

Archaeological Impact Assessment

**For the Proposed Libangeni and Mmamethlake Landfill Sites, Located within the Dr JS Moroka
Local Municipality, Limpopo Province**

Prepared For
Marinda le Roux

By



HERITAGE

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**VERSION 1.0
4 November 2013**

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I, Jaco van der Walt as duly authorised representative of Heritage Contracts and Archaeological Consulting CC, hereby confirm my independence as a specialist and declare that neither I nor the Heritage Contracts and Archaeological Consulting CC have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which the client was appointed as Environmental Assessment practitioner, other than fair remuneration for work performed on this project.



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EXECUTIVE SUMMARY

Site name and location:

- **Mmamethlake** village, also known as Dierefeng is situated within Dr JS Moroka Local Municipality (DJS MLM). Mmamethlake is about **44 km from Pretoria**. The Mmamethlake landfill site is situated 2.0 km from the Mmamethlake Hospital on the Remainder of the **Farm Bultfontein No 74 JR**.
- Libangeni, also known as Vaalbank is a small town situated within Dr JS Moroka Local Municipality (DJS MLM). It is about 130km northeast of Pretoria. The Libangeni landfill is opposite the Vaalbank Police Station across the R568 tarred road (Portion 2 of the Farm Leeuwfontein No 188JR)

Purpose of the study: Phase 1 Archaeological Impact Assessment to determine the presence of cultural heritage sites and the impact of the proposed project on these resources within the study area.

1:50 000 Topographic Map: 2528 BA (Mmamethlake) and 2528 BB (Libangeni).

Environmental Consultant: Marinda le Roux

Developer: Dr JS Moroka Local Municipality

Heritage Consultant: Heritage Contracts and Archaeological Consulting CC (HCAC).

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Date of Report: 5 November 2013

Findings of the Assessment:

During the Archaeological Impact Assessment no sites of significance was identified in either of the study areas. From an archaeological point of view there is no reason why both the developments cannot commence work (based on approval from SAHRA). If during construction any archaeological finds are made (e.g. stone tools, skeletal material), the operations must be stopped, and the archaeologist must be contacted for an assessment of the find.

A paleontological desktop assessment was conducted for both sites by Dr John Almond and he concluded that it is recommended that exemption from further specialist palaeontological studies and mitigation be granted for both waste disposal facilities development.

General

Due to extensive ground disturbance, archaeological visibility was low on portions of the site during the survey. The possible occurrence of unmarked or informal graves and subsurface finds can thus not be excluded. If during

construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find.

Disclaimer: *Although all possible care is taken to identify sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. Heritage Contracts and Archaeological Consulting CC and its personnel will not be held liable for such oversights or for costs incurred as a result of such oversights.*

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- The technology described in any report;
- Recommendations delivered to the Client.

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ABBREVIATIONS

AIA: Archaeological Impact Assessment
ASAPA: Association of South African Professional Archaeologists
BIA: Basic Impact Assessment
CRM: Cultural Resource Management
ECO: Environmental Control Officer
EIA: Environmental Impact Assessment*
EIA: Early Iron Age*
EIA Practitioner: Environmental Impact Assessment Practitioner
EMP: Environmental Management Plan
ESA: Early Stone Age
GPS: Global Positioning System
HIA: Heritage Impact Assessment
LIA: Late Iron Age
LSA: Late Stone Age
MEC: Member of the Executive Council
MIA: Middle Iron Age
MPRDA: Mineral and Petroleum Resources Development Act
MSA: Middle Stone Age
NEMA: National Environmental Management Act
PRHA: Provincial Heritage Resource Agency
SADC: Southern African Development Community
SAHRA: South African Heritage Resources Agency

**Although EIA refers to both Environmental Impact Assessment and the Early Iron Age both are internationally accepted abbreviations and must be read and interpreted in the context it is used.*

GLOSSARY

Archaeological site (remains of human activity over 100 years old)

Early Stone Age (~ 2.6 million to 250 000 years ago)

Middle Stone Age (~ 250 000 to 40-25 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

The Iron Age (~ AD 400 to 1840)

Historic (~ AD 1840 to 1950)

Historic building (over 60 years old)

1 BACKGROUND INFORMATION

<i>Kind of study</i>	Archaeological Impact Assessment
<i>Type of development</i>	Mmamethlake and Libangeni Landfill Sites
<i>Developer:</i>	Dr JS Moroka Local Municipality
<i>Consultant:</i>	Marinda le Roux Consulting

The Archaeological Impact Assessment (AIA) report forms part of the Basic Assessment for the proposed project.

The aim of the study is to identify cultural heritage sites, document, and assess their importance within local, provincial and national context. It serves to assess the impact of the proposed project on non-renewable heritage resources, and to submit appropriate recommendations with regard to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner. It is also conducted to protect, preserve, and develop such resources within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

The report outlines the approach and methodology utilized before and during the survey, which includes: Phase 1, a review of the heritage scoping report that includes collection from various sources and consultations; Phase 2, the physical surveying of the area on foot and by vehicle; Phase 3, reporting the outcome of the study.

During the survey no heritage sites were identified. General site conditions and features on sites were recorded by means of photographs, GPS locations, and site descriptions. Possible impacts were identified and mitigation measures are proposed in the following report.

This report must also be submitted to the appropriate SAHRA provincial office for peer review.

1.1 Terms of Reference

Desktop study

Conducting a brief desktop study where information on the area is collected to provide a background history of the area.

Field study

Conduct a field study to: a) systematically survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest; b) record GPS points identified as significant areas; c) determine the levels of significance of the various types of heritage resources recorded in the project area.

Reporting

Report on the identification of anticipated and cumulative impacts the operational units of the proposed project activity may have on the identified heritage resources for all 3 phases of the project; i.e., construction, operation and decommissioning phases. Consider alternatives, should any significant sites be impacted adversely by the proposed project. Ensure that all studies and results comply with Heritage legislation and the code of ethics and guidelines of ASAPA.

To assist the developer in managing the discovered heritage resources in a responsible manner, and to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

1.2. Archaeological Legislation and Best Practice

Phase 1, an AIA or a HIA is a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of a heritage specialist input is to:

- Identify any heritage resources, which may be affected;
- Assess the nature and degree of significance of such resources;
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- Assess the negative and positive impact of the development on these resources;
- Make recommendations for the appropriate heritage management of these impacts.

The AIA or HIA, as a specialist sub-section of the EIA, is required under the National Heritage Resources Act NHRA of 1999 (Act 25 of 1999), Section 23(2)(b) of the NEMA and sections 39(3)(b)(iii) of the MPRDA.

The AIA should be submitted, as part of the EIA, BIA or EMP, to the PHRA if established in the province or to SAHRA. SAHRA will be ultimately responsible for the professional evaluation of Phase 1 AIA reports upon which review comments will be issued. 'Best practice' requires Phase 1 AIA reports and additional development information, as per the EIA, BIA/EMP, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 AIA reports authored by professional archaeologists, accredited with ASAPA or with a proven ability to do archaeological work.

Minimum accreditation requirements include an Honours degree in archaeology or related discipline and 3 years post-university CRM experience (field supervisor level).

Minimum standards for reports, site documentation and descriptions are set by ASAPA in collaboration with SAHRA. ASAPA is a legal body, based in South Africa, representing professional archaeology in the SADC region. ASAPA is primarily involved in the overseeing of ethical practice and standards regarding the archaeological profession. Membership is based on proposal and secondment by other professional members.

Phase 1 AIAs are primarily concerned with the location and identification of sites situated within a proposed development area. Identified sites should be assessed according to their significance. Relevant conservation or Phase 2 mitigation recommendations should be made. Recommendations are subject to evaluation by SAHRA.

Conservation or Phase 2 mitigation recommendations, as approved by SAHRA, are to be used as guidelines in the developer's decision making process.

Phase 2 archaeological projects are primarily based on salvage/mitigation excavations preceding development destruction or impact on a site. Phase 2 excavations can only be conducted with a permit, issued by SAHRA to the appointed archaeologist. Permit conditions are prescribed by SAHRA and includes (as minimum requirements) reporting back strategies to SAHRA and deposition of excavated material at an accredited repository.

In the event of a site conservation option being preferred by the developer, a site management plan, prepared by a professional archaeologist and approved by SAHRA, will suffice as minimum requirement.

After mitigation of a site, a destruction permit must be applied for from SAHRA by the client before development may proceed.

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36. Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act), as well as the Human Tissues Act (Act 65 of 1983), and are the jurisdiction of SAHRA. The procedure for Consultation Regarding Burial Grounds and Graves (Section 36[5]) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in this age category, located inside a formal cemetery administrated by a local authority, require the same authorisation as set out for graves younger than 60 years, in addition to SAHRA authorisation. If the grave is not situated inside a formal cemetery, but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws, set by the cemetery authority, must be adhered to.

Human remains that are less than 60 years old are protected under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), as well as the Human Tissues Act (Act 65 of 1983), and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning; or in some cases, the MEC for Housing and Welfare.

Authorisation for exhumation and reinterment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and

regional provisions, laws and by-laws must also be adhered to. To handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

1.3 Description of Study Area

1.3.1 Location Data

Mmamethlake village, also known as Dierefeng is situated within Dr JS Moroka Local Municipality (DJS MLM). Mmamethlake is about **44 km from Pretoria**. The Mmamethlake landfill site is situated 2.0 km from the Mmamethlake Hospital on the Remainder of the **Farm Bultfontein No 74 JR**. The Mmamethlake project entails the development and formalisation of a 9ha landfill facility at Mmamethlake in the Mathanjana Area on the remaining Portion of the farm Bultfontein No. 74-JR.

Libangeni, also known as Vaalbank is a small town situated within Dr JS Moroka Local Municipality (DJS MLM). It is about **130km northeast of Pretoria**. The Libangeni landfill is opposite the Vaalbank Police Station across the R568 tarred road (Portion 2 of the **Farm Leeuwfontein No 188JR**).

The topography of the area is very flat and the study area falls within the bioregion described by Mucina et al (2006) as the Central Bushveld Bioregion with the vegetation described as Central Sandy Bushveld.

1.3.2. Location Map

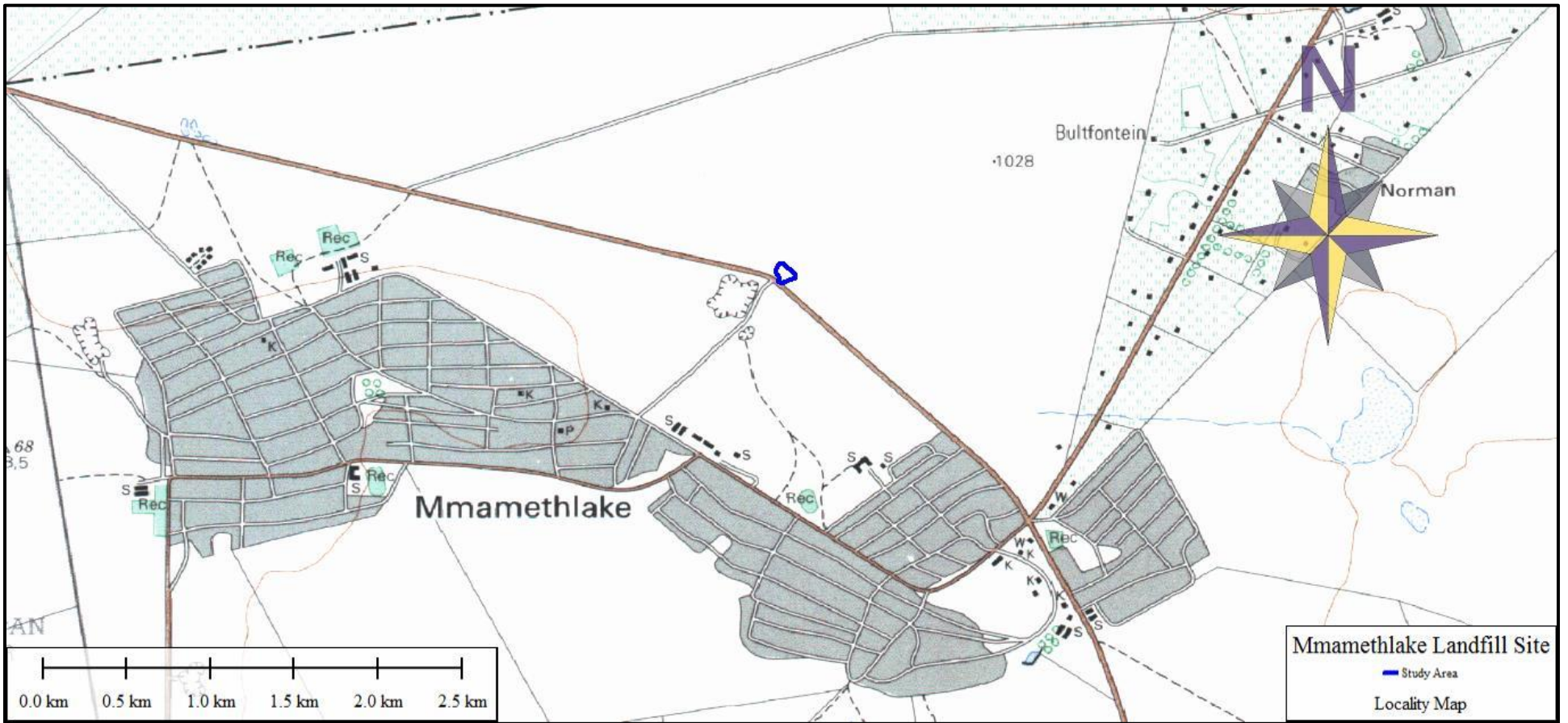


Figure 1: Locality map of the proposed Mmamethlake Landfill development

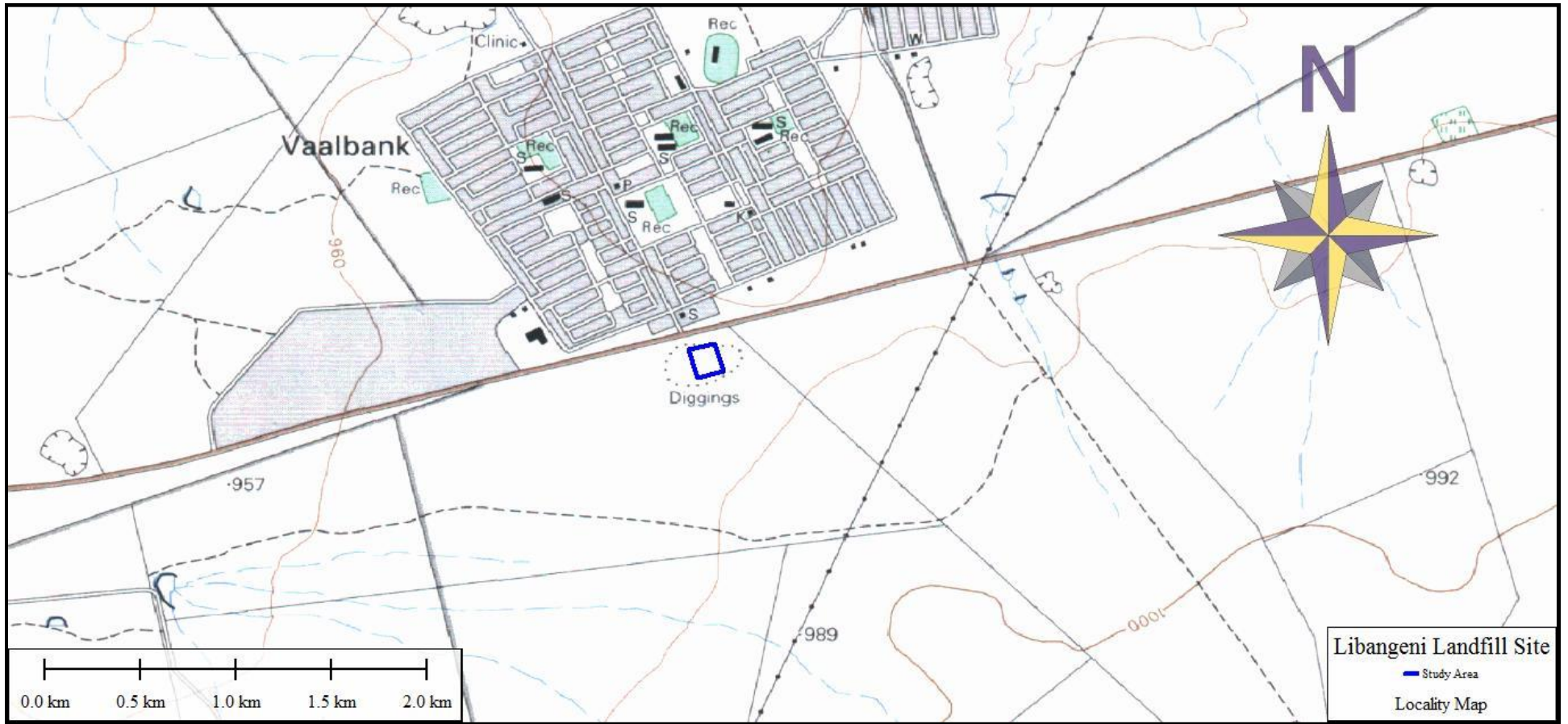


Figure 2: Locality Map of the proposed Libangeni Landfill development.

2. APPROACH AND METHODOLOGY

The aim of the study is to cover archaeological databases and historical sources to compile a background history of the study area followed by field verification; this was accomplished by means of the following phases.

2.1 Phase 1 - Desktop Study

The first phase comprised a desktop study, gathering data to compile a background history of the area in question. It included scanning existing records for archaeological sites, historical sites and graves, on the inhabitants of the area.

2.1.1 Literature Search

Utilising data for information gathering stored in the archaeological database at Wits, previous CRM reports done in the area and a short literature search. The aim of this is to extract data and information on the area in question, looking at archaeological sites, historical sites, graves, architecture, oral history and ethnographical information on the inhabitants of the area.

2.1.2 Information Collection

The SAHRA report mapping project (Version 1.0) and SAHRIS was consulted to collect data from previously conducted CRM projects in the region to provide a comprehensive account of the history of the study area.

2.1.3 Consultation

No consultation was conducted by the heritage team as this is conducted as part of the BA.

2.1.4 Google Earth and Mapping Survey

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where sites of heritage significance might be located.

2.1.5 Genealogical Society of South Africa

The database of the Genealogical Society was consulted to collect data on any known graves in the area.

2.2 Phase 2 - Physical Surveying

Due to the nature of cultural remains, the majority of which occurs below surface, field surveys of both the landfill study areas of less than 2 ha each were conducted; focussing on drainage lines, hills and outcrops, high lying areas and disturbances in the topography. The study area was surveyed on foot by a professional archaeologist on 31 October 2013.

2.3. Restrictions

Due to the fact that most cultural remains may occur below surface, the possibility exists that some features or artefacts may not have been discovered/ recorded during the survey. Low archaeological visibility is due to extensive ground disturbance, illegal dumping and vegetation, and the possible occurrence of unmarked graves and other cultural material cannot be excluded. Although Heritage Contracts and Archaeological Consulting CC surveyed the area as thoroughly as possible,

it is incumbent upon the developer to stop operations and inform the relevant heritage agency should further cultural remains, such as unmarked graves, stone tool scatters, artefacts, bones or fossils, be exposed during the process of development.

3. NATURE OF THE DEVELOPMENT

The type of waste disposed of at the landfill is General Waste (G) including domestic, commercial and construction rubble. The waste classification to be considered in the design is based on the assumption that the waste is general and there will be leachate produced. The landfill site should have no hazardous and medical waste disposed of at the site. At present, the site can be described as a dumping ground rather than a landfill site. For this reason (and the resulting negative impact on the environment), proper engineering design and organized operation befitting of a landfill facility became a necessity. The main waste stream is domestic waste composed of plastics, polythene material, paper, cardboard box material and glass.

4. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND OF THE STUDY AREA

4.1 Databases Consulted

Wits Archaeological Data Bases

No previously recorded sites are on record for the Libangeni project area on the 2528 BB topographic map at the Wits database. For the Mmamethlake study area on the 2528 BA topographic map at the Wits database two MSA sites are on record well towards the south of the study area and no impact will occur on these sites.

SAHRA Report Mapping Project

The SAHRIS and the SAHRA Report Mapping project (version 1) have a survey on record 8 km to the south of the Mmamethlake land fill site (van Schalkwyk 2007) and a study to the north east of Libangile (Pistorius 2003). Pistorius identified a single grave and a cemetery and Van Schalkwyk found several MSA occurrences of low importance.

Genealogical Society and Google Earth Monuments

Neither the Genealogical Society nor the monuments database at Google Earth (Google Earth also include some archaeological sites and historical battlefields) have any recorded sites in the study area.

4.2 Archaeological and Historical Information Available on the Study Area

The following report will endeavour to give an account of the history the area and also a brief overview of the district in which it is located. The report has been divided into several sections that will focus on the following aspects:

General history of human settlement in the area

The history of black and white interaction in the area

4.2.1. Historiography And Methodology

It was necessary to use a range of sources in order to give an accurate account of the history of the area in which the proposed development is located. Sources included secondary source material, maps, online sources and archival documents. This study is by no means all-inclusive, and there are doubtlessly still sources to be found on the history of the property and area researched in this study.

4.2.2. The Area Under Investigation

Mmamethlake

Very little information is available on the Mmamethlake village. Rust de Winter is located 38km from the study area. Some information on the history of Rust de Winter could be found.

The history of the Rust de Winter Farms dates back to the 'Voortrekker days' in the 1800's. The first white farmers discovered and utilized area for the excellent winter grazing potential. The name Rust de Winter originated from this. The Rust de Winter irrigation scheme was developed in the 1950's to promote commercial arable production. The Rust de Winter dam's capacity was utilized mainly for agricultural purposes. In 1981, the farms were bought out by the government, due to increased diverse water demand. The Suidelike Transvaal Kooperasie (STK) was appointed to maintain the farms, until its withdrawal in 1992, due to political pressure and economically unfeasibility. Thereafter, illegal land invasions took place. In 1992 the

Renosterkop Dam was constructed lower downstream on the Elands River, following increasing water demand for household consumption in the newly constructed urban settlements, which formed part of the former KwaNdebele homeland. In 1994, after the first democratic elections, and the reintegration of KwaNdebele into South Africa, the Rust de Winter farms became state owned land. Land occupation was then legalized, through allocation of lease agreements.

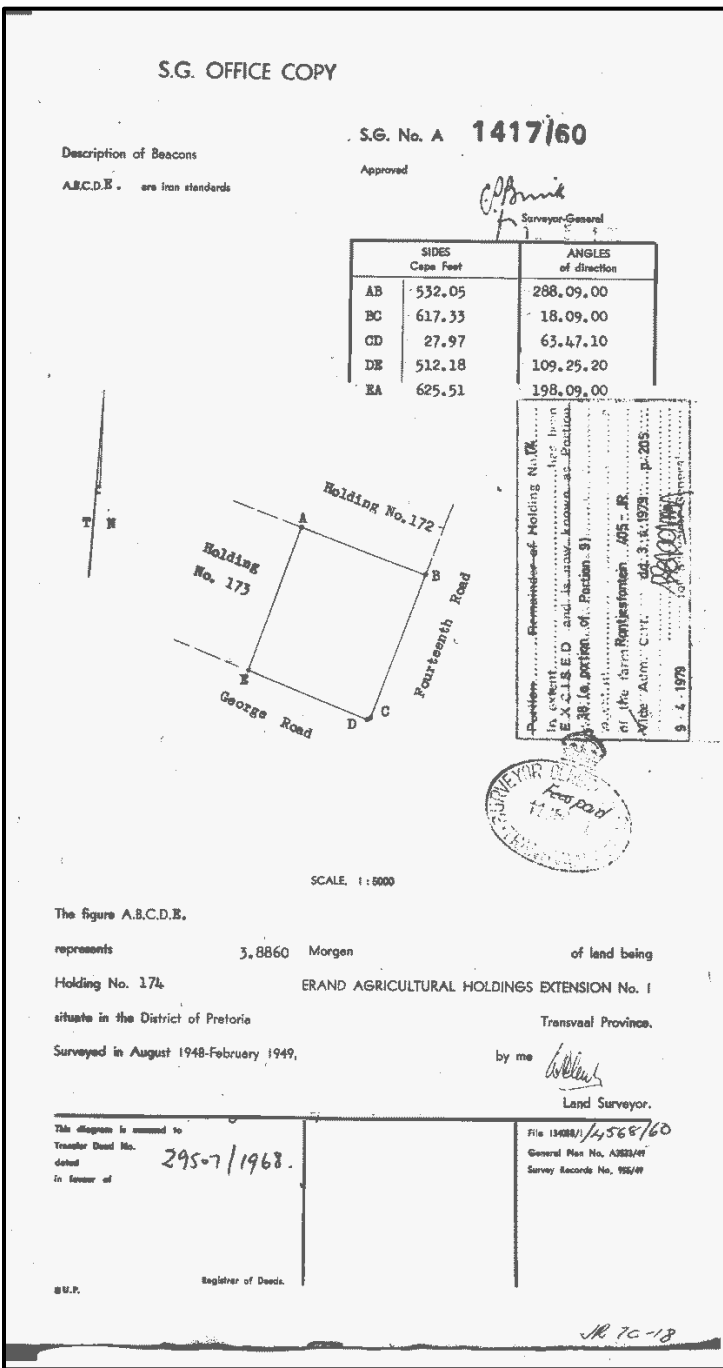


Figure 3: 1949 map of the farm Bultfontein (Chief Surveyor General).

Libangeni

Libangeni was previously known as Vaalbank, an Afrikaans term that refers to grey banks, this probably referred to the banks of the Renosterkop Dam. The early Vaalbank was established to be an urban residential site for the Ndebele population.

S.G. OFFICE COPY

Description of Beacons
A.B.C.D. are iron standards

S.G. No. A

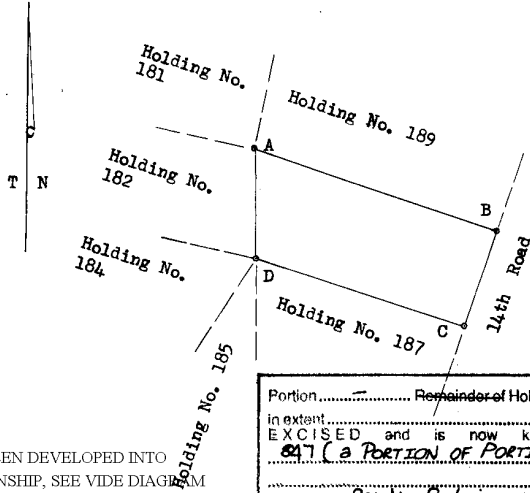
5374/59

Approved

C.H. West
Surveyor-General

5-12-1959

	SIDES Cape Feet	ANGLES of direction
AB	847.06	288.09.00
BC	330.00	18.09.00
CD	726.95	108.09.00
DA	351.18	178.09.00



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S.G. No. 2158/2000

Portion..... Remainder of Holding No. 188.....
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847 (a PORTION OF PORTION 9)
of the farm Randjesfontein 405-JR
Vide Adm. Cert. dd. 1999.08.11 Pg. 100 Vol. 3
Portion..... Remainder of Holding No. 188.....
in extent..... has been
EXCISED and is now known as Portion 847
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of the farm Randjesfontein 405-JR
Vide Adm. Cert. dd. 1999.08.11 Pg. 100 Vol. 3
Morgensgd. R.W. Herbert..... of land being
for Surveyor-General
1999.10.13
GRAND AGRICULTURAL HOLDINGS EXTENSION No. 1

The figure A.B.C.D.
represents 3,0059
Holding No. 188

situate in the District of Pretoria
Surveyed in August 1948-February 1949,

by me *C.H. West*
Land Surveyor.

This diagram is annexed to
Transfer Deed No. T5760/1960
dated
in favour of

T 5760/1960

File 134088/1 113404/59
General Plan No. A3533/49
Survey Records No. 955/49

U.P.

Registrar of Deeds.

JRSV-48
JR TC 18

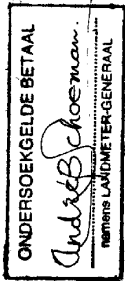
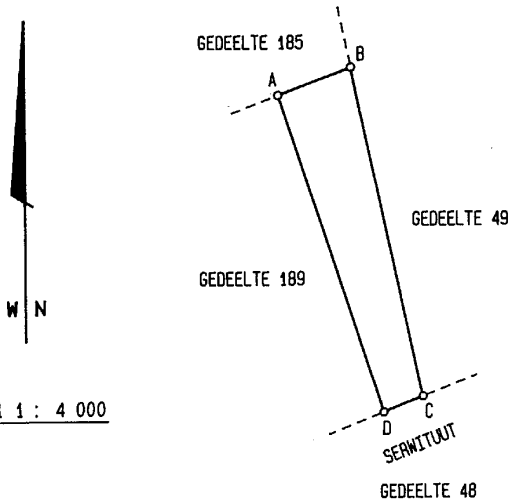
Figure 4: Chief Surveyor General 1949 map of the farm Leeuwfontein

ONDERVERDELINGSKAART

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BC	246,38	347 53 50	B + 62 389,66	+ 38 780,21	<i>André Schoeman</i>
CD	31,26	68 37 20	C + 62 338,02	+ 39 021,12	nms.
DA	244,21	162 00 30	D + 62 367,13	+ 39 032,51	LANDMETER- GENERAAL
369	LEEUEW	▲ + 58 564,42	+ 38 792,87		1997.01.22
370	PIENAARS RIVER	▲ + 63 168,07	+ 39 830,30		

Beskrywing van bakens

A, B, C : Standaard ysterpaal
D : 20mm Pyp



Skaal 1 : 4 000

Die figuur A B C D
stel voor 1,0700 Hektaar grond, synde
Gedeelte 188 ('n gedeelte van Gedeelte 50)
van die plaas

LEEUFONTEIN No. 299 - JA

Provinsie GAUTENG

Opgemeet in OKTOBER en NOVEMBER 1996 deur my

P.J.N. Van Marle
P.J.N. VAN MARLE PLS 0655
Professionele Landmeter

Hierdie kaart is	Die oorspronklike kaart	Lêer -/52
No.	L.G. No. A4947/1955	M.S. No 5989/1996
ged.	Transport T40394/1966	A.P.
t.g.v.	Grondbrief	Komp. JA 50-8*
Registrateur van Aktes		JRSG - 42

Figure 5: Sub Division Map from the Chief Surveyor general completed in 1996 for the farm Leeufontein no 299.

4.2.3. A Brief History Of Human Settlement And Black And White Interaction in the greater study area.

It is important to understand the social history of the surrounding area. To do so it is essential to consider the history of towns in the vicinity of the property under investigation, since these social centres would have affected those individuals living close by. The city of Marble Hall is of obvious significance, as it is the biggest center located 48 km to the north east of the Libangile study area. The history of this area will be discussed.

No signs of Stone Age or Iron Age terrains are present in the vicinity of Marble Hall. (Geskiiedenisatlas van Suid-Afrika 1999: 4-5, 7). No major black tribes seem to have settled near the area where Marble Hall is located today by the start of the nineteenth century, but the Kôpa Tribe was prominent in the area to the south thereof. (Geskiiedenisatlas van Suid-Afrika 1999: 10)

In a few decades, the sociographic nature of the then Transvaal province would change forever. The Difaqane (Sotho), or Mfekane (“the crushing” in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820’s until the late 1830’s. (Geskiiedenisatlas van Suid-Afrika 1999: 109-115) It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka’s Zulus to attack other tribes. (Geskiiedenisatlas van Suid-Afrika 1999: 14; 116-119) Ndebele raiders moved through the area and displaced the Kôpa and various other tribes. (Geskiiedenisatlas van Suid-Afrika 1999: 110-111) It is not known if these events had a great influence on the area where the area under investigation is located today, but it is important to understand the social dynamics of this area.

During the time of the Difaqane, a northwards migration of white settlers from the Cape was also taking place. Some travellers, missionaries and adventurers had gone on expeditions to the northern areas in South Africa – some as early as in the 1720’s. One such an adventurer was Robert Scoon, who formed part of a group of Scottish travellers and traders who had travelled the northern provinces of South Africa in the late 1820s and early 1830s. Scoon had gone on two long expeditions in the late 1820s and once again ventured eastward and northward of Pretoria in 1836 (Geskiiedenisatlas van Suid-Afrika 1999: 13, 116-121)

The Voortrekker groups Hans van Rensburg and Louis Tregardt also passed through the area in 1837. The first white settlers obtained farms here between 1841 and 1850 (Geskiiedenisatlas van Suid Afrika 1999: 13-15).

By the late 1820’s, a mass-movement of Dutch speaking people in the Cape Colony started advancing into the northern areas. This was due to feelings of mounting dissatisfaction caused by economical and other circumstances in the Cape. This movement later became known as the Great Trek. This migration resulted in a massive increase in the extent of that proportion of modern South Africa dominated by people of European descent. (Ross 2002: 39) As can be expected, the movement of whites into the northern provinces would have a significant impact on the black people who populated the land. By 1860, the population of whites in the central Transvaal was already very dense and the administrative machinery of their leaders was firmly in place. Many of the policies that would later be entrenched as legislation during the period of apartheid had already been developed. (Geskiiedenisatlas van Suid-Afrika 1999: 170)

Much can be said about the systematic oppression of black people in South Africa. In 1904 about a half of the black population in the Transvaal was living on private land, owned by whites or companies. According to the Squatters’ Law of 1895, no more than five families of “natives” could live on any farm or divided portion of a farm, without special permission

of the Government in the Transvaal. (Massie 1905: 97) In Bergh's source, one can see a map indicating the areas where blacks had settled by 1904. It is interesting that there were no black settlements in the Bethal District, and very few in the surrounding districts. (Geskiiedenisatlas van Suid-Afrika 1999: 41) One can estimate that most black families would probably have lived and worked on private farms owned by white farmers. The 1913 and 1936 Acts delimited areas of land where a number of black "homelands" were established. The 1936 Act proclaimed land directly to the west, north and east of Marble Hall as "Native Trust" land. By 1993 a large area to the northeast of Marble Hall was known as the autonomous black state of Lebowa. Other parts of Lebowa, Bophuthatswana and KwaNdebele were located to the southwest of Marble Hall. (Geskiiedenisatlas van Suid-Afrika 1999: 42-43)

Black and white relations were however at times also interdependent in nature. After the Great Trek, when white farmers had settled at various areas in the northern provinces, wealthier farmers were often willing to lodge needy white families on their property in exchange for odd jobs and commando service. This bywoner often arrived with a family and a few cows. He would till the soil and pay a minimal rent to the farmer from the crops he grew. The farmer did not consider him a laborer, but mostly kept black workers for hard labour on the farm. After the Anglo-Boer War, many families were left destitute. Post war years of severe droughts and locust plagues did not ameliorate this state of affairs. All of these factors resulted in what became known as the 'poor white problem'. On the advent of commercial farming in South Africa, white landowners soon found bywoners to be a financial burden, and many were evicted from farms. In many cases, wealthier landlords found it far more profitable to rent their land to blacks than to bywoners. This enabled them to create reservoirs of black labour (for which mine recruiting agencies were prepared to pay handsome commissions), while it was also possible to draw more rent from their black tenants. This practice was outlawed by the 1913 Natives Land Act, which forbade more than five black families from living on white farms as peasant squatters. (Readers Digest 1992: 329-332)

The discovery of diamonds and gold in the northern provinces had very important consequences for South Africa. After the discovery of these resources, the British, who at the time had colonized the Cape and Natal, had intentions of expanding their territory into the northern Boer republics. This eventually led to the Anglo-Boer War, which took place between 1899 and 1902 in South Africa, and which was one of the most turbulent times in South Africa's history. Even before the outbreak of war in October 1899 British politicians, including Sir Alfred Milner and Mr. Chamberlain, had declared that should Britain's differences with the Z.A.R. result in violence, it would mean the end of republican independence. This decision was not immediately publicized, and as a consequence republican leaders based their assessment of British intentions on the more moderate public utterances of British leaders. Consequently, in March 1900, they asked Lord Salisbury to agree to peace on the basis of the status quo ante bellum. Salisbury's reply was, however, a clear statement of British war aims. (Du Preez 1977)

The skirmish that took place closest to where Marble Hall is located today is the battle at Vrieskraal. The British Commander, W. Kitchener, attacked the Boer troops of Commandant Muller on 16 Augustus 1901. (Geskiiedenisatlas van Suid-Afrika 1999: 54)

Warmbaths is the most prominent centre located to the north west of the Mmamethlake studie area Warmbaths / Bela-Bela - has strong mineral springs that flows out of the Earth at a rate of 22 000 liters of water per hour with a temperature of 52°C this water gave rise to the eventual establishment of the town of Warmbaths. The water from these springs is rich

in sodium chloride, calcium carbonate and other salts that are highly beneficial to those suffering from rheumatic ailments.

Carl Van Heerden, a Voortrekker, established the first farm in this area at the Mineral Springs and called it Het Bad, at this time the area in and around the mineral springs was a marshland where great numbers of wild animals were trapped and died in the mud. After the marshes were drained, the skeletons of numerous animals including elephants were found.

In 1873, President Burger of the then South African Republic (ZAR) saw the tourism and recreational opportunities that Het Bad had to offer. He proposed the purchase of the farm to the ZAR. At first they refused the proposal but when President Burger wanted to purchase Het Bad from his own funds they accepted the proposal. Although Hartingsburg was the authorized name - named after Pieter Harting (Dutch Biologist & Naturalist, 1812-1885) who conducted extensive groundwater research in effort to improve quality of water for public health – the place was commonly called “Warmbaths“. Hartingsburg and Nylstroom remained declared townships in the district of Waterberg and the magisterial headquarters were where the Government deemed it most necessary. This however fell to the lot of Nylstroom, for although Erven were sold at Hartingsburg, hardly a soul lived there. The fresh water supply was poor - the place was visited by sick persons during 5 months of the year only and in addition Nylstroom did everything to maintain itself. In 1903 the British government changed the name of the Post Office to Warm Baths (Tvl. Government Gazette. Vol. V111 - 1905, pp. 108-109).

During the Anglo-Boer war the British annexed the small hut that still stood and called it Warm Baths. The British also erected a blockhouse to protect the railway line to Pietersburg and it still stands today. Major Jackson Map, June 1902 (National Archives, Maps, 3/1895)

As seen on the “Hartingsburg (Warmbaths)” sheet of the Major Jackson Series. The series was compiled, surveyed and printed during the South African War of 1899 to 1902 (National Archives, Maps, 3/1895). This sheet was first compiled and drawn during June 1900 and lithographed during September 1900. It was revised during May 1902 as well as during June 1902. This map shows the railway line between Pretoria and present-day crossing over the study area. This line was officially opened during 1899.

Christina Pretorius, wife of the well-known General Andries Pretorius passed away after a bout of flu and was buried in Warmbaths, she was brought to Warmbaths in the hope that the mineral waters would restore her health.

In 1920 *Warm Baths* was proclaimed a town and it was not until the 1st July 1950, that it had a magisterial district of its own. In 1932 *Warmbaths* attained village town status and town council status in 1960. Since then the community has advanced with great strides.

New suburban areas sprang up, modern commercial concerns were established and superb schools and hotels made their arrival.

In the year 2002 Warmbaths was officially renamed Bela-Bela (which means the pot that boils in Tswana) and the Northern Province has been renamed the Limpopo Province.

Another important landmark in the general area is Buiskop located 9.4 km to the north of the study area.

Buiskop

Buiskop is situated approximately four miles North of Warmbaths, this is a well-known and historical summit. Buiskop was used as a halfway house during the Republican days for the mail coach that travelled between Pretoria and Pietersburg, fresh horses were provided here. The mountain was also found to contain a sandstone formation and this stone was used for the erection of a portion of Pretoria's Union Buildings.

This mountain has an interesting history and owes its name to a Coenraad De Buys who was forced to flee the Cape Colony at the beginning of the 19th Century. He fled North and with his two sons Machiel and Gabriel and a number of natives as bodyguards. Tradition relates that they incurred the wrath of a number of local tribesmen in the area and were driven to the mountain and encircled. The natives tried to get them to surrender by thirst, eight days later Coenraad de Buys made his appearance and dumbfounded the natives who were expecting surrender, to see him swinging a skin of water over the top of the mountain and declaring that he had certain higher powers on his side that enabled him to get water on the dry mountain top. Terrified by this state of affairs the natives decided to cease hostilities and put an end to the seige on Buiskop. (<http://www.accommodation-warmbaths.co.za/history.htm>)

The early pioneer and traveller Coenraad de Buys was besieged on top of the hill known as Buiskop by local black groups. This is confirmed by T.V. Bulpin's *Lost Trails of the Transvaal*. According to Bulpin (1989) De Buys went to the top of the hill and offered their last water container to the besiegers. A person was sent up to receive the gift of water, upon which De Buys threw the water container at him. This suggestion by De Buys that they still had enough water to drink forced the besiegers to abandon the siege.

However, according to Dr. J.B. de Vaal (1990) Coenraad de Buys had disappeared during c.1821 after the death of his wife Elizabeth, the sister of Mzilikazi. Two of Coenraad and Elizabeth's sons, Doris and Gabriël, later resided in the Soutpansberg. After they had trouble with the Venda, both sons fled to present-day Bela-Bela and established themselves at Buiskop. This appears to have been during c. 1836. According to De Vaal they were besieged by the AmaNdebele. During the siege it was Gabriël de Buys who took their last water container, shouted at the besiegers that they still had lots of water and emptied the container onto the rocks (van der Walt 2013).

J. S. Bergh's historical atlas of the four northern provinces of South Africa is a very useful source for the writing of local and regional histories. A Middle Stone Age site called Tuinplaats and a Late Stone Age sites called Wellington Estates were identified to the east of Bela-Bela **and to the north of the surveyed area** (Geskiiedenisatlas van Suid-Afrika 1999: 4).

Early in the 19th century the Kgatla, a Tswana group, stayed in the area (Geskiiedenisatlas van Suid-Afrika 1999: 10). Late Iron Age/ Historical sites were identified at Rust-de-Winter (Van Vollenhoven 2012). Royal graves and cattle enclosures are to be found at Loding. The royal settlement at Loding on the farm farm Roodekopies dates back to 1926 when the royal house Mbhongo Mabena of the Manala - Ndzundza left Wallmansdal (Ko Mjekejeke) north of Pretoria.

4.3 Palaeontology

A paleontological desktop study was conducted by Dr John Almond (2013) and he recommended that exemption from further specialist palaeontological studies and mitigation be granted for both waste disposal facilities.

The Letters of exemption are attached as Annexure A and B to this report.

5. HERITAGE SITE SIGNIFICANCE AND MITIGATION MEASURES

The presence and distribution of heritage resources define a 'heritage landscape'. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area, or a representative sample, depending on the nature of the project. In the case of the proposed development the local extent of its impact necessitates a representative sample and only the footprint of the areas demarcated for development were surveyed. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface.

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The following criteria were used to establish site significance:

- » The unique nature of a site;
- » The integrity of the archaeological/cultural heritage deposits;
- » The wider historic, archaeological and geographic context of the site;
- » The location of the site in relation to other similar sites or features;
- » The depth of the archaeological deposit (when it can be determined/is known);
- » The preservation condition of the sites;
- » Potential to answer present research questions.

Furthermore, The National Heritage Resources Act (Act No 25 of 1999, Sec 3) distinguishes nine criteria for places and objects to qualify as 'part of the national estate' if they have cultural significance or other special value. These criteria are:

- » Its importance in/to 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;
- » Sites of significance relating to the history of slavery in South Africa.

5.1. Field Rating of Sites

Site significance classification standards prescribed by SAHRA (2006), and approved by ASAPA for the SADC region, were used for the purpose of this report. The recommendations for each site should be read in conjunction with section 7 of this report.

			RECOMMENDED
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FIELD RATING	GRADE	SIGNIFICANCE	MITIGATION
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

6. BASELINE STUDY-DESCRIPTION OF SITES

The larger study area of Dr JS Moroka Local Municipality in which Libangeni and Mmametlake are situated is characterised by informal settlements. Both sites consist of abandoned borrow pits used for the construction of provincial roads in the area and would have impacted on any surface indications of heritage resources. Almost no archaeological sites are on record in close proximity to the study areas and none were identified in the development footprint of both land fill sites. Other studies in the larger study area indicated that the archaeological record is characterised by Iron Age stone walled settlements found to the north east and south of the study area. Several Stone Age sites are on record to the south east at Loskop Dam. No traces of any archaeological remains were identified and no buildings older than 60 years exist on site. A search on archaeological data bases also yielded no known sites within the study area and no heritage significant sites were identified during the desktop study. The lack of heritage sites was confirmed during a comprehensive field survey (Figure 6 & 7).

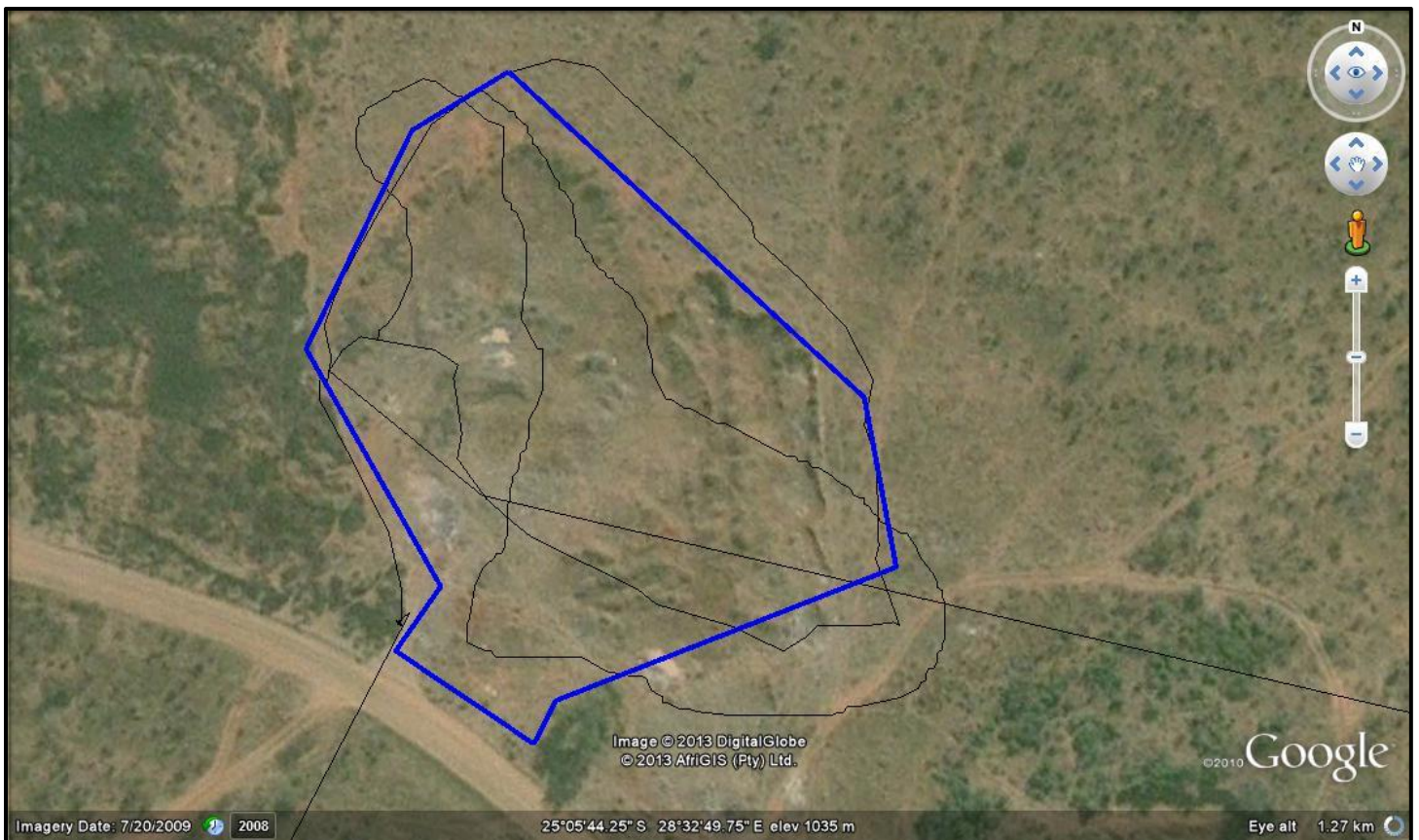


Figure 6: Mmametlake landfill Study area in blue and track logs of the area covered in black



Figure 7. Libangeni Landfill study area in blue and GPS tracks of the survey in black.

Photographs Taken at Mmamethlake Landfill



Figure 8: Central portion of the study area



Figure 9: Northern view of the study area



Figure 10. Western view of the study area.



Figure 11. Eastern view of the study area.



Figure 12. Profile of the abandoned borrow pit and current dumping on site

Photographs Taken at Libangeni Landfill



Figure 13. Entrance to the study area.



Figure 14. Existing dumping on site.



Figure 15. western view of the land fill.



Figure 16. Southern view of the landfill.



Figure 17. Extensive dumping on site

7. RECOMMENDATIONS

No sites of heritage significance were identified during either one of the surveys.

However, if during construction, any archaeological finds are made (e.g. stone tools, skeletal material), the operations must be stopped, and the archaeologist must be contacted for an assessment of the finds.

8. CONCLUSIONS

Almost no archaeological sites are on record for the immediate study area and none were identified in the study area. Other studies in the larger study area indicated that the archaeological record is characterised by Iron Age stone walled settlements found to the north east and south of the study area. Several Stone Age sites are on record to the south east at Loskop Dam. No archaeological sites were identified during the survey and desktop study, no red flags were identified. There is from a heritage point of view no reason why the development cannot commence work (based on approval from SAHRA).

9. PROJECT TEAM

Jaco van der Walt, Project Manager and archaeologist

Liesl Bester, Archival Specialist

Dr John Almond (Palaeontologist)

10. STATEMENT OF COMPETENCY

I (Jaco van der Walt) am a member of ASAPA (no 159), and accredited in the following fields of the CRM Section of the association: Iron Age Archaeology, Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation. This accreditation is also valid for/acknowledged by SAHRA and AMAFA.

For the past two years I served as Council Member for the CRM Section of ASAPA, and have been involved in research and contract work in South Africa, Botswana, Zimbabwe, Mozambique and Tanzania as well as the DRC; having conducted more than 300 AIAs since 2000.

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