

Heritage Impact Assessment

Heritage Impact Assessment for the Proposed Matshena Demarcation Project at Matshena Village, east of Tshipise, Limpopo Province.

Compiled for:

Tekplan Environmental

Survey conducted & Report compiled by:

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May 2013

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Executive Summary

Site name and location: Proposed development of the Matshena Township Extension adjacent to the village of Matshena approximately 30km east of Tshipise in the Limpopo Province.

Local Authority: Vhembe District Municipality.

Developer: The Department of Local Government and Housing.

Date of field work: 01 February 2013.

Date of report: May 2013.

Findings: The proposed area to be developed was largely undisturbed and was subject to the grazing of local animal stock. No further site-specific actions or any further heritage mitigation measures are recommended as no sites or finds with heritage value or significance were identified in the indicated study area. The proposed development of the Matshena Township Extension in the indicated area can continue from a heritage point of view.

Disclaimer: *Although all possible care is taken to identify all 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. Hutten Heritage Consultants 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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ADDENDUM A Photographs

- Photo 1: View of the adjacent gravel road and power line.
- Photo 2: View of the dongas across the site.
- Photo 3: View of the intermittent stream across the site.
- Photo 4: View of the small pan/dam to the north of the site.
- Photo 5: View of the adjacent soccer field and stands.
- Photo 6: General view of the semi-arid Mopani sand-veldt.

ADDENDUM B Location Maps

1. Introduction

Hutten Heritage Consultants was contracted by TEKPLAN ENVIRONMENTAL to conduct a Heritage Impact Assessment (HIA) on the proposed development of the Matshena Township Extension, adjacent and to the east of Matshena village, approximately 30km east of Tshipise, Limpopo Province.

The aim of the study was to identify all heritage sites, to document and to assess their significance within Local, Provincial and National context. The report outlines the approach and methodology implemented before and during the survey, which includes in Phase 1: Information collection from various sources and social consultations; Phase 2: Physical surveying of the area on foot and by vehicle; and Phase 3: Reporting the outcome of the study.

This HIA forms part of the Environmental Impact Assessment (EIA) as required by various Acts and Laws as described under the next heading and is intended for submission to the provincial South African Heritage Resources Agency (SAHRA) for peer review.

Minimum standards for reports, site documentation and descriptions are set by the Association of Southern African Professional Archaeologists (ASAPA) in collaboration with SAHRA. ASAPA is a legal body representing professional archaeology in the Southern African Development Community (SADC) region. As a member of ASAPA, these standards are tried to be adhered to.

The extent of the proposed development sites were determined as well as the extent of the areas to be affected by secondary activities (access routes, construction camps, etc.) during the development.

2. Legislative Requirements

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

National Environmental Management Act (NEMA) Act 107 of 1998

National Heritage Resources Act (NHRA) Act 25 of 1999

Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002

Development Facilitation Act (DFA) Act 67 of 1995

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

National Environmental Management Act (NEMA) Act 107 of 1998

Basic Environmental Assessment (BEA) – Section (23)(2)(d)

Environmental Scoping Report (ESR) – Section (29)(1)(d)

Environmental Impacts Assessment (EIA) – Section (32)(2)(d)

Environmental Management Plan (EMP) – Section (34)(b)

National Heritage Resources Act (NHRA) Act 25 of 1999

Protection of Heritage resources – Sections 34 to 36; and

Heritage Resources Management – Section 38

Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
Section 39(3)
Development Facilitation Act (DFA) Act 67 of 1995
The GNR.1 of 7 January 2000: Regulations and rules in terms of the Development Facilitation Act, 1995. Section 31

3. Proposed Project

The Department of Local Government and Housing has proposed the development of the Matshena Township Extension approximately 30km east of Tshipise in the Limpopo Province. This development will include the layout of 300 residential erven, sites for schools, businesses, churches, public open spaces and roads (see Addendum B: Location maps). The size of the development area for the proposed Matshena Township Extension is approximately 30ha. The purpose of the study was to determine if the proposed area was suitable for the development of the residential town from a heritage point of view.

The project was tabled during January 2013 and the developer intends to commence as soon as possible after receipt of the ROD from the Department of Environmental Affairs.

4. Project Area Description

The proposed development of the Matshena Township Extension will be situated adjacent and on the eastern side of Matshena village. Matshena village is situated approximately 30 km east of Tshipise in the Limpopo Province.

The proposed area was situated adjacent and on the northern side of a gravel road to Mapakoni village further to the east (photo 1). A power line was also situated next to the gravel road (photo 1). The area was relatively flat, but sloped slightly down from the south to the small pan to the north of the site. A few dongas (photo 2) and an intermittent stream (photo 3) also crossed the central parts of the site from the south to the north and filled the small pan/dam to the north of the site (photo 4). Recent rains and flooding in the region filled the pan/dam. A soccer field and several stands (photo 5) were situated on the western extent of the proposed site.

The study area consisted of typical semi-arid Mopani veldt with red sandy soils (photo 6). It was mostly undisturbed and was used for the grazing of local animal stock. The area across the gravel road was used to be ploughed and planted.

The proposed development will be approximately 30ha in size and was situated on State Land. The proposed development will be situated on the 2230 BC 1:50 000 topographical map (see Addendum B: Location Maps).

5. Archaeological History of the Area

The examination of heritage databases, historical data and cartographic resources represents a critical additional tool for locating and identifying heritage resources and in determining the historical and cultural context of the study area. Therefore an internet literature search was conducted and relevant archaeological and historical texts were also consulted. Relevant topographic maps and satellite imagery were studied. Researching the SAHRA APM Report Mapping Project records and the SAHRIS online database (<http://www.sahra.org.za/sahris>), it was determined no previous archaeological studies had been carried out in the study area. However, a number of previous archaeological or historical studies had been performed within the wider vicinity of the study area.

Previous Studies

Previous studies listed in the APM Report Mapping Project for the relevant Quarter Degree Square, 2230BC, and surrounding Quarter Degree Squares, 2230AD 2230BD 2230CB and 2230DA, included the following studies:

Roodt, F. 1997. **Nwanedi-Luphephe Environmental Impact Assessment Study: Phase 2**. An unpublished report by R & R Cultural Resource Consultants on file at SAHRA as: 1997-SAHRA-0044.

Roodt, F. 2002. **Flood Damage Repair and Partial Regravelling of Road P2771/1 Between Makonde and Masisi, Limpopo Province**. An unpublished report by R & R Cultural Resource Consultants on file at SAHRA as: 2002-SAHRA-0095.

Hanisch, E.O.M. 2006. **A Heritage Impact Assessment for the Awelani Eco-Tourism Project, Vhembe District, Limpopo Province**. An unpublished report by the University of Venda on file at SAHRA as: 2006-SAHRA-0317.

Murimbika, M. 2007. **Proposed Development of Waste Disposal Facility (Landfill) Project at Makwilidza Village of Mutale Local Municipality, Vhembe District, Limpopo Province**. An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2007-SAHRA-0044.

Munyai, R. & Roodt, F. 2007. **An Archaeological Investigation for the Proposed Road Upgrade Project and Three Borrow Pit Sites from Shakadza to Mavhuvhi Village**. An unpublished report by Vhufa Hashu Heritage Consultants on file at SAHRA as: 2007-SAHRA-0145.

Hutten, M. & Gaigher, S. 2007. **Heritage Impact Assessment for the Proposed Muswubi Entertainment Centre: Bende- Mutale Lodge near Kruger National Park, Vhembe District, in the Limpopo Province**. An unpublished report by Archaeo-Info on file at SAHRA as: 2007-SAHRA-0309.

Munyai, R. & Roodt, F. 2007. **Phase 1 Heritage Impact Assessment Additional of 08 Borrow Pits Sites Associated with the Upgrading of Road D369 from Shakadza to Tshipise in Mutale.** An unpublished report by Vhufa Hashu Heritage Consultants on file at SAHRA as: 2007-SAHRA-0314.

Munyai, R. & Roodt, F. 2008. **Phase 1 Heritage Impact Assessment of (12) Twelve Proposed Reservoirs Construction from Seven Villages Within Vhembe District Municipality, Limpopo Province.** An unpublished report by Vhufa Hashu Heritage Consultants on file at SAHRA as: 2008-SAHRA-0392.

Munyai, R. & Roodt, F. 2008. **An Archaeological Investigation of a Proposed Borrowpit #3 Associated with Road Upgrade from Gravel to Tar from Makonde to Masisi Area, Road P277/1 Within the Vhembe District Municipality, Limpopo Province.** An unpublished report by Vhufa Hashu Heritage Consultants on file at SAHRA as: 2008-SAHRA-0394.

Murimbika, M. 2008. **Cultural and Archaeological Heritage Assessment Specialist Study for the Proposed Construction of 12 km at Thengwe Tshilavulu Village in Mutale Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0561.

Murimbika, M. 2008. **Cultural and Archaeological Heritage Assessment Specialist Study for the Proposed Construction of Power Line at Mutele B Villages in Mutale Local Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0565.

Murimbika, M. 2008. **Cultural and Archaeological Heritage Assessment Specialist Study for the Proposed Construction of 8 577.48 km at Maramanzhi Village in the Mutale Local Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0566.

Murimbika, M. 2008. **Cultural and Archaeological Heritage Impact Assessment Specialist Study for the Proposed Construction of a Power Line at Gumbu Village in the Mutale Local Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0568.

Stegmann, L. & Roodt, F.E. 2008. **Phase 1 Heritage Resources Scoping Report Nwanedi Nature Reserve Road, Nwanedi, Limpopo.** An unpublished report by Shasha Heritage Consultants CC on file at SAHRA as: 2008-SAHRA-0573.

Murimbika, M. 2008a. **Cultural and Archaeological Heritage Assessment Specialist Study for the Proposed Electrification of Sigonde Villages in Mutale Local Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0564.

Murimbika, M. 2008b. **Cultural and Archaeological Heritage Assessment Specialist Study for the Proposed Construction of 6.7 km Power-Line at Lwathudwa Village in Mutale Local Municipality of Vhembe District, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0567.

Murimbika, M. 2008c. **Cultural and Archaeological Heritage Assessment Specialist Study for the Construction of Power-Line to Mukomawabani Primary School, Vhembe District of Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0604.

Murimbika, M. 2008d. **Cultural and Archaeological Heritage Assessment Specialist Study for the Construction of Power-Line from Tshikuyu Village to Madavhila Primary School, Vhembe District Municipality, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0605.

Murimbika, M. 2008e. **Cultural and Archaeological Heritage Impact Assessment Specialist Study for the Construction of Power-Line from Mukoma Primary School, Vhembe District Municipality, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0606.

Murimbika, M. 2008f. **Cultural and Archaeological Heritage Assessment Specialist Study for the Construction of Power-Line from Tshipise to Madifha Primary School, Vhembe District Municipality, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0607.

Murimbika, M. 2008g. **Cultural and Archaeological Heritage Assessment Specialist Study for the Construction of Power-Line from Tshipise to Mbodi Primary School, Vhembe District Municipality, Limpopo Province.** An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2008-SAHRA-0608.

Researching the SAHRIS online database (<http://www.sahra.org.za/sahris>) no further, more recent, studies were identified in the vicinity of the study area.

The studies listed above located or included a large number of heritage sites in the wider area. with one investigator stressing that since the area has a long history of human occupation the entire landscape should be considered a cultural landscape (Murimbika 2008b). By way of example, Roodt (1997) identified nine sites to the south of the study area with significant archaeological remains spanning 11th Century Eiland to recent Venda habitation including Zwigodini with its Moloko, Khami and Shona traditions. Other sites were also characterised by significant overlapping of traditions and included features such as stone walling, evidence of metal-working in the form of slag, artefacts such as spindle whorls and ironstone outcrops with evidence of early mining (Roodt 1997). A number of graves up to recent times were identified by various assessments (e.g. Munyai & Roodt 2007). Stone Age remains are scattered throughout the area including Early- (e.g. Roodt 2002), Middle- (e.g. Roodt 1997) and numerous Late Stone Age sites. The Limpopo Valley, including the vicinity of the study area, is known for its rock art

and rock engravings with one assessment locating a set of engravings in a shelter to the south-west of the study area (Stegmann & Roodt 2008),

Archaeological & Historical Sequence

The historical background and timeframe of the study area and other areas in Southern Africa can be divided into the Stone Age, Iron Age and Historical period. These can be divided as follows:

Stone Age sites

The Stone Age is divided into the Early; Middle and Late Stone Age. The *Early Stone Age* (ESA) includes the period from 2.5 million years B.P. to 250 000 years B.P. and is associated with Australopithecines and early *Homo* species who practiced stone tool industries such as the Oldowan and Acheullian. The *Middle Stone Age* (MSA) covers various tool industries, for example the Howiesons Poort industry, in the period from 250 000 years B.P. to 25 000 years B.P. and is associated with archaic and modern *Homo sapiens*. The *Late Stone Age* (LSA) incorporates the period from 25 000 years B.P. up to the Iron Age and Historical Periods and contact between hunter-gatherers and Iron Age farmers or European colonists. This period is associated with modern humans and characterised by lithic tool industries such as Smithfield and Robberg.

Both ESA and MSA sites are known from the Limpopo Valley as well as lithic industries that appear to be transitional between the two ages and with dates estimated at 300,000 years ago (Kuman *et al.* 2005). The presence of numerous rock art sites with associated stone tool assemblages in the Limpopo River basin, Blouberg, Makgabeng, Waterberg and Soutpansberg attests to the presence of Late Stone Age San/Bushman communities across the region (e.g. Pager, 1973; Eastwood *et al.*, 2002). The Central Limpopo Basin, including the Soutpansberg, Limpopo Valley, the Blouberg-Makgabeng area and the Pafuri area, has over 700 documented rock art sites and is one of the few regions where paintings and engravings occur, sometimes at the same site (Eastwood and Hanisch 2003).

Iron Age

The Iron Age incorporates the arrival and settlement of Bantu speaking people and overlaps the Pre-Historic and Historical Periods. It can be divided into three phases. The *Early Iron Age* includes the majority of the first millennium A.D. and is characterised by traditions such as Happy Rest and Silver Leaves. The *Middle Iron Age* spans the 10th to the 13th Centuries A.D. and includes such well known cultures as those at K2 and Mapungubwe. The *Late Iron Age* is taken to stretch from the 14th Century up to the colonial period and includes traditions such as Icon and Letaba.

The Vhembe District (the Limpopo and Luvuvhu river valleys in particular) contains some of the earliest and most famous Iron-Age settlements in the region including Schroda, K2 and the Mapungubwe National and World Heritage Site to the west of the study area and Thulamela to the south-east. The Early Iron Age is represented by a number of sites such as Happy Rest in the Soutpansberg (Hanisch E.O.M., 2003). The Middle Iron Age in the region and the sequence of settlement development and the

growing importance of trade networks has been extensively described (e.g. Leslie & Maggs 2000; Bonner & Carruthers 2003) with in depth studies on, amongst others, ethnic stratification, climate change and herding strategies, glass beads and international trade, the ethno-archaeology and archaeology of rainmaking, settlements and landscapes, faunal remains and agricultural production (Huffman 2011).

The origin of the local VhaVenda people has been investigated and there is some question as to the degree to which the origins of the people was local or not. The local origins theory falls roughly into the following sequence. Between 1300 and 1450 AD Mapungubwe ceramics related to Shona speakers dominated north of the Soutpansberg while Moloko ceramics, the product of Sotho speakers, were prevalent in the south. From 1450 AD Khami ceramics and associated settlements bore witness to a revived influence from new Shona dynasties in Zimbabwe and by 1550 AD the Letaba facies had arisen from the fusion of Shona and Sotho cultures. The origin of the VhaVenda appears therefore to be local as characterised in the archaeological sequence and it seems likely that a common Venda identity had developed by the 1600s (Loubser 1989). According to Stayt (1968), the BaVenda broke away from the Karanga in Zimbabwe and crossed the Limpopo entering the Soutpansberg region in two main streams of migration, the Vhatavhatsinde followed by the Singo, during the latter part of the 17th century. These groups found other tribes already in occupation including the Ngoni, Mbedzi, and Twamamba and most researchers are of the opinion that peaceful integration between them took place under the rule of Chief Thohoyandou (Eloff 1968). Another two chiefs and their followers were integrated with the BaVenda during the rule of Tshikalanga (the son of Thohoyandou). These chiefs were Madzivhandila and Lwamondo who were most probably of Sotho origin and who were appointed as keepers of the chief's cattle, becoming assimilated into the BaVenda tribe and culture (Stayt 1968).

A number of Iron Age Sites in the region have Provincial Heritage Site status including: Dzata II, Verdun and the Machedema ruins (SAHRA) and a number of others have been indicated to be of particular importance including Mutulowe, Tshitaka tsha Makoleni, Mukumbane and the Tshiungani complex (Hanisch 2003).

Historical Period

The beginning of the Historical Period overlaps the demise of the late Stone and Iron Ages and is characterised by the first written accounts of the region from 1600 A.D. A number of early European travellers visited the area from the early 19th Century onwards including Carl Mauch (Burke 1969) and the region saw European settlement and influence from the late 1830's with the arrival of Louis Trichardt and Hendrik Potgieter and the subsequent establishment of the town of Soutpansbergdorp (later renamed Schoemansdal) in 1848 (Tempelhoff 1999). Given the high summer temperatures, low rainfall and incidence of Malaria the Limpopo Valley was not settled early by European colonists whose earliest settlements, including Soutpansbergdorp and Schoemansdal, were located in the cooler, better watered region to the south of the Soutpansberg. Way (1858 – 1859) described the settlement of 'Zout Pans Berg' as "an emporium of a considerable commerce and is also a kind of Alsatia for refugees from the laws of the Cape Colonies and the adjoining territories." It is well known that these early settlements were to a large

extent based on the hunting of elephant for ivory, largely herds in the Limpopo Valley to the north. Famous early traders in the region included Coenraad de Buys and João Albasini and the latter estimated that, in the prime of Schoemansdal, up to 80,000 tonnes of ivory was exported annually (Das Neves 1987) with an increasing reliance on African hunters including the Ba-Birwa, BaVenda and Bagananwa (Bonner & Carruthers 2003).

In 1855 Joaquim de Santa Rita Montanha led a party from Inhambane to the Soutpansberg, following the Limpopo Valley and from the original map it is likely that they passed quite close to the vicinity of the study area. It was remarked upon that after crossing the River Tave (Save) that “every day they passed and slept in towns or villages of the cultivators, and readily procured the supplies they required” (MacQueen 1862). Further exploration of the course of the Limpopo River was undertaken by Frederick Elton in 1870, who remarked on the “many kraals” and “fertile country” at the junction of the Limpopo and ‘Nuanetzi’ (Nwanedzi) Rivers (Elton 1871 – 1872), this confluence being located approximately 15 km

The area was not a significant theatre during the Anglo-Boer War although a brief battle was fought between Rhodesian and Boer forces in the vicinity of Rhodes Drift on the Limpopo some distance to the west of the study area. According to Bonner and Carruthers (2003) one overall effect of the war on the area was the total effacing of a ‘previously negligible’ white presence and the re-occupation of their land by formerly displaced black communities. After 1900 European farmers were encouraged by the ruling government to occupy farms nearby and to the west of the study area in an effort mainly to compromise for land losses in other parts of the province (Bonner & Carruthers 2003).

6. Methodology

Physical Survey

The extent of the proposed development site was determined as well as the extent of the areas to be affected by secondary activities (access route, construction camp, etc.) during the development.

The physical survey was conducted on foot over the entire area proposed for development. Priority was placed on the undisturbed areas. A systematic inspection of the area on foot along linear transects resulted in the maximum coverage of the proposed area. The author and an experienced field worker, who did not have a GPS device with him, transected the study area in transects of approximately 25m -30m between them.

The survey was conducted on February 01, 2013 and was performed by M. Hutten and field worker T. Mulaudzi. No sampling was done as no sites or finds of heritage value or significance were found.

Interviews

Several people were interviewed or questioned during the survey. Headman Mafela was not present to be interviewed, but his daughter, Elsie Mulatedzi Mafela, was charged with

the responsibility to manage inquiries in his absence. She confirmed that she was not aware of any heritage sites or other sites (such as graves) which were present in the study area.

Restrictions

Vegetation proved the major restriction in accessibility to some of the areas and also contributed to poor surface visibility after the spate of recent good rains.

Documentation

All sites/findspots located during the foot surveys were briefly documented. The documentation included digital photographs and descriptions as to the nature and condition of the site and recovered materials. The sites/findspots were plotted using a Global Positioning System (GPS) (Garmin GPSmap 60CSx) and numbered accordingly.

7. Assessment Criteria

This chapter describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The significance of archaeological and heritage sites were based on the following criteria:

- The unique nature of a site
- The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.)
- The wider historic, archaeological and geographic context of the site
- The preservation condition and integrity of the site
- The potential to answer present research questions.

Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report.

<i>FIELD RATING</i>	<i>GRADE</i>	<i>SIGNIFICANCE</i>	<i>RECOMMENDED MITIGATION</i>
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 (GP.A)	A 4A	Grade High / Medium Significance	Mitigation before destruction
Generally Protected (GP.B)	B 4B	Grade Medium Significance	Recording before destruction
Generally Protected (GP.C)	C 4C	Grade Low Significance	Destruction

Impact Rating

VERY HIGH

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

Example: The loss of a species would be viewed by informed society as being of VERY HIGH significance.

Example: The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with a VERY HIGH significance.

HIGH

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

Example: The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

Example: The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be HIGH.

MODERATE

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the public or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are real, but not substantial.

Example: The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

Example: The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

LOW

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

Example: The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

Example: The increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people living some distance away.

NO SIGNIFICANCE

There are no primary or secondary effects at all that are important to scientists or the public.

Example: A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of NO SIGNIFICANCE in the overall context.

Certainty

DEFINITE: More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment.

PROBABLE: Over 70% sure of a particular fact, or of the likelihood of an impact occurring.

POSSIBLE: Only over 40% sure of a particular fact, or of the likelihood of an impact occurring.

UNSURE: Less than 40% sure of a particular fact, or of the likelihood of an impact occurring.

Duration

SHORT TERM: 0 – 5 years

MEDIUM: 6 – 20 years

LONG TERM: more than 20 years

DEMOLISHED: site will be demolished or is already demolished

Mitigation

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- **A** – No further action necessary
- **B** – Mapping of the site and controlled sampling required
- **C** – Preserve site, or extensive data collection and mapping required; and
- **D** – Preserve site

8. Assessment of Sites and Finds

This section will contain the results of the heritage site/find assessment.

Matshena Demarcation Project

GPS 30° 37' 33.3" S
22° 27' 53.9" E

The proposed area was situated adjacent and on the northern side of a gravel road to Mapakoni village further to the east. A power line was also situated next to the gravel road. The area was relatively flat, but sloped slightly down from the south to the small pan to the north of the site. A few dongas and an intermittent stream also crossed the central parts of the site from the south to the north and filled the small pan/dam to the north of the site. Recent rains and flooding in the region filled the pan/dam. A soccer field and several stands were situated on the western extent of the proposed site.

The study area consisted of typical semi-arid Mopani veldt with red sandy soils. It was mostly undisturbed and was used for the grazing of local animal stock. The area across the gravel road was used to be ploughed and planted.

After intensive investigations, no sites or finds of any heritage potential or value were identified.

<i>Heritage Significance:</i>	None
<i>Impact:</i>	None
<i>Impact Significance:</i>	None
<i>Certainty:</i>	None
<i>Duration:</i>	None
<i>Mitigation:</i>	A – No further action necessary.

9. Recommendations

The following steps and measures are recommended regarding the investigated area:

Matshena Demarcation Project

- The proposed area to be developed was largely undisturbed and was subject to the grazing of local animal stock.
- No further site-specific actions or any further heritage mitigation measures are recommended as no sites or finds with heritage value or significance were identified in the indicated study area.
- The proposed development of the Matshena Township Extension in the indicated area can continue from a heritage point of view.

10. References

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APPENDIX A

Photographs



Photo 1: View of the adjacent gravel road and power line.



Photo 2: View of the dongas across the site.



Photo 3: View of the intermittent stream across the site.



Photo 4: View of the small pan/dam to the north of the site.



Photo 5: View of the adjacent soccer field and stands.

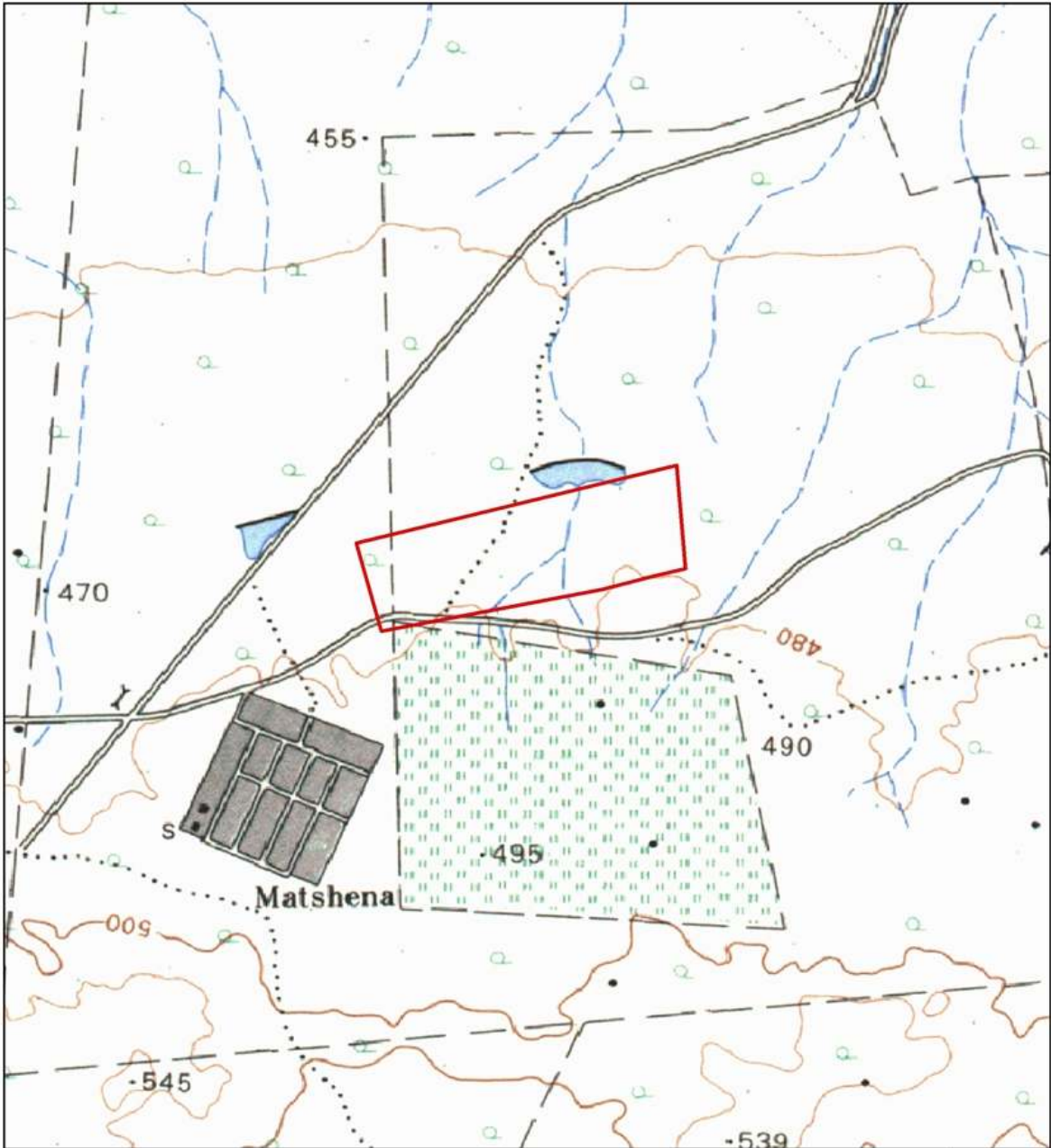


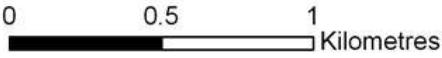


Photo 6: General view of the semi-arid Mopani sand-veldt.

APPENDIX B

Location Maps

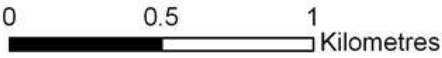


Matshena Demarcation Project



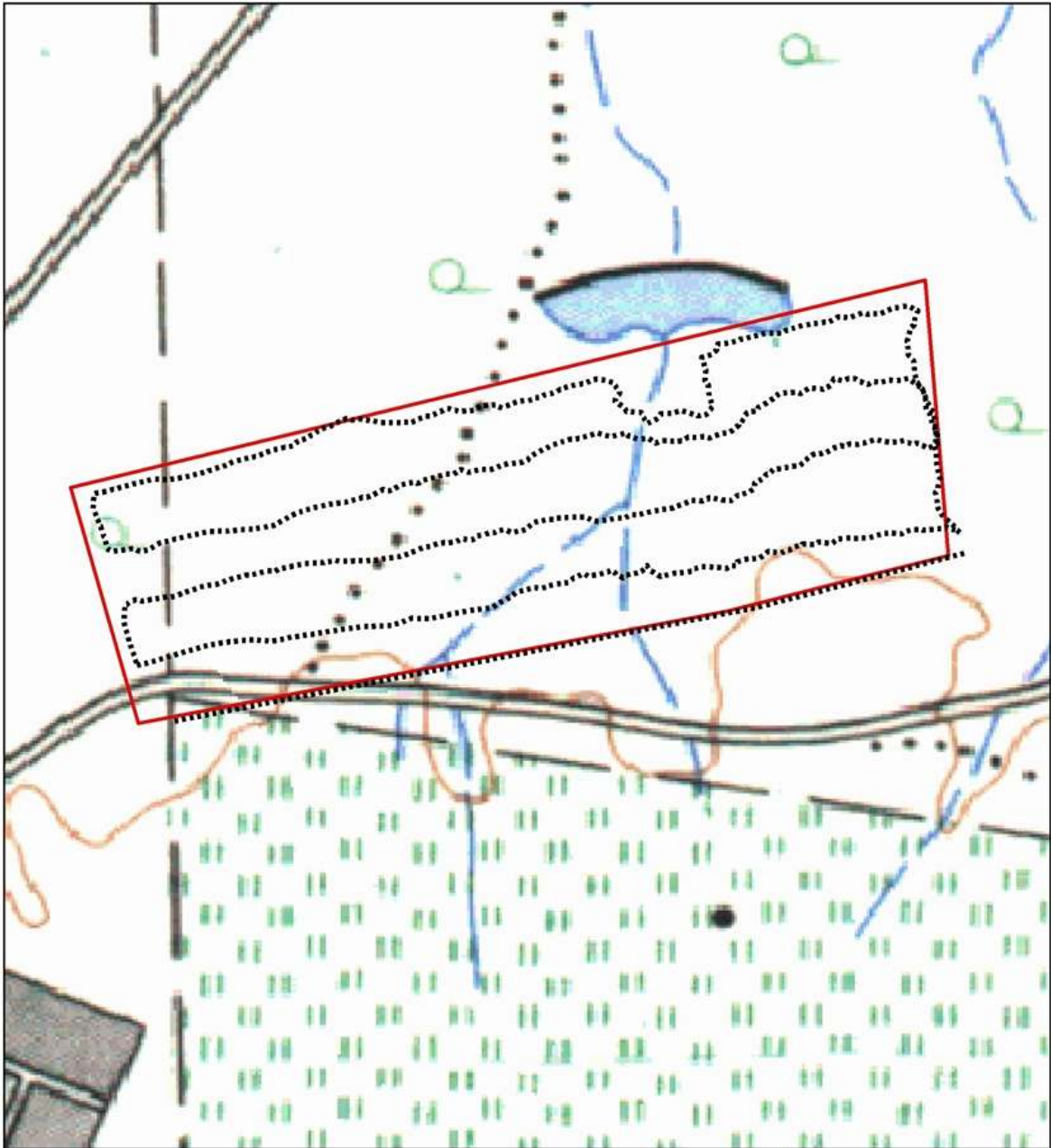
	1:20,000	
 Study Area	Image: WGS2230BC.TIF Source: Chief Directorate: National Geo-spatial Information Datum: WGS84 Study Area Location: Mutale Municipality Study Area Centroid: 30° 37' 33.304" E, 22° 27' 53.986" S	

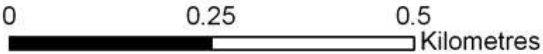


Matshena Demarcation Project



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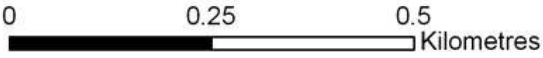



Matshena Demarcation Project

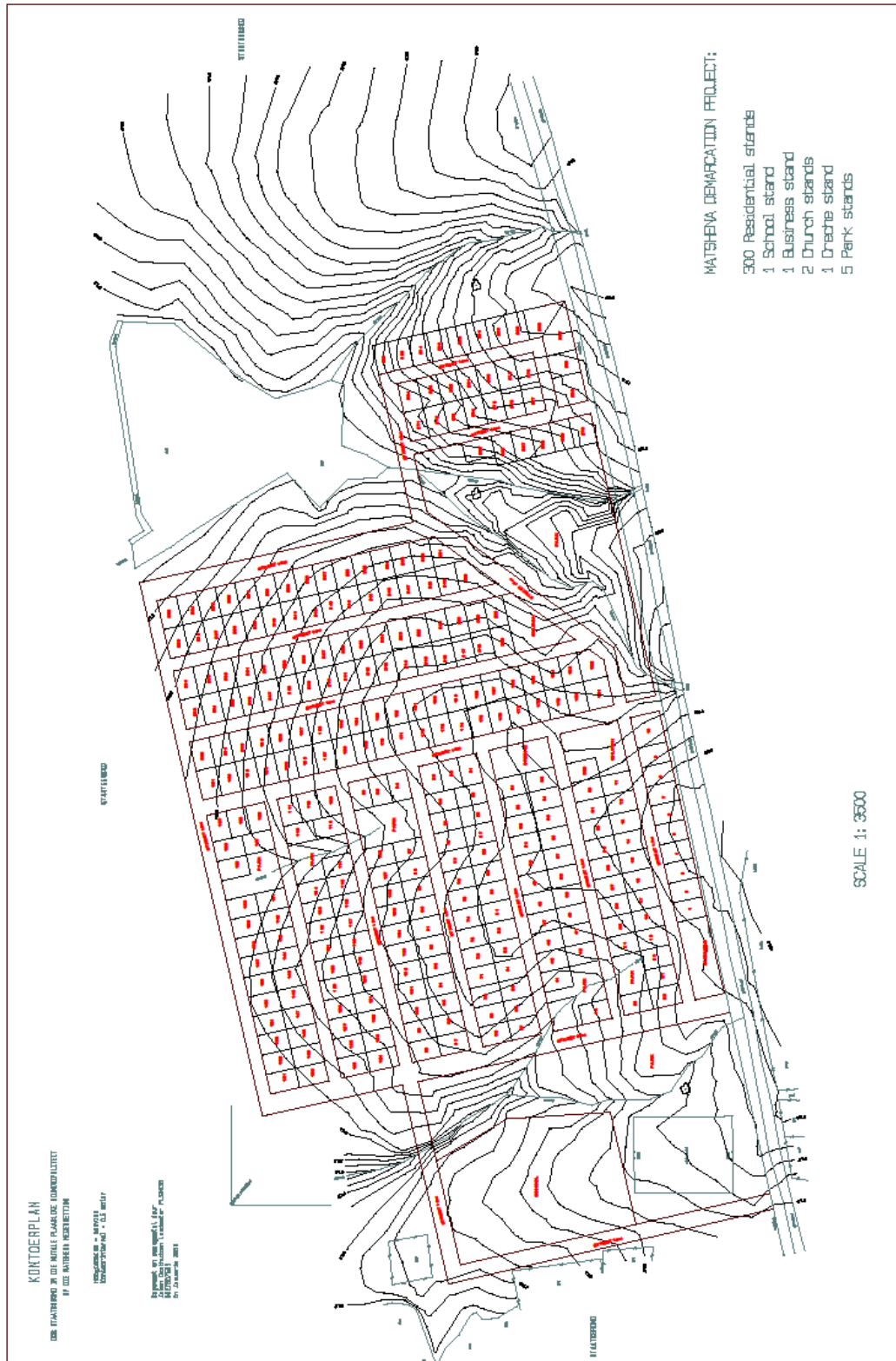


	1:7,500	
<p>..... Track Log  Study Area</p>	<p>Image: WGS2230BC.TIF Source: Chief Directorate: National Geo-spatial Information Datum: WGS84 Study Area Location: Mutale Municipality Study Area Centroid: 30° 37' 33.304" E, 22° 27' 53.986" S</p>	

Matshena Demarcation Project



	1:7,500	
 Study Area  Track Log	Image: Spot 5 2.5m National Mosaic 2230B.jp2 Source: Spot Image/CSIR Datum: WGS84 Study Area Location: Mutale Municipality Study Area Centroid: 30° 37' 33.304" E, 22° 27' 53.986" S	



Proposed layout for the Matshena Township Extension.