

Prepared for:

SAVANNAH ENVIRONMENTAL (PTY) LTD

AND

ESKOM TRANSMISSION

**A HERITAGE SCOPING ASSESSMENT REPORT FOR THE
ESKOM TSHWANE STRENGTHENING PROJECT IN
CENTURION AND TSHWANE IN THE GAUTENG PROVINCE
OF SOUTH AFRICA**

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EXECUTIVE SUMMARY

Eskom transmission intends to implement the Tshwane Strengthening Project in the Gauteng Province of South Africa. The Tshwane Strengthening Project involves the following:

- The construction of a new 400kV transmission power line from the Phoebus Substation to the Kwagga Substation (approximately 30km).
- The construction of the new Phoebus Substation adjacent to the existing Hangklip (Phoebus) Substation.
- The construction of a new 400kV loop-in transmission power line from the existing 400kV Apollo/Dinaledi power line to feed the Phoebus Substation (approximately 10km).
- The extension of the existing Verwoerdburg Substation.
- Construction of 2x400 kV turn-in and turn-out power lines from the Apollo/Pluto power line to the Verwoerdburg Substation.

Eskom's proposed Tshwane Strengthening Project may impact on South Africa's 'national estate' which comprises a wide range of heritage resources, some of which may occur in Tshwane Strengthening Project Area (see Part 2, 'The National Estate'). Therefore, ultimately, a Phase I Heritage Impact Assessment (HIA) has to be undertaken for the Tshwane Strengthening Project as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999).

This Heritage Scoping report precedes the Phase I HIA study as it outlines the following:

- The possible presence of certain types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Part 3) which may occur in the Project Area by means of consulting archaeological data bases, literary sources and earlier HIA studies of the Project Area (see Part 3, 'Methodology').
- The scope, objectives and approach for the Phase I HIA for the Tshwane Strengthening Project during the Environmental Impact Assessment (EIA) phase in order to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999) as well as with the objectives of the EMP report that has to be completed for the Tshwane Strengthening Project.

Possible types and ranges of heritage resources in the Project Area

Considering the pre-historical and historical context for the Project Area at large it is clear that the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) may occur in the Project Area, namely:

Tshwane in the north

- Stone Age sites or scatters of stone tools may occur near eroded areas or dongas, near small outcrops and along older beds and floodplains of rivers.
- Late Iron Age stone walled settlements along the norite hills near Garankuwa.
- Fortifications such as blockhouses and a fort on the Daspoortrand dating from the South African War (1899-1902).
- Farm homesteads with associated infrastructure such as sheds and outbuildings, family graveyards or informal graveyards which date from the historical period.
- Formal and informal graveyards on the outskirts of towns across the Project Area.
- Individual buildings or other structures which may be older than sixty years and which qualify as heritage resources

Centurion in the south

- Farm homesteads with associated outbuildings, family graveyards or informal graveyards which date from the historical period.
- Informal graves and graveyards within the confines of the Project Area.

Section 38 of the National Heritage Resources Act (No25 of 1999)

The proposed Tshwane Strengthening Project may have an impact on any of the possible types and ranges of heritage resources ('national estate') that may occur in the Project Area. Therefore, a Phase I HIA for the Tshwane Strengthening Project Area has to be undertaken to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999). A Phase I HIA study has the following scope and objectives:

- (a) 'The identification and mapping of all heritage resources in the area affected;
- (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of development on such heritage resources;

- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development'.

The Phase I HIA study

The Phase I HIA study will consist of a reconnaissance of the Project Area with a vehicle while sensitive spots and areas will be surveyed on foot. The Phase I HIA study will also include the geo-referencing, mapping, photographing and describing of any heritage resources and graveyards which may exist in or near the Project Area.

The significance of these heritage resources will be determined by means of stipulations derived from the National Heritage Resources Act 1999 (No 25 of 1999) and by means of criteria relating to the types and ranges of heritage resources that may be affected by the Tshwane Strengthening Project.

Impacts on the heritage resources may be the result of the physical or visual affects which the new substation or power lines may have on heritage resources or cultural heritage landscapes. The significance of these impacts will be determined by means of assessing criteria such as the nature, extent, duration, probability and severity of impacts on the various types and ranges of heritage resources.

Mitigation measures will be proposed for those heritage resources that may be affected by the Tshwane Strengthening Project. Most of these mitigation measures are generally referred to as Phase II investigations. The Phase I HIA report will also outline management proposals for any heritage resources that may continue to exist unaffected in the Project Area in the short-, medium- or long-term.

Protecting and managing the national estate

The Phase I HIA study will provide mitigation and management measures for heritage resources that may be affected (demolished, altered, removed) during the construction, operation or maintenance of the Tshwane Strengthening Project.

The protection and management of the national estate usually occurs through formal and general protection measures.

- Formal protection involves identifying (or nominating) national and provincial heritage sites; designating areas of land as protected areas; providing provisional protection to protected areas or heritage resources; compiling and maintaining heritage registers (for Grade II and Grade III heritage resources); designating heritage areas in order to protect places of environmental or cultural interest as heritage sites and declaring objects/collections of objects as a heritage object(s).
- General protection of heritage resources provides for control in the importation of foreign heritage resources; prevention of the destruction/altering of heritage resources older than 60 years; special measures in dealing with archaeological/paleontological material and meteorites; conserving and caring for burial grounds and graves; protecting public monuments and memorials and requiring developers to implement heritage resources management plans for various categories of development.

Mitigation measures (Phase II studies) that may be applied to any of the possible types and ranges of heritage resources that may be affected in the Project Area will involve some of those listed under 'general protection'.

Phase II investigations

Phase II studies include in-depth heritage studies and vary according to the types and ranges of heritage resources that may be affected. These studies include the documentation of sites dating from the Stone Age, Iron Age and the Historical Period by means of mapping (surveying), excavating, photographing and describing archaeological sites. Excavations of archaeological sites could be followed by laboratory work when archaeological collections have to be studied and analysed.

Phase II work may also include the documenting of rock art, engravings or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation and relocation of graves and graveyards; the collection or excavation of paleontological samples, etc. and may require the input of different types of specialists.

Phase II work requires permission from the Provincial Heritage Resources Authority (PHRA) who would provide the necessary permits authorising the undertaking of Phase II heritage work. Phase II investigations are done before construction activities - that may affect heritage resources - are undertaken.

Heritage management programmes must be visionary and must ensure that possible cultural, historical or cultural resources in the Project Area are conserved and managed in the short-, medium- or long-term.

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1 INTRODUCTION

Eskom's Transmission is currently supplying the Tshwane municipality with electricity. However, Tshwane has applied for new supply points as well as a step load increase from Eskom. Consequently, the City of Tshwane Electricity Supply Scheme which will involve the construction of four new substations, namely: Eskom Phoebus (400/275/132 kV) Substation; Eskom Verwoerdburg (400/275/132kV) Substation; Eskom Anderson (400/275/132kV) Substation and the Tshwane (400/132kV) Wildebeest Substation will be implemented.

The Tshwane Strengthening Project involves some of these components as well as the construction of new transmission power lines. This scoping document addresses the Tshwane Strengthening Project with regard to heritage aspects and will be followed by a Phase I Heritage Impact Assessment (HIA) study for the Tshwane Strengthening Project as this project may impact on South Africa's 'national estate' which comprises a wide range of heritage resources, some of which may occur in Tshwane Strengthening Project Area (hereafter referred to as the Project Area) (see Part 2, 'The National Estate').

Therefore, a Phase I Heritage Impact Assessment (HIA) has to be undertaken for the Tshwane Strengthening Project as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999). This Heritage Scoping report precedes the Phase I Heritage Impact Assessment (HIA) study for the Tshwane Strengthening Project and outlines the following:

- The historical context of the Project Area as well as the possible presence of certain types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Part 2) which may occur in the Project Area by means of consulting archaeological data bases, literary sources, maps and earlier HIA studies (see Part 3, 'Methodology').
- The scope, objectives and approach for the Phase I HIA for the Tshwane Strengthening Project during the Environmental Impact Assessment (EIA)

phase in order to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999) as well as with the objectives of the EMP report that has to be completed for the Tshwane Strengthening Project.

2 THE NATIONAL ESTATE

Section 3 of the National Heritage Resources Act (No 25 of 1999) lists a wide range of heritage resources that qualify as part of South Africa's 'national estate'. When conducting a Heritage Impact Assessment (HIA) study the following types and ranges of heritage resources have to be identified:

- (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.

Section 3 of the National Heritage Resources Act, Act No. 25 of 1999 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; and
- (i) sites of significance relating to the history of slavery in South Africa.

3 METHODOLOGY

This Heritage Scoping Assessment report was conducted by means of consulting archaeological (heritage) data bases; studying maps of the Project Area and doing a brief survey of literature relating to the pre-historical and historical context of the Project Area.

3.1 Archaeological data bases

Archaeological data bases kept at heritage institutions such as the African Window Museum in Pretoria (Tshwane), the South African Heritage Resources Authority (SAHRA) (Cape Town [national]) and the Gauteng Heritage Resources Authority (LIHRA) were consulted to establish if any heritage resources of significance occur in or near the Project Area.

3.2 Maps

The 1: 50 000 topographical map and the 1: 250 000 map outlining the Project Area were studied for any possible heritage resources in and near the Project Area. The author is not totally unacquainted with the larger Project Area as he has undertaken several heritage impact assessment studies for power lines as well as for town development schemes in and near the Project Area (see Part 6, 'Select Bibliography').

3.3 Survey of literature

A brief survey of literature relating to the pre-historical and cultural history of the region was undertaken in order to contextualise the Project Area (see Part 4, 'The Project Area' and Part 6, 'Select Bibliography').

3.4 Limitations and assumptions

The Project Area covers a considerable piece of land and was not covered in full during the scoping assessment phase for the Tshwane Strengthening Project. Heritage resources therefore may have been missed during the Heritage Scoping Survey. The Phase I HIA study will include a survey with a vehicle and a survey of sensitive areas on foot and will identify the presence of heritage resources with a greater degree of accuracy than this scoping assessment study.

3.5 Some remarks on terminology

Terminologies that may be used in this report are briefly outlined in Box 1.

Box 1. 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 project area, to the first appearance or use of 'modern' Western writing brought to Tshwane and Centurion by the first Colonists who settled in this area after c. 1840.

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 terms 'Early Iron Age' and 'Late Iron Age' respectively refer to the periods between the first and the second millenniums AD. The 'Late Iron Age' refers to the period between the 17th and the 19th centuries and 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 '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 THE TSHWANE STRENGTHENING PROJECT

4.1 Nature and extent of the project

The Tshwane Strengthening Project involves the following developmental components:

- The construction of a new 400kV transmission power line from the Phoebus Substation to the Kwagga Substation (approximately 30km).
- The construction of the new Phoebus Substation adjacent to the existing Hangklip (Phoebus) Substation.
- The construction of a new 400kV loop-in transmission power line from the existing 400kV Apollo/Dinaledi power line to feed the Phoebus Substation (approximately 10km).
- The extension of the existing Verwoerdburg Substation.
- Construction of 2x400 kV turn-in and turn-out power lines from the Apollo/Pluto power line to the Verwoerdburg Substation (approximately 6km)..

4.2 The Project Area

Considering the various components of the Tshwane Strengthening Project it is clear that the project will be developed in two geographical separate areas, namely:

- In Tshwane in the north where the Phoebus/Kwagga components of the project will be developed (2528CA Pretoria; 1: 50 000 topographical map).
- In Centurion in the south where the Verwoerdburg/Apollo components of the project will be developed (2528CC Verwoerdburg; 1:50 000 topographical map).

The historical context of these two areas is now briefly outlined in order to demonstrate the heritage character of each of these two areas within the larger Project Area in which the Tshwane Strengthening Project will be realised.

4.2.1 Tshwane in the north

Contextual evidence that serves as background to this development component of the Tshwane Strengthening Project includes the following: the Stone Age; the earliest farmers and stone builders; the arrival of the first colonists and the South African War (1899-1902).

4.2.1.1 Stone Age sites

The Stone Age is divided into the Early Stone Age (covers the period from 2.5 million years ago to 250 000 years ago), the Middle Stone Age (refers to the period from 250 000 years ago to 22 000 years ago) and the Late Stone Age (the period from 22 000 years ago to 200 years ago).

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. Heritage surveys up to now have recorded Stone Age sites in the project area but no rock paintings or engravings near the Project Area. These, however do occur in or near the Magaliesberg.

4.2.1.2 The earliest farmers

The Iron Age is associated with the first agro-pastoralists who lived in semi-permanent villages and who practised metal working during the last two millennia. The Iron Age is usually divided into the Early Iron Age (covers the 1st millennium AD) and the Later Iron Age (covers the first 880 years of the 2nd millennium AD).

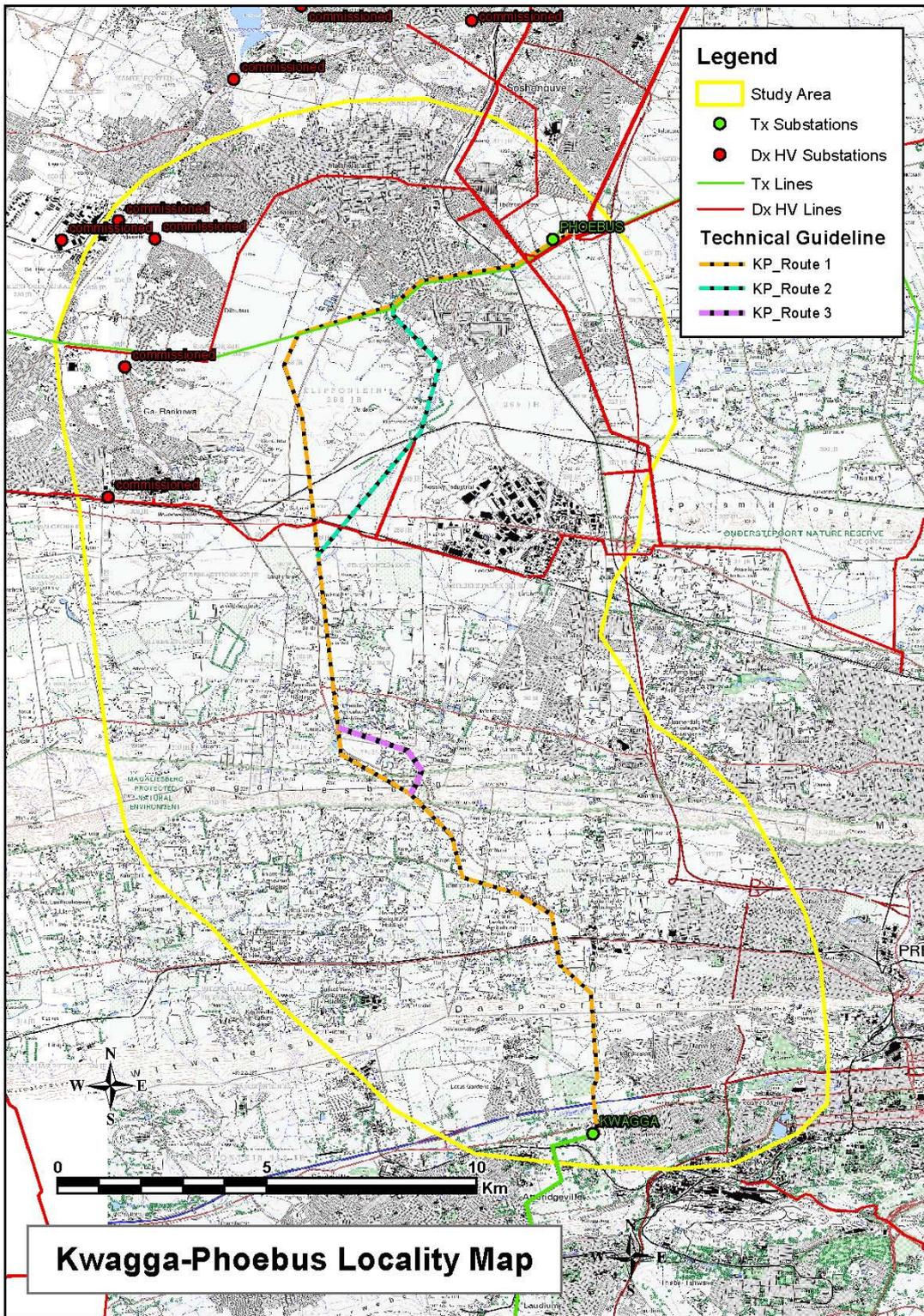


Figure 1- The northern components of the Tshwane Strengthening Project (above).

The Project Area was probably not occupied by Early Iron Age communities. However, large numbers of stone walled sites that were occupied by Late Iron Age farming communities such as the Kgatla, Kwena and Ndebele occur in the norite kopjes that run from the east (near Onderstepoort) to the west (Pilanesberg) across the Project Area.

4.2.1.3 The colonists and the historical period

Historical towns close to the Project Area include Garankuwa and Pretoria. Pretoria-North is a later extension of the original city of Pretoria.

Garankuwa, together with Mabopane and Soshanguve, developed as a result of the policy of apartheid during the 1950's and 1960's and Garankuwa used to be parts of the Bophuthatswana 'homeland'. Garankuwa was opened in 1966 when 2 000 homes were completed. Development plans provided for a population of some 120 000 people. The name honours a former inhabitant of the area and is Tswana for 'with the master of the sheep'.

The first colonists settled near Pretoria in places such as Tierpoort, Garsfontein and Swawelpoort near the Bronberge in the second half of the 19th century. Pretoria was established on 16 November 1855 to meet the need for a central meeting place for the disunited Voortrekker republics. At first Pretoria developed slowly, and for many years maintained a rural atmosphere. The first mail coach service was established in 1864, telegraph communications followed in 1877 and in 1893 the railway line from Elandsfontein (Germiston) reached Pretoria. The Delagoa Bay railway line was opened on 1 January 1895 and the railway line to Pietersburg on 1 May 1899.

4.2.1.4 The Witwatersberge (Daspoortrand)

Eskom's proposed new 400kV Phoebus/Kwagga power line crosses the Daspoortrand to the north of the Kwagga Substation. This low mountain range together with the Witwatersberge and the Magaliesberg became an important battlefield during the South African War (1899-1902). The British used these mountains as natural barriers against which mobile Boer commandoes could be driven and trapped and the Boer commandoes, who knew the terrain well, used the mountainous terrain to ambush the British. The British defensive system included blockhouses and redoubts which were established along the Magaliesberg, the Witwatersberg and Daspoortrand.

Approximately 39 lines of blockhouses were established from AD1900 in the Zuid-Afrikaansche Republiek (ZAR). These lines comprised a total of 8 000 blockhouses built over a distance of 3 700 kilometres. Approximately 50 000 soldiers supported by 12 000 labourers built and maintained these structures.

Several blockhouses and at least one fort occur on the Daspoortrand where Eskom intends to establish the proposed 400kv Phoebus/Kwagga transmission line.

4.2.2 Centurion in the south

After leaving the Cape Colony and Natal, and crossing to the north of the Vaal River, some of the earliest Voortrekker communities settled here during the first half of the 19th century. The farm Zwartkop 356JR was part of the original land occupied by the Erasmus family, who settled across a large area, between Wonderboom (Pretoria) in the north and Doringkloof (Centurion) in the south, from c. 1850 onwards. Various members of the Erasmus family occupied this vast tract of land, retaining their presence and influence in this area until the first quarter of the 20th century. The farm homesteads, infrastructure and other

material and non-material contributions that this family made to the larger Pretoria area therefore made a significant contribution to the history, development and heritage of this region.

The southern development components for the Tshwane Strengthening Project are located on the farm Doornkloof 391JP. It is located in close proximity of the former residence of General Jan Smuts (1850-1970) who used to be the prime minister of the Union of South Africa. This residence and its surrounding landscape have been developed into a historical museum complex.

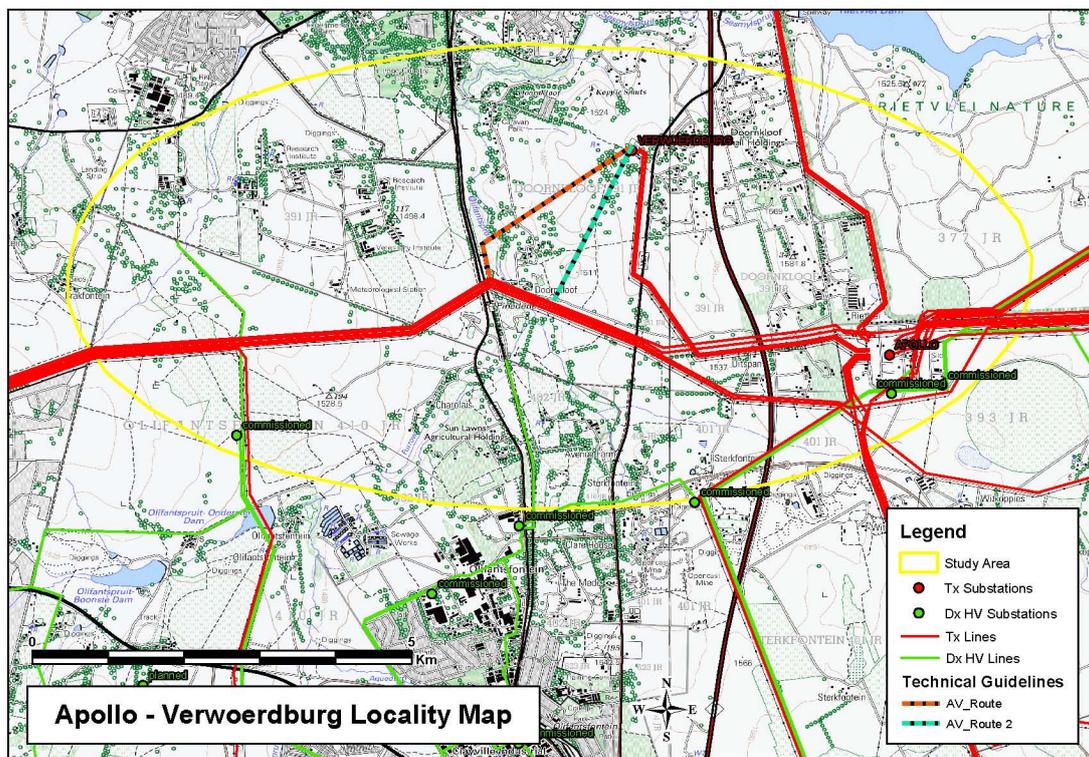


Figure 2- The southern development components of the Tshwane Strengthening Project is located on the historical farm Doornkloof 193JP in Centurion (above).

4.2.2.1 A brief historical overview of Centurion-East

The southern development components of the Tshwane Strengthening Project fall within Centurion-East. Dr. G. M. van der Waal has researched the cultural history of Centurion extensively and has published this information in a brochure entitled 'Settlers, Soldiers and Statesmen'. A brief chronology serves to emphasise the most important events in the prehistory and history of Centurion-East and the Swartkop Country Club (with acknowledgement to CULTMATRIX).

From as early as 200 000 years ago, Stone Age communities occupied the larger Pretoria and Centurion areas.

AD 1200. The earliest evidence of Iron Age communities associated with farming activities such as stock herding and agriculture in the area dates from this time.

1841. The Erasmus family arrived in the area that later became Centurion. Daniël Jacobus Erasmus (1785- ?) settled on the farm Swartkop; Daniël Elardus Erasmus (1815-1875) settled on the farm Doornkloof; and Rasmus Elardus Erasmus (1830-1891) settled on the farm Brakfontein

28 and 29 December 1849. Rev Andrew Murray visited Doornkloof to baptise 126 children and confirm 26 young members of the congregation of the Hervormde Kerk. 'Nagmaal' (the Eucharist) was celebrated the next day.

February 1881. A commando led by D.J. Erasmus (jr) defeated Colonel Gildea, commander of the British Pretoria garrison, at Rooihuiskraal on the farm Brakfontein.

17 October 1889. Alois Hugo Nellmapius (1847-1893) bought the northern and south-eastern part of Doornkloof and called the farm 'Irene', after his daughter Irene (1887-1961).

January 1901. The Irene Concentration Camp was established by the British forces during the Anglo-Boer War on Doornkloof, north of the Hennops River.

17 May 1901. Irene Primary School was started as an extension to the concentration camp activities.

1902. Industrialist J.A. van der Bijl laid out Irene in 337 erven of one acre each. He built a house for himself (it was bought by Dr E.G. Jansen in 1943).

1904. Lyttleton Manor was laid out on the farm Droogegrond. It was probably named after Sir Neville Gerald Lyttleton (1845-1931).

1908. Lyttleton was proclaimed a town.

1921. South Africa's first permanent air force base was established when Zwartkops Air Force Base came into operation.

26 Sept 1945. Lyttleton was placed under the jurisdiction of the Peri-Urban Health Board.

1955. Lyttleton was proclaimed a Village Council.

7 March 1962. Lyttleton received municipal status.

1 July 1964. Irene, Lyttleton, Kloofsig, Clubview and Eldoraigine were incorporated into the municipality of Lyttleton.

20 September 1967. Lyttleton was renamed Verwoerdburg after Dr Hendrik Verwoerd (1901-1966), Prime Minister of South Africa from 1958 to 1966.

1971. The municipal area of Verwoerdburg was enlarged from 6 600 ha to 20 000 ha.

24 July 1985. The Centurion City and Lake complex was opened.

1994. Verwoerdburg changed its name to Centurion.

4.2.2.2 Heritage attractions in Centurion-East

The most important attractions in the eastern parts of Centurion, close to the Project Area, include the following:

- Smuts House was the home of Jan Christiaan Smuts (1870-1950), Anglo-Boer War general, World War II Field Marshall, and prime minister of South Africa.
- At a site close to the Hennops *River*, the earliest white settlers to the area held their first church service in 1849.
- Irene Road with its avenue of pine *trees* has become a landmark in Irene. The avenue contributes to the area's rural atmosphere.
- A natural sinkhole became the last refuge for a group of Batswana people during the upheavals of the *difaqane* period.
- A porcinarium in the area claims to be the first museum in the world dedicated to the pig family. No less than 43% of South Africa's pork industry operates within a radius of 250 kilometres from the museum.
- On the site of the Research Institute for Livestock and Dairy Science there are the foundations of one of three orphanages established after the Anglo-Boer War to cater for children orphaned in the British concentration camps.
- Irene Estates is a fruit and dairy farm established by Hugo Nellmapius during the late 1860's. He named it after his daughter Irene. Businessman J.A. van der Bijl later purchased this farm.

- The Baard House is an authentic part of the original Rasmus Elardus Erasmus farmstead of 1856. The Baard house with its outbuildings, stone walled kraals and dams became the property of the Baard family in 1895.
- The South African Mint and Coin World includes the first mint in the Transvaal (1892) that is still in a working order. There is a museum at the mint, and it is possible to go on tours of the old and the modern mint.
- The Rooihuiskraal national monument site contains a farmstead associated with skirmishes during the First War of Independence (1880-1881).
- Wierda Bridge is the oldest remaining bridge to the north of the Vaal River and was opened in 1892.
- Zwartkops Air Force base was established in 1920 and was the first air force base in South Africa (and the Commonwealth). It now also houses a museum.
- The Air Force Memorial commemorates members of the Air Force killed in the wars in German West Africa (Namibia), Europe, North and East Africa, Rhodesia (Zimbabwe), Angola and Mozambique.
- Centurion Park/Supersport Stadium is the venue of many high-rated cricket matches.
- Verwoerdburg City and Lake was the first waterfront complex to be established in South Africa in 1985. The building of this artificial lake, situated in the bed of the Hennops River (the Six Mile Spruit), initiated rapid development in Centurion.
- The Ossewa Brandwag Garden of Remembrance commemorates the establishment of the Ossewa Brandwag (Guards of the Ox Wagons). Dr J.F.J. (Hans) van Rensburg, leader of the Ossewa Brandwag, is buried here.
- *The Irene Oval* in the central part of Irene is testimony of a long tradition of British suburb design dating from the 18th century.
- The Irene Concentration Camp Cemetery close to the Six Mile Spruit is a national monument. Thousands of women and children died in this camp during the Anglo-Boer War.

- At the Irene Primary School, there is a corrugated iron building which is a relic from the days of the concentration camp when Boer children received rudimentary education here.
- Jansen House was originally built for industrialist J.A. (Bertie) van der Bijl in 1902. Dr J.G. Jansen, then Speaker of Parliament, later purchased the house. His wife Mabel established an art collection, the Jansen Collection.
- The Irene railway station dates from the 1940's and the *Irene Town Hall* dates from 1923, when Ethel van der Bijl laid the cornerstone.
- The Van der Bijl family erected the Cornwall Memorial to commemorate friends who died during World War II.

4.3 Possible types and ranges of heritage resources in the Project Area

Considering the pre-historical and historical context for the Project Area at large it is clear that the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) may occur in the Project Area, namely:

4.3.1 Tshwane in the north

- Stone Age sites or scatters of stone tools may occur near eroded areas or dongas, near small outcrops and along older beds and floodplains of rivers.
- Late Iron Age stone walled settlements along the norite hills near Garankuwa.
- Fortifications such as blockhouses and a fort on the Daspoortrand dating from the South African War (1899-1902).
- Farm homesteads with associated infrastructure such as sheds and outbuildings, family graveyards or informal graveyards which date from the historical period.
- Formal and informal graveyards on the outskirts of towns across the Project Area.

- Individual buildings or other structures which may be older than sixty years and which qualify as heritage resources

4.3.2 Centurion in the south

- Farm homesteads with associated outbuildings, family graveyards or informal graveyards which date from the historical period.
- Informal graves and graveyards within the confines of the Project Area.

5 THE PHASE I HERITAGE IMPACT ASSESSMENT (HIA) STUDY

5.1 Section 38 of the National Heritage Resources Act (No 25 of 1999)

The proposed Tshwane Strengthening Project may have an impact on any of the possible types and ranges of heritage resources ('national estate') that may occur in the Project Area. Therefore, a Phase I HIA for the Tshwane Strengthening Project Area has to be undertaken to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999). A Phase I HIA study has the following scope and objectives:

- (a) 'The identification and mapping of all heritage resources in the area affected;
- (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of development on such heritage resources;
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development'.

5.2 The Phase I HIA study

The Phase I HIA study will consist of a reconnaissance of the Project Area with a vehicle while sensitive spots and areas will be surveyed on foot. The Phase I HIA

study will also include the geo-referencing, mapping, photographing and describing of any heritage resources and graveyards which may exist in or near the Project Area.

The significance of these heritage resources will be determined by means of stipulations derived from the National Heritage Resources Act 1999 (No 25 of 1999) and by means of criteria relating to the types and ranges of heritage resources that may be affected by the Tshwane Strengthening Project.

Impacts on the heritage resources may be the result of the physical or visual effects which new substations or power lines may have on heritage resources or cultural heritage landscapes. The significance of these impacts will be determined by means of assessing criteria such as the nature, extent, duration, probability and severity of impacts on the various types and ranges of heritage resources.

Mitigation measures will be proposed for those heritage resources that may be affected by the Tshwane Strengthening Project. Most of these mitigation measures are generally referred to as Phase II investigations. The Phase I HIA report will also outline management proposals for any heritage resources that may continue to exist unaffected in the Project Area in the short-, medium- or long-term.

5.3 Protecting and managing the national estate

The Phase I HIA study will provide mitigation and management measures for heritage resources that may be affected (demolished, altered, removed) during the construction, operation or maintenance of the Tshwane Strengthening Project.

The protection and management of the national estate usually occurs through formal and general protection measures.

- Formal protection involves identifying (or nominating) national and provincial heritage sites; designating areas of land as protected areas; providing provisional protection to protected areas or heritage resources; compiling and maintaining heritage registers (for Grade II and Grade III heritage resources); designating heritage areas in order to protect places of environmental or cultural interest as heritage sites and declaring objects/collections of objects as a heritage object(s).
- General protection of heritage resources provides for control in the importation of foreign heritage resources; prevention of the destruction/altering of heritage resources older than 60 years; special measures in dealing with archaeological/paleontological material and meteorites; conserving and caring for burial grounds and graves; protecting public monuments and memorials and requiring developers to implement heritage resources management plans for various categories of development.

Mitigation measures (Phase II studies) that may be applied to any of the possible types and ranges of heritage resources that may be affected in the Project Area will involve some of those listed under 'general protection'.

5.4 Phase II investigations

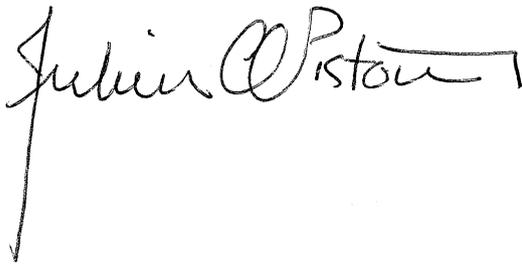
Phase II studies include in-depth heritage studies and vary according to the types and ranges of heritage resources that may be affected. These studies include the documentation of sites dating from the Stone Age, Iron Age and the Historical Period by means of mapping (surveying), excavating, photographing and describing archaeological sites. Excavations of archaeological sites could be

followed by laboratory work when archaeological collections have to be studied and analysed.

Phase II work may also include the documenting of rock art, engravings or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation and relocation of graves and graveyards; the collection or excavation of paleontological samples, etc. and may require the input of different types of specialists.

Phase II work requires permission from the Provincial Heritage Resources Authority (PHRA) who would provide the necessary permits authorising the undertaking of Phase II heritage work. Phase II investigations are done before construction activities - that may affect heritage resources - are undertaken.

Heritage management programmes must be visionary and must ensure that possible cultural, historical or cultural resources in the Project Area are conserved and managed in the short-, medium- or long-term.

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

Dr Julius CC Pistorius
Archaeologist and Heritage Consultant
Cell 0825545449
Member ASAPA

6 CONCLUSION

Eskom transmission intends to implement the Tshwane Strengthening Project in the Gauteng Province of South Africa. The Tshwane Strengthening Project involves the following:

- The construction of a new 400kV transmission power line from the Phoebus Substation to the Kwagga Substation (approximately 30km).
- The construction of the new Phoebus Substation adjacent to the existing Hangklip (Phoebus) Substation.
- The construction of a new 400kV loop-in transmission power line from the existing 400kV Apollo/Dinaledi power line to feed the Phoebus Substation (approximately 10km).
- The extension of the existing Verwoerdburg Substation.
- Construction of 2x400 kV turn-in and turn-out power lines from the Apollo/Pluto power line to the Verwoerdburg Substation.

Eskom's proposed Tshwane Strengthening Project may impact on South Africa's 'national estate' which comprises a wide range of heritage resources, some of which may occur in Tshwane Strengthening Project Area (see Part 2, 'The National Estate'). Therefore, ultimately, a Phase I Heritage Impact Assessment (HIA) has to be undertaken for the Tshwane Strengthening Project as outlined in Section 38 of the National Heritage Resources Act (No 25 of 1999).

This Heritage Scoping report precedes the Phase I HIA study as it outlines the following:

- The possible presence of certain types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) (see Part 3) which may occur in the Project Area by means of consulting archaeological data bases, literary sources and earlier HIA studies of the Project Area (see Part 3, 'Methodology').

- The scope, objectives and approach for the Phase I HIA for the Tshwane Strengthening Project during the Environmental Impact Assessment (EIA) phase in order to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999) as well as with the objectives of the EMP report that has to be completed for the Tshwane Strengthening Project.

Possible types and ranges of heritage resources in the Project Area

Considering the pre-historical and historical context for the Project Area at large it is clear that the following types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) may occur in the Project Area, namely:

Tshwane in the north

- Stone Age sites or scatters of stone tools may occur near eroded areas or dongas, near small outcrops and along older beds and floodplains of rivers.
- Late Iron Age stone walled settlements along the norite hills near Garankuwa.
- Fortifications such as blockhouses and a fort on the Daspoortrand dating from the South African War (1899-1902).
- Farm homesteads with associated infrastructure such as sheds and outbuildings, family graveyards or informal graveyards which date from the historical period.
- Formal and informal graveyards on the outskirts of towns across the Project Area.
- Individual buildings or other structures which may be older than sixty years and which qualify as heritage resources

Centurion in the south

- Farm homesteads with associated outbuildings, family graveyards or informal graveyards which date from the historical period.
- Informal graves and graveyards within the confines of the Project Area.

Section 38 of the National Heritage Resources Act (No25 of 1999)

The proposed Tshwane Strengthening Project may have an impact on any of the possible types and ranges of heritage resources ('national estate') that may occur in the Project Area. Therefore, a Phase I HIA for the Tshwane Strengthening Project Area has to be undertaken to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999). A Phase I HIA study has the following scope and objectives:

- (a) 'The identification and mapping of all heritage resources in the area affected;
- (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
- (c) an assessment of the impact of development on such heritage resources;
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development'.

The Phase I HIA study

The Phase I HIA study will consist of a reconnaissance of the Project Area with a vehicle while sensitive spots and areas will be surveyed on foot. The Phase I HIA study will also include the geo-referencing, mapping, photographing and describing of any heritage resources and graveyards which may exist in or near the Project Area.

The significance of these heritage resources will be determined by means of stipulations derived from the National Heritage Resources Act 1999 (No 25 of 1999) and by means of criteria relating to the types and ranges of heritage resources that may be affected by the Tshwane Strengthening Project.

Impacts on the heritage resources may be the result of the physical or visual effects which new substations or power lines may have on heritage resources or cultural heritage landscapes. The significance of these impacts will be determined by means of assessing criteria such as the nature, extent, duration, probability and severity of impacts on the various types and ranges of heritage resources.

Mitigation measures will be proposed for those heritage resources that may be affected by the Tshwane Strengthening Project. Most of these mitigation measures are generally referred to as Phase II investigations. The Phase I HIA report will also outline management proposals for any heritage resources that may continue to exist unaffected in the Project Area in the short-, medium- or long-term.

Protecting and managing the national estate

The Phase I HIA study will provide mitigation and management measures for heritage resources that may be affected (demolished, altered, removed) during the construction, operation or maintenance of the Tshwane Strengthening Project.

The protection and management of the national estate usually occurs through formal and general protection measures.

- Formal protection involves identifying (or nominating) national and provincial heritage sites; designating areas of land as protected areas; providing provisional protection to protected areas or heritage resources; compiling and maintaining heritage registers (for Grade II and Grade III

- heritage resources); designating heritage areas in order to protect places of environmental or cultural interest as heritage sites and declaring objects/collections of objects as a heritage object(s).
- General protection of heritage resources provides for control in the importation of foreign heritage resources; prevention of the destruction/altering of heritage resources older than 60 years; special measures in dealing with archaeological/paleontological material and meteorites; conserving and caring for burial grounds and graves; protecting public monuments and memorials and requiring developers to implement heritage resources management plans for various categories of development.

Mitigation measures (Phase II studies) that may be applied to any of the possible types and ranges of heritage resources that may be affected in the Project Area will involve some of those listed under 'general protection'.

Phase II investigations

Phase II studies include in-depth heritage studies and vary according to the types and ranges of heritage resources that may be affected. These studies include the documentation of sites dating from the Stone Age, Iron Age and the Historical Period by means of mapping (surveying), excavating, photographing and describing archaeological sites. Excavations of archaeological sites could be followed by laboratory work when archaeological collections have to be studied and analysed.

Phase II work may also include the documenting of rock art, engravings or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavations of archaeological sites; the exhumation and relocation of graves and graveyards; the collection or excavation of paleontological samples, etc. and may require the input of different types of specialists.

Phase II work requires permission from the Provincial Heritage Resources Authority (PHRA) who would provide the necessary permits authorising the undertaking of Phase II heritage work. Phase II investigations are done before construction activities - that may affect heritage resources - are undertaken.

Heritage management programmes must be visionary and must ensure that possible cultural, historical or cultural resources in the Project Area are conserved and managed in the short-, medium- or long-term.

6 SELECT BIBLIOGRAPHY

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

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

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

Pistorius, J.C.C. 2002. A Cultural Heritage Assessment of the proposed Zwartkop Golf Estate (Centurion), incorporating a scoping assessment of the old clubhouse, associated buildings and direct environs. *Unpublished report prepared for Landscape Dynamics*.

Pistorius, J.C.C. 2002. A Heritage Impact Assessment study for the new Eldo Lakes residential development on Portion 334 and Portion 170 of the farm Zwartkop 356JR in Centurion. *Unpublished report prepared for Landscape Dynamics*.

Pistorius, J.C.C. 2002. A Heritage Impact Assessment (HIA) study for the Mooiplaats Industrial Security Park on the farm Mooiplaats 355JR in Centurion. *Unpublished report prepared for Landscape Dynamics*.

Pistorius, J.C.C. 2005. A Heritage Impact Assessment (HIA) of three power lines routes for the proposed Apollo-Dinaledi 400kV transmission line crossing the Rietvlei Nature Reserve east of Centurion in the Gaiuteng Province of South Africa. *Unpublished report prepared for Landscape Dynamics*.

Van Warmelo, N. J. 1930. *Transvaal Ndebele texts*. Government Printer: Pretoria.