

# HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED MTHOMBOWESIZWE SECONDARY SCHOOL, NONGOMA LOCAL MUNICIPALITY, ZULU LAND DISTRICT

EMS



**MAY 2021**

**Prepared for**



**Mashize Investments (Pty) Ltd**

**Planet Development Systems**



Sustainable Solution for a Greater Tomorrow

# EXECUTIVE SUMMARY

Mashize Investments (Pty) Ltd has appointed Planet Development Systems to undertake the heritage impact assessment for the proposed alterations to Mthombowesizwe Secondary School, in Nongoma Local Municipality within KwaZulu Natal. The study aims to identify and document geological sites of cultural importance, palaeontological objects and material, meteorites and rare geological specimens. With regards to the heritage aspect, the study will explore archaeological sites, cultural resources, sites associated with oral histories (intangible heritage), graves, cultural landscapes, and any structures of historical significance (tangible heritage) that may be affected within the footprint of the proposed upgrades to the school.

The appointment of Planet Development Systems is in terms of the National Heritage Resources Act (NHRA), No. 25 of 1999. The Heritage Impact Assessment (HIA) is completed in accordance with requirements of Section 38 (1) (a, b, c) of the NHRA, No. 25 of 1999. The palaeontological assessment is undertaken in accordance with Sections 35 and 38 (Heritage Resources Management) of the South African Heritage Resources Act (Act No. 25 of 1999). This is due to the nature of the proposed development which involves:

The HIA for the above-mentioned development comprises a:

- Phase 1 Archaeological Impact Assessment (AIA)
- Desktop Palaeontological Impact Assessment (PIA)

## **Archaeological Impact Assessment Conclusion**

From a heritage point of view, the current project is acceptable. Due to the lack of substantial heritage resources in the study area, the effect of the proposed project on heritage resources is considered to be poor and it is recommended that the proposed project should start on the condition that the following chance-finding procedures (CFPs) are enforced as part of the Environmental Management Programme (EMPR) and based on the approval of South African Heritage Resources Agency (SAHRA).

### **Palaeontological Impact Assessment Conclusion**

The specialist recommends that the applicant be granted environmental authorisation. However, if significant fossil remains (especially articulated vertebrate skeletons or skulls) are exposed during development, Environmental Control Officer (ECO) should protect the in-situ where possible. SAHRA and/or a trained palaeontologist should be alerted as quickly as possible so that appropriate mitigation measures can be implemented.

PLANET DEVELOPMENT SYSTEMS

## DECLARATION OF INDEPENDENCE

Planet Development Systems is an independent service provider and apart from their fair remuneration for services rendered, the company has no financial interest in the proposed development. We have disclosed any material information that have or may have the potential to influence the objectivity of any report or decisions based thereon. The specialists are very much aware that a false declaration is misleading and constitutes an offence in terms of regulation 71 of GN No. R. 543.

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## LIST OF OF ABBREVIATIONS

<b>AAC</b>	All African Convention
<b>ADP</b>	African Democratic Party
<b>AIA</b>	Archaeological Impact Assessment
<b>ANC</b>	African National Congress
<b>ANCYL</b>	ANC Youth League
<b>APO</b>	African Peoples Organisation
<b>BMSC</b>	Bantu Men's Social Centre
<b>CFP</b>	Chance-finding procedures
<b>ECPHRA</b>	Eastern Cape Provincial Heritage Resources Authority
<b>ESA</b>	Earlier Stone Age
<b>HIA</b>	Heritage Impact Assessment
<b>ICOMOS</b>	International Council on Monuments and Sites
<b>LIA</b>	Later Iron Age
<b>LM</b>	Local Municipality
<b>LSA</b>	Later Stone Age
<b>MSA</b>	Middle Stone Age
<b>NEUM</b>	Non-European Unity Movement
<b>NHRA</b>	National Heritage Resources Act
<b>OBS</b>	Orlando Brotherly Society
<b>OCA</b>	Orlando Civic Association
<b>PIA</b>	Palaeontological Impact Assessment
<b>SACP</b>	South African Communist Party
<b>SAHRA</b>	South African Heritage Resources Agency
<b>SAIC</b>	South African Indian Congress
<b>UN</b>	United Nations
<b>WWII</b>	World War II

# 1. INTRODUCTION AND BACKGROUND

## 1.1. PROJECT BACKGROUND

Planet Development Systems (Pty) Ltd has been appointed by Mashize Investments (Pty) Ltd on the behalf of Delca Systems (Pty) Ltd to undertake the paleontological and cultural Heritage Impact Assessment for the proposed development at Mthombowesizwe Secondary School in Nongoma Local Municipality.

The nature of the proposed projects involves upgrades and additions to Mthombowesizwe Secondary School in Nongoma Local Municipality.

The proposed development will entail:

- Natural underground work method
- Associated infrastructure:
- The construction of structures, internal roads,
- Parking area, fencing and Security wall, and
- Civil engineering services etc.



Figure 1: Layout of the proposed

Thus, Heritage Impact Assessments are required in terms of South African legislation. The report is mainly guided by the following legislations:

- National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA),
- National Heritage Act, 1999 (Act No. 25 of 1999) and 2014 EIA regulations (as amended).

The Heritage Impact Assessment is conducted as part of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) requirements and it also follows the requirements of the NHRA, 1999 (Act No. 25 of 1999). The terminology used and the methodology followed with regards to the compilation of the Heritage impact assessment are explained and the legal framework stated. International conventions regarding the protection of cultural resources have also been followed. The International Council on Monuments and Sites (ICOMOS) Burra Charter (1979) was also consulted in producing this report as part of the international conventions for the protection of cultural heritage places.

## 1.2. TERMS OF REFERENCE

Undertake a desktop study and field assessment to identify important palaeontological, archaeological and cultural heritage resources in the area. In particular, to identify:

- Potential sites of palaeontological, archaeological and cultural heritage significance (GPS co-ordinates to be provided for planning purposes).
- Desktop palaeontological Assessment.
- Identify any potential 'fatal flaws' linked to the proposed development.
- Describe the findings of the study and their potential implications for the proposed project. This should include a description and assessment of the significance of the impacts of the proposed activities on heritage resources.
- Provide detailed guideline measures to manage any impacts, particularly during the construction phase but including the implementation phase, and an assessment of their likely effectiveness.
- Documentation of the findings of the study in a report.

## 2. DESCRIPTION OF THE STUDY AREA

### 2.1. LOCALITY

The project area is located at Ehethani within in the Nongoma LM area, which falls under the jurisdiction of the Zulu Land District Municipality in KwaZulu Natal. The project focus area is located within Ehethani town. The proposed development is located on 1 hectare portion of the Reserve 12 No. 15632 15832 HU of Nongoma farm. The property has an existing structure zone as social area designated for a high school. The project area is surrounded by rural residential settlements and large land of potential agricultural production. The site is neighbored by residential housing area and a highway on one side. The site coordinates are 27.834S, 31.55793E



Figure 2: Project site area



## 2.2. PHYSICAL ENVIRONMENT



Figure 3: View of the general landscape



Figure 4: View of the general landscape





Figure 5: Entrance to the school



Figure 6: Location of graves

### 3. LEGISLATIVE CONTEXT

South Africa's unique and non-renewable palaeontological heritage is protected in terms of the NHRA. According to this act, heritage resources may not be excavated, damaged, destroyed or otherwise impacted by any development without prior assessment and without a permit from the relevant heritage resources authority.

As areas are developed and landscapes are modified, heritage resources, including palaeontological resources, are threatened. As such, both the environmental and heritage legislation require that development activities must be preceded by an assessment of the impact undertaken by qualified professionals. The various categories of heritage resources recognized as part of the National Estate in Section 3 of the NHRA (1999) include, among others:

- Geological sites of scientific or cultural importance;
- Palaeontological sites;
- Palaeontological objects and material, meteorites and rare geological specimens.

According to Section 35 of the NHRA, dealing with archaeology, paleontology, and meteorites:

- 1) The protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority.
- 2) All archaeological objects, palaeontological material and meteorites are the property of the State.
- 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.
- 5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is underway, and where no application for a permit has been submitted and no heritage resources management procedure in terms of section 38 has been followed, it may—
- a) serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
  - b) investigate the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
  - c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
  - d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.

### **3.1. OTHER RELEVANT LEGISLATIONS**

#### **a) Constitution of South Africa**

The Constitution stipulates under Section 24 that everyone has a right to an environment that is not harmful to their health or well-being. This right extends to protecting the environment for the benefit of present and future generations through legislative and other measures that are aimed at preventing pollution and ecological degradation, promoting conservation and secure ecologically sustainable development and use of natural resources. Sustainable development and use of natural (1) resources must promote justifiable economic and social development.

#### **b) National Environmental Management Act 107 of 1998**

The NEMA stipulates under Section 2(4)(a) that sustainable development requires the consideration of all relevant factors including (iii) the disturbance of landscapes and sites that constitute the nation's cultural heritage must be avoided, or where it cannot be altogether avoided, is minimised and remedied. Heritage assessments are implemented in terms of the NEMA Section 24 in order to give effect to the general objectives. Procedures



considering heritage resource management in terms of the NEMA are summarised under Section 24(4) as amended in 2008.

### 3.2. SAHRA MINIMUM STANDARDS

The SAHRA Minimum Standards makes provision for the compilation and integration of AIAs and Palaeontological Impact Assessments (PIAs) as specialist components of the broader HIA and Environmental Impact Assessments (EIAs) (SAHRA, 2006). The Phase 1 Heritage Impact Assessments, as stipulated by the SAHRA Minimum Standards, comprise of Phase 1 AIAs and/or Phase 1 PIAs. These assessments usually involve a field survey of the proposed project and will include:

- Details of property to be developed and the type of assessment - Section 38(1) or Section 38(8);
- Short description of the characteristics of each site;
- Short assessment of the importance of each site, indicating which should be conserved and which mitigated;
- Assessment of the potential impact of the development on the site(s);
- In some cases, a shovel test, to establish the extent of the site, or collection of material might be required to identify the associations of the site (a prearranged permit is required); and
- Recommendations for conservation or mitigation.

### 3.3. ICOMOS

The credibility of the information sources is vital in determining the importance and authenticity of heritage resources. The ICOMOS Nara Document on Authenticity (Nara Document on Authenticity, 1994) forms the basis of determining authenticity. Based on this document, it is accepted that understanding and determining the value attributed to heritage resources rely on certain information sources. These sources need to be assessed as credible or truthful, which requires knowledge and understanding of such information sources concerning original and subsequent characteristics of the cultural heritage and their meaning.

The ICOMOS Charter for Places of Cultural Significance, 1999 (the Burra Charter) provides guidance for the conservation and management of places of cultural significance. ICOMOS Charters are generally published following proceedings held in and hosted by various ICOMOS member states. The Burra Charter: ICOMOS Charter for Places of Cultural Significance is thus a Charter that was adopted by ICOMOS following the 1979 ICOMOS meeting in Burra, South Australia. The Burra Charter considered the 1964 Venice Charter: International Charter of the Conservation and Restoration of Monuments and Sites and the 1978 Moscow Resolutions of the 15th General

Assembly of ICOMOS. The Burra Charter also formed the foundation for much of the South Africa NHRA. It defines and describes various heritage issues in more detail that is at times only alluded to in the NHRA.

According to this Charter, the cultural significance of a heritage resource (defined as a site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views) and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then the development of policy and finally management of the heritage resource in accordance with the policy. The policy for managing a heritage resource must therefore be based on an understanding of its cultural significance. Policy development should also include consideration of other factors affecting the future of a heritage resource such as the owner's needs, resources, external constraints and its physical condition (The Burra Charter, 1999).

## 4. METHODOLOGY

### 4.1. ARCHAEOLOGICAL ASSESSMENT

A desktop study was used to assess archaeological features in the development site. The background information search of the proposed development area was conducted following the site maps from the client. Sources used in this study included:

- Published academic papers and HIA studies conducted in and around the region where the proposed infrastructure development will take place;
- Available archaeological literature covering the Nongoma LM area was also consulted;
- The South African Heritage Resources Information System (SAHRIS) website was consulted to obtain background information on previous heritage surveys and assessments in the area; and
- Map Archives - Historical maps of the proposed area of development and its surrounds were assessed to aid information gathering of the proposed area of development and its surrounds.

### 4.2. ORAL HISTORIES

People from neighbouring local communities were interviewed to collect information on heritage resources. The local community helped gather information on the location of graves within the framework of the project. The

evaluation of the old buildings listed also required input from the local community. The Khumalo elders met with the heritage impact specialist onsite and provided information regarding the location of the graves.

People from the nearby local community were interviewed to collect information on heritage resources. The local community helped gather information on the location of graves within the framework of the project. The evaluation of the old buildings listed also required input from the local community.

- Assessment of the significance of the cultural resources in terms of their archaeological, built environment and landscape, historical, scientific, social, religious, aesthetic and tourism value;
- A description of possible impacts of the proposed development, especially during the construction phase, following the standards and conventions for the management of cultural environments;
- Review of applicable legislative requirements that is the NEMA (together with the 2014 EIA Regulations), the NHRA of 1999 and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008);
- The consolidation of the data collected using the various sources as described above;
- Acknowledgement of impacts on heritage resources (such as unearthed graves) predicted to occur during construction;
- Geological Information Systems mapping of known archaeological sites and maps in the region;
- A discussion of the results of this study with conclusions and recommendations based on the available data and study findings

### 4.3. PALAEOLOGICAL ASSESSMENT

The potential fossiliferous rock units (groups, formations, etc.) represented in the study area were identified from geological maps in the preparation of a palaeontological desktop study. The known fossil heritage within each rock unit is an inventory of published scientific literature, previous palaeontological impact studies in the same region, and the author's field experience. The desktop study for this report was from the following sources:

- The author's database on the geological formations concerned and their palaeontological heritage
- A review of the relevant scientific literature, including published geological maps and accompanying sheet explanations

The possible impact of the proposed development on the local fossil heritage was then assessed based on (1) the palaeontological sensitivity of the rock units concerned and (2) the nature and size of the development itself, most importantly the degree of fresh rock excavation envisaged. When rock units of moderate to high palaeontological sensitivity are present within the development footprint, a Phase 1 field assessment analysis by a trained

palaeontologist is typically required to identify any palaeontological hotspots and to make clear recommendations for any mitigation required before or during the developmental phase.

The possible impact of the proposed development on local fossil heritage and any need for specialised mitigation is then assessed based on the desktop and Phase 1 field assessment studies. Adverse palaeontological impacts typically occur during the construction process rather than during the operation or decommissioning phase.

### **4.3. FIELD SURVEY**

The field survey was conducted on the March 2021. It was conducted by an archaeologist and palaeontologist from Planet Development Systems. A field survey was done following accepted archaeological procedures and standards.

The survey also paid special attention to disturbed and exposed layers of soils such as eroded surfaces. These areas are likely to be exposed or yield archaeological and other heritage resources that may be buried underneath the soil and be brought to the surface by animal and human activities including animal barrow pits and human excavated grounds. The surface was also inspected for possible Stone Age scatters as well as exposed Iron Age implements and other archaeological resources.

The survey followed investigated the cultural resources on-site using the best possible technologies for archaeological field surveys. The general project area was documented through photographs using an Apple iPhone. A cellphone camera was used to record the archaeological findings on-site. GPS coordinates were recorded and features were mapped with an aid of Google Earth and ESRI ArcGIS version 10.5.

### **4.5. DATA CONSOLIDATION AND REPORT WRITING**

The data for this study was collected through desktop analysis and a field survey. The obtained data was used to determine any potential impacts within the construction footprint. This includes the following:

- Assessment of the significance of the cultural resources in terms of their archaeological, built environment and landscape, historical, scientific, social, religious, aesthetic and tourism value;
- A description of possible impacts of the proposed development, especially during the construction phase, following the standards and conventions for the management of cultural environments;
- Review of applicable legislative requirements that is the NEMA (together with the 2014 EIA Regulations), the NHRA of 1999 and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008);
- The consolidation of the data collected using the various sources as described above;

- Acknowledgement of impacts on heritage resources (such as unearthed graves) predicted to occur during construction;
- Geological Information Systems mapping of known archaeological sites and maps in the region;
- A discussion of the results of this study with conclusions and recommendations based on the available data and study findings

#### 4.6. ARCHAEOLOGICAL AND CULTURAL HERITAGE MITIGATION METHODOLOGY

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007).

**Table 1: SAHRA archaeological and cultural heritage site significance assessment ratings and associated mitigation recommendations**

SAHRA Archaeological and Cultural Heritage Site Significance Assessment			
Site Significance	Field Rating	Grade	Recommended mitigation
High Significance	National Significance	Grade I	Site conservation / Site development
High Significance	Provincial Significance	Grade II	Site conservation / Site development
High Significance	Local Significance	Grade III- A	Site conservation or extensive mitigation prior to development/ destruction
High Significance	Local Significance	Grade III- B	Site conservation or extensive mitigation prior to development / destruction
High/ Medium Significance	Generally protected A	Grade IV- A	Site conservation or mitigation prior to development / destruction
Medium Significance	Generally protected B	Grade IV-B	Site conservation or mitigation/ test excavation/ systematic sampling/ monitoring prior to or during development/ destruction

Low Significance	Generally protected C	Grade IV-C	On-site sampling, monitoring or no archaeological mitigation required prior to or during development / destruction
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## 5. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

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

**Table 2: Archaeological time periods and their descriptions**

ARCHAEOLOGICAL PERIOD	APPROXIMATE DATES <for less than and > for greater than
<b>Earlier Stone Age</b> Tools = Handaxes and cleavers	More than 2 million years ago to >200 000 years ago
<b>Middle Stone Age</b> Tools =Stone flakes such as scrapers, points and blades	<300 000 years ago to >20 000 years ago
<b>Later Stone Age</b> (Includes gatherer rock art) Tools = Wood, bone, hearths, ostrich eggshell beads and even bedding material	<40 000 years ago up to historical times in certain areas
<b>Early Iron Age</b>	c. AD 200 - c. AD 900
<b>Middle Iron Age</b>	c. AD 900 – c. AD 1300
<b>Late Iron Age</b> (Stonewalled sites) Tools = iron or steel	c. AD 1640 – c. AD 1840 (c. AD 1640 – c. AD 1840)



ARCHAEOLOGICAL PERIOD	APPROXIMATE DATES  <for less than and > for greater than

The Nongoma municipal area is rich in history particularly in the Zulu culture; thus, it has a number of cultural heritage assets. These are of historical importance and should be held to advance celebration, preservation, tourism, and cultural education and is used for economic gain.

### 5.1. SAHRA PROVINCIAL HERITAGE SITE DATABASE

The following map depicts Georeferenced Provincial Heritage Sites recorded in SAHRA Kwa Zulu Natal database. The author only included sites that are situated within 50 kilometers radius from the proposed development sites.

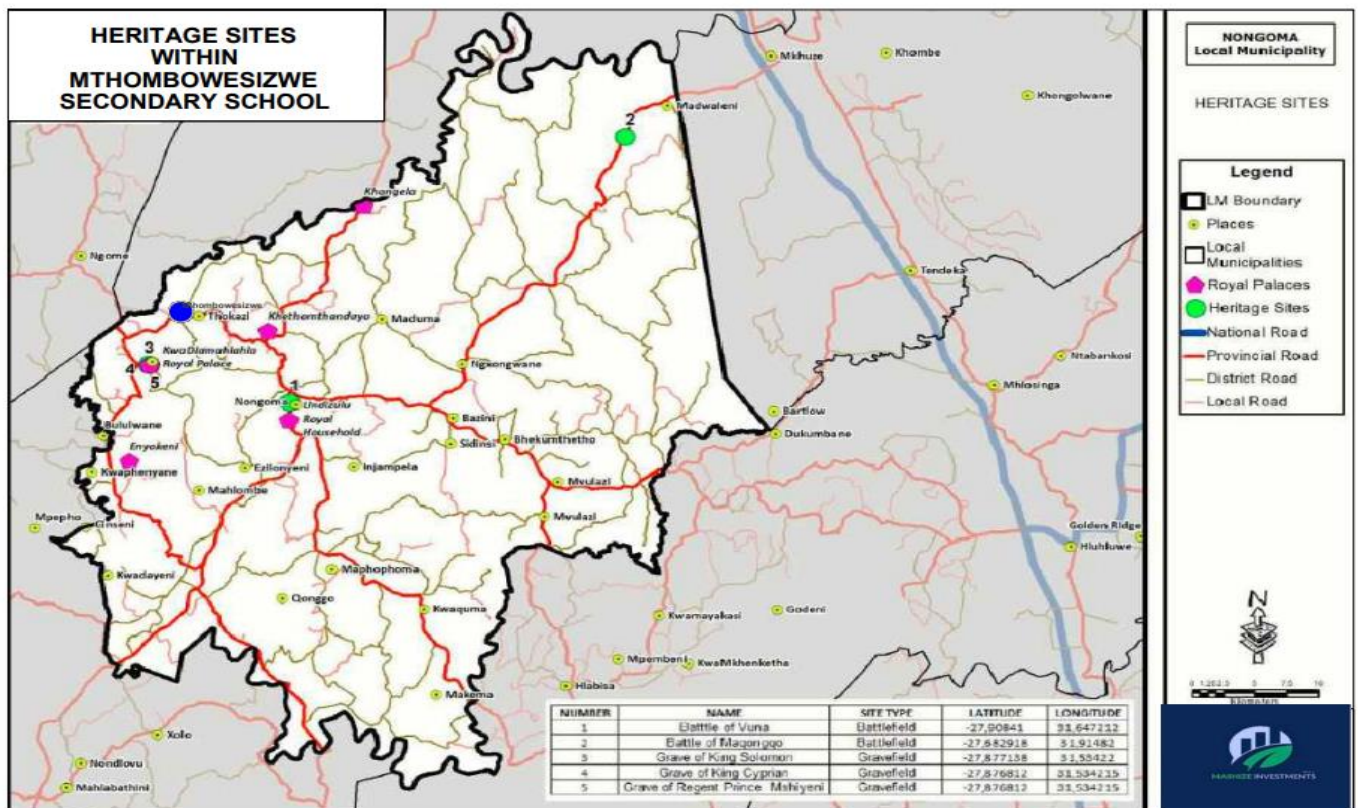


Figure 7: Heritage Sites within 50 kilometers radius from the proposed development site

Based on the data obtained from SAHRA database, there is no heritage site present within 200 meters of the proposed development site. Figure 3 shows that two cultural heritage sites are located at most 50 kilometers from the development site. The heritage sites are, namely,

**a) LinduZulu Royal Household**

This royal residence is one of the official homes of the Royal family and stands at a distance of 18,2 km from the project site. In 2014 The Lindizulu palace has had its roads repaired, storm water drainage system and car ports constructed, as well as installation of a generator.

**b) KwaDhlahlala Royal Residence**

KwaDlamadhlala Royal Palace is one of at least six royal palaces in the Nongoma area and though it is not open to the public, visitors can get a clear view of the old colonial veranda house from the entrance gate. Adjacent to the palace grounds is a small cemetery in which the present king's grandfather, King Cyprian Bhekuzulu Nyangayezizwe kaSolomon (1924-1968), and great grandfather, King Solomon Nkayishana kaDinuzulu (1893-1933), are buried.

## **5.2. GENERAL OVERVIEW**

The greater Nongoma area has been sporadically surveyed for archaeological heritage sites by archaeologists previously employed by the Natal Museum, the Ondini Cultural Museum and Amafa with the most systematic surveys having occurred in the Umfolozi-Hluhluwe Nature Reserve. The available evidence indicates that there are six Early Stone Age sites have been recorded that date back to between 300 000 and 1.5 million years ago. Most of these are situated in dongas close to water with little in-situ material (Prins 2014:2). Fifty nine Middle Stone Age sites have been recorded in the Umhfolozi-Hluhluwe Nature Reserve and thirty five Later Stone Age sites have been recorded (Prins 2014:3).

According to Prins (2014:3), early Stone Age tools have been recorded in the greater Ulundi district. Two Early Stone Age Sites have been recorded near the town of Nongoma. Later Stone Age tools, belonging to the San and their immediate ancestors, occur in various localities in Zululand but none has been recorded close to Nongoma as yet. Around 1 700 years ago an initial wave of Early Iron Age people settled along the coast at the foot of sand dunes. These early people produced a characteristic pottery style known as Matola. The Matola people exploited the wild plant and animal resources of the forest and adjacent seashore. By 1500 years ago another wave of Iron Age migrants entered the area. Their distinct ceramic pottery is classified to styles known as "Msuluzi" (AD 500-700), Ndongondwane (AD 700-800) and Ntshekane (AD 800-900).



The majority of recorded sites belonging to this period occur in the Tugela River Basin below the 1000m contour (Prins 2014:3), south of the project area. There is evidence that shows by 1593, a mercantile trade, presumed to have come from Delagoa Bay had penetrated as far south as the Transkei and as far inland as the Nongoma area. Ivory was the main export, while beads and copper were the main imports (Maggs 1989:42). The project area is situated between Nongoma and Ulundi. Ulundi (oNdini) was the seat of the Zulu King Cetshwayo kaMpande (Laband & Thompson 1989:194) and during the Anglo-Zulu War of 1879, Ulundi was attacked by the British. The Battle of Ulundi was the decisive battle that took place on the 4th July 1879 and marked the end of the Anglo-Zulu War, as well as the breakup of the Zulu nation/ Cetshwayo was forced to flee but was captured in the Ngome forest in August and exiled to Robben Island (SAHO 2014:1) The emakXhosini valley (Valley of the Kings) is situated in the immediate environs of Ulundi. This area also contains the military capital of King Dingane – the half-brother and successor of Shaka. Sites associated with Zwide, the leader of the Ndwandwe clan who initially opposed Shaka, occurs closer to the project area not far from Nongoma. Historical era sites relating to the AngloZulu War of 1879 also occur in the general area. Most of these sites are situated closer to Ulundi (Prins 2014:4). The history of Benedictine hospital goes way back to 1926 when the Benedictines founded Nongoma. They started a mission east of Nongoma-Vryheid road, about 1 km north of Nongoma village. In 1935, the station was moved to a new and much larger property west of the main road. Over the next 40 years Nongoma became by far the biggest mission institute in Zululand and the mission hospital was at the centre of the whole complex. It was officially started in 1937 (KZN Department of Health 2001:1)

## 6. DESCRIPTION AND DOCUMENTATION OF THE CULTURAL HERITAGE RESOURCES

The development site was easily accessible and it is dominated by grass vegetation. There were no archaeological features observed during the fieldwork, however, as with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resumes. The site is currently having the presence of a school of which the development involves alterations and upgrades to the existing school.



Figure 8: Vegetation cover in the development site and beyond the school boundary



Figure 9: Proof of grazing within the area

In terms of the national estate as defined by the NHRA, no sites of significance were found during the survey as described below.

### 6.1. BUILT ENVIRONMENT

*Section 34(1) of the NHRA of 1999 protects these structures against any altering.*

- No standing structures older than 60 years occur in the study area.

### 6.2. ARCHAEOLOGICAL AND PALAEOLOGICAL RESOURCES

*Section 35 (4) No person may, without a permit issued by the responsible heritage resources authority*

- During the survey, no archaeological sites were recorded.

### 6.3. CULTURAL LANDSCAPES, INTANGIBLE AND LIVING HERITAGE

*Section 3 (3) of the NHRA, No. 25 of 1999 makes provisions of such places of spiritual significance to individuals.*

- Long term impact on the cultural landscape is considered to be negligible as the surrounding area consists of a residential area. Visual impacts to scenic routes and sense of place are also considered to be low and there is a lack of significant sites.

## 6.4. BURIAL GROUNDS AND GRAVES

36(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority.

- The study area has 3 existing graves of which the development will not impose upon or result in the exhumation of the graves. One of the graves is located inside the school and the other one just outside the school but still within school property . Graves will not be relocated or exhumed for the purpose of the development.

## 6.5. PUBLIC MONUMENTS AND MEMORIALS

37. Public monuments and memorials must, without the need to publish a notice to this effect be protected in the same manner as places which are entered in a heritage register referred to in section 30.

- There are no public monuments and memorials in the study area

# 7. POTENTIAL IMPACTS AND SITE SIGNIFICANCE

## 7.1. POTENTIAL IMPACT DURING PRE-CONSTRUCTION

It is assumed that the pre-construction phase involves the removal of topsoil and vegetation as well as the establishment of infrastructure needed for the construction phase. These activities can have a negative and irreversible impact on heritage sites. Impacts include destruction or partial destruction of non-renewable heritage resources. If heritage resources are identified on-site during the pre-construction phase, the contractor must inform the archaeologist and that the construction must be suspended until the necessary permit has been obtained.

## 7.2. POTENTIAL IMPACTS DURING CONSTRUCTION

Possible direct impacts may occur during the construction phase. The impacts would however be of very low significance. During this phase, the impacts and effects are similar in nature but more extensive than the pre-construction phase. These activities can have a negative and irreversible impact on heritage sites. Impacts include destruction or partial destruction of non-renewable heritage resources. Social- Economic Impacts are also expected during the construction phase. These are expected to be largely positive.

### 7.2.1. SOCIO-ECONOMIC IMPACTS

Impact	Direction	Extent	Intensity	Duration	Probability	Significance
<b>General Public</b>						
Employment	+ve	Regional	High	Short-term	Definite	Very high
Income	+ve	Regional	High	Medium	Highly Probable	Very high
Economic growth	+ve	Regional	Medium	Medium	Highly Probable	High

## 7.3. POTENTIAL IMPACTS DURING OPERATIONAL PHASE

From a heritage perspective, no impacts will be envisaged during the operational phase.

## 7.4. SIGNIFICANCE OF IMPACTS

Nature: During the construction phase activities resulting in disturbance of surfaces and/or sub-surfaces may destroy, damage, alter, or remove from its original position archaeological material or objects.		
	Without mitigation	With mitigation
<b>Extent</b>	Local	Local
<b>Duration</b>	Permanent	Permanent
<b>Magnitude</b>	Low	Low
<b>Probability</b>	Not probable	Not probable
<b>Significance</b>	Low	Low
<b>Status</b>	Negative	Negative
<b>Reversibility</b>	Irreversible	Irreversible
<b>Irreversible loss of resources</b>	No resources were recorded	No resources were recorded
<b>Can impacts be mitigated?</b>	Yes, a chance find procedure should be implemented.	Yes
<b>Mitigation:</b> Due to the lack of apparent significant heritage resources no further mitigation is required before construction. A Chance Find Procedure should be implemented for the project should any sites be identified during the construction process.		

## 7.4. CONCLUSION

From a heritage perspective, the proposed project is acceptable. Due to the lack of significant heritage resources in the study area, the impact of the proposed project on heritage resources is considered low and it is recommended that the proposed project can commence on the condition that the following CFP are implemented as part of the EMP and based on approval from SAHRA.



## 7.5. RECOMMENDATIONS

- i. It is recommended that a desktop palaeontological study is undertaken to ensure that no significant fossils will be destroyed by the proposed development. The palaeontological assessment will be looked at in Section 8 of the report.
- ii. Although unlikely, sub-surface remains of heritage sites could still be encountered during the construction activities associated with the project. The following indicators of unmarked sub-surface sites could be encountered:
  1. Bone concentrations, either animal or human
  2. Ceramic fragments such as pottery shards either historic or pre-contact
  3. Stone concentrations of any formal nature
- iii. Although no sites of heritage significance were identified within the proposed study area, the following recommendations are given should any sub-surface remains of heritage sites be identified as indicated above.
- iv. All operators of excavation equipment should be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures should they be encountered.
- v. All construction in the immediate vicinity (50m radius of the site should cease).
- vi. The Heritage Practitioner or Provincial Heritage Resource Agency – ECPHRA should be informed as soon as possible, should any of the features (in Point ii) be found on-site.

## 8. CONCLUSION AND RECOMMENDATIONS

The proposed development of Mthombowesize High School will involve the excavation of substantial volumes of fresh bedrock of the Burgersdorp Formation that is potentially fossiliferous. The comparatively limited size of the activity, however, does not warrant supervision or mitigation by a trained palaeontologist. The responsible ECO should be alerted to the likelihood that scientifically useful fossil resources could be exposed by drilling in the research field, for example by this article.

**The specialist recommends that the applicant be granted environmental authorisation.** However, if significant fossil remains (especially articulated vertebrate skeletons or skulls) are exposed during development, ECO should protect the in-situ where possible. SAHRA and/or a trained palaeontologist should be alerted as quickly as possible so that appropriate mitigation measures can be implemented.



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