

**Cultural heritage impact assessment for the
PROPOSED RESIDENTIAL DEVELOPMENT, VLAKFONTEIN PORTION 50,
BENONI, EKURHULENI, GAUTENG PROVINCE**

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, VLAKFONTEIN PORTION 50, BENONI, EKURHULENI, GAUTENG PROVINCE

Report No: 2014/JvS/050
Status: Final
Revision No: 0
Date: September 2014

Prepared for:
Eco Assessments
Mr M Custers

Postal Address: P O Box 441037, Linden, 2104
Tel: 011 782 3428
E-mail: mark@ecoassessment.co.za

Prepared by:
J van Schalkwyk (D Litt et Phil), Heritage Consultant
ASAPA Registration No.: 168
Principal Investigator: Iron Age, Colonial Period, Industrial Heritage

Postal Address: 62 Coetzer Avenue, Monument Park, 0181
Mobile: 076 790 6777
Fax: 086 611 3902
E-mail: jvschalkwyk@mweb.co.za

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
September 2014

EXECUTIVE SUMMARY

CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, VLAKFONTEIN PORTION 50, BENONI, EKURHULENI, GAUTENG PROVINCE

It is proposed to establish a medium density residential unit on Portion 50 of the farm Vlakfontein 69IR in the Rynfield region of Benoni, Ekurhuleni Metropolitan Municipality, Gauteng Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Eco Assessments** to conduct a basic cultural heritage assessment to determine if the proposed development would have an impact on any sites, features or objects of cultural heritage significance.

The whole region was subjected to urbanization and mining activities which would have destroyed any pre-colonial or early colonial heritage features that might have occurred here in the past.

- As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. We also recommend that if archaeological sites or graves are exposed during development activities, 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
September 2014

TECHNICAL SUMMARY

Property details						
Province	Gauteng Province					
Magisterial district	Benoni					
District municipality	Ekurhuleni					
Topo-cadastral map	2628AB					
Closest town	Benoni					
Farm name & no.	Vlakfontein 69IR					
Portions/Holdings	Portion 50					
Coordinates	Centre point					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 26.16656	28.33301			

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	Medium density residential unit
Project name	-

Land use	
Previous land use	Mining
Current land use	Vacant

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.....	1
2. TERMS OF REFERENCE	1
3. HERITAGE RESOURCES	2
4. STUDY APPROACH AND METHODOLOGY	3
5. DESCRIPTION OF THE AFFECTED ENVIRONMENT	5
6. SITE SIGNIFICANCE AND ASSESSMENT	9
7. RECOMMENDATIONS.....	11
8. REFERENCES.....	12
APPENDIX 1: CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON HERITAGE RESOURCES	14
APPENDIX 2. RELEVANT LEGISLATION	16

LIST OF FIGURES

	Page
Fig. 1. Map indicating the track log of the field survey.	4
Fig. 2. Location of the study area (red outline) in regional context.	5
Fig. 3. Views over the study area.....	6
Fig. 4. The 1939 version of the 1:50 000 cadastral map of the study area.	6
Fig. 5. Aerial view of the site: 2014.	7
Fig. 6. Location of the development area.....	9

GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 - 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
Later 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 PROPOSED RESIDENTIAL DEVELOPMENT, VLAKFONTEIN PORTION 50, BENONI, EKURHULENI, GAUTENG PROVINCE

1. INTRODUCTION

It is proposed to establish a medium density residential unit on Portion 50 of the farm Vlakfontein 69IR in the Rynfield region of Benoni, Ekurhuleni Metropolitan Municipality, Gauteng Province.

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), No. 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 **Eco Assessments** to conduct a basic cultural heritage assessment to determine if the proposed development would have an impact on any sites, features or objects of cultural heritage significance.

This 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 study 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 establish a medium density residential unit.

This include:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site,

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development areas;
- 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

The investigation has been influenced by the following factors:

- The unpredictability of archaeological remains occurring below the surface.
- 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 as presented in Section 5 and as illustrated in Figure 1 - 3.

4.2 Methodology

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.

- Information on events, sites and features in the larger region were 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 the larger region of the proposed development.

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 site was visited on 2 May 2014. The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area that had to be investigated was identified by **Eco Assessments** by means of maps. The area was investigated by walking transects across it – see Fig. 1.

The *kml* files indicating the location of the study area was loaded onto a Nexus 7 tablet. This was used, in Google Earth, during the field survey to access the study area.

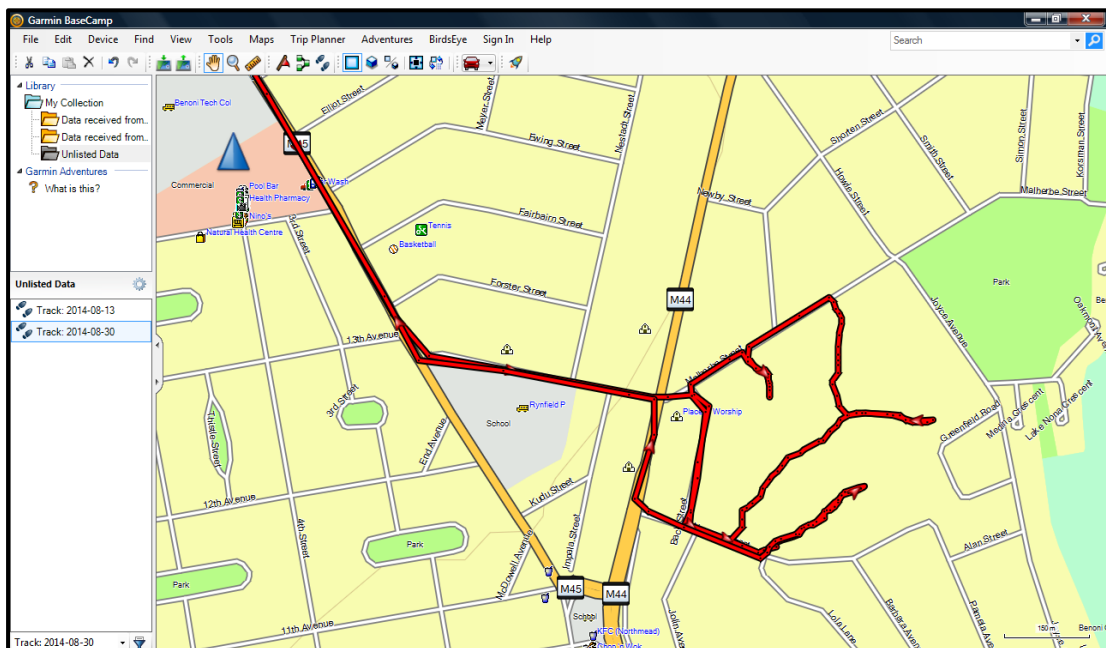


Fig. 1. Map indicating the track log of the field survey.

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. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location

The site is located east of the M44 (Pretoria Road) and south of Malherbe Road in the Rynfield region of Benoni. For more information please see the Technical Summary presented above (p. iii).

The geology is made up of quartzite and the original vegetation is classified as Moist Cool Highveld Grassland, but this has changed due to intensive urbanisation and mining activities. A large amount of building rubble has been dumped on sections of the study area, making the detection of heritage features difficult (Fig. 3.3).

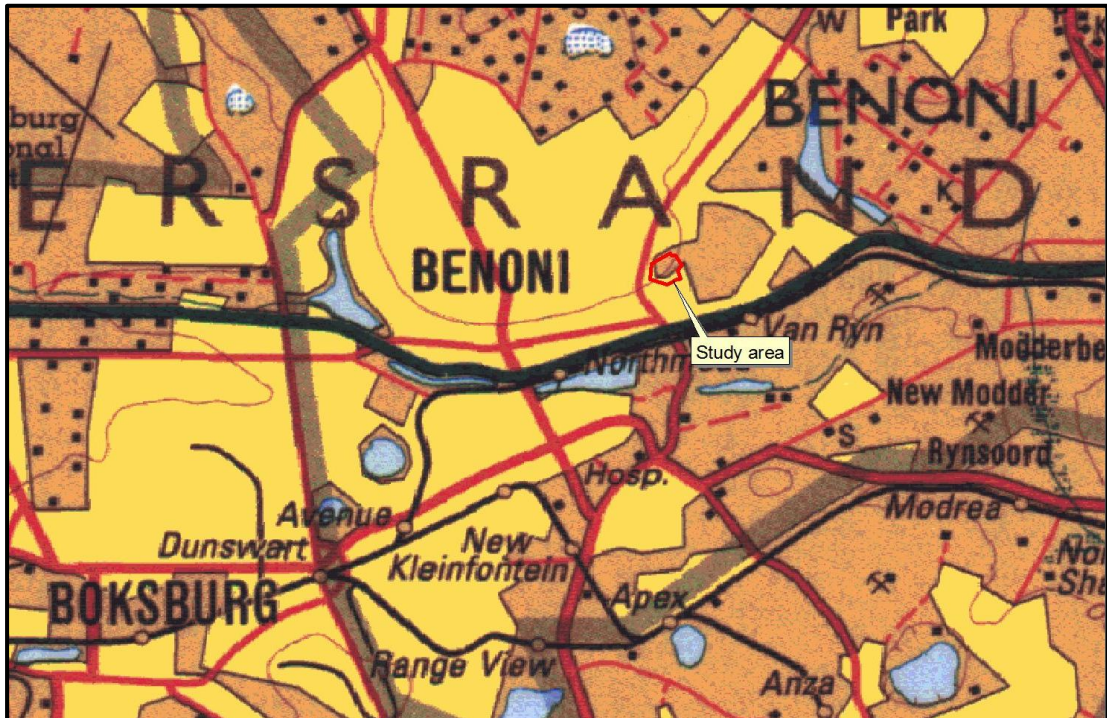


Fig. 2. Location of the study area (red outline) in regional context.
(Map 2628: Chief Surveyor-General)

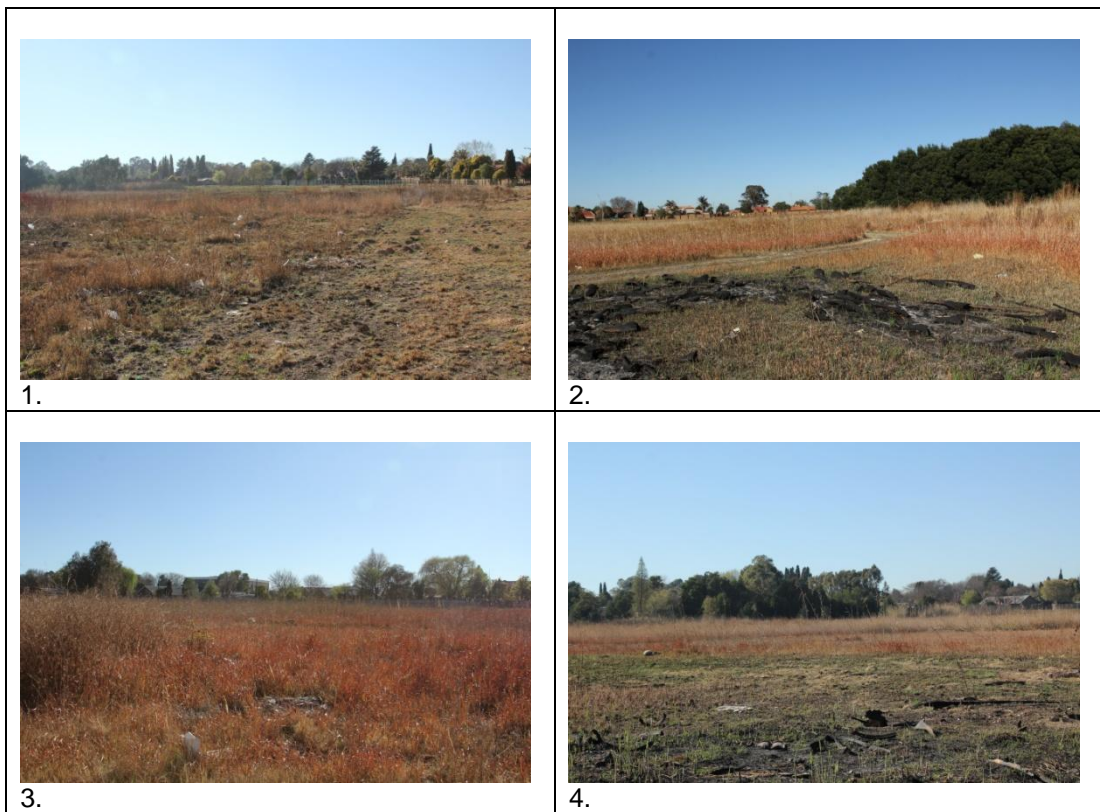


Fig. 3. Views over the study area.

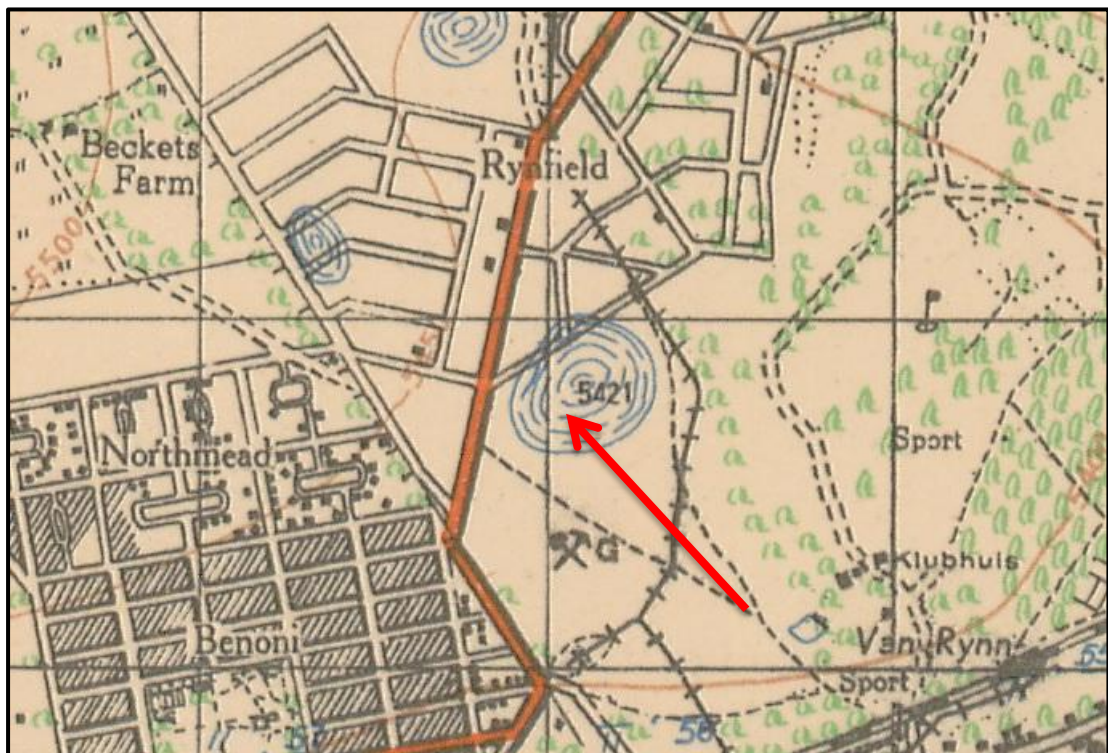


Fig. 4. The 1939 version of the 1:50 000 cadastral map of the study area.

From the 1939 topocadastral maps it can be seen that some undefined development existed in the study area in the period more than 60 years ago (Fig. 4).

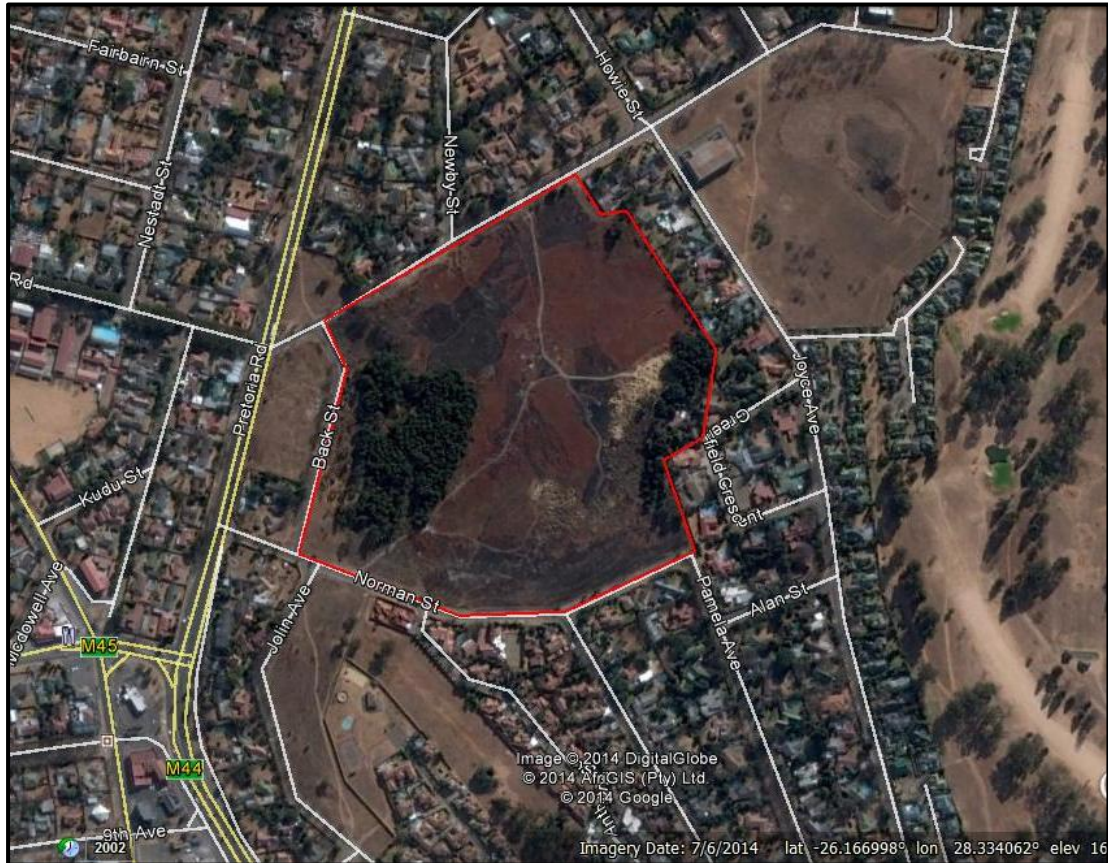


Fig. 5. Aerial view of the site: 2014.
(Photo: Google Earth)

5.2 Development proposal

It is proposed to establish a medium density residential unit on Portion 50 of the farm Vlaktefontein 691R in the Rynfield region of Benoni, Ekurhuleni Metropolitan Municipality, Gauteng Province.

No further information was supplied to the heritage consultant.

5.3 Overview of the region

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.

The cultural landscape qualities of the region is made up of a pre-colonial element consisting of very limited Stone Age and Iron Age occupation, as well as a much later colonial (farmer) component, which eventually gave rise to an urban and industrial component.

Stone Age

Records indicate that stone tools dating to the Early and Middle Stone Age occurred all over, for example in the Primrose Ridge area in adjacent Germiston, 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.

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 and, according to Huffman et al (2006/2007) these sites can be related to the Bafokeng people.

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. Few towns were established and it remained an undeveloped area until the discovery of gold and later of coal. From early days this region was subjected to intense gold mining activities (Praagh 1906). The result is that most sites and features of heritage significance in the larger region derive from this development.

In 1881 the government of the South African Republic (ZAR) decided to conduct a survey and to allot titles to various unclaimed sections of state property between occupied farms. This task fell to Johann Rissik, afterwards Surveyor-General and later Administrator of the Transvaal. One piece of land was very irregular in shape and difficult to survey. Rissik must have wrestled long with the problem of surveying the area and, remembering the name Rachel gave to her son in her grief, named the farm Benoni (Genesis 35:18). Ben-Oni means *son of my sorrows*. In September 1887 gold was discovered at Benoni, and on 9 May 1888 it was declared a gold-bearing farm. After the discovery of gold on the adjoining farms Kleinfontein, Vlakfontein and Modderfontein rapid mining development set in. On 18 March 1904 the first plots were sold at Kleinfontein and the name Benoni was adopted for the new township. The real pioneer of mining in Benoni was Sir George Farrar, chairman of the mining syndicate that owned the land. Inspired by memories of his former home at Bedford in England, he resolved to create just such a town on the northern slopes of the valley on which the Klipfontein Dam was situated. He was appointed as a one-man committee to plan the new town. In 1906 a health committee was established, which could not keep pace with the development of the new township, and consequently Benoni was created a municipality on 1 October 1907. The original municipal boundaries included Brakpan. In 1919 the municipal area was subdivided and Brakpan became a separate municipality. Benoni was established with an ideal layout with a large industrial and railway complex separated from but close to the commercial centre and the residential suburbs (SRK Consulting 2003).

Gold mining has ceased and all the mines that brought Benoni early prosperity are closed down. Successive town councils encouraged industrial development and a great variety of industries were created, including heavy and light engineering, iron and steel foundries and textiles.

5.4 Identified sites

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

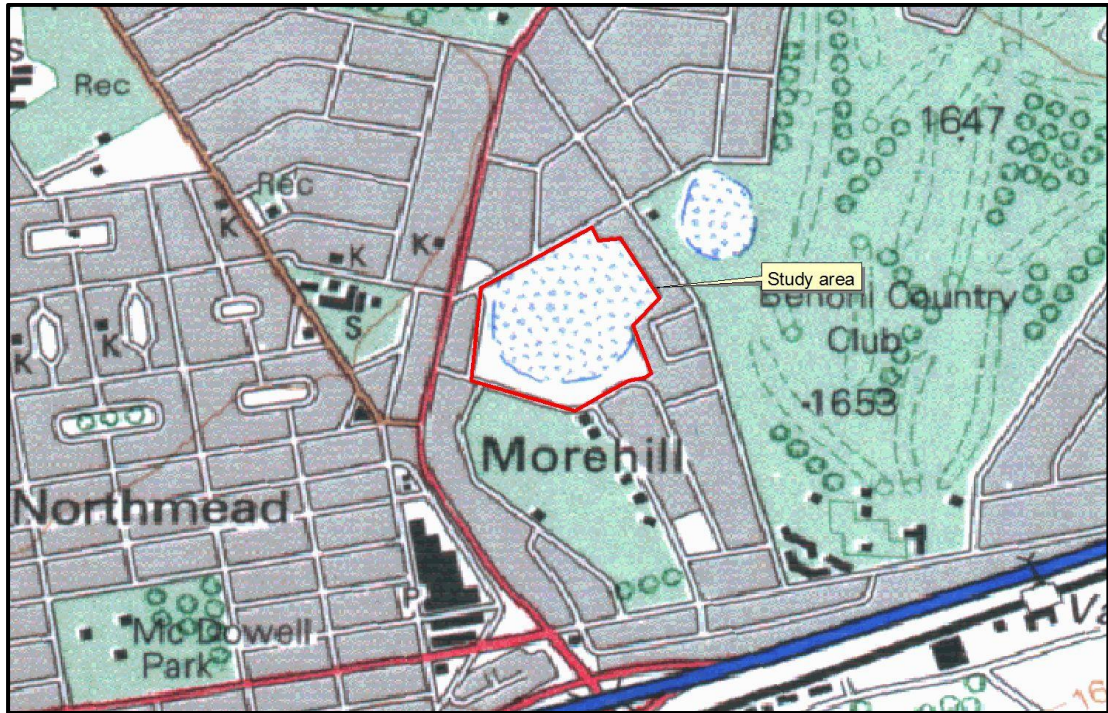


Fig. 6. Location of the development area.

5.4.1 Stone Age

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

5.4.2 Iron Age

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

5.4.3 Historic period

- No sites, features or objects 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.

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)	None
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

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 sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

7. RECOMMENDATIONS

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 establish a medium density residential unit.

The whole region was subjected to urbanization and mining activities which would have destroyed any pre-colonial or early colonial heritage features that might have occurred here in the past.

- As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue. We also recommend that if archaeological sites or graves are exposed during development activities, 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.

Coetzee, C.B. (ed.) 1976. *Mineral resources of the Republic of South Africa*. Handbook 7, Geological Survey. Pretoria: Government Printer.

Handley, J.R.F. 2004. *Historic overview of the Witwatersrand Goldfields*. Howick: RF Handley

Huffman, T.N. et al. 2006/7. Stone walling in the Klipriviersberg: archaeological mitigation for the Aspen Hills development project. *Southern African Field Archaeology* 15 & 16:42-56.

Mendelsohn, F. & Potgieter, C.T. (reds.). 1986. *Guidebook to Sites of Geological and Mining Interest on the Central Witwatersrand*. Johannesburg: The Geological Society of South Africa.

Praagh, L.V. (ed.) 1906. *The Transvaal and its mines*. London: Praagh & Lloyd.

Richardson, D. 2001. *Historic sites of South Africa*. Cape Town: Struik Publishers.

Radford, D. 1989. Baker and the mining houses - an initial investigation into this aspect of his architecture. *South African Journal of Cultural and Art History* 3(3):257-267.

SRK Consulting, 2003. *State of the environment report: Ekurhuleni Metropolitan Municipality*.

Van Schalkwyk, J.A. 2004. *Heritage impact assessment for Reiger Park Extensions 8-11, Boksburg district, Gauteng*. Unpublished report 2004KH05. Pretoria: National Cultural History Museum.

Van Schalkwyk, J.A. 2009a. *Heritage impact survey report for the proposed urban development on portions of the farm Driefontein 85IR, Boksburg magisterial district, Gauteng*. Unpublished report 2009JvS016.

Van Schalkwyk, J.A. 2009b. *Heritage impact assessment for the proposed Beyerspark Extension 110 development, Boksburg magisterial district, Gauteng Province*. Unpublished report 2009JvS074.

Van Schalkwyk, J.A. 2011. *Heritage impact assessment for the proposed commercial development, Holding 30, Bartlett Agricultural Holdings, Boksburg, Gauteng Province*. Unpublished Report 2014JvS/029.

Van Schalkwyk, J.A. *Cultural heritage impact assessment for the proposed residential development, Portion 57, Benoni 77IR, Ekurhuleni, Gauteng Province*. Unpublished Report 2011/JvS/003.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2628AB
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the **significance** of a heritage sites and artefacts is determined by it 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			

Significance of impact:

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a “no-go” implication on the project regardless of any mitigation

Certainty of prediction:

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

Recommended management action:

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation/action necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 4 = preserve site at all costs

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.

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.

The National Heritage Resources Act (Act no 25 of 1999) 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, and which prescribes heritage resources assessment criteria, consistent with the criteria set out in section 3(3), which must be used by a heritage resources authority or a local authority to assess the intrinsic, comparative and contextual significance of a heritage resource and the relative benefits and costs of its protection, so that the appropriate level of grading of the resource and the consequent responsibility for its management may be allocated in terms of section 8.

Presenting archaeological sites as part of tourism attraction requires, in terms 44 of the Act, a Conservation Management Plan as well as a permit from SAHRA.

(1) Heritage resources authorities and local authorities must, wherever appropriate, co-ordinate and promote the presentation and use of places of cultural significance and heritage resources which form part of the national estate and for which they are responsible in terms of section 5 for public enjoyment, education, research and tourism, including-

- (a) the erection of explanatory plaques and interpretive facilities, including interpretive centres and visitor facilities;
- (b) the training and provision of guides;
- (c) the mounting of exhibitions;
- (d) the erection of memorials; and
- (e) any other means necessary for the effective presentation of the national estate.

(2) Where a heritage resource which is formally protected in terms of Part I of this Chapter is to be presented, the person wishing to undertake such presentation must, at least 60 days prior to the institution of interpretive measures or manufacture of associated material, consult with the heritage resources authority which is responsible for the protection of such heritage resource regarding the contents of interpretive material or programmes.

(3) A person may only erect a plaque or other permanent display or structure associated with such presentation in the vicinity of a place protected in terms of this Act in consultation with the heritage resources authority responsible for the protection of the place.