rock paintings are common in the Waterberg Mountains to the south of the Eskom Project Area.

5.2 The Iron Age (earliest farmers)

Hunter-gatherers were followed by the first agro-pastoralists who lived in semi-permanent villages and who practised metal working during the last two millennia, the so-called Iron Age. The Iron Age is usually divided into the Early Iron Age (EIA) (covers the 1st millennium AD) and the Later Iron Age (LIA) (covers the first 880 years of the 2nd millennium AD).

Whilst the EIA is marked by small scattered sites with (elaborately) decorated pottery and in many instances with iron smelting, LIA sites may occur in clusters covering large tracks of land constituting cultural landscapes. These sites are mostly marked by stone walls and (undecorated) pottery. Metal working during the LIA occurs when this activity has attained specialised status. Historical links between LIA complexes and communities close to the sites can usually be pointed out. (This provides opportunities for oral traditions, cultural landscapes and aspects of living [tangible and intangible] heritage to be investigated as well).

EIA sites are limited to the northern and eastern parts of the country whilst LIA farmers' settlements cover a large part of South Africa – except the far western low-summer rainfall region and the southern extreme of the country.

In and near the Eskom Project Area

EIA farmers utilized pieces of land close to the banks of major rivers, such as the Limpopo or Mogol outside the Eskom Project Area or near confluences between major rivers and small streams. Here, some farmers planted crops while small numbers of cattle and small stock were kept if grazing and shrubbery allowed for stock keeping. Woods, such as the Vaalbos (*Terminalia Sericea*), growing on sand veldt, was fired to make charcoal which was used to smelt iron ores. Magnetite ore was collected from the surface (if available) or was carried long distances to smelting sites. Large scale iron smelting with substantial evidence for habitation occurred at Diamant, south of the Eskom Project Area during the EIA (Pistorius 2007, 2009).

EIA as well as LIA communities did not prefer the flat outstretched sand veldt of the Eskom Project Area 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 the region (Pistorius 2007, 2009).

Late Iron Age occupation on the scale that marked the Ga-Seleka and Shongwane areas to the north-east of Lephalale did not occur in the Eskom Project Area. Here, the Ga-Seleka and Batlhalerwa established spheres of influence. The mountain stronghold Bobididi near Villa Nora was occupied by the Batlhalerwa and illustrates the kind of sites which were used by second millennium farming communities (Pistorius 2007, 2009).

The absence of mountains and kopjes and therefore stone that was used as building material during the LIA is a conspicuous feature of the Eskom Project Area.

Nelsonskop is the only topographical feature in the Eskom Project Area,



Figure 4- Nelsonskop, a small sandstone kopje to the north of the Eskom Project Area and the Groottegeluk open cast mine. Limited stone tools and potsherds occur along the base of the kopje. This kopje together with the limited number of kopjes on the vast plains to the west of the Waterberg probably had some ideological meaning to Later Stone Age, Iron Age and historical communities (above).

No historically known tribal groupings or clans occupied the Eskom Project Area during the LIA or the Historical Period. Communities known as the ‘Vaalpense’ (mixed Negroid and San) lived further to the south and their descendants can still be found. These communities were nomadic hunters and herders before they became employed by the first colonial farmers. As far as it is known they did not occupy large permanent settlements that have left traces on the landscape (Van Schalkwyk 1985).

Some LIA and historical farmers left rock paintings much younger than those which date from the Stone Age. These phenomena were restricted to areas occupied by

historically known communities and therefore probably did not occur in the Eskom Project Area.

5.3 The Historical Period

The restricted hunting and farming practises supported by Stone and Iron Age communities were intensified and expanded when the first colonial hunters and traders, followed by colonial settlers arrived in the region from the second half of the 19th century. Whilst little has been recorded about these early farmers in the Eskom Project Area some research has been done on the colonial farmers who occupied the Waterberg Mountain Bushveld further to the east.

In and near the Eskom Project Area

Farm houses with outbuildings, family graveyards, cattle posts, outlying bore holes with drinking troughs and grazing fields lead to the establishment of cultural landscapes of some proportions in the region from the second half of the 19th century. 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, as well as farm stores along dirt roads in the Eskom Project Area, may be older than sixty years.

However, as elsewhere in the larger region, farm homesteads with associated infrastructure and activity areas have been transformed as a result of changing subsistence patterns. Cattle ranching and crop planting have in many instances, been replaced by game farming (Pistorius 2007, 2009).

The opening of the Onverwacht open cast coal mine to the west of the Eskom Project Area in 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 Matimaba Power Station to

generate electricity. A second power station, Medupi, is currently being constructed to the west of the Eskom Project Area (Erasmus 1995).

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 during exploration for water. The coal fields around Lephalale represent as much as one half of the country's coal reserves (Pistorius 2007, 2009).

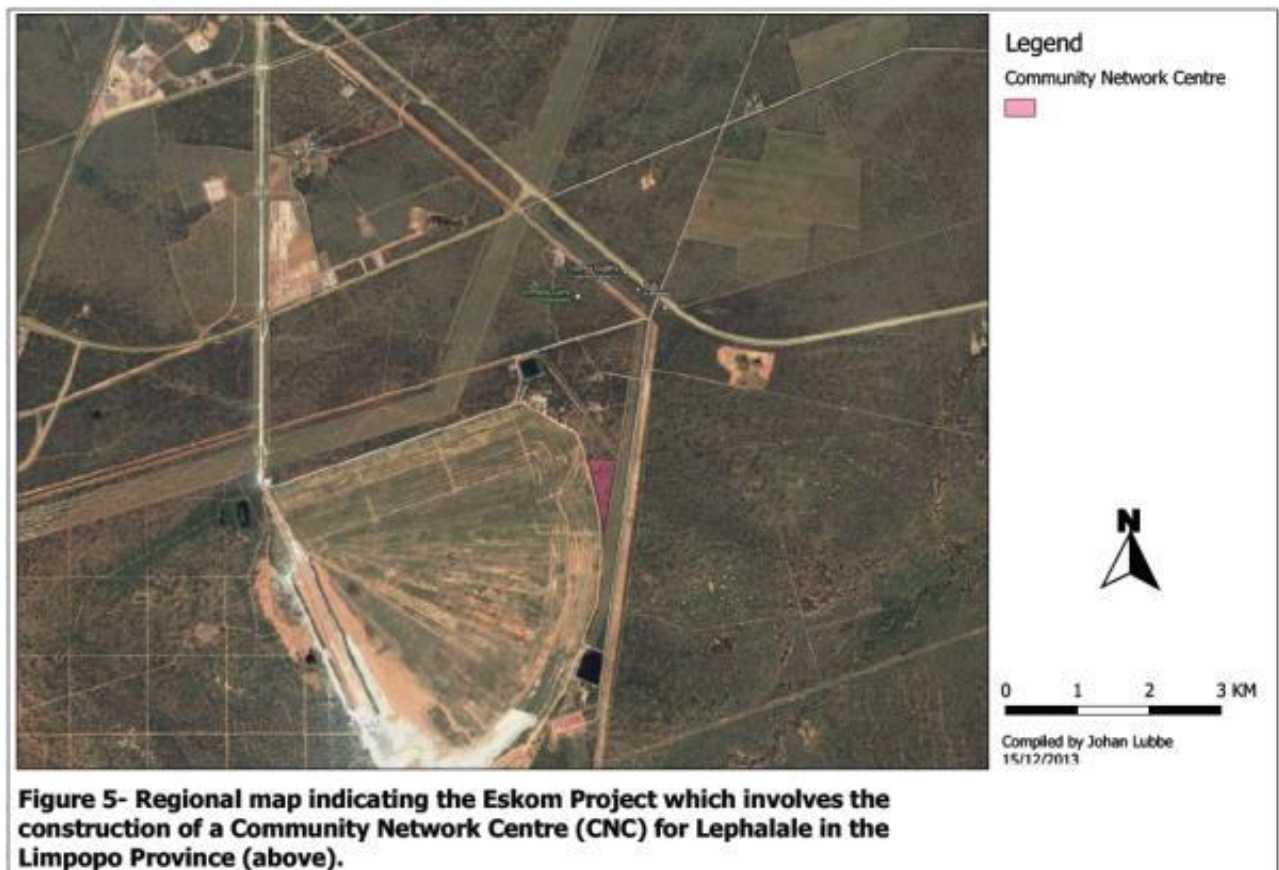
Historically significant structures older than sixty years such as farm houses, sheds and other secondary infrastructure occur throughout the region and include family graveyards as well as informal cemeteries used by farm labourers.

6 THE PHASE I HERITAGE IMPACT ASSESSMENT STUDY

6.1 The field survey

The Phase I HIA study for the proposed Eskom Project did not reveal the presence of any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) in the Eskom Project Area.

The Phase I HIA study is now briefly discussed and illustrated with photographs.





Figures 6 & 7- The Eskom Project Area viewed from the north indicates its position which is wedged between Eskom's existing power lines and the ash dump which is associated with the Matimba power station (above). The Eskom Project Area viewed along its length from the north to the south between Eskom's existing power lines and the Matimba ash dump (below).





Figures 8 & 9- The northern part of the Eskom Project Area holds the largest part of pristine veld as the project area narrows towards the south (above). A wide variety of trees grow in the northern part of the Eskom Project Area - between the Matimba ash dump and Eskom's existing power lines (below). However, no heritage resources were observed in this part of the project area.





Figures 10 & 11- The central and southern parts of the Eskom Project Area resemble the northern part and both are covered with stands of trees and an open grass cover (above and below). No heritage resources of significance were observed in these parts of the project area.





Figures 12 & 13- The surface of the Eskom Project Area is covered with ash which was blown from the ash dump which is situated adjacent to the Eskom Project Area (above and below).

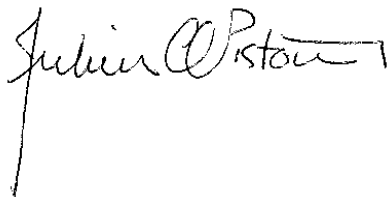


7 CONCLUSION AND RECOMMENDATIONS

The Phase I HIA study for the proposed Eskom Project did not reveal the presence of any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) in the Project Area.

There is consequently no reason from a heritage point of view why the development of the Eskom Project should not continue.

If any heritage resources of significance is exposed during this development 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.



DR JULIUS CC PISTORIUS

Archaeologist & Heritage Consultant

Member ASAPA

8 SELECT BIBLIOGRAPHY

Bergh, J.S. (red.) 1998. *Geskiedenisatlas van Suid Afrika. Die vier noordelike provinsies*. J.L. van Schaik: Pretoria.

Biemond, W.M. 2002. *The Iron Age sequence around a Limpopo river floodplain on Basinghall Farm, Tuli Block, Botswana*. Unpublished: University of Pretoria M.A. research proposal.

Erasmus, B.P.J. 1995. *Oppad in Suid Afrika. 'n Gids tot Suid Afrika, Streek vir Streek*. Jonathan Ball Uitgewers Bpk.

Inskeep, R.R. 1978. *The peopling of Southern Africa*. David Philip: Cape Town.

Mason, R. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Naude, M. 1990. Die Transvaalse Boerewoning. *Africana Society of Pretoria* (8): 46-49.

Naude, M. 2004. Oral evidence on the construction of vernacular farm dwellings in the Waterberg (Limpopo Province). *South African Journal of Cultural History*. 18(1): 34-61

Pistorius, J.C.C. 2002. *A Phase I Heritage Impact Assessment (HIA) report for Eskom's proposed new Alpha Project near Lephalale in the Limpopo Province of South Africa*. Unpublished report for Enviro Excellence Services.

Pistorius, J.C.C. 2004. *A Phase I Heritage Impact Assessment (HIA) study for the proposed new Tambotie Private Game Rererve on the farms Jonkershoek 580LQ and Bellevue 582LQ in the Limpopo Province of South Africa*. Unpublished report for Landscape Dynamics

Pistorius, J.C.C. 2005. *A Phase I Heritage Impact Assessment (HIA) study for four eco-type residential developments on the farms Wolmunster 108LQ, Rustenburg*

105LQ, New Lands 109LQ and Alpha 103LQ near Lephalale (Ellisras) in the Limpopo Province of South Africa. Unpublished report for Landscape Dynamics

Pistorius, J.C.C. 2003 -2006. Various Phase I HIA studies for Eskom's rural power lines occurring on the following farms: Geelbeksvley, Rob Roy, Other World, Wentzel, Ouhoek. Vaalpenskraal, St Agnes and Dwars-in-de-Weg.

Pistorius, J.C. C. 2007. *A Phase I Heritage Impact Assessment study for Anglo Coal's proposed 37 exploratory gas wells project on the farm Nooitgedacht 403LQ north-west of Lephalale in the Limpopo Province of South Africa.*

Pistorius, J. C.C.. 2007. *A Phase I Heritage Impact Assessment study for the Eskom Mmamabula Delta Project near Lephalale in the Limpopo Province of South Africa.* Unpublished report prepared for PBA International.

Pistorius, J.C.C.. 2009. *A Phase I Heritage Impact Assessment study for Eskom's proposed new 6x675kV power lines running from the Delta (Masa) Substation in Lephalale to the Epsilon (Selomo) Substation in the Gauteng Province of South Africa.* Unpublished report prepared for PBA International.

Pistorius, J.C.C.. 2009. *A Phase I Heritage Impact Assessment study for Eskom's proposed new 132kV power line running between the Waterpoort and the Toulon Substations near Lephalale in the Limpopo Province of South Africa.* Unpublished report prepared for Landscape Dynamics.

Pistorius, J.C.C.. 2011. *A Phase I Heritage Impact Assessment study for Eskom's proposed new 132kV power line between the Waterberg and the Munnik Substations near Lephalale in the Limpopo Province of South Africa.* Unpublished report prepared for Shumani She Specialists .

Van Der Ryst, M. 1996. *The later Stone Age prehistory of the Waterberg, with special reference to Goergap shelter.* Unpublished MA thesis. University of the Witwatersrand.

Van Der Ryst, M. 1998. The Waterberg Plateau in the Northern Province, Republic of South Africa, in the Later Stone Age. *BAR International Series* 715.

Van Der Ryst, M., Lombard, M., & Biemond, W. 2004. Rocks of potency: engravings, cupules from the Dovedale Ward, southern Tuli Block, Botswana. *South African Archaeological Bulletin*, 59 (179), p1-11.

Van Schalkwyk, J. 1985. Vaalperse: Verwarring en waarheid. *Suid Afrikaanse Tydskrif vir Etnologie*. 8(4), 146-153.

Van Schalkwyk, J. 2005. *A Phase Heritage Impact Assessment for Eskom's proposed new Matimba B Power Station near Lephalale in the Limpopo Province of South Africa*. Unpublished report prepared for Bholweki Environmental and Eskom Megawatt Park.

APPENDIX A: DETAILS OF THE SPECIALIST

Profession: Archaeologist, Museologist (Museum Scientists), Lecturer, Heritage Guide Trainer and Heritage Consultant

Qualifications:

BA (Archaeology, Anthropology and Psychology) (UP, 1976)

BA (Hons) Archaeology (distinction) (UP, 1979)

MA Archaeology (distinction) (UP, 1985)

D Phil Archaeology (UP, 1989)

Post Graduate Diploma in Museology (Museum Sciences) (UP, 1981)

Work experience:

Museum curator and archaeologist for the Rustenburg and Phalaborwa Town Councils (1980-1984)

Head of the Department of Archaeology, National Cultural History Museum in Pretoria (1988-1989)

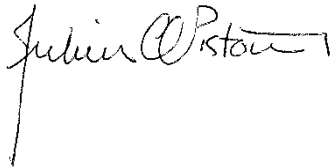
Lecturer and Senior lecturer Department of Anthropology and Archaeology, University of Pretoria (1990-2003)

Independent Archaeologist and Heritage Consultant (2003-)

Accreditation: Member of the Association for Southern African Professional Archaeologists. (ASAPA)

Summary: Julius Pistorius is a qualified archaeologist and heritage specialist with extensive experience as a university lecturer, museum scientist, researcher and heritage consultant. His research focussed on the Late Iron Age Tswana and Lowveld-Sotho (particularly the Bamalatji of Phalaborwa). He has published a book on early Tswana settlement in the North-West Province and has completed an unpublished manuscript on the rise of Bamalatji metal workings spheres in Phalaborwa during the last 1 200 years. He has written a guide for Eskom's field personnel on heritage management. He has published twenty scientific papers in academic journals and several popular articles on archaeology and heritage matters. He collaborated with environmental companies in compiling State of the Environmental Reports for Ekurhuleni, Hartebeespoort and heritage management plans for the Magaliesberg and Waterberg. Since acting as an independent consultant he has done approximately 800 large to small heritage impact assessment reports. He has a longstanding working relationship with Eskom, Rio Tinto (PMC), Rio Tinto (EXP), Impala Platinum, Angloplats (Rustenburg), Lonmin, Sasol, PMC, Foskor, Kudu and Kelgran Granite, Bafokeng Royal Resources etc. as well as with several environmental companies.

APPENDIX B: DECLARATION OF INDEPENDENCE

<p>I, Julius CC Pistorius, declare that:</p> <ul style="list-style-type: none"> • I act as the independent environmental practitioner in this application • I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant • I declare that there are no circumstances that may compromise my objectivity in performing such work; • I have expertise in conducting environmental impact assessments, including knowledge of the National Heritage Resources Act (No 25 of 1999) and any guidelines that have relevance to the proposed activity; • I will comply with the Act, regulations and all other applicable legislation; • I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application; • I have no, and will not engage in, conflicting interests in the undertaking of the activity; • I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority; • I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application; • I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report; • I will keep a register of all interested and affected parties that participated in a public participation process; and • I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not • all the particulars furnished by me in this form are true and correct; • will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and • I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act. <p>Disclosure of Vested Interest</p> <p>I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010.</p>
<p></p> <p>_____ Signature of the environmental practitioner: Private Consultant</p> <p>_____ Name of company: 5 Augustus 2013</p> <p>_____ Date:</p>
<p>_____ Signature of the Commissioner of Oaths:</p> <p>_____ Date:</p> <p>_____ Designation:</p>

