

**Cultural heritage impact assessment for the
CONSTRUCTION OF THE PROPOSED TAUNUS-DIEPKLOOF 132KV POWER
LINE, SOUTH OF SOWETO, CITY OF JOHANNESBURG MUNICIPALITY,
GAUTENG PROVINCE**

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE CONSTRUCTION OF THE PROPOSED TAUNUS-DIEPKLOOF 132KV POWER LINE, SOUTH OF SOWETO, CITY OF JOHANNESBURG MUNICIPALITY, GAUTENG PROVINCE

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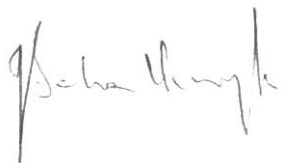
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Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services, for which a fair numeration is charged.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
November 2015

EXECUTIVE SUMMARY

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE CONSTRUCTION OF THE PROPOSED TAUNUS-DIEPKLOOF 132KV POWER LINE, SOUTH OF SOWETO, CITY OF JOHANNESBURG MUNICIPALITY, GAUTENG PROVINCE

In 2010 an environmental impact assessment (EIA) was conducted for the construction of the Taunus - Diepkloof 132kV power line in Gauteng Province. The environmental authorisation has now expired. As Eskom is negotiating with City Power regarding the right of way for the power line, as well as the fact that it deviates slightly from the original alignment, it was decided to redo the heritage assessment (Van Schalkwyk 2010).

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Enviolution Consulting** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where the development is planned.

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development.

- The ruins of two homesteads have been identified to occur in close proximity of the proposed power line route. However, as these are in total ruin, they are viewed to be fully documented after incorporation into this report.
 - It is recommended that these two features should be isolated by fencing it off with danger tape during construction of the power line.

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view it is recommended that the proposed development be allowed to continue, on condition of acceptance of the above mitigation measures.

Conditions for inclusion in the environmental authorisation:

- Should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
November 2015

TECHNICAL SUMMARY

| Property details | | | | | | |
|-------------------------|--------------------------|------------|------------|----|------------|------------|
| Province | Gauteng | | | | | |
| Magisterial district | Johannesburg | | | | | |
| District municipality | City of Johannesburg | | | | | |
| Topo-cadastral map | 2627BB, 2627BD | | | | | |
| Closest town | Soweto | | | | | |
| Farm name | - | | | | | |
| Coordinates | End points (approximate) | | | | | |
| | No | Latitude | Longitude | No | Latitude | Longitude |
| | 1 | S 26.25218 | E 27.93485 | 2 | S 26.26839 | E 27.77838 |

| Development criteria in terms of Section 38(1) of the NHR Act | Yes/No |
|---|--------|
| Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length | Yes |
| Construction of bridge or similar structure exceeding 50m in length | No |
| Development exceeding 5000 sq m | No |
| Development involving three or more existing erven or subdivisions | No |
| Development involving three or more erven or divisions that have been consolidated within past five years | No |
| Rezoning of site exceeding 10 000 sq m | No |
| Any other development category, public open space, squares, parks, recreation grounds | No |

| Development | |
|--------------------|---|
| Description | Construction of a 132kV electricity distribution power line |
| Project name | Taurus - Diepkloof 132kV Power Line |

| Land use | |
|-------------------|--------------|
| Previous land use | Vacant/Urban |
| Current land use | Vacant/Urban |

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GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 and 2.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

| | |
|------------------|------------------------------------|
| Early Stone Age | 2 000 000 - 150 000 Before Present |
| Middle Stone Age | 150 000 - 30 000 BP |
| Late Stone Age | 30 000 - until c. AD 200 |

Iron Age: Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. As they produced their own iron tools, archaeologists call this the Iron Age.

| | |
|-----------------|-------------------|
| Early Iron Age | AD 200 - AD 900 |
| Middle Iron Age | AD 900 - AD 1300 |
| Late Iron Age | AD 1300 - AD 1830 |

Historical Period: Since the arrival of the white settlers - c. AD 1840 - in this part of the country

ABBREVIATIONS

| | |
|-------|---|
| ADRC | Archaeological Data Recording Centre |
| ASAPA | Association of Southern African Professional Archaeologists |
| CS-G | Chief Surveyor-General |
| EIA | Early Iron Age |
| ESA | Early Stone Age |
| LIA | Late Iron Age |
| LSA | Later Stone Age |
| HIA | Heritage Impact Assessment |
| MSA | Middle Stone Age |
| NASA | National Archives of South Africa |
| NHRA | National Heritage Resources Act |
| PHRA | Provincial Heritage Resources Agency |
| SAHRA | South African Heritage Resources Agency |

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE CONSTRUCTION OF THE PROPOSED TAUNUS-DIEPKLOOF 132KV POWER LINE, SOUTH OF SOWETO, CITY OF JOHANNESBURG MUNICIPALITY, GAUTENG PROVINCE

1. INTRODUCTION

In 2010 an environmental impact assessment (EIA) was conducted for the construction of the Taunus - Diepkloof 132kV power line in Gauteng Province. The environmental authorisation has now expired. As Eskom is negotiating with City Power regarding the right of way for the power line, as well as the fact that it deviates slightly from the original alignment, it was decided to redo the heritage assessment (Van Schalkwyk 2010).

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. According to Section 27(18) of the National Heritage Resources Act (NHRA), Act 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Envirolution Consulting** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where the development is planned.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and is intended for submission to the South African Heritage Resources Agency (SAHRA).

2. TERMS OF REFERENCE

This report does not deal with development projects outside of or even adjacent to the study area as is presented in Section 5 of this report. The same holds true for heritage sites, except in a generalised sense where it is used to create an overview of the heritage potential in the larger region.

2.1 Scope of work

The aim of this HIA, broadly speaking, is to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to construct the power line.

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied; and
- A visit to the proposed development area.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources; and
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

2.2 Limitations

The investigation has been influenced by the following factors:

- It is assumed that the description of the proposed project, provided by the client, is accurate.
- No subsurface investigation (i.e. excavations or sampling) were undertaken, since a permit from SAHRA is required for such activities.
- It is assumed that the public consultation process undertaken as part of the Environmental Impact Assessment (EIA) is sufficient and that it does not have to be repeated as part of the heritage impact assessment.
- The unpredictability of buried archaeological remains.
- This report does not consider the palaeontological potential of the site.

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
 - ancestral graves;
 - royal graves and graves of traditional leaders;
 - graves of victims of conflict;
 - graves of individuals designated by the Minister by notice in the Gazette;
 - historical graves and cemeteries; and
 - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
 - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - objects to which oral traditions are attached or which are associated with living heritage;
 - ethnographic art and objects;
 - military objects;

- objects of decorative or fine art;
- objects of scientific or technological interest; and
- books, records, documents, photographic 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).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

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

A matrix was developed whereby the above criteria were applied for the determination of the significance of each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar identified sites.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area presented in Section 5 and illustrated in Figure 2.

4.2 Methodology

4.2.1 Preliminary investigation

4.2.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological, historical sources and heritage impact assessment reports were consulted.

- Information of a very general nature was obtained from these sources.

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General* and the *National Archives of South Africa* were consulted.

- Database surveys produced a number of sites located in adjacent areas.

4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature was obtained from these sources.

4.2.2 Field survey

The area that had to be investigated was identified by **Envirolution Consulting** by means of maps. The site was visited on 14 November 2015 (see Fig. 1). Archaeological visibility was good over much of the region as there was very little vegetation as no rain has fallen yet. In the urban area visibility was equally good. It was only in the region of the Klipriver where the power line alignment was difficult to access.

The site information supplied by Envirolution was converted into a *kml* file indicating the alignment of the proposed power line. This was loaded onto a Nexus 7 tablet and used in Google Earth during the field survey to access the area.

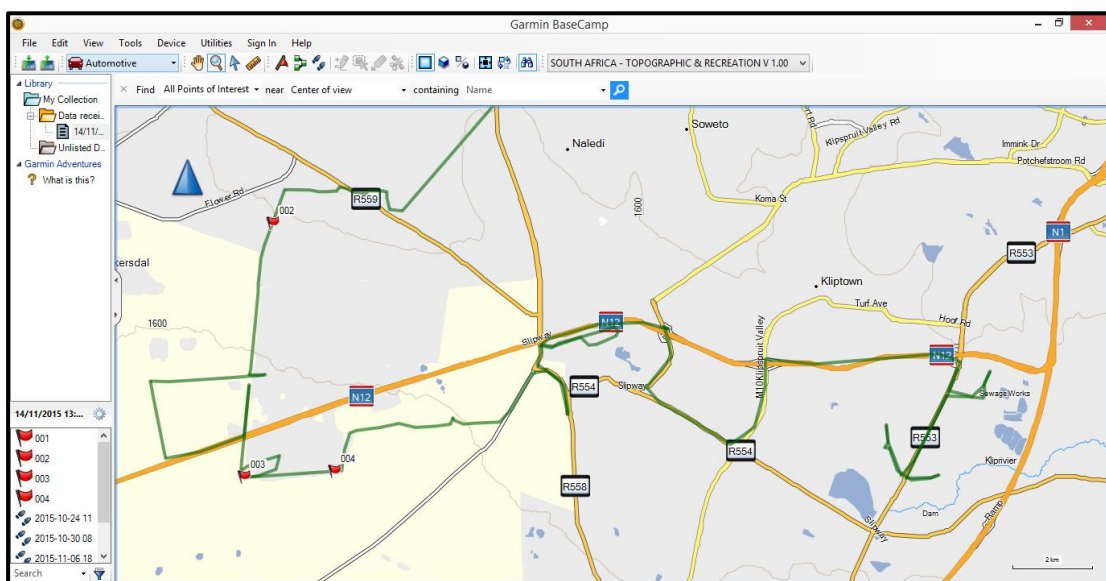


Fig. 1. Track log of the field survey.

4.2.3 Documentation

All sites, objects and structures that are identified are documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities are determined by means of the *Global Positioning System* (GPS) and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

The track log and identified sites were recorded by means of a Garmin Oregon 550 handheld GPS device. Photographic recording was done by means of a Canon EOS 550D digital camera.

Map datum used: Hartebeeshoek 94 (WGS84).

5. PROJECT LOCATION AND DESCRIPTION

5.1 Site location and description

The power line will run southwards from the Diepkloof substation, crossing the N12 before turning to the west. From there it takes a somewhat zig-zag route before crossing back over the N12 and goes in a northern direction to the Taurus substation. For more information, please see the Technical Summary presented above (p. iv).

5.2 Development proposal

The proposed development consists of the primary alignment, indicated in yellow on the map in Fig. 2. Two deviations are proposed for the area where the Eskom is negotiating the servitude with City Power. The total distance covered by the power line is approximately 8km.

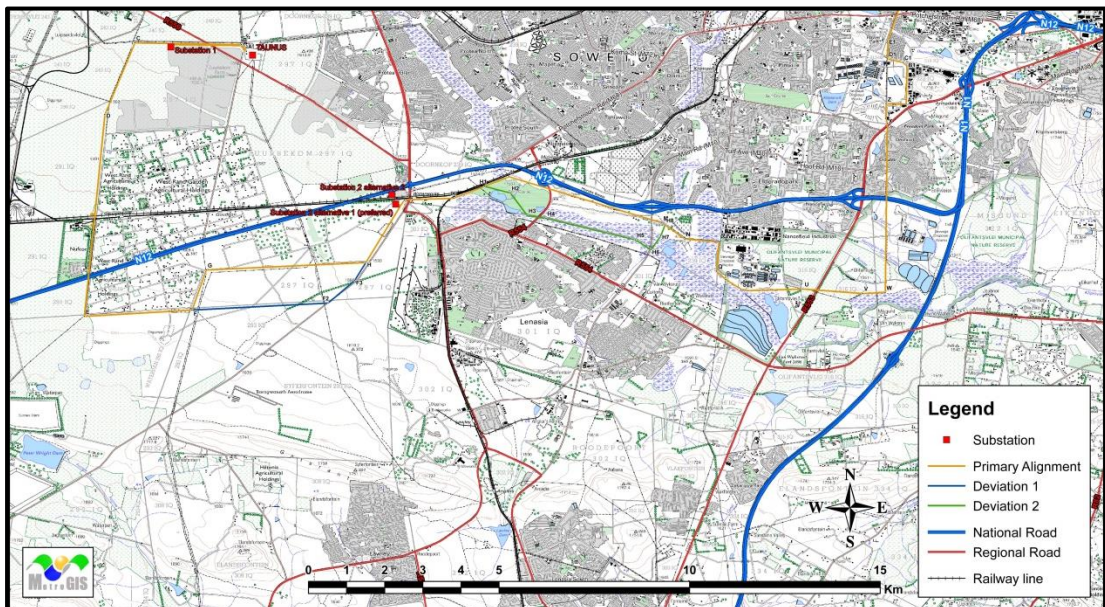


Fig. 2. Layout of the proposed development
(Map supplied by Enviroolution)

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

6.1 Site description

The geology of the region is made up of granite and the original vegetation is classified as Rocky Highveld Grassland. However, due to agricultural activities and urbanisation this has totally disappeared. The topography of the region is indicated as lightly undulating plains. The Kliprivier is located in the south-eastern section of the study area. The north-eastern section of the study area is located in a high density urban environment.



Fig. 3. Views over the study area.



Fig. 4. Aerial view of the proposed development.
(Photograph: Google Earth)

6.2 Regional overview

The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the study area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity – see Section 3.2 and Appendix 1 for more information.

6.2.1 Stone Age

No record of occupation of the region during the Stone Age exists, although records indicate that stone tools dating to the Early and Middle Stone Age occur for example in the Klipriviersberg area to the east, as well as to the south at Henly-On-Klip. Tools dating to this period are mostly found in the vicinity of watercourses, and no sealed, stratified sites (i.e. rock shelter or cave) are known from the region.

6.2.2 Iron Age

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area.

The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating condition that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand in the region of Klipriviersberg. Here, a large number of settlements dating to the Later Iron Age occur.

6.2.3 Historic period

Up until the discovery of gold, the area was largely a farming community, with a low density of human population. All of this changed with the discovery of gold during the early 1880s. Although the history of mining activities and ownership is very complex, most of what happened in the region of the study area can be associated with Rand Mines. Mining activities changed the natural landscape into a cultural landscape, with buildings, headgear, slimes dams and infra-structural support. As the mines closed down, these structures were left behind, falling into disrepair, and are vandalised. What most people do not realise is the interrelatedness of all of these. If there were not any mines in the region, the population density in the region might have been quite different from what it is today.

The history of larger Soweto has already been covered in a number of publications written from different perspectives, e.g. Kane-Berman (1981), Magubane (1990) and need not be repeated here.

6.3 Identified sites

The following cultural heritage resources were identified in the study area (Fig. 5):

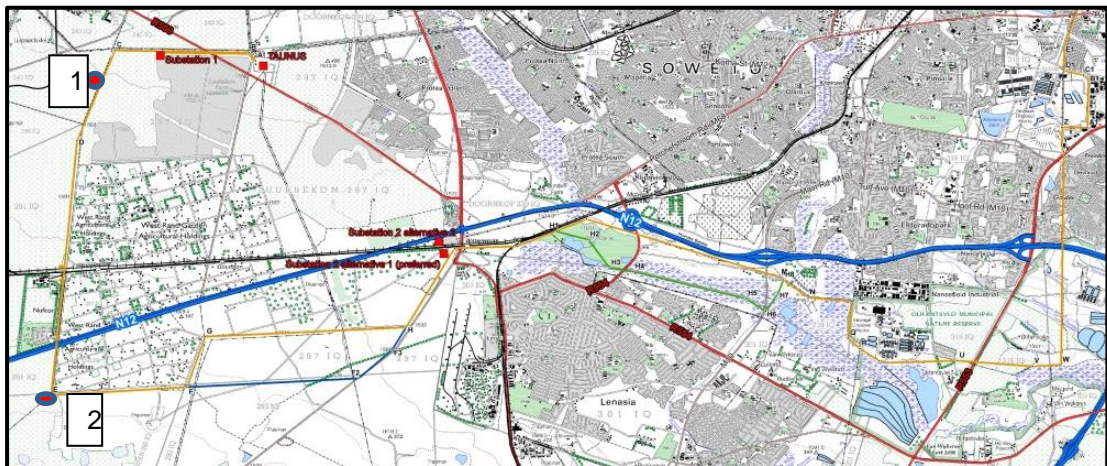


Fig. 5. The study area.
(Map 2627BB, 2627BD: Chief Surveyor-General)

6.3.1 Stone Age

- No sites, features or objects dating to the Stone Age were identified in the study area.

6.3.2 Iron Age

- No sites, features or objects dating to the Iron Age were identified in the study area.

6.3.3 Historic period

Apart from a number of sites located in the larger region, such as informal cemeteries, the Zuurbekom Water supply facilities and a number of heritage sites dealing with people and

events in the larger Soweto area, such as the Oppenheimer Memorial, the Hector Pieterse Memorial, and houses occupied by famous persons such as Nelson Mandela and Archbishop Desmond Tutu, two other sites were identified.

| | | | |
|---|-------------|---------------------|------------------------|
| Location | No. 6.3.3.1 | Luipaardsvlei 294IQ | S 26.27287, E 27.74740 |
| Description | | | |
| Ruins of what might have been a farm labourer homestead. Bricks and cement bricks were used in construction of a possible two structure feature. No information on its date of construction is known. | | | |

| | |
|-------------------------------------|----------------------------------|
| Significance of site/feature | Low on a local level – Grade III |
|-------------------------------------|----------------------------------|

| | |
|---|--|
| Impact assessment | |
| This site is in close proximity of the proposed power line, but it might be possible to avoid it. | |

| | |
|--|--|
| Mitigation | |
| This feature is seen to be fully recorded after inclusion in this report. During construction this site should be isolated by fencing it off with danger tape. | |



| | | | |
|---|-------------|----------------|------------------------|
| Location | No. 6.3.3.2 | Zuurbekom 297I | S 26.32946, E 27.74010 |
| Description | | | |
| Ruins of what might have been a farm labourer homestead. Bricks and cement bricks were used in construction of a possible three structure feature. No information on its date of construction is known. | | | |

| | |
|-------------------------------------|----------------------------------|
| Significance of site/feature | Low on a local level – Grade III |
|-------------------------------------|----------------------------------|

| | |
|---|--|
| Impact assessment | |
| This site is in close proximity of the proposed power line, but it might be possible to avoid it. | |

| | |
|--|--|
| Mitigation | |
| This feature is seen to be fully recorded after inclusion in this report. During construction this site should be isolated by fencing it off with danger tape. | |



7. SITE SIGNIFICANCE AND ASSESSMENT

7.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation, on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

7.2 Statement of significance

A matrix was developed whereby the above criteria, as set out in Sections 3(3) and 7 of the NHRA, No. 25 of 1999, were applied for each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar sites. Three categories of significance are recognized: low, medium and high. In terms of Section 7 of the NHRA, all the sites currently known or which are expected to occur in the study area are evaluated to have a grading as identified in the table below.

Table 1. Summary of identified heritage resources in the study area.

| Identified heritage resources | |
|---------------------------------------|-----------------------------------|
| <i>Category, according to NHRA</i> | <i>Identification/Description</i> |
| Formal protections (NHRA) | |
| National heritage site (Section 27) | None |
| Provincial heritage site (Section 27) | None |

| | |
|--|------|
| Provisional protection (Section 29) | None |
| Place listed in heritage register (Section 30) | None |
| General protections (NHRA) | |
| structures older than 60 years (Section 34) | Yes |
| archaeological site or material (Section 35) | None |
| palaeontological site or material (Section 35) | None |
| graves or burial grounds (Section 36) | None |
| public monuments or memorials (Section 37) | None |
| Other | |
| Any other heritage resources (describe) | None |

7.3 Impact assessment

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development.

- The ruins of two homesteads have been identified to occur in close proximity of the proposed power line route. However, as these are in total ruin, they are viewed to be fully documented after incorporation into this report.

8. CONCLUSIONS

The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area in which the development is proposed.

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development.

- The ruins of two homesteads have been identified to occur in close proximity of the proposed power line route. However, as these are in total ruin, they are viewed to be fully documented after incorporation into this report.
 - It is recommended that these two features should be isolated by fencing it off with danger tape during construction of the power line.

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view it is recommended that the proposed development be allowed to continue, on condition of acceptance of the above mitigation measures.

Conditions for inclusion in the environmental authorisation:

- Should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

9. REFERENCES

9.1 Data bases

Chief Surveyor General
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.
Heritage Atlas Database, Pretoria.
National Archives of South Africa

9.2 Literature

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

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Van Schalkwyk, J.A. 2015. *Heritage impact assessment for the proposed installation of storm water management systems in the larger Soweto region, City of Johannesburg District Municipality, Gauteng Province*. Unpublished report 2015/JvS/034.

9.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2627BB, 2627BD
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

| | | | | |
|---|--------|------|--------|-----|
| 1. Historic value | | | | |
| Is it important in the community, or pattern of history | | | | |
| Does it have strong or special association with the life or work of a person, group or organisation of importance in history | | | | |
| Does it have significance relating to the history of slavery | | | | |
| 2. Aesthetic value | | | | |
| It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group | | | | |
| 3. Scientific value | | | | |
| Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage | | | | |
| Is it important in demonstrating a high degree of creative or technical achievement at a particular period | | | | |
| 4. Social value | | | | |
| Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons | | | | |
| 5. Rarity | | | | |
| Does it possess uncommon, rare or endangered aspects of natural or cultural heritage | | | | |
| 6. Representivity | | | | |
| Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects | | | | |
| Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class | | | | |
| Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality. | | | | |
| 7. Sphere of Significance | | High | Medium | Low |
| International | | | | |
| National | | | | |
| Provincial | | | | |
| Regional | | | | |
| Local | | | | |
| Specific community | | | | |
| 8. Significance rating of feature | | | | |
| 1. | Low | | | |
| 2. | Medium | | | |
| 3. | High | | | |

APPENDIX 2. RELEVANT LEGISLATION

All archaeological and palaeontological sites and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

APPENDIX 3. SPECIALIST COMPETENCYJohan (Johnny) van Schalkwyk

J A van Schalkwyk, D Litt et Phil, heritage consultant, has been working in the field of heritage management for more than 30 years. Based at the National Museum of Cultural History, Pretoria, he has actively done research in the fields of anthropology, archaeology, museology, tourism and impact assessment. This work was done in Limpopo Province, Gauteng, Mpumalanga, North West Province, Eastern Cape, Northern Cape, Botswana, Zimbabwe, Malawi, Lesotho and Swaziland. Based on this work, he has curated various exhibitions at different museums and has published more than 60 papers, many in scientifically accredited journals. During this period he has done more than 2000 impact assessments (archaeological, anthropological, historical and social) for various government departments and developers. Projects include environmental management frameworks, road-, pipeline-, and power line developments, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments.