



## **NSOVO ENVIRONMENTAL CONSULTING**

**PHASE I ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT SPECIALIST REPORT FOR THE PROPOSED EXPANSION OF RAILWAY LOOPS AT THABAZIMBI TO FERROGATE THROUGH NORTHAM WITHIN THABAZIMBI LOCAL MUNICIPALITY OF WATERBERG DISTRICT IN LIMPOPO PROVINCE.**

**June, 2017**

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## **DECLARATION**

### **ABILITY TO CONDUCT THE PROJECT**

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## **EXECUTIVE SUMMARY**

Vhubvo Archaeo-Heritage Consultant Cc has been commissioned by Nsovo Environmental Consulting to conduct the Cultural Heritage Impact Assessment (HIA) Study for the proposed expansion of railway loops at Thabazimbi, Ferrogate and Northam within Thabazimbi Local Municipality of Waterberg District. The aim of the survey was to investigate the availability of archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structures of historical significance that may be affected by the proposed expansion of railway loops, these will in turn assist the developer in ensuring proper conservation measure in line with the National Heritage Resource Act, 1999 (Act 25 of 1999). The findings of this study have been informed by desktop study and field survey. The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for researches that have been carried out in the wider area over the past years. Archaeological researches have been conducted within the province of Limpopo for several decades (Hanisch 1980; Huffman 2007; Hunt 1931; Krige and Krige 1943; Murimbika 2006). These have led to the discovery of Stone, Iron and Historical sites. The province of Limpopo can thus be quantified as one of the Province in South Africa which is rich of heritage resources.

### **Background and Need of the Project**

Market Demand Strategy (MDS) requires Transnet Freight Rail to increase its volumes to 350 Mtpa. It is expected that unlocking the Waterberg and eventually the Botswana coal field, will contribute significantly to the targeted MDS volumes. The development of the Waterberg to Gauteng and Richards Bay corridors, will strengthen the favorability of using the Southern route rather than alternative routes to Mozambique. Therefore, the expansion in rail capacity has been identified as a strategic initiative and received much focus from Government as a key drive for the South Africa's economy. In line with these strategic priorities for the country, Transnet has developed a programme for expansion of railway infrastructure between Lephalale in Limpopo and Pyramid South in Gauteng provinces. The expansions will feed the heavy haul coal line for increased coal exports through the Port of Richards Bay and also deliver coal to several power stations along the existing rail route.

### **Brief History of the Area**

The Stone Age is the period in human history when stone materials were used to produce tools. In South Africa the Stone Age can be divided into three periods, Early (More than 2 million years ago - 250 000 years Ago), Middle (250 000 years ago – 25 000 years ago) and Late (25 000 years ago - AD 200). It is, however, important to note that dates only provide a broad framework for interpretation. This area is home to three known phases of the Stone Age. The Iron Age is the name given to the period of human



history when metal was mainly used to produce artifacts. In South Africa it can be divided in two separate phases. Early (AD 400 - AD 1025) and Late (AD 1025 - AD 1830). Although there are no known Early Iron Age sites in the area, there are several Late Iron Age sites in the area (Bergh 1999: 7 - 8). The Late Iron Age farmers were followed by colonists. Although Thabazimbi, Ferrogate and Northam areas have a rich history of both mining and colonial expansion, these towns holds little of historic significance.

### **Receiving Environment**

The proposed development is linear and it will be located at Thabazimbi, Ferrogate and Northam. The project will traverse various private owned farms in Wards 4, 5 and 7 within the jurisdiction of Thabazimbi Local Municipality in the Limpopo Province. The area is currently used for various purposes including farming, mining and other related activities (see Figure 2 - 5). The land on which the development is proposed is transformed and no archaeological materials are expected. The locality map provided indicates the proposed study area.

### **Impact statement**

The impact of the proposed expansion of railway loops on archaeological and cultural heritage remains is rated as being low. The probability of locating any important archaeological remains during excavations of the railway loops is unlikely. However, there is a possibility of encountering some cultural sites, as demonstrated on the table below. The developer should thus commission public consultation to investigate if there could be any cultural connotation that could be negatively impacted by this proposal, similarly, encountering a grave in the proposed area is considered a possibility, though unlikely.

### **Restrictions and Assumptions**

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction stage, a heritage specialist monitoring the development must immediately be notified. In the mean time, no further disturbance may be made until such time as the heritage specialist has been able to make an assessment of the find in question. It is the responsibility of the contractor to protect the site from publicity (i.e., media) until all assessments are made.



**Table 1:** Possibility of archaeological/ heritage materials on sites.

Landscape type	Description	Occurrence still possible	Likely occurrence
Archaeology	Early, Middle and Late Stone Age; Iron Age;	Yes Yes	Rather unlikely Chance find
Burial and Graves	Pre-colonial burials; Graves of victims of conflict; Graves older than 100 years; Graves older than 60 years; Graves younger than 60 years;	Yes	Chance find
Built Environment	Formal public spaces; Historical structures; Area associated with social identity/ displacement;	Yes	Likely
Historic Farmland	Historical farm yards; Historical farm workers villages; Irrigation furrows; Historical routes; Distinctive types of planting;	Yes	Likely
Landscape usage	Sites associated with living heritage e.g., initiation school sites; Sites of political conflict; Sites associated with a historic event/ person;	Yes	Likely
Historic rural Town	Historic mission settlements;	Yes	Unlikely

### Survey sensation

The visibility of all area proposed for the expansion of railway loops was high, emancipating in the survey of the proposed expansion of railway loops being successful.

### Survey Findings

The Archaeological and Cultural Heritage Phase I Impact Assessment for the proposed expansion of Railway Loops at Thabazimbi, Ferrogate and Northam has identified no significant impacts to archaeological or grave resources that will need to be mitigated prior construction. Despite that no archaeological materials were identified on the proposed sites, structures of historical importance had been noted in the area proposed for expansion. These include a bulk loading structure, railway line and a historical light pole. According to information sourced from Transnet Archive, the loading structure was in existence in the 1963. This is not withstanding that the station was initial found prior this date. Nonetheless, all these objects are protected by the National Heritage Resource Act by virtue of age and special value as indicated below. It should be borne in mind that none of these resources can be considered to be of such significance that can prevent the proposed development from proceeding.

### Recommendations and Discussions

The noted structures have medium significance value by virtue of being over 60 years of age and most importantly by their historical, social, and aesthetic value. These structures are rated by this study as of locally important (Local Grade III B), and are considered as a heritage situate in the larger history of the region. According to Section 34(1) of the National Heritage Resource Act, no person may alter or



demolish any structure or part of a structure, which is older than 60 years without a permit, issued by the relevant provincial heritage resources authority, in this case, Limpopo Heritage Resource Authority (LIHRA). Section 3 of the same Act also protects the demolition or altering of any structure in the Republic of South Africa for its cultural significance or other special value, such as:

- Its importance in the community, or pattern of South Africa's history;
- Its potential to yield information that will contribute to an understanding of South Africa's cultural heritage;
- Its importance in demonstrating the principal characteristics of a particular class of South Africa's cultural places or objects;
- Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and;
- Structures of significance relating to the history of slavery in South Africa.

It has been noted that the three structures will be impacted by the proposal, on that note, it is strictly recommended that a second phase heritage study is conducted by a heritage specialist. This should be done before any commencement of the proposed development, and it will entail proper documentation of these structures, as well as application for permit to alter/ demolish as stipulated by the legislature.

The developer is reminded that unavailability of archaeological materials (e.g., pottery, stone tools, remnants of stone-walling, graves, etc) and fossils does not mean absentee, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction. In the event that archaeological materials are unearthed, all construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by LIHRA.

## Pre-construction education and awareness training





Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during the project. The pre-construction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas. Below are some of the indicators of archaeological site that may be found during construction:

- ✚ Flaked stone tools, bone tools and loose pieces of flaked stone;
- ✚ Ash and charcoal;
- ✚ Bones and shell fragments;
- ✚ Artefacts (e.g., beads or hearths);
- ✚ Packed stones which might be uncounted underground, and might indicate a grave or collapse stone walling.

## Conclusions

A thorough background study and survey of the proposed development was conducted and findings were recorded in line with LIHRA guidelines. As per the recommendations above, there are no major heritage reasons why the proposed development could not be allowed to proceed. Thus, it is recommended that the proposed development proceed on condition that the recommendation indicated above are adhered to.



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## ACRONYMS AND ABBREVIATIONS

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency
LIHRA	Limpopo Heritage Resource Authority



## GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (*Burra Charter*):

**Archaeological Material:** remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

**Artefact:** Any movable object that has been used, modified or manufactured by humans.

**Conservation:** All the processes of looking after a site/heritage place or landscape including maintenance, preservation, restoration, reconstruction and adaptation.

**Cultural Heritage Resources:** refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistorical places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. This include intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

**Cultural landscape:** “the combined works of nature and man” and demonstrate “the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external”.

**Cultural Resources Management (CRM):** the conservation of cultural heritage resources, management, and sustainable utilization and present for present and for the future generations



**Cultural Significance:** is the aesthetic, historical, scientific and social value for past, present and future generations.

**Chance Finds:** means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Compatible use:** means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

**Conservation** means all the processes of looking after a place so as to retain its cultural significance.

**Expansion:** means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

**Grave:** A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

**Heritage impact assessment (HIA):** Refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.



**Historic Material:** remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

**Impact:** the positive or negative effects on human well-being and / or on the environment.

***In situ* material:** means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

**Interested and affected parties Individuals:** communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

**Interpretation:** means all the ways of presenting the cultural significance of a place.

**Late Iron Age:** this period is associated with the development of complex societies and state systems in southern Africa.

**Material culture** means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

**Mitigate:** The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

**Place:** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

**Protected area:** means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers.



**Public participation process:** A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.

**Setting:** means the area around a place, which may include the visual catchment.

**Significance:** can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

**Site:** a spatial cluster of artifact, structures, organic and environmental remains, as residues of past human activity.



## 1. Introduction

At the request of Nsovo Environmental Consulting, Vhubvo Archaeo-Heritage Consultant Cc conducted an Archaeological and Cultural Heritage Phase I Assessment Study for the proposed expansion of Railway Line/ Loops at Thabazimbi, Ferrogate and Northam within Thabazimbi Local Municipality of Limpopo Province. The survey was conducted in accordance with the SAHRA Minimum Standards for the Archaeology and Palaeontology. The minimum standards clearly specify the required contents of the report of this nature. The study aim to identify and document archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure of historical significance that may be affected by the proposed construction, these will in turn assist the developer in ensuring proper conservation measure in line with the National Heritage Resource Act, 1999 (Act 25 of 1999).

## 2. Sites location and description

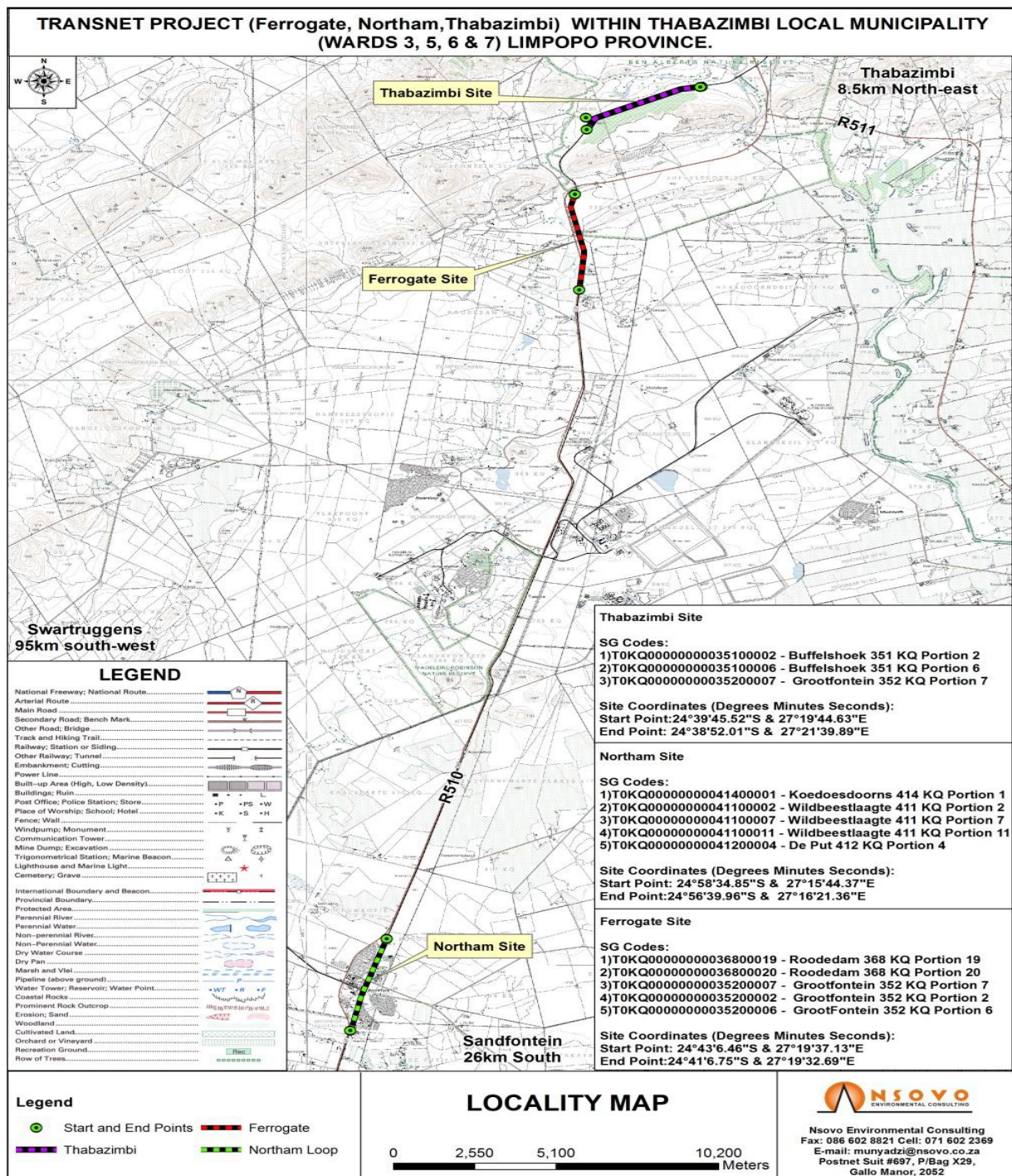
The proposed development is linear and it will be located at Thabazimbi, Ferrogate and Northam. The project will traverse various private owned farms in Wards 4, 5 and 7 within the jurisdiction of Thabazimbi Local Municipality, in the Limpopo Province. The area is currently used for various purposes including farming, mining and other related activities (see Figure 2 - 5). The land on which the development is proposed is transformed and no archaeological materials are expected. The locality map provided indicates the proposed study area.

### Summary of Project Location Details

Province:	Limpopo
Local Municipality:	Thabazimbi
District Municipality:	Waterberg
Proposed development:	Expansion of railway line/ loops







**Figure 1:** View of the topographical map of the proposed development.







**Figure 2:** View of the area proposed for expansion of the railway line/ loops at Thabazimbi.



**Figure 3:** View of section of the area proposed for expansion of the railway line/ loops at Thabazimbi.







**Figure 4:** View of another section of the area proposed for expansion of the railway line/loops at Ferrogate.



**Figure 5:** An overview of the area proposed for development at Northam.







**Figure 6:** Another view of the area proposed for development at Northam.

### 3. Nature of the proposed project

Market Demand Strategy (MDS) requires Transnet Freight Rail to increase its volumes to 350 Mtpa. It is expected that unlocking the Waterberg and eventually the Botswana coal field, will contribute significantly to the targeted MDS volumes. The development of the Waterberg to Gauteng and Richards Bay corridors, will strengthen the favourability of using the Southern route rather than alternative routes to Mozambique. Therefore, the expansion in rail capacity has been identified as a strategic initiative and received much focus from Government as a key drive for the South Africa's economy. In line with these strategic priorities for the country, Transnet has developed a programme for expansion of railway infrastructure between Lephalale in Limpopo and Pyramid South in Gauteng provinces. The expansions will feed the heavy haul coal line for increased coal exports through the Port of Richards Bay and also deliver coal to several power stations along the existing rail route. The project will also entails the following expansion:

The expansion will entail the following:



- The development of two railway loops of approximately 3.4km, crewing facilities, seven (7) culverts and associated infrastructure adjacent the existing railway line at Thabazimbi;
- The expansion of the existing railway network of approximately 3.75km and (5) five culverts at Ferrogate; and
- The extension of the existing loop by approximately 4km and two (2) culverts at Northam.

## 4. Purpose of the Cultural Heritage Study

The purpose of this Archaeological and Cultural Heritage study was to entirely identify and document archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure of historical significance that may be affected by the proposed expansion, these will in turn assist the developer in ensuring proper conservation measure in line with the National Heritage Resource Act, 1999 (Act 25 of 1999). Impact assessments highlight many issues facing sites in terms of their management, conservation, monitoring and maintenance, and the environment in and around the site. Therefore, this study involves the following:

- Identification and recording of heritage resources that maybe affected by the proposed railway line,
- Providing recommendations on how best to appropriately safeguard identified heritage sites. Mitigation is an important aspect of any development on areas where heritage sites have been identified.

## 5. Methodology and Approach

### *Background study introduction*

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this study, the following tasks were conducted: 1) literature review, 2), consultations with the developer and appointed consultants, 3), completion of a field survey and 4), analysis of the acquired data, leading to the production of this report.



***Physical survey***

The field survey lasted two days of the 28th and 29th of March 2017. An archaeologist from Vhubvo conducted the survey in the presence of Nsovo and Transnet officials.

***Documentation***

The general project area was documented. This documentation included taking photographs using cameras a 10.1 mega-pixel Sony Cybershort Digital Camera. Plotting of finds was done by a Garmin etrex Venture HC.

***Oral interview***

Oral interview was initiated with land owners. The oral interviews aim to understand the cultural landscapes and/ or intangible heritage of the area.

***Restrictions and Assumptions***

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction, a heritage specialist must immediately be notified.

## **6. Applicable Heritage Legislation**

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act (No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

- (a) *the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) *the construction of a bridge or similar structure exceeding 50 m in length; and*
- (c) *any development or other activity which will change the character of an area of land, or water -*
  - (i) *exceeding 5 000 m<sup>2</sup> in extent;*
  - (ii) *involving three or more existing erven or subdivisions thereof; or*
  - (iii) *involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - (iv) *the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;*
- (d) *the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or*



*(e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

Section 3 of the National Heritage Resources Act (25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting a Heritage Impact Assessment (HIA) the following heritage resources have to be identified:

- (a) Places, buildings structures and equipment of cultural significance*
- (b) Places to which oral traditions are attached or which are associated with living heritage*
- (c) Historical settlements and townscapes*
- (d) Landscapes and natural features of cultural significance*
- (e) Geological sites of scientific or cultural importance*
- (f) Archaeological and paleontological sites*
- (g) Graves and burial grounds including-*
  - (i) ancestral graves*
  - (ii) royal graves and graves of traditional leaders*
  - (iii) graves of victims of conflict*
  - (iv) graves of individuals designated by the Minister by notice in the Gazette*
  - (v) historical graves and cemeteries; and*
  - (vi) other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983)*
- (h) Sites of significance relating to the history of slavery in South Africa*
- (i) moveable objects, including -*
  - (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens*
  - (ii) objects to which oral traditions are attached or which are associated with living heritage*
  - (iii) ethnographic art and objects*
  - (iv) military objects*
  - (v) objects of decorative or fine art*
  - (vi) objects of scientific or technological interest; and*
  - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).*

Section 3 of the National Heritage Resources Act (No. 25 of 1999) also 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 the following:

- (a) Its importance in the community, or pattern of South Africa’s history*
- (b) Its possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage*



- (c) *Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage*
- (d) *Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects*
- (e) *Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group*
- (f) *Its importance in demonstrating a high degree of creative or technical achievement at particular period*
- (g) *Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons*
- (h) *Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- (i) *Sites of significance relating to the history of slavery in South Africa.*

***Other sections of the Act with a direct relevance to the AIA are the following:***

***Section 34(1)*** No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

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

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

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

- *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside formal cemetery administered by a local authority; or*
- *bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.*

## 7. Degree of Significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

### Significance rating of sites

(i) High

(ii) Medium

(iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in. For example, an archaeological site may be the only one of its kind in the region, thus its regional significance





is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

### High

- This is a ‘do not touch’ situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.
- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.

### Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

### Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the legislation (the National Heritage Resources Act, no. 25 of 1999). Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade heritage resources.



**Table 2:** Grading systems for identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).

Level	Significance	Possible action
<b>National (Grade I)</b>	Site of National Value	Nominated to be declared by SAHRA
<b>Provincial (Grade II)</b>	Site of Provincial Value	Nominated to be declared by PHRA
<b>Local Grade (IIIA)</b>	Site of High Value Locally	Retained as heritage
<b>Local Grade (IIIB)</b>	Site of High Value Locally	Mitigated and part retained as heritage
<b>General Protected Area A</b>	Site of High to Medium	Mitigation necessary before destruction
<b>General Protected Area B</b>	Medium Value	Recording before destruction
<b>General Protected Area C</b>	Low Value	No action required before destruction

## 8. History of the Area

### *Introduction*

Limpopo Province is one of the few South African provinces with a multi-layered archaeological record. Documenting the existence of the Stone Age people, Iron Age farmers and the Colonial settlers of the province is a complex task. Although Stone Age sites are found in abundance throughout the province, Limpopo remain one of the richest province in Iron Age, and several archaeological researches had been conducted producing diverse Iron Age sites. Thus, the archaeology of the province can thus be divided into the Stone Age, Iron Age and Historical time frame. The project area falls within a rich archaeological region where both Stone and Iron Age periods are represented. Evidence suggests that Early Stone Age, Middle Stone Age and Late Stone Age occupations occurred in the region, with Middle Stone Age most visible.

### *Stone Age sites*

Several Stone Age sites found in the province conform to the generic South African periodization spilt into the Early Stone Age (ESA), Middle Stone Age (MSA) and Late Stone Age [(LSA) van der Walt 2012]. It is well known for the World Heritage Site Makapans



Caves which yields evidence of hominid occupation by “*Australopithecus africanus*” from approximately 3.3 million years ago (Bergh 1999; van der Walt 2012). The Caves of Hearths is considered to be one of the two known in the world to have yielded an unbroken sequence showing evidence and artefacts of occupation of the caves through Early Stone Age (ESA), Middle Stone Age (MSA), Late Stone Age (LSA), and right up to the Iron Age; and it is one of the few rock shelters to present Acheulian assemblages in southern Africa (Mitchell 2002). Most of the LSA sites in the region are well documented and preserved. LSA in the region is well represented by sites that had been discovered in the Waterberg which is known for its many rock art sites including those containing shaded painting such as at Haakdoorndraai (Eastwood et al., 2002). Other rock art site can be found at Makgabeng plateau which has over 460-recorded rock art sites (Pager 1973; Eastwood et al., 2002). Rock art paintings have also been documented at Blouberg Mountains and Soutpansberg Mountains (Blundell & Eastwood, 2001; Eastwood, 2003; Hall & Smith, 2000; Louw 1969).

Some tools have been identified in Thabazimbi area, ESA sites have been identified close to the Crocodile River. No known Stone Age sites have been found in the direct area affected by this proposal. This is despite that the study area falls within a region which could be ideal for ESA, MSA and LSA occupations. No specific concentrations were recorded to date, but numerous rock paintings have been recorded in the larger geographical area (see Berg 1999, van der Ryst 2006). The specific affected project-receiving area environment has low potential for Stone Age sites.

### ***Iron Age sites***

Extensive research has been done on Iron Age in the Province (Huffman 2007), most of the Iron Age sites are located near flood plains, along and near some of the major rivers, hill slopes and/or mountain areas (Hall & Smith 2000; Huffman 2007; van Schalkwyk 2007) The Iron Age of Limpopo Province region dates back to the 5th century AD when the Early Iron Age proto-Bantu-speaking farming communities began arriving in the area, which was then occupied by Stone Age people. The region is well known for the famous golden rhino that was recovered from Iron Age settlement site of Mapungubwe in the Limpopo Shashi Valley, now a UNESCO World Heritage Site.



The Early Iron Age (EIA) in the wider area of Limpopo Province is represented by sites such as Schroda in the Limpopo Valley, KommandoKop and Pont Drift. Huffman proposed Middle Iron Age for the period between 900 and 1300 AD in the Shashe-Limpopo confluence (2007: 361). Some researchers however still question Huffman's proposal. Limpopo Middle Iron Age (MIA) includes the well-known Mapungubwe World Heritage site, K2 and Kommandokop (Bergh 1999; Huffman 2005). Late Iron Age (LIA) sites are found in abundance throughout the Limpopo Province and are usually located on the foot or against slope hills for defensive purposes, an example would be the LIA Zimbabwe tradition sites such as Thulamela and Dzata found in the Soutpansberg.

EIA sites have been recorded representing Diamond and Eiland facies in the wider region (Huffman 1990). However no EIA sites have identified close to the study area. It is assumed that Late Iron Age peoples were attracted to the area because of the relatively fertile soils around the hills and valleys, and because of the iron ore and red ochre. The LIA in Thabazimbi is attested to the Sotho-Tswana group. Several sites dating between AD 1500 and 1700 belonging to the Madikwe and Olifantspoort facies (from Icon) have been recorded close to the project area, and predate stone walling ascribed to Sotho-Tswana speakers (Breutz 1953, Bergh 1998, Huffman 2007). Sotho Tswana stonewalled sites with Uitkomst pottery have been found close to the study area and dates to the seventeenth to nineteenth centuries. Stone walled sites belonging to the LIA have also been identified next to the study area, but up to so far they have not been linked to a cultural group. Iron smelting sites have been recorded at Rooiberg and Ben Alberts Nature Reserve. Ceramic evidence suggests then that at one time Sotho-Tswana people were mining at Rooiberg. The ceramic evidence from the Rhino Andalusite Mine shows that the Sotho-Tswana people living there were directly related to the miners at Rooiberg: both belonged to the Western Sotho-Tswana cluster (Huffman 2007, Berg 1999). Therefore the relationship between the ochre mine and Madikwe settlements is of great interest. Associated with the Madikwe settlements, in addition to the ochre mine, are several maize grindstones found.



### ***Historical Background***

The name Thabazimbi is a Tswana word meaning ‘mountain of iron’ and refers to the lucrative iron ore reef first discovered here in 1919 by J.H. Willaims. Few years after discovery, full scale mining will begin around 1930s, and this gave birth to steel production, as well as railway line. Thus, railway line from Rustenburg reached the area in the 1930s. This discovery made Thabazimbi to be known as an iron mining region, and would later be declared as a town in 1953. The town is situated at the feet of the Ysterberg and is surrounded by the Witfonteinrand and Boshofberg with the majestic Kransberg in the background. The mine boasts one of the largest mining shafts in Africa. More than 2 million tons of ore are mined every year and hauled by train to Mittal's iron and steel works. Today the ISCOR Steelworks in Tshwane still draw much of their raw material from Thabazimbi (<http://www.golimpopo.com/waterberg/thabazimbi>).

## **9. Survey Findings**

The Archaeological and Cultural Heritage Phase I Impact Assessment for the proposed expansion of Railway Loops at Thabazimbi, Ferrogate and Northam has identified no significant impacts to archaeological or grave resources that will need to be mitigated prior construction. Despite that no archaeological materials were identified on the proposed sites, structures of historical importance had been noted in the proposed expansion. These include a bulk loading structure, railway line and a historical light pole. Aerial photograph taken from the 1960s indicate that the Ferrogate railway station on which these resources were noted had long been established in the 1960s. The railway line from Rustenburg reached the area of Thabazimbi via Northam and Ferrogate in the 1930s for the purpose of transporting iron which was mined in the area. Although the exact age of these resources remain unknown, they are assumed to be over 60 years of age, hence, they are protected by the National Heritage resource Act. It should be borne in mind that none of the resources that can be found here can be considered to be of such significance that can prevent the proposed development from proceeding.



**Table 3:** Overview of the findings and their significance.

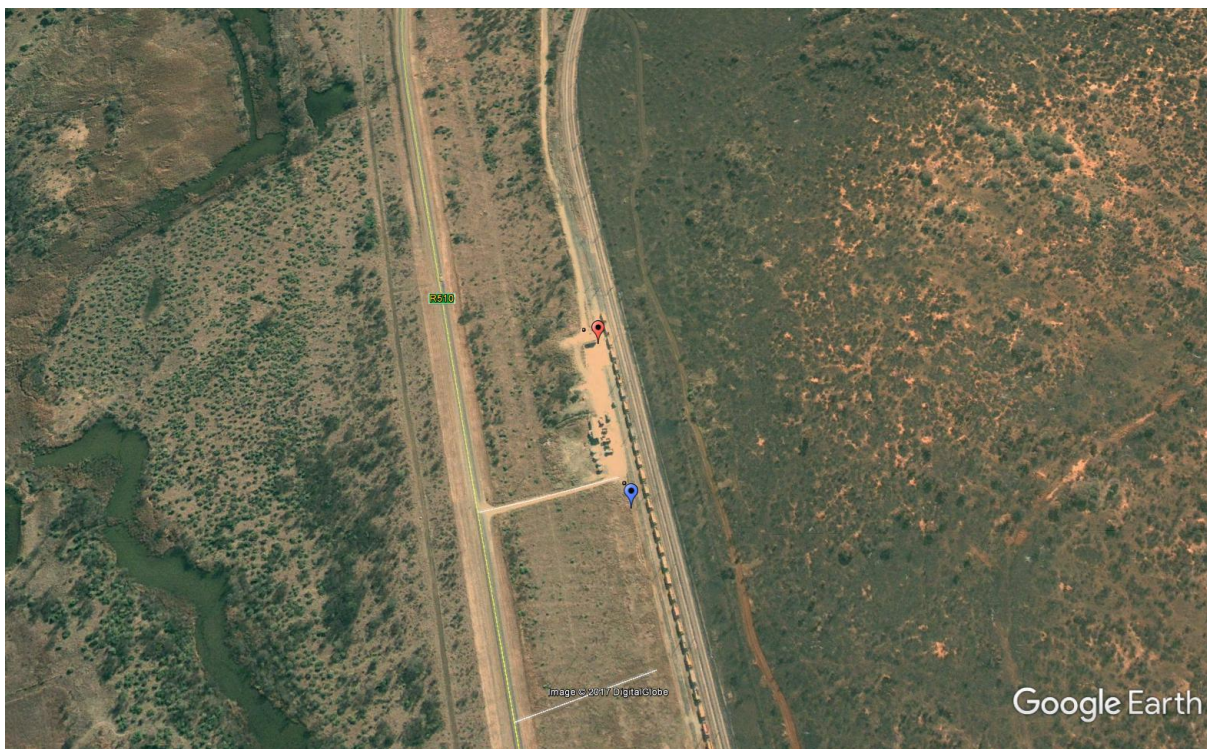
Name of the resource	Co-ordinates	Description/Condition	Significance
Ral001 (Loading structure)	S 24°41'31.8" E 27°19'29.7"	The first structure is a bulk loading area – This kind of structure allows for goods to be delivered straight from a truck onto a train. Today this kind of edifice are no longer constructed, making this an important heritage situate.	Medium (See Fig. 7)
Ral002 (Pole)	S 24°41'36.83" E 27°19'30.6"	The second site is what appears to be a utility pole. This kind of poles were primarily used for street lighting until the advent of high-intensity poles.	Medium (See Fig. 8)
Ral003 (Railway line)	The old line had been noted in at Ferrogate station.	It is not clear whether this line is part of the initial railway line that was constructed in the 1930s, or it dates later.	Medium

**Figure 7:** View of the old Bulk Loading Area at Ferrogate station.





**Figure 8:** View of the old light pole that will be impacted by the proposed development Ferrogate station.



**Figure 9:** View of Google Earth snapshot taken in the 1980s showing the Ferrogate station as well as the bulk loading area and electric pole indicated by red and blue icon respectively.





**Figure 10:** An overview of the historical topographical map of Ferrogate station and the Railway line (Deeds: 2427CB, 1960).

## 10. Recommendations and Discussions

The noted structures have medium significance value by virtue of being over 60 years of age and also about their historical, social, and aesthetic value. These structures are rated by this study as of locally important (Local Grade III B), and are considered as a heritage situate in the larger history of the region. According to Section 34(1) of the National Heritage Resource Act, no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit, issued by the relevant provincial heritage resources authority, in this case, LIHRA. Section 3 of the same Act also protects the demolition or altering of any structure in the Republic of South Africa for its cultural significance or other special value, such as:





- Its importance in the community, or pattern of South Africa's history;
- Its potential to yield information that will contribute to an understanding of South Africa's cultural heritage;
- Its importance in demonstrating the principal characteristics of a particular class of South Africa's cultural places or objects;
- Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and;
- Structures of significance relating to the history of slavery in South Africa.

It has been noted that the structures will be impacted by the proposal. It is thus strictly recommended that a second phase heritage study is conducted by a heritage specialist. This should be done before the commencement of the proposed development, and it will entail proper documentation of these structures, as well as application for the permit to alter as stipulated by the legislature.

The developer is reminded that unavailability of archaeological materials (e.g., pottery, stone tools, remnants of stone-walling, graves, etc) and fossils does not mean absentee, archaeological material might be hidden underground, and as such the client is reminded to take precautions during construction.

In the event that archaeological materials are unearthed, all construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the



same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by LIHRA.

### **Pre-construction education and awareness training**

Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during the project. The pre-construction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas. Below are some of the indicators of archaeological site that may be found during construction:

- + Flaked stone tools, bone tools and loose pieces of flaked stone;
- + Ash and charcoal;
- + Bones and shell fragments;
- + Artefacts (e.g., beads or hearths);
- + Packed stones which might be uncouneted underground, and might indicate a grave or collapse stone walling.

## **11. Conclusions**

A thorough background study and survey of the proposed development was conducted and findings were recorded in line with LIHRA guidelines. As per the recommendations above, there are no major heritage reasons why the proposed development could not be allowed to proceed. Thus, it is recommended that the proposed development proceed on condition that the recommendation indicated above are adhered to.



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## APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance* were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

### (a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

### (b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

### (c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

### (d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

### (e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

### (f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as



being characteristic of its class?

- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?

