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**Heritage impact assessment for the
PROPOSED DIEPSLOOT WASTE BUYBACK CENTRE,
RANDBURG MAGISTERIAL DISTRICT,
GAUTENG PROVINCE**

**HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DIEPSLOOT
WASTE BUYBACK CENTRE, RANDBURG MAGISTERIAL DISTRICT,
GAUTENG PROVINCE**

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Prepared for:

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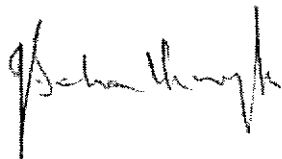
ASAPA Registration No.: 168

Principal Investigator: Iron Age, Colonial Period, Industrial Heritage

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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.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
August 2011

EXECUTIVE SUMMARY

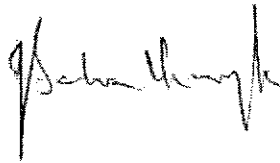
HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DIEPSLOOT WASTE BUYBACK CENTRE, RANDBURG MAGISTERIAL DISTRICT, GAUTENG PROVINCE

In order to promote the concept of recycling the City of Johannesburg is proposing to develop a site where waste will be bought back and separated for recycling. For this purpose an open section of land located on the western edge of the township of Diepsloot has been selected.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Envirovolution 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 it is planned to develop the project.

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. However, we request that if archaeological sites or graves are exposed during construction work, it should 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
August 2011

TECHNICAL SUMMARY

| Property details | | | | | | |
|-------------------------|------------------|------------|------------|----|----------|-----------|
| Province | Gauteng Province | | | | | |
| Magisterial district | Pretoria | | | | | |
| Topo-cadastral map | 2527DD | | | | | |
| Closest town | Pretoria | | | | | |
| Farm name | Diepsloot 388JR | | | | | |
| Portions/Holdings | - | | | | | |
| Coordinates | Centre point | | | | | |
| | No | Latitude | Longitude | No | Latitude | Longitude |
| | 1 | S 25.93273 | E 27.99556 | | | |

| 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 | No |
| Construction of bridge or similar structure exceeding 50m in length | No |
| Development exceeding 5000 sq m | Yes |
| 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 | Development of a waste buyback centre |
| Project name | Diepsloot Waste Buyback |

| Land use | |
|-------------------|---------|
| Previous land use | Farming |
| Current land use | Vacant |

| Heritage sites assessment | | |
|----------------------------------|-------------------|----------------------------------|
| Site type | Site significance | Site grading (Section 7 of NHRA) |
| None | | |

| Impact assessment | | |
|--------------------------|------------|------------------|
| Impact | Mitigation | Permits required |
| None | | |

TABLE OF CONTENTS

| | Page |
|---|------|
| EXECUTIVE SUMMARY | II |
| TECHNICAL SUMMARY | III |
| TABLE OF CONTENTS | IV |
| LIST OF FIGURES | IV |
| GLOSSARY OF TERMS AND ABBREVIATIONS | V |
| 1. INTRODUCTION | 6 |
| 2. TERMS OF REFERENCE | 6 |
| 3. HERITAGE RESOURCES | 7 |
| 4. STUDY APPROACH AND METHODOLOGY | 8 |
| 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT | 9 |
| 6. SITE SIGNIFICANCE AND ASSESSMENT | 12 |
| 7. CONCLUSIONS | 13 |
| 8. REFERENCES | 14 |
| APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES | 15 |
| APPENDIX 2. RELEVANT LEGISLATION | 16 |
| APPENDIX 3. ILLUSTRATIONS | 17 |

LIST OF FIGURES

| | Page |
|--|------|
| Fig. 1. Location of the study area in regional context. | 10 |
| Fig. 2. Views over the study area..... | 10 |
| Fig. 3. The study area, showing known heritage sites. | 11 |
| Fig. 4. The 1943 version of the 1:50 000 topocadastral map. | 17 |
| Fig. 5. Aerial view of the study area..... | 18 |

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. These people, according to archaeological evidence, spoke early variations of the Bantu Language. Because 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 |

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DIEPSLOOT WASTE BUYBACK CENTRE, RANDBURG MAGISTERIAL DISTRICT, GAUTENG PROVINCE

1. INTRODUCTION

In order to promote the concept of recycling the City of Johannesburg is proposing to develop a site where waste will be bought back and separated for recycling. For this purpose and open section of land located on the western edge of the township of Diepsloot has been selected.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, 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 **Envirovolution 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 it is planned to develop the project.

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

2.1 Scope of work

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;
- 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;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

2.2 Limitations

- It must be remembered that archaeological material, by its very nature, occurs below ground level and in many cases such buried cultural remains are difficult to detect.

Table 1: Applicable category of heritage impact assessment study and report.

| Type of study | Aim | SAHRA involved | SAHRA response |
|----------------------------|--|--|--|
| Heritage Impact Assessment | The aim of a full HIA investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives are to identify heritage resources (involving site inspections, existing heritage data and additional heritage specialists if necessary); assess their significances; assess alternatives in order to promote heritage conservation issues; and to assess the acceptability of the proposed development from a heritage perspective. | Provincial Heritage Resources Authority | Comments on built environment and decision to approve or not |
| | The result of this investigation is a heritage impact assessment report indicating the presence/ absence of heritage resources and how to manage them in the context of the proposed development. Depending on SAHRA's acceptance of this report, the developer will receive permission to proceed with the proposed development, on condition of successful implementation of proposed mitigation measures. | SAHRA Archaeology, Palaeontology and Meteorites Unit | Comments and decision to approve or not |

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.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figures 1 and 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 and historical sources were consulted.

- A few publications dealing with events and places in the larger region were identified (Van Schalkwyk 2005, 2007, 2010), but none that deal with the study area specifically.

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General (CS-G)* and the *National Archives of South Africa (NASA)* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.
- The original Title Deed of the farm was not located.

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 were 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 surveyed by walking two transects across it.

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The site is located south of the N14 and close to the R5114 provincial route on the north western edge of the township of Diepsloot (Fig. 1). For more information, please see the Technical summary presented above.

The geology of the region is made up of granite and the topography is described as strongly undulating plains. The original vegetation is classified as Rocky Highveld Grassland, but, due to past agricultural activities and recent township development, this has been completely changed (Fig. 2).

Both the 1943 version of the 1:50 000 topocadastral map (Fig. 4) and the 2004 aerial photograph (Fig. 5) shows an area without any built structures on it.

Informal settlement has expanded in the region and is only prevented from spreading into all areas due to the existence of some overhead electricity power lines.

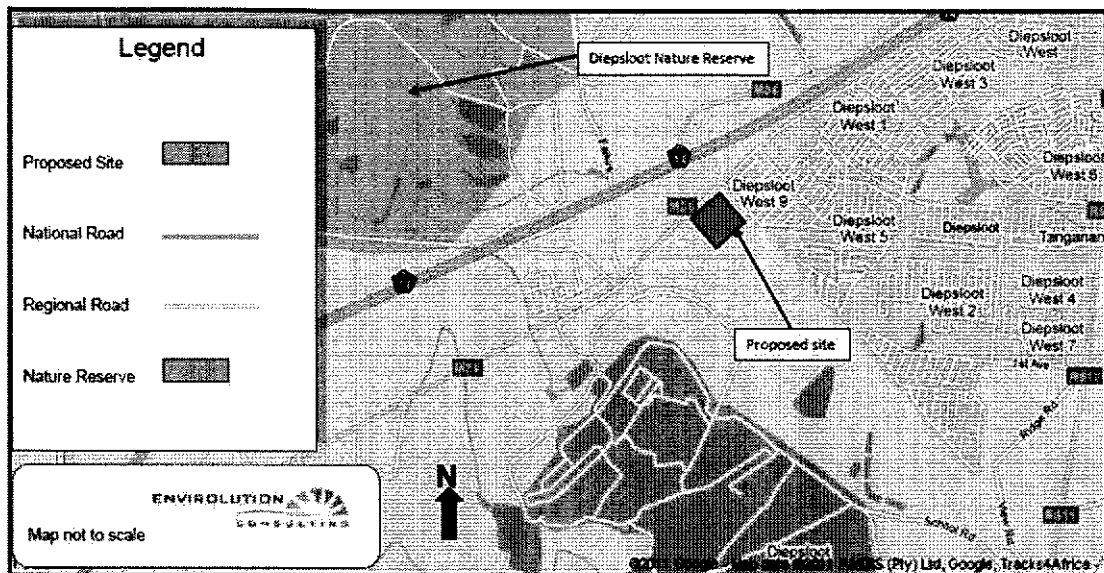


Fig. 1. Location of the study area in regional context.

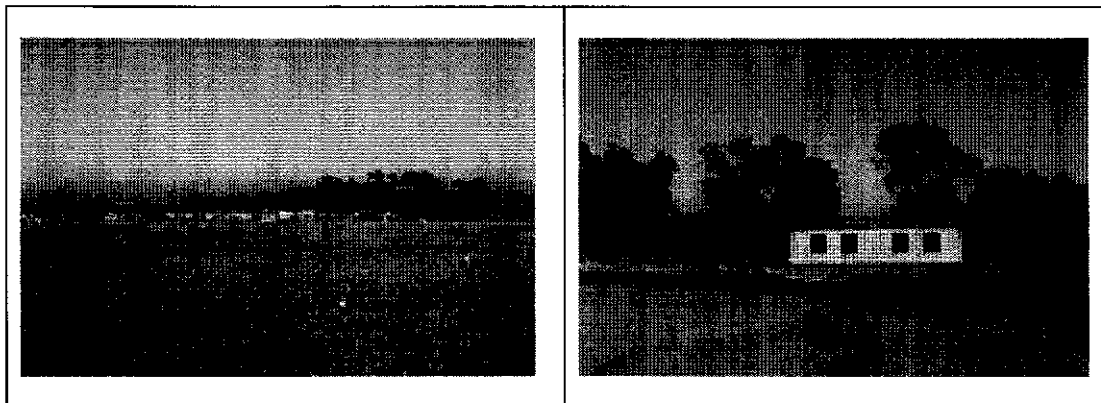


Fig. 2. Views over the study area.

5.2 Overview of the region

5.2.1 Stone Age

Records indicate that stone tools dating to the Early and Middle Stone Age and especially the Later Stone Age occurred all over, for example in the Jukskei River area at Glenferness shelter, excavated by Prof. Revil Mason (1969).

5.2.2 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 and the Magaliesberg to the north (Horn 1996).

5.2.3 Historic period

White settlers moved into the area during the first half of the 19th century. They were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. Pretoria was established in 1850 and proclaimed as town in 1855.

The study area falls within that zone usually located on the front edge of (city) urban-sprawl where the land previously used for agricultural use (only) have become subdivided into small holdings. What may used to be a large single agricultural unit or farm now consists of a number of small properties. These units do not have their economic base in traditional agriculture but are sustained by a variety of land uses and economic activities with strong urban associations. This phenomenon happened in the past thirty years. Therefore most of the built fabric, date from this period. The result was that any historic farmsteads older than 60 years that may have existed have either disappeared or have been 'upgraded'.

The oldest physical remains in these areas usually are planted vegetation such as lanes and tall trees in mature gardens, cemeteries, the remains of portions of farm and farmstead walling (dry stacked stone walls erected to demarcate the boundaries of a farmstead, an orchard or cattle kraal) farm roads, weirs (in the river) and water furrows.

5.3 Identified sites

The following sites, features and objects of cultural heritage significance were identified in the study area:

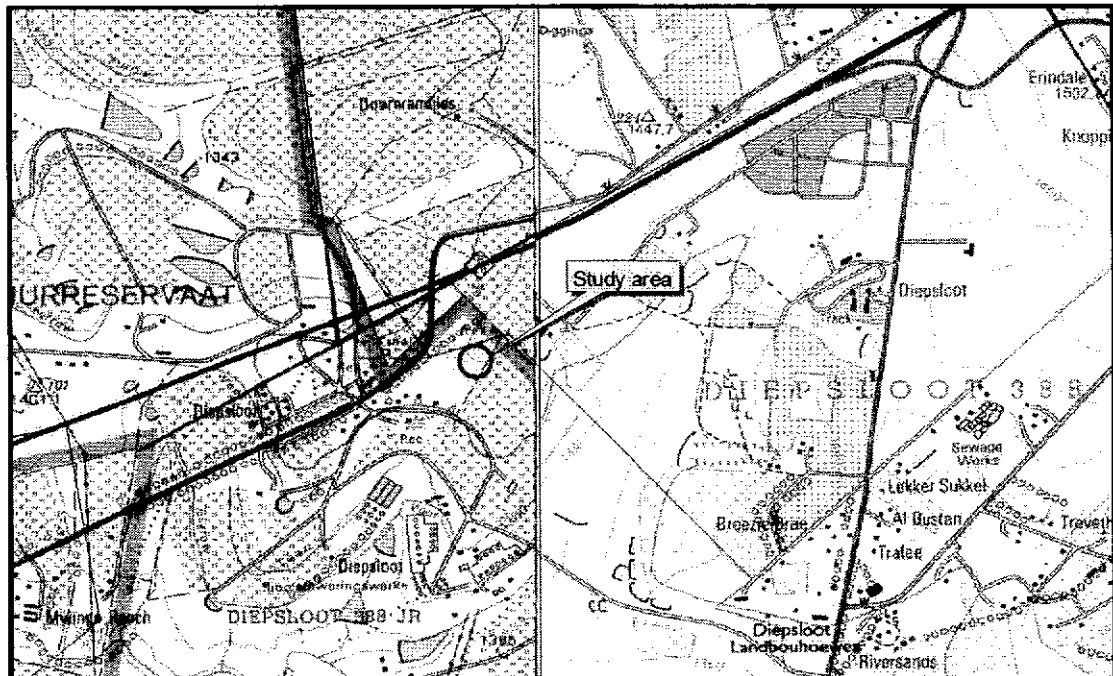


Fig. 3. The study area, showing known heritage sites.
(Map 2527DD: Chief Surveyor-General)

5.3.1 Stone Age

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

5.3.2 Iron Age

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

5.3.3 Historic period

No sites, features or objects of cultural significance dating to the historic period were identified in the study area.

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 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.

6.2 Statement of significance

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 Grade III significance.

6.3 Impact assessment

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

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development of the waste buyback facility.

7. 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 it is proposed to construct the electricity substation.

- As no heritage sites occur in the study area, there would be no impact resulting from the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. However, we request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

8. REFERENCES

8.1 Data bases

Chief Surveyor General

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.

Heritage Atlas Database, Pretoria.

National Archives of South Africa

8.2 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.

Horn, A.C. 1996. Okkupasie van die Bankeveld voor 1840 n.C.: 'n sintese. *South African Journal of Ethnology* 19(1):17-27.

Mason, R.J. 1969. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Van Schalkwyk, J.A. 2005. *Scoping study for the development of a new landfill site for the northern areas of the Metropolitan Municipality of Johannesburg*. Unpublished report 2005KH09. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2007. *Heritage scoping report for the proposed expansion to the Northern Waste Water Treatment Works, Diepsloot 338JR, Randburg magisterial district, Gauteng Province*. Unpublished report 2007/JvS/077. Pretoria.

Van Schalkwyk, J.A. 2010. *Heritage impact assessment for the proposed Diepsloot pedestrian bridge development, Randburg magisterial district, Gauteng Province*. Unpublished report 2010/JvS/018. Pretoria.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2527DD

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. ILLUSTRATIONS

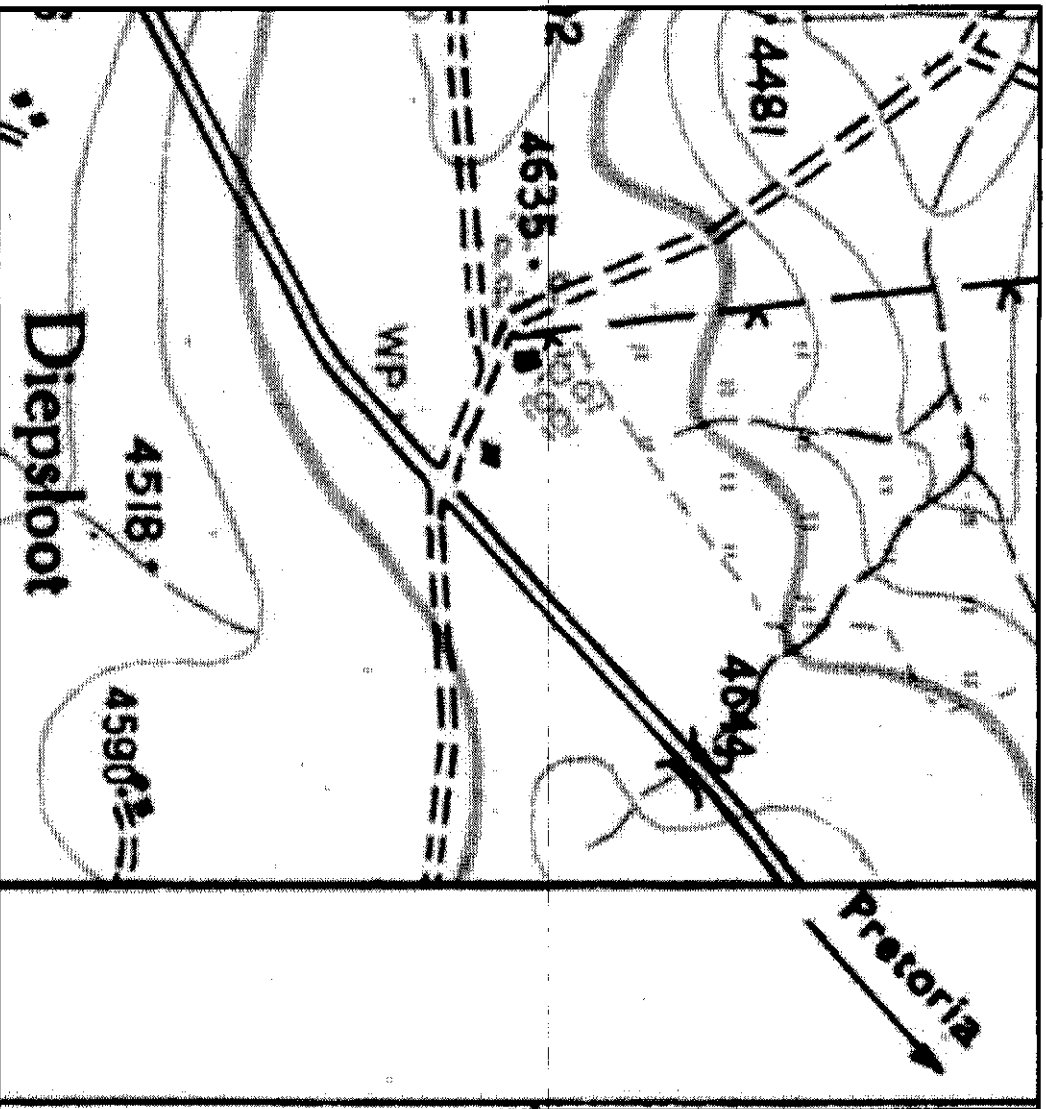


Fig. 4. The 1943 version of the 1:50 000 topocadastral map.
(Map 2527DD: Chief Surveyor-General)



Fig. 5. Aerial view of the study area.
(Photo: Google Earth)