
Heritage Impact Assessment Report

Heritage Impact Report for the Proposed Establishment of
a Tourist Lodge and Staff Village at Letaba Ranch Game
Reserve, near Phalaborwa, Limpopo Province

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***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. G&A Heritage and its personnel will not be held liable for such oversights or for costs incurred as a result of such oversights.*

Statement of Independence

As the duly appointed representative of G&A Heritage, I Stephan Gaigher, hereby confirm my independence as a specialist and declare that neither I nor G&A Heritage have any interests, be it business or otherwise, in any proposed activity, application or appeal in respect of which the Environmental Consultant was appointed as Environmental Assessment Practitioner, other than fair remuneration for work performed on this project.

SIGNED OFF BY: STEPHAN GAIGHER



EXECUTIVE SUMMARY

Site name and location: Proposed development of a tourist lodge and staff village on the Letaba Ranch Game Reserve, Limpopo Province

Municipal Area: Ba-Phalaborwa Local Municipalities.

Developer: Limpopo Tourism Agency

Consultant: G&A Heritage, PO Box 522, Louis Trichardt, 0920, South Africa. 38A Vorster Str. Louis Trichardt, 0920

Date of Report: 18 March 2014

The purpose of the management summary is to distil the information contained in the report into a format that can be used to give specific results quickly and facilitate management decisions. It is not the purpose of the management summary to repeat in shortened format all the information contained in the report, but rather to give a statement of results for decision making purposes.

This study focuses on the proposed development of a tourist lodge and associated staff village at the Letaba Ranch Reserve, near Phalaborwa, Limpopo Province.

This study encompasses the heritage impact investigation. A preliminary layout has been supplied to lead this phase of this study.

The purpose of this study is to determine the possible occurrence of sites with cultural heritage significance within the study area. The study is based on archival and document combined with fieldwork investigations.

Archival Research

• Historic Maps

The following historic map sets were consulted during the archival study

- The New Society for the Diffusion of Knowledge, Map of the Transvaal, 1907
- Sketch Map of South Africa Showing British Possessions, July 1881 & 1885
- South African Population Density Map, 1918
- Map of the Boer Republic of Transvaal Showing Blockhouse Lines and South African Constabulary Posts with Dates of Completion, 1901

None of the above maps showed any developments on the property with the exception of the Rondalia Camps.

• Previous Heritage Studies on the SAHRIS Database

- Roodt, F., 2008. Mahale Quarsite Mine Phalaborwa Local Municipality Limpopo, HIA.
- Roodt, F., 2013. Proposed Hotel & Conference Centre, Portion 24 & 42 (a portion of Portion 38) of the farm Laaste 24 LU, Ba-Phalaborwa Local Municipality, Limpopo.
- Roodt, F., 2002. Letter of Exemption. Report of a Heritage Resources Impact Assessment: Proposed Development of a Medium Density Township, Erf 1800, Extension 4, Phalaborwa.
- Maguire, R. & Van Wijk, C. 2004. Archaeological and Cultural Assessment of Lodges and Associated Infrastructure Development on Portion 4 (Remainder) and Portion 5 of the Farm Rietvley 28 KU, Phalaborwa Magisterial District, Limpopo.



- Roodt, F., 2006. Phase 1 Heritage Resource Impact Assessment (Scoping & Evaluation) Residential Development on Portion 47 of the Farm Laaste 24 LU Phalaborwa: Limpopo.
- Pistorius, J.C.C. 2007. A Phase 1 Heritage Impact Assessment (HIA) Study for Phalaborwa Mining Company's (Pmc) Main Tailings Dam New East Paddock in the Limpopo Province of South Africa.
- **Scientific Publications in the Area**
 - Klapwijk, M. Some Notes on the Tuyères from Smelting Sites in the North-Eastern Transvaal, South Africa. *South African Archaeological Bulletin*, Vol. 41, No. 143 (Jun., 1986), pp. 17-21.
 - Plug, I., Pistorius, J.C.C. Animal Remains from Industrial Iron Age Communities in Phalaborwa, South Africa. *The African Archaeological Review*, Vol. 16, No. 3 (Sep., 1999), pp. 155-184.
 - Evers, T.M., Van Der Merwe, N.J. Iron Age Ceramics from Phalaborwa North Eastern Transvaal Lowveld, South Africa. *The South African Archaeological Bulletin*, Vol42, No. 146 (Dec., 1987), pp. 87-106.
 - Miller, D., Killick, D., Van Der Merwe, N.T. Metal Working in the Northern Lowveld, South Africa, A.D. 1000-1890. *Journal of Field Archaeology*, Vol. 28, No. 3/4 (Autumn – Winter, 2001), pp. 401-417.
 - Van Der Merwe, N.J., Killick, D. Square: An Iron Smelting Site near Phalaborwa. *Goodwin Series*, No. 3, *Iron Age Studies in Southern Africa* (1979), pp. 86-93.
 - Evers, T.M. Two Later Iron Age Sites on Mabete, Hans Merensky Nature Reserve, Letaba District, N. E. Transvaal. *The South African Archaeological Bulletin*, Vol. 37, No. 136 (Dec., 1982), pp. 63-67.
 - Chatterton, J.F., Collet, D.P. A Late Iron Age Village Site in the Letaba District, Northeast Transvaal. *Goodwin Series*, No. 3, *Iron Age Studies in Southern Arrica* (1979), pp. 109-119.

Palaeontology

The palaeontological sensitivity of the area did not form part of this study.

Findings

No sites with heritage potential were identified within the two study areas.

Recommendations

It is recommended that the developer adhere to the recommendations given in this report regarding the handling of unidentified sites. Since no heritage site of any significance were identified, no site specific recommendations are necessary

Fatal Flaws

No fatal flaws were identified.



TABLE OF CONTENTS

Introduction	10
Background Information	13
Mining Rights Application	13
Project Description	13
Site Location.....	15
Methodology	17
Impact Assessment Components.....	17
Archival Research.....	17
SAHRIS Database Studies	23
Field Investigations	23
Assessing Visual Impact.....	25
Regional Cultural Context	27
Stone Age.....	27
Iron Age	27
Historic Era	28
Assessment of Heritage Potential.....	32
Assessment Matrix	32
Determining Heritage Sensitivity	32
Findings.....	34
Section A.....	34
Section B	35
Impact Statement	36
Paleontological sites	36
Pre-Contact Sites.....	36
Post-Contact Sites	36
Cultural Landscape.....	36



18/03/2014

Impact Evaluation	38
Determination of Significance of Impacts	38
Impact Rating System	38
Rating System Used To Classify Impacts	39
Recommendations	41
Conclusion	42
References.....	43



LIST OF FIGURES

Figure 1. Greenfield Staff Village layout	13
Figure 2. Upgraded Lodge layout	14
Figure 3. Two developments in relation to each other	14
Figure 4. Location of study area.....	15
Figure 5. General landscape with heavy plant growth.....	16
Figure 6. Old Rondalia Camp.....	16
Figure 7. Administrative offices	17
Figure 9. Kgopolwe Hill (Gauteng Museum Services).....	19
Figure 10. Feature layout at Nagome Hill (Rightmire & Van der Merwe, 1976).....	20
Figure 11. Smelting furnace (Evers & Van der Merwe, 1987).....	20
Figure 12. Vessel profiles, decorations and placement (Evers & Van der Merwe, 1987)	21
Figure 13. Vessel decoration and profile (Evers & Van der Merwe, 1987).....	21
Figure 14. Furnaces as excavated by Van der Merwe, 1987)	21
Figure 15. Study area as per Miller, Killick and Van der Merwe (2001).....	22
Figure 16. Section A	23
Figure 17. GPS Track Paths followed for Section A	24
Figure 18. Section B	24
Figure 19. Section B GPS Track Paths	25
Figure 20. Constructions already present on site.....	26
Figure 21. Recent ruins at Section 3.....	26
Figure 22. Location of Iron Age sites (Plug 7 Pistorius, 1999)	28
Figure 23. Rondalia TC badges	29
Figure 24. 1921 survey diagram of Letaba Ranch No 1143 (Surveyor Generals Office).....	30
Figure 25. Old lion enclosure at Rondalia Camp	34
Figure 26. Rondalia camp location	35
Figure 27. Homestead ruins at Section B.....	35



18/03/2014

Figure 28. Development area at Section B36



LIST OF ABBREVIATIONS

Bp.....	Before Present
EIA.....	Early Iron Age
ESA.....	Early Stone Age
Fm.....	Femtometre (10 ⁻¹⁵ m)
GPS.....	Geographic Positioning System
HIA.....	Heritage Impact Assessment
LIA.....	Late Iron Age
LSA.....	Late Stone Age
MYA.....	Million Years Ago
MSA.....	Middle Stone Age
NHRA.....	National Heritage Resources Act no 22 of 1999
SAHRA.....	South African Heritage Resource Agency
S&EIR.....	Scoping & Environmental Impact Reporting
Um.....	Micrometre (10 ⁻⁶ m)
WGS 84.....	World Geodetic System for 1984



Heritage Impact Report

Heritage Impact Report for the Proposed Development of a Tourist Lodge and Staff Accommodation at the Letaba Ranch Game Reserve.

Introduction

Legislation and methodology

G&A Heritage was appointed by Strategic Environmental Focus (S.E.F.) to undertake a heritage impact assessment for the proposed development of a tourist lodge and associated staff village on the Letaba Ranch Game Reserve. Section 38 (A) and 3 (2) of the South African Heritage Resources Act (25 of 1999) requires that a heritage study be undertaken for:

- (a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) 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 –
 - (1) exceeding 10 000 m² in extent;
 - (2) involving three or more existing erven or subdivisions thereof; or
 - (3) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations; or
- (e) any other category of development provided for in regulations.

A heritage impact assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. A heritage resource is defined as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes the following:

- (a) places, buildings, structures and equipment;
- (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;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and paleontological sites;
- (g) graves and burial grounds, including –
 - (1) ancestral graves,
 - (2) royal graves and graves of traditional leaders,
 - (3) graves of victims of conflict (iv) graves of important individuals,
 - (4) historical graves and cemeteries older than 60 years, and
 - (5) other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
- (h) movable objects, including ;
 - (1) objects recovered from the soil or waters of South Africa including archaeological and paleontological objects and material, meteorites and rare geological specimens;
 - (2) ethnographic art and objects;
 - (3) military objects;
 - (4) objects of decorative art;
 - (5) objects of fine art;
 - (6) objects of scientific or technological interest;
 - (7) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and



- (8) any other prescribed categories, but excluding any object made by a living person;
- (i) battlefields;
 - (j) traditional building techniques.

A **'place'** is defined as:

- (a) A site, area or region;
- (b) A building or other structure (which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure);
- (c) a group of buildings or other structures (which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures); and (d) an open space, including a public square, street or park; and in relation to the management of a place, includes the immediate surroundings of a place.

'Structures' means any building, works, device, or other facility made by people and which is fixed to land and any fixtures, fittings and equipment associated therewith older than 60 years.

'Archaeological' means:

- (a) material remains resulting from human activity which are in a state of disuse and are in or on land and are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
- (b) rock art, being a form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and is older than 100 years including any area within 10 m of such representation; and
- (c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land or in the maritime cultural zone referred to in section 5 of the Maritime Zones Act 1994 (Act 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which are older than 60 years or which in terms of national legislation are considered to be worthy of conservation;
- (d) features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found.

'Paleontological' means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

'Grave' means a place of interment and includes the contents, headstone or other marker of and any other structures on or associated with such place. The South African Heritage Resources Agency (SAHRA) will only issue a permit for the alteration of a grave if it is satisfied that every reasonable effort has been made to contact and obtain permission from the families concerned.

The removal of graves is subject to the following procedures as outlined by the SAHRA:

- Notification of the impending removals (using English, Afrikaans and local language media and notices at the grave site);
- Consultation with individuals or communities related or known to the deceased;
- Satisfactory arrangements for the curation of human remains and / or headstones in a museum, where applicable;
- Procurement of a permit from the SAHRA;
- Appropriate arrangements for the exhumation (preferably by a suitably trained archaeologist) and re-interment (sometimes by a registered undertaker, in a formally proclaimed cemetery);
- Observation of rituals or ceremonies required by the families.

The limitations and assumptions associated with this scoping study are as follows;

- Sites were evaluated by means of description of the cultural landscape and analysis of written sources and available databases as well as fieldwork investigations.
- It was assumed that the layout as provided by S.E.F. is accurate.
- We assumed that the public participation process performed as part of the Scoping and Environmental Impact Reporting (EIR) process would be sufficiently encompassing not to be repeated in the Heritage Scoping Phase.
- Heavy plant cover made the identification of sites difficult.



Table 1. Impacts on the NHRA Sections

Act	Section	Description	Possible Impact	Action
National Heritage Resources Act (NHRA)	34	Preservation of buildings older than 60 years	No impact	None
	35	Archaeological, paleontological and meteor sites	Possible Impact	None
	36	Graves and burial sites	Possible Impact	None
	37	Protection of public monuments	No impact	None
	38	Does activity trigger a HIA?	Yes	HIA

Table 2. NHRA Triggers

Action Trigger	Yes/No	Description
Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length.	No	N/A
Construction of a bridge or similar structure exceeding 50m in length.	No	N/A
Development exceeding 5000 m ²	Yes	Tourist lodge and staff village
Development involving more than 3 erven or sub divisions	No	N/A
Development involving more than 3 erven or sub divisions that have been consolidated in the past 5 years	No	N/A
Re-zoning of site exceeding 10 000 m ²	Yes	N/A
Any other development category, public open space, squares, parks or recreational grounds	No	N/A



Background Information

Mining Rights Application

Project Description

The Limpopo Tourism Agency (LTA) is proposing the upgrading of the tourism infrastructure at Letaba Ranch Game Reserve. The project involves the upgrading and expansion of the existing Letaba Ranch Resort. The main resort will be refurbished and a new greenfield staff village will be constructed. The proposed development will take place on portion 0 of the farm Belasting 7 as well as on portion 1 of the Farm Letaba Ranch 17 in the Limpopo Province.

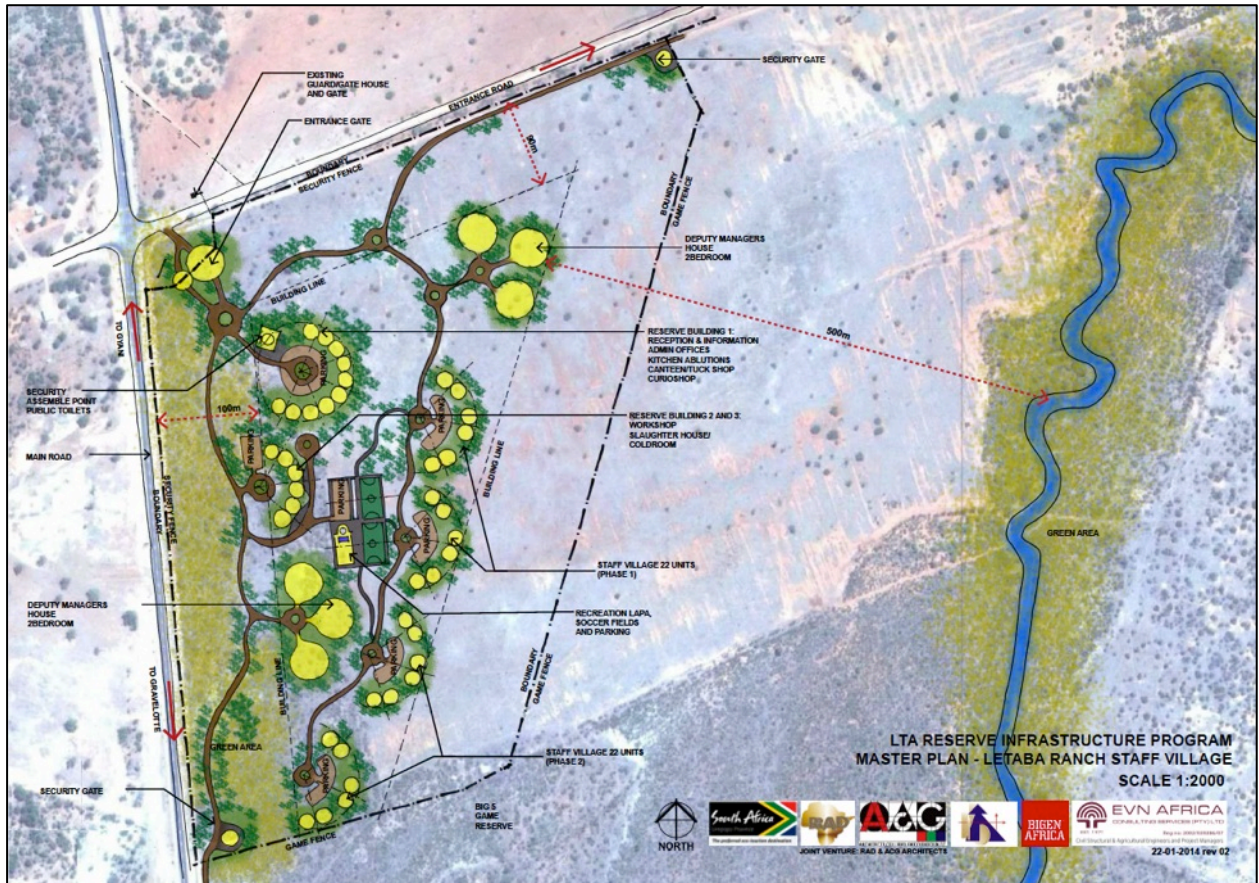


Figure 1. Greenfield Staff Village layout



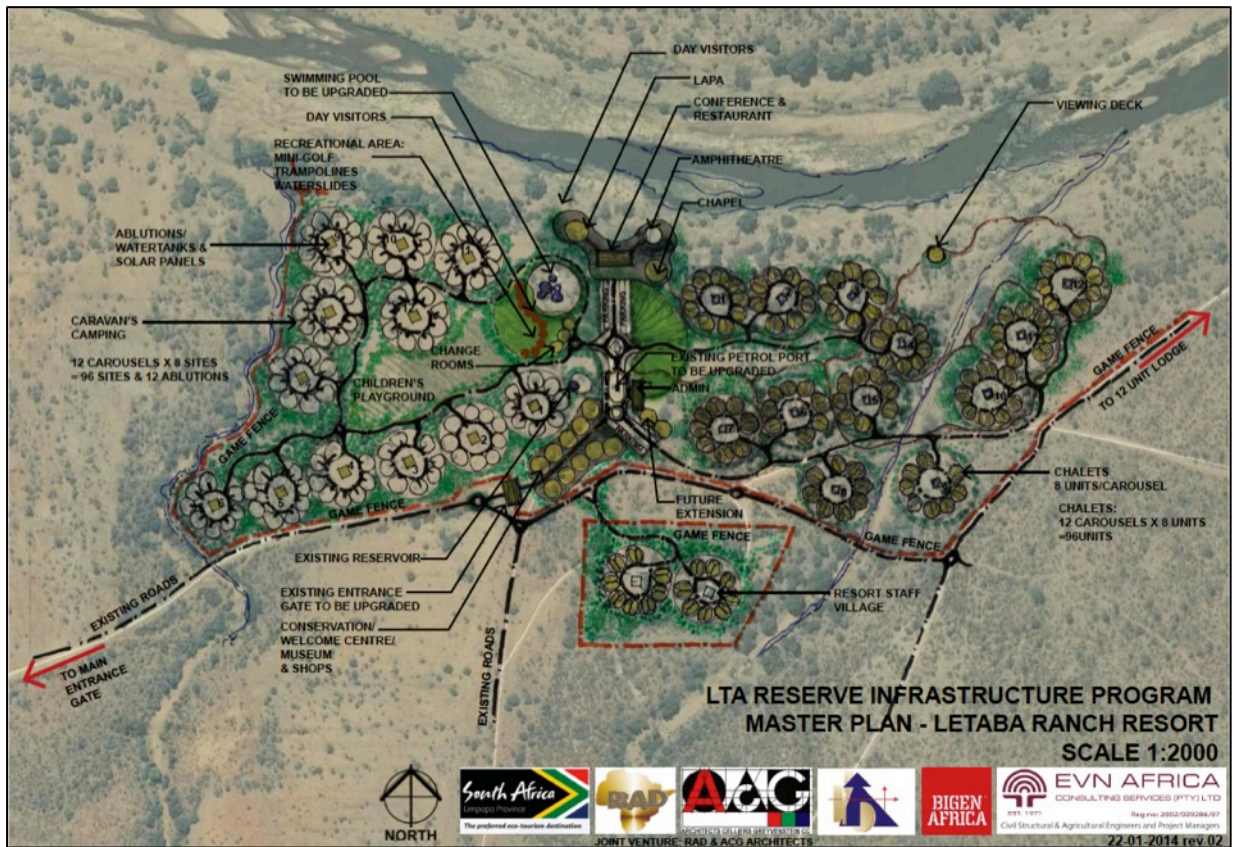


Figure 2. Upgraded Lodge layout

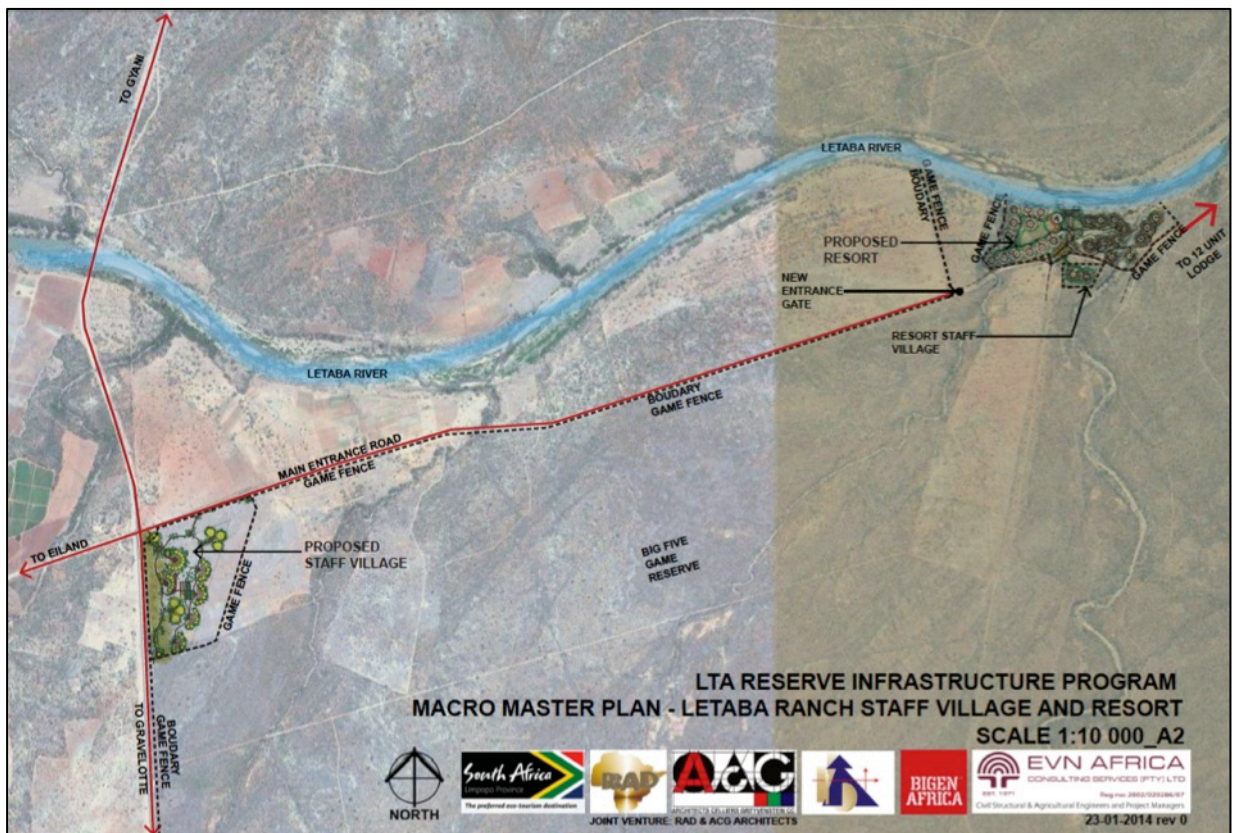


Figure 3. Two developments in relation to each other



Site Location

The proposed development will take place on portion 0 of the farm Belasting 7 as well as on portion 1 of the Farm Letaba Ranch 17 in the Limpopo Province. This area lies

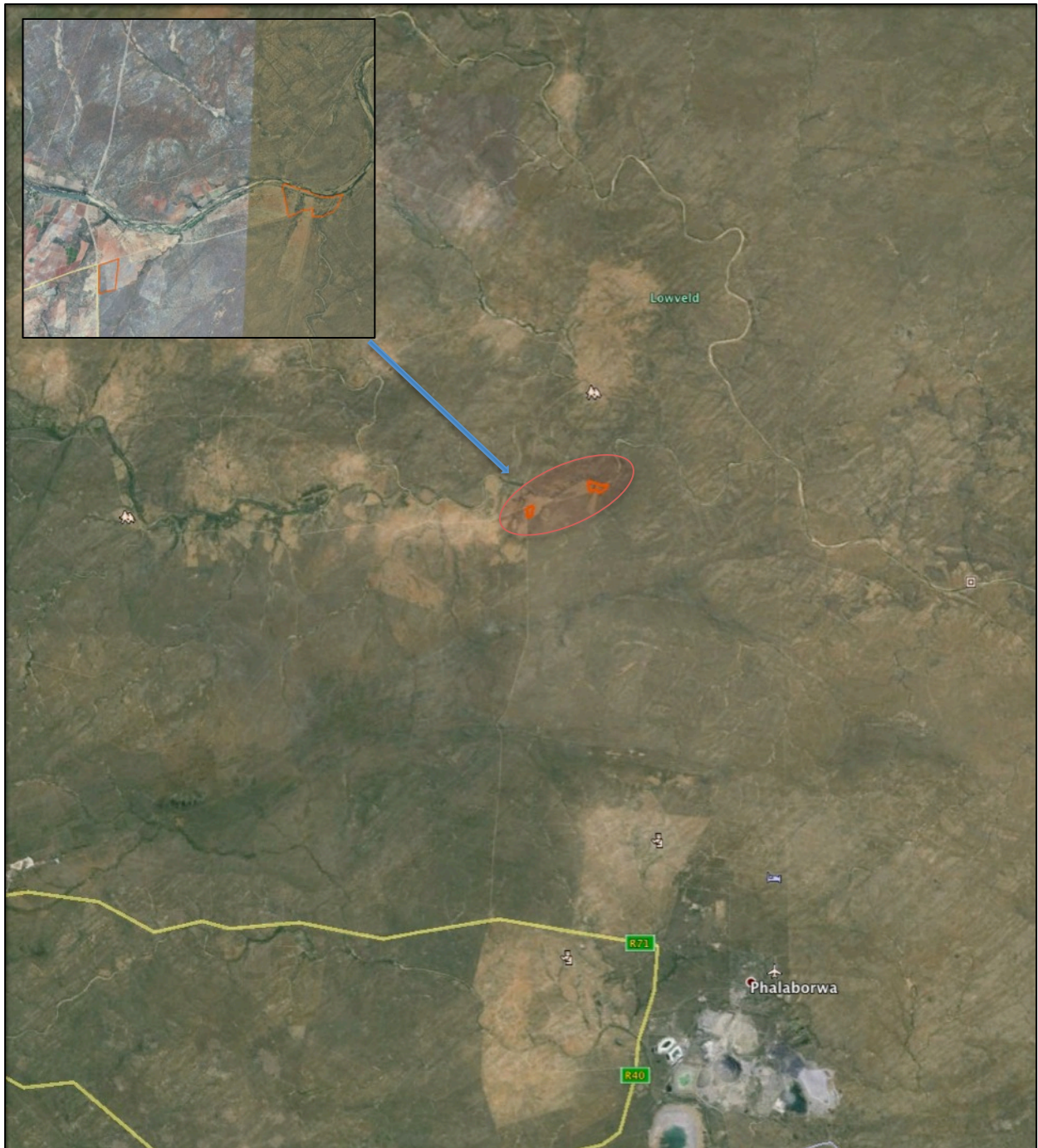


Figure 4. Location of study area

The study area is located within the Letaba Ranch Game Reserve. As this is a Big Five reserve, fieldwork had to be undertaken while under the supervision of an armed ranger to ensure safety. The areas had been subjected to heavy rains the past season and the plant cover on the ground was extreme, making the identification of heritage markers very difficult.

The area around the administration buildings and the old Rondalia camps was however much easier to access.



Figure 5. General landscape with heavy plant growth



Figure 6. Old Rondalia Camp



Figure 7. Administrative offices

METHODOLOGY

This study defines the heritage component of the EIA process being undertaken for the proposed upgrading of tourism facilities at the Letaba Ranch Nature Reserve. It is described as a Heritage Impact Assessment (HIA). This report attempts to evaluate the accumulated heritage knowledge of the area.

IMPACT ASSESSMENT COMPONENTS

The evaluation of this site was performed in three phases;

1. Archival and database research

This component involved the identification of previous studies in the area, accumulation of scientific and popular publications on the area and the evaluation of historic map sets.

2. Field investigations

This component involves the physical investigation of the study area on the ground and aims at identifying any sites of heritage potential visually. The field investigations were performed on 24 February 2014 by a professional archaeologist and an experienced fieldworker. Where sites were identified it was documented photographically and plotted using GPS with the WGS 84 datum point as reference.

3. Reporting

This phase of the investigation in which the results of the previous two phases of investigation is reported on and evaluations are given regarding the heritage sensitivity of the area as well as recommendations on further actions needed.

ARCHIVAL RESEARCH

Three main sources of information regarding the heritage sensitivity of this area could be identified. These were;

- Scientific publications on heritage related research in the area
- Previous heritage studies in the area as per the SAHRIS database
- Historic maps and figures as available in the National Archive

Scientific publications

Several publications on heritage related work in this area could be sourced. These include, but are not limited to;

- Klapwijk, M. Some Notes on the Tuyères from Smelting Sites in the North-Eastern Transvaal, South Africa. *South African Archaeological Bulletin*, Vol. 41, No. 143 (Jun., 1986), pp. 17-21.
- Plug, I., Pistorius, J.C.C. Animal Remains from Industrial Iron Age Communities in Phalaborwa, South Africa. *The African Archaeological Review*, Vol. 16, No. 3 (Sep., 1999), pp. 155-184.
- Evers, T.M., Van Der Merwe, N.J. Iron Age Ceramics from Phalaborwa North Eastern Transvaal Lowveld, South Africa. *The South African Archaeological Bulletin*, Vol42, No. 146 (Dec., 1987), pp. 87-106.
- Miller, D., Killick, D., Van Der Merwe, N.T. Metal Working in the Northern Lowveld, South Africa, A.D. 1000-1890. *Journal of Field Archaeology*, Vol. 28, No. ¾ (Autumn – Winter, 2001), pp. 401-417.
- Van Der Merwe, N.J., Killick, D. Square: An Iron Smelting Site near Phalaborwa. *Goodwin Series, No. 3, Iron Age Studies in Southern Africa* (1979), pp. 86-93.
- Evers, T.M. Two Later Iron Age Sites on Mabete, Hans Merensky Nature Reserve, Letaba District, N. E. Transvaal. *The South African Archaeological Bulletin*, Vol. 37, No. 136 (Dec., 1982), pp. 63-67.
- Chatterton, J.F., Collet, D.P. A Late Iron Age Village Site in the Letaba District, Northeast Transvaal. *Goodwin Series, No. 3, Iron Age Studies in Southern Arrica* (1979), pp. 109-119.

The literature study of the above publications resulted in several findings that guided investigations regarding the study area; The main points are;

- The study by Plug and Pistorius indicated where previous sites were located and furthermore also indicated that the Iron Age sequence in the Letaba area had much more reliance on hunted animals than domesticated animals (Plug & Pistorius, 1999). This helped fieldworkers looking for sites in that wild animal bones found could very well be indicators of Iron Age occupational sites.

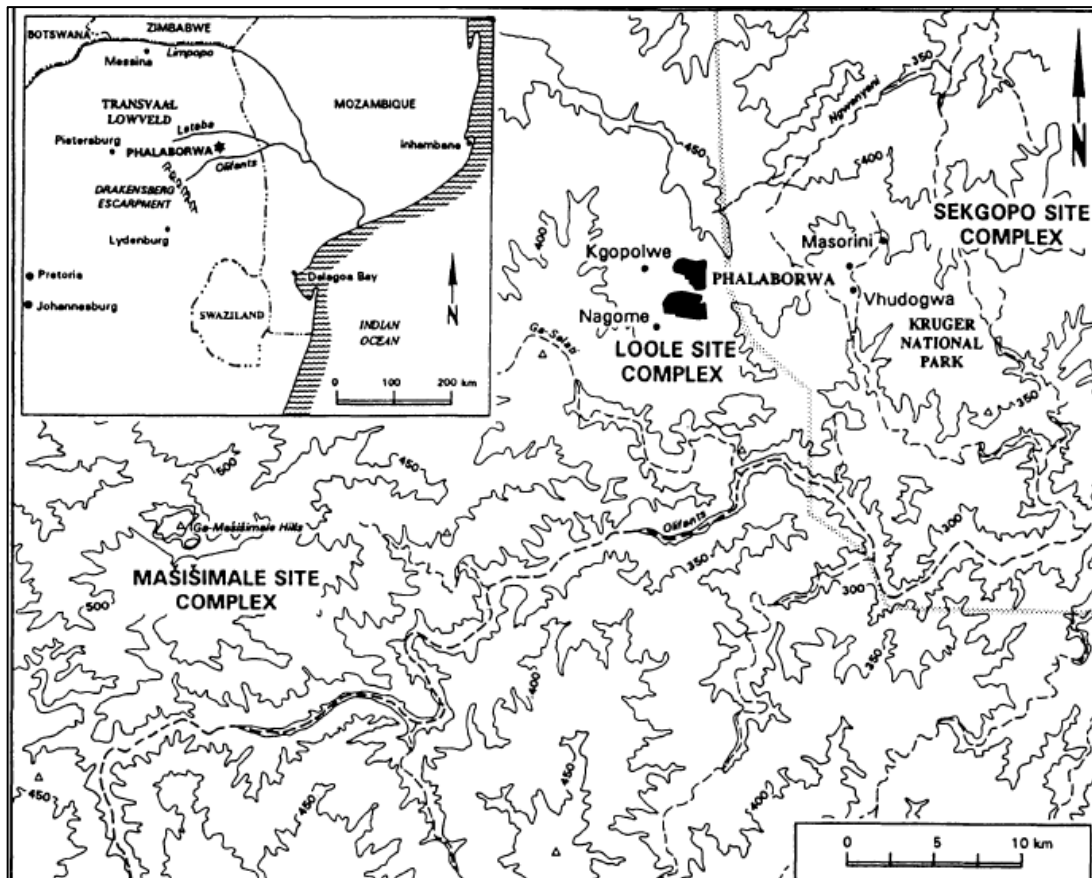


Figure 8. Three archaeological complexes in Letaba (Plug & Pistorius, 1999)



The identification of the Sekgopo, Kgopolwe and Loole sites on prominent hilltops in the surrounding area also indicated the importance of such areas for settlement within the study area.

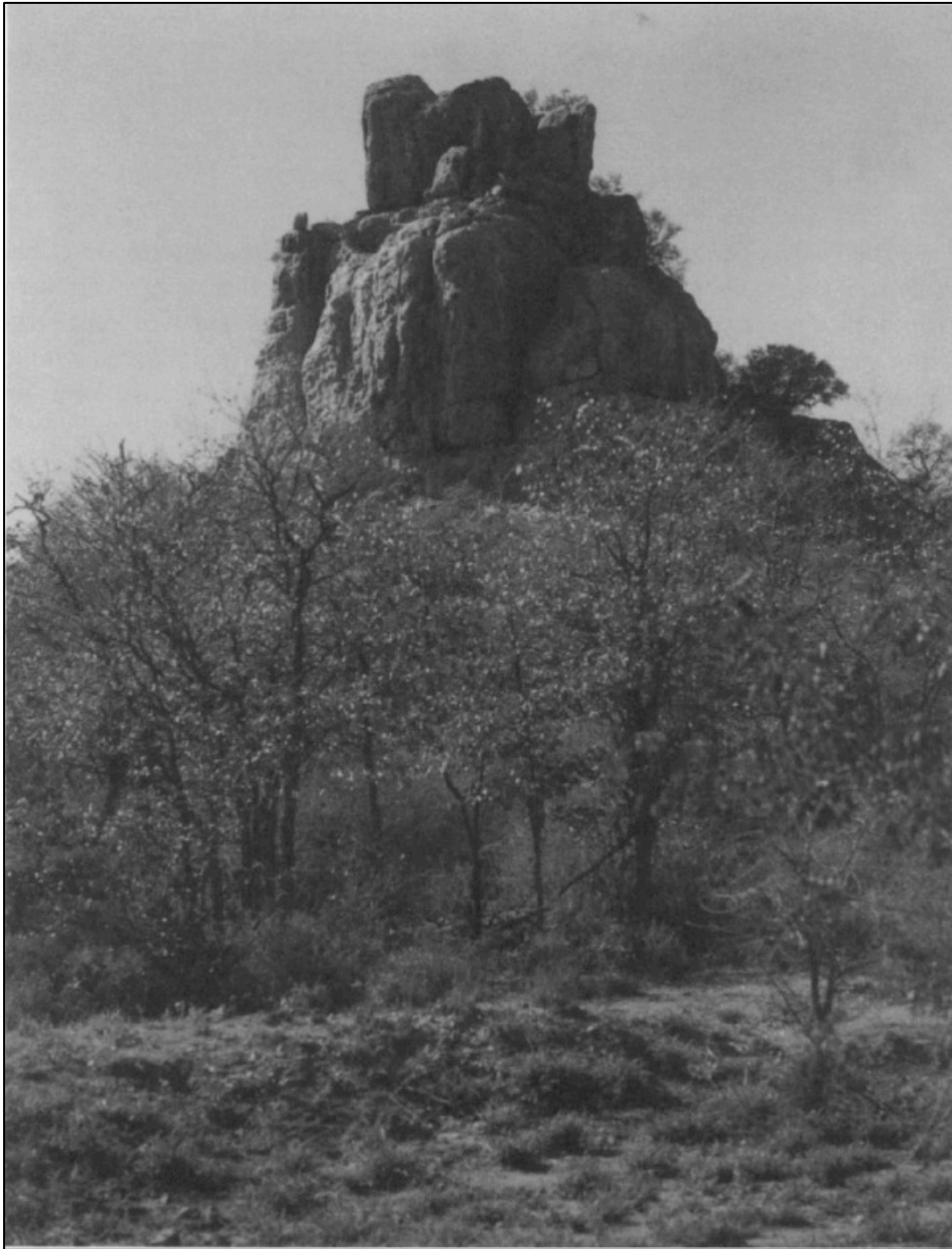


Figure 9. Kgopolwe Hill (Gauteng Museum Services)

The 1987 publication by Evers and Van der Merwe gave guidance on the location of possible smelting sites as well as site layout and especially ceramic decorations that could be encountered in the field during the site survey.

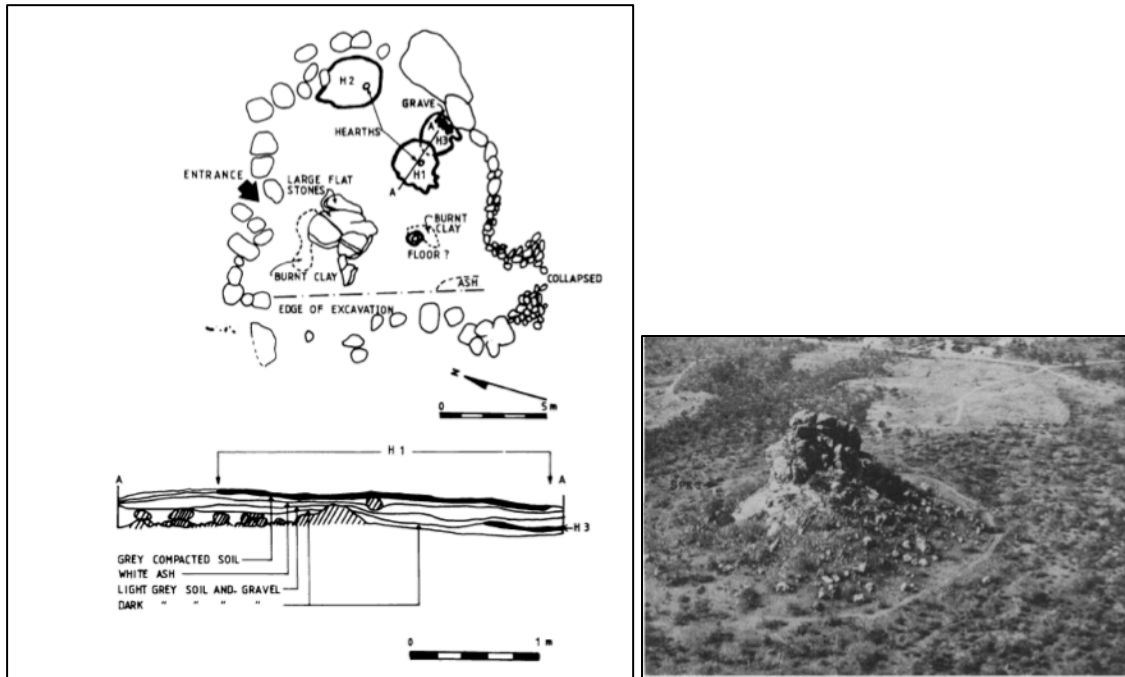


Figure 10. Feature layout at Nagome Hill (Rightmire & Van der Merwe, 1976)



Figure 11. Smelting furnace (Evers & Van der Merwe, 1987)

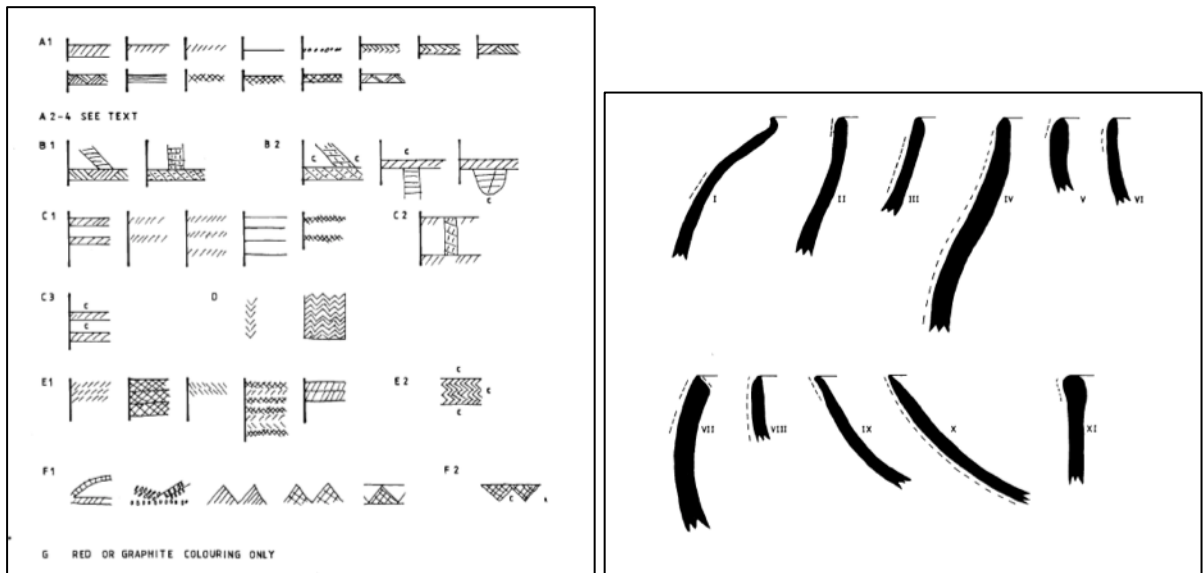


Figure 12. Vessel profiles, decorations and placement (Evers & Van der Merwe, 1987)

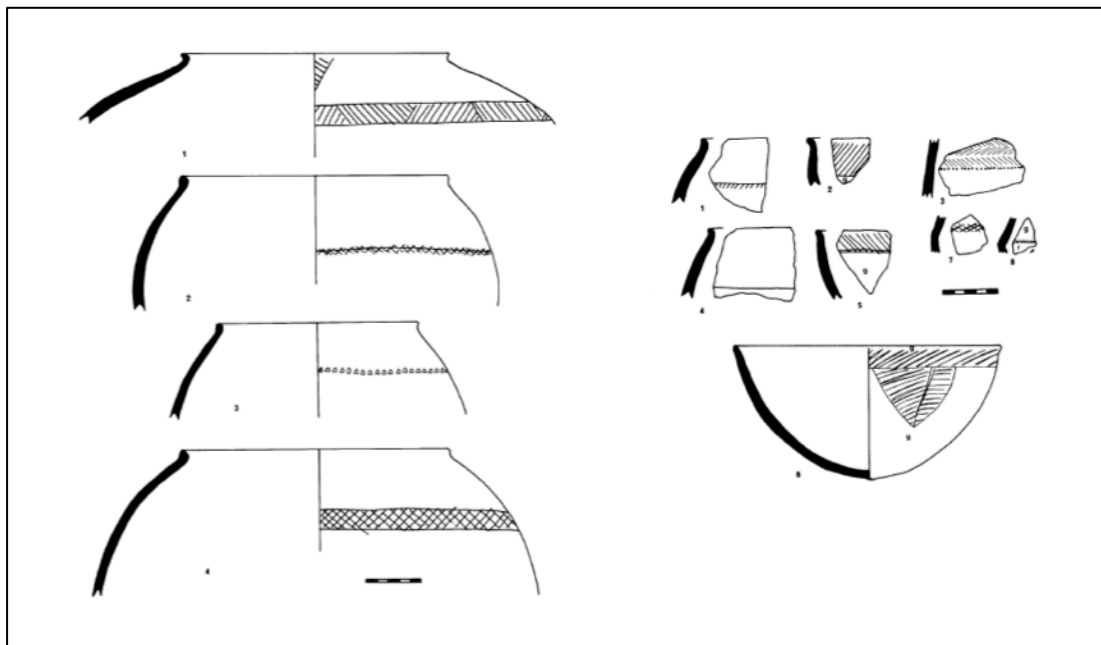


Figure 13. Vessel decoration and profile (Evers & Van der Merwe, 1987)

Further information regarding the possible location, shape and form of metal working sites could be derived from Miller, Killick and Van der Merwe's 2001 study on metal working sites in the northern Lowveld.

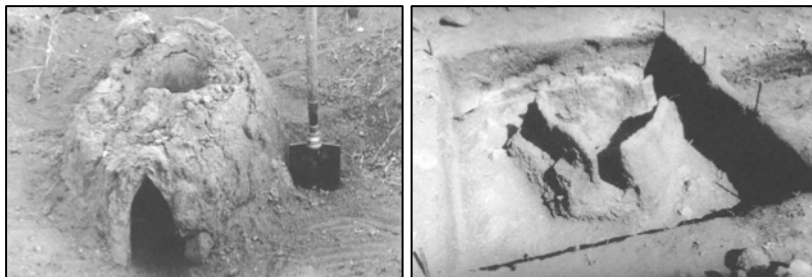


Figure 14. Furnaces as excavated by Van der Merwe, 1987)

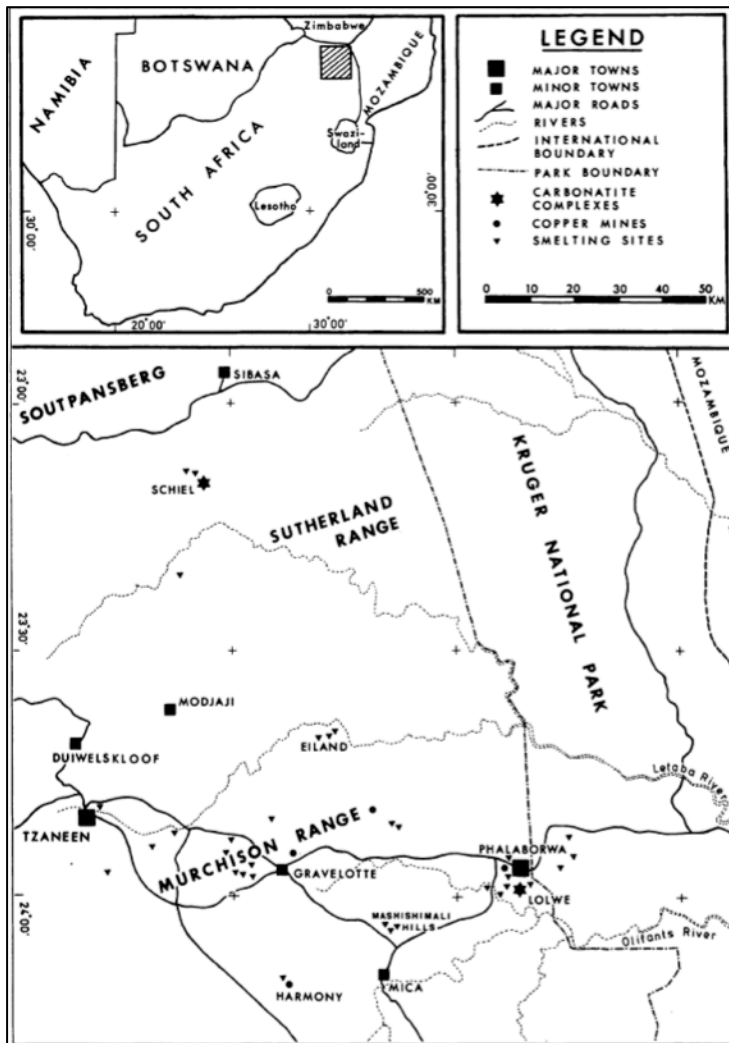


Figure 15. Study area as per Miller, Killick and Van der Merwe (2001)

Historic Maps

Especially during the evaluation of historic structures, the use of archived historic maps is very handy. They give a direct chronological reference for such sites and also lead the investigation on the ground.

The following historic map sets are relevant for this study (in chronological order);

- The New Society for the Diffusion of Knowledge, Map of the Transvaal, 1907
- Sketch Map of South Africa Showing British Possessions, July 1881 & 1885
- South African Population Density Map, 1918
- Map of the Boer Republic of Transvaal Showing Blockhouse Lines and South African Constabulary Posts with Dates of Completion, 1901

Significance of Scientific Information for the Study Area

The above information when analysed in detail forms a matrix within which the study area can be analysed, it furthermore also gives guidance to investigators to ensure that fieldwork is focussed on the possible occurrence of sites and features as outlined in these studies. The main points that have been derived from these studies are the possible occurrence of the following features within the study area;

- Possible pre-colonial mining sites.
- Sites with rock art.
- Sites with mining implements from the Stone Age
- Iron Age smelting and occupational sites



SAHRIS DATABASE STUDIES

The following heritage reports could be identified on the SAHRIS database which are connected to the study area;

- Roodt, F., 2008. Mahale Quarsite Mine Phalaborwa Local Municipality Limpopo, HIA.
- Roodt, F., 2013. Proposed Hotel & Conference Centre, Portion 24 & 42 (a portion of Portion 38) of the farm Laaste 24 LU, Ba-Phalaborwa Local Municipality, Limpopo.
- Roodt, F., 2002. Letter of Exemption. Report of a Heritage Resources Impact Assessment: Proposed Development of a Medium Density Township, Erf 1800, Extension 4, Phalaborwa.
- Maguire, R. & Van Wijk, C. 2004. Archaeological and Cultural Assessment of Lodges and Associated Infrastructure Development on Portion 4 (Remainder) and Portion 5 of the Farm Rietvley 28 KU, Phalaborwa Magisterial District, Limpopo.
- Roodt, F., 2006. Phase 1 Heritage Resource Impact Assessment (Scoping & Evaluation) Residential Development on Portion 47 of the Farm Laaste 24 LU Phalaborwa: Limpopo.
- Pistorius, J.C.C. 2007. A Phase 1 Heritage Impact Assessment (HIA) Study for Phalaborwa Mining Company's (Pmc) Main Tailings Dam New East Paddock in the Limpopo Province of South Africa.

Relevance of Listed Heritage Studies for the Study Area

From the above it is obvious that the area around Phalaborwa has been subject to only limited and out-dated heritage investigations in the past. Most of the reports were found to be lacking in any useable details and also did not conform to the SAHRA minimum standards for heritage reports.

FIELD INVESTIGATIONS

The study area was investigated during the later part of February 2014. The proposed development area is not very extensive in size and with the exception of the heavy plant growth (due to heavy rains), surveying was relatively easy.

The two areas investigated was;

- Section A – Proposed location of the new lodge
- Section B – Proposed location of staff village

Section A

This area is located on the old Rondalia Camps Site. It is located next to the Letaba River and is around 40ha in size.

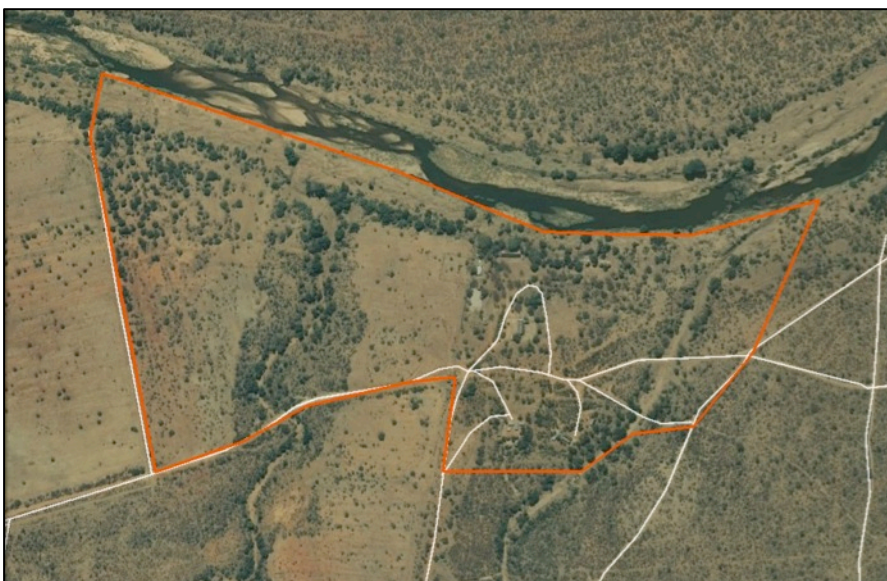


Figure 16. Section A

Much of the area has been altered severely by both the construction of the Rondalia Camp as well as extensive agricultural activities and the construction of predator enclosures at the site.



Figure 17. GPS Track Paths followed for Section A

Section B

This is a greenfield site located next to and towards the east of the Giyani/Phalaborwa tar road. The site is immediately after the vehicle bridge crossing the Letaba River. Much of the site indicated the effects of old agricultural activities such as ploughing and bush-clearing. Much of these areas have however recovered to some effect.



Figure 18. Section B



Figure 19. Section B GPS Track Paths

The remains of an old farmstead were found in this area. According to the accompanying ranger the structure dates from the late 1960's.

ASSESSING VISUAL IMPACT

Visual impacts of developments result when sites that are culturally celebrated are visually affected by a development. The exact parameters for the determination of visual impacts have not yet been rigidly defined and are still mostly open to interpretation. CNdV and DEAP (2006) have developed some guidelines for the management of the visual impacts of wind turbines in the Western Cape, although these have not yet been formalized. In these guidelines they recommend a buffer zone of 1km around significant heritage sites to minimize the visual impact.

The area around Section A has been severely altered due to the construction of the old Rondalia camp. The development is therefore anticipated to improve the visual fabric of the site. The area around Section B earmarked for development has also been altered. There are some ruins of recent origin that detracts from the visual value of the site. The development is therefore anticipated to improve this aspect.



Figure 20. Constructions already present on site



Figure 21. Recent ruins at Section 3

HERITAGE INDICATORS WITHIN THE RECEIVING ENVIRONMENT

REGIONAL CULTURAL CONTEXT

STONE AGE

This area is home to all three of the known phases of the Stone Age, namely: the Early- (2.5 million – 250 000 years ago), Middle- (250 000 – 22 000 years ago) and Late Stone Age (22 000 – 200 years ago). The Late Stone Age in this area also contains sites with rock art from the San and Khoi San cultural groups. Early to Middle Stone Age sites are less common in this area, however rock-art sites and Late Stone Age sites are much better known (Clark 1959).

During the Middle Stone Age, 200 000 years ago, modern man or Homo sapiens emerged, manufacturing a wider range of tools, with technologies more advanced than those from earlier periods (Deacon 1984). This enabled skilled hunter-gatherer bands to adapt to different environments. From this time onwards, rock shelters and caves were used for occupation and reoccupation over very long periods of time.

The Late Stone Age, considered to have started some 20 000 years ago, is associated with the predecessors of the San and Khoi Khoi. Stone Age hunter-gatherers lived well into the 19th century in some places in SA. Stone Age sites may occur all over the area where an unknown number may have been obliterated by mining activities, urbanisation, industrialisation, agriculture and other development activities during the past decades.

There is ample evidence of Middle Stone Age Man or human presence in the area (from between ± 20,000 - 18,000 years ago), as well as evidence of Early Stone Age Man or Homo Erectus (some 500,000 - 100,000 years ago). Also in evidence are findings of San people in the form of ± 180 Rock Art sites and Iron Age people from recent history to about 20,000 years ago (www.phalaborwa.org.za).

IRON AGE

The metal working industries in the Phalaborwa area is focussed on the mining, reduction and use of the several sources of copper and iron ores. Several metal working settlements with the focus on the use of hunting rather than domestic animals were identified in the Letaba area (Mason *et al.*, 1983).

Three of the most important Iron Age sites studied in the recent past include Loole, Sekgopo and Ga-Masisimale. These sites are associated with the Makusane, Maseke-Malatje, Majaji-Malatji as well as the Bashai historical groups. While the Bashai focussed on iron production the Makusane and Majaji-Malatjie. Characterised by the Palabora Igneous Complex the Loole site spans nearly 100km² (Pistorius, 1989).



(Ordinance No. 9 of 1940. The area was subsequently de-proclaimed as a reserve, effective from 1 September 1975 through Notice No. 1716 of 1 October 1975 in terms of Section 3 of the Transvaal nature Conservation Ordinance, 1967 (Ordinance No. 17 of 1967) (Letaba Ranch Nature Reserve Strategic Plan 2013).

The *Rondalia Touring Club* was founded from the *Automobile Club of South Africa*, formed in Cape Town in 1901. In 1911 the *Automobile Club of South Africa* received a Royal charter and became the *Royal Automobile Club of South Africa*. By 1930 it was reconstituted as the *Automobile Association of South Africa*. In 1957 a rival organisation, *The Rondalia Touring Club* was formed (Potgieter, D.J., 1970).



Figure 23. Rondalia TC badges

The *Rondalia Touring Club* originally included only the camping club at Hibberdene. Later several other camping sites and holiday destinations were added to the Rondalia portfolio such as Goudini Spa, Swadini Spa and Tshipese Spa. In 1967 the campsite at Letaba Ranch was also added and the site was developed with bungalows and administrative offices. At one stage a lion encampment was also added. In the 1980's the *ATKV groups*, which were later in turn absorbed by the *Overvaal group*, and then the *Aventura group* absorbed the *Rondalia* group. The camp at Letaba Ranch was however decommissioned in 1986 and has not been in use since with the exception of staff accommodation.

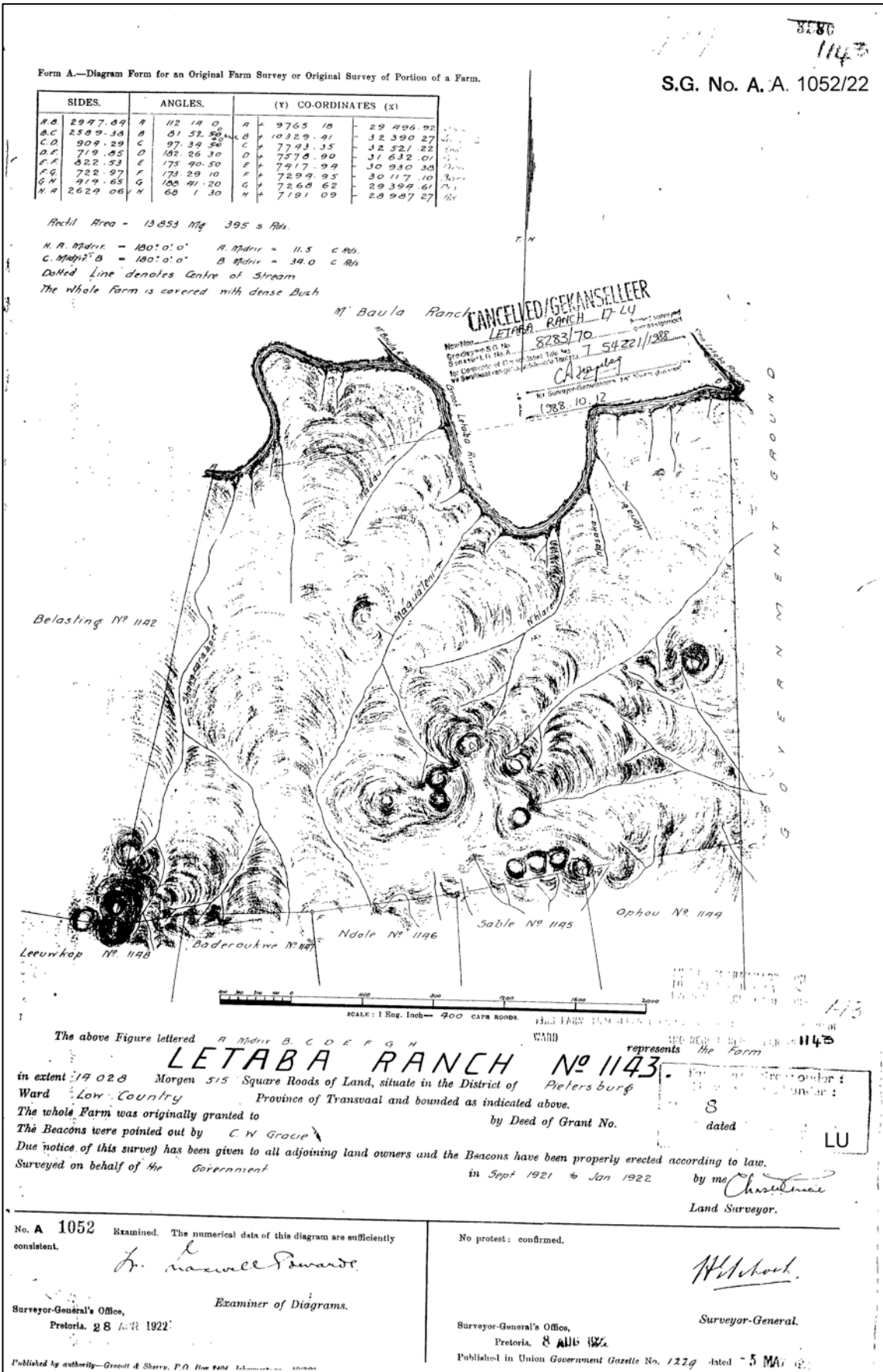


Figure 24. 1921 survey diagram of Letaba Ranch No 1143 (Surveyor Generals Office)



MEASURING AND EVALUATING THE CULTURAL SENSITIVITY OF THE STUDY AREA

In 2003 the SAHRA compiled the following guidelines to evaluate the cultural significance of individual heritage resources:

TYPE OF RESOURCE

- Place
- Archaeological Site
- Structure
- Grave
- Paleontological Feature
- Geological Feature

TYPE OF SIGNIFICANCE

1. HISTORIC VALUE

It is important in the community, or pattern of history

- Important in the evolution of cultural landscapes and settlement patterns
- Important in exhibiting density, richness or diversity of cultural features illustrating the human occupation and evolution of the nation, province, region or locality.
- Important for association with events, developments or cultural phases that have had a significant role in the human occupation and evolution of the nation, province, region or community.
- Important as an example for technical, creative, design or artistic excellence, innovation or achievement in a particular period.

It has strong or special association with the life or work of a person, group or organisation of importance in history

- Importance for close associations with individuals, groups or organisations whose life, works or activities have been significant within the history of the nation, province, region or community.

It has significance relating to the history of slavery

- Importance for a direct link to the history of slavery in South Africa.

2. AESTHETIC VALUE

It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

- Important to a community for aesthetic characteristics held in high esteem or otherwise valued by the community.
- Importance for its creative, design or artistic excellence, innovation or achievement.
- Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas or otherwise contributing to the identified aesthetic qualities of the cultural environs or the natural landscape within which it is located.
- In the case of an historic precinct, importance for the aesthetic character created by the individual components which collectively form a significant streetscape, townscape or cultural environment.

3. SCIENTIFIC VALUE

It has potential to yield information that will contribute to an understanding of natural or cultural heritage



- Importance for information contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.
- Importance for information contributing to a wider understanding of the origin of the universe or of the development of the earth.
- Importance for information contributing to a wider understanding of the origin of life; the development of plant or animal species, or the biological or cultural development of hominid or human species.
- Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the nation, Province, region or locality.
- It is important in demonstrating a high degree of creative or technical achievement at a particular period
- Importance for its technical innovation or achievement.

4. SOCIAL VALUE

- It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, symbolic, aesthetic or educational associations.
- Importance in contributing to a community's sense of place.

DEGREES OF SIGNIFICANCE

1. RARITY

It possesses uncommon, rare or endangered aspects of natural or cultural heritage.

- Importance for rare, endangered or uncommon structures, landscapes or phenomena.

2. REPRESENTIVITY

- It is important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects.
- Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class.
- Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.

The table below illustrates how a site's heritage significance is determined

Spheres of Significance	High	Medium	Low
International			
National			
Provincial			
Regional			
Local			
Specific Community			

Assessment of Heritage Potential

Assessment Matrix

Determining Heritage Sensitivity

In addition to guidelines provided by the National Heritage Resources Act (Act No. 25 of 1999), a set of criteria based on Deacon (J) and Whitelaw (1997) for assessing archaeological significance has been developed for Northern Cape settings (Morris 2007a). These criteria include estimation of landform potential (in terms of its capacity to contain archaeological traces) and assessing the value to any archaeological traces (in terms of their attributes or their capacity to be construed as evidence, given that evidence is not given but constructed by the investigator).

Estimating site potential

Table 1 (below) is a classification of landforms and visible archaeological traces used for estimating the potential of archaeological sites (after J. Deacon and, National Monuments Council). Type 3 sites tend to



be those with higher archaeological potential, but there are notable exceptions to this rule, for example the renowned rock engravings site Driekopseiland near Kimberley which is on landform L1 Type 1 – normally a setting of lowest expected potential. It should also be noted that, generally, the older a site the poorer the preservation, so that sometimes any trace, even of only Type 1 quality, could be of exceptional significance. In light of this, estimation of potential will always be a matter for archaeological observation and interpretation.

Table 1. Classification of landforms and visible archaeological traces for estimating the potential for archaeological sites (after J. Deacon, NMC as used in Morris)

Class	Landform	Type 1	Type 2	Type 3
L1	Rocky Surface	Bedrock exposed	Some soil patches	Sandy/grassy patches
L2	Ploughed land	Far from water	In floodplain	On old river terrace
L3	Sandy ground, inland	Far from water	In floodplain or near features such as hill/dune	On old river terrace
L4	Sandy ground, coastal	>1 km from sea	Inland of dune cordon	Near rocky shore
L5	Water-logged deposit	Heavily vegetated	Running water	Sedimentary basin
L6	Developed urban	Heavily built-up with no known record of early settlement	Known early settlement, but buildings have basements	Buildings without extensive basements over known historical sites
L7	Lime/dolomite	>5 myrs	<5000 yrs	Between 5000 yrs and 5 myrs
L8	Rock shelter	Rocky floor	Loping floor or small area	Flat floor, high ceiling
Class	Archaeological traces	Type 1	Type 2	Type 3
A1	Area previously excavated	Little deposit remaining	More than half deposit remaining	High profile site
A2	Shell of bones visible	Dispersed scatter	Deposit <0.5 m thick	Deposit >0.5 m thick; shell and bone dense
A3	Stone artefacts or stone walling or other feature visible	Dispersed scatter	Deposit <0.5m thick	Deposit >0.5 m thick

Table 2. Site attributes and value assessment (adapted from Whitelaw 1997 as used in Morris)

Class	Landforms	Type 1	Type 2	Type 3
1	Length of sequence /context	No sequence Poor context Dispersed distribution	Limited sequence	Long sequence Favourable context High density of arte / ecofacts
2	Presence of exceptional items (incl. regional rarity)	Absent	Present	Major element
3	Organic preservation	Absent	Present	Major element
4	Potential for future archaeological investigation	Low	Medium	High
5	Potential for public display	Low	Medium	High
6	Aesthetic appeal	Low	Medium	High
7	Potential for implementation of a long-term management plan	Low	Medium	High

Assessing site value by attribute

Table 2 is adapted from Whitelaw (1997), who developed an approach for selecting sites meriting heritage recognition status in KwaZulu-Natal. It is a means of judging a site's archaeological value by



ranking the relative strengths of a range of attributes (given in the second column of the table). While aspects of this matrix remain qualitative, attribute assessment is a good indicator of the general archaeological significance of a site, with Type 3 attributes being those of highest significance.

Findings

In this section the results of the survey will be given. The sites will be described and evaluated and their locations given. This section is divided into sites identified during fieldwork and sites identified during previous studies as found during the document study. We will start with the latter;

SECTION A

The remains of the Rondalia Resort Camp is located here. These structures date from the late 1960's and therefor do not have any heritage value;



Figure 25. Old lion enclosure at Rondalia Camp

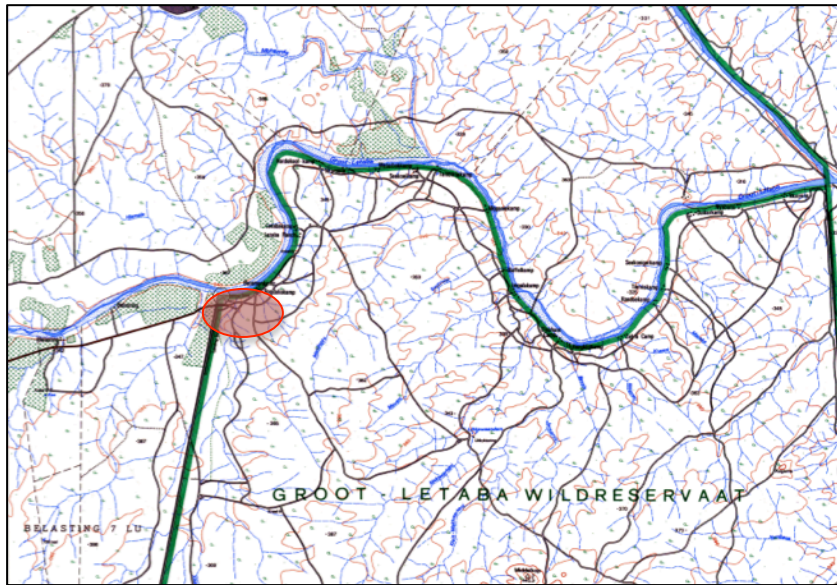


Figure 26. Rondalia camp location

SECTION B

This site is mostly a Greenfield area with the exception of some agricultural activity and the remains of an old homestead possibly from the late 1960's. None of the features have any heritage significance.



Figure 27. Homestead ruins at Section B

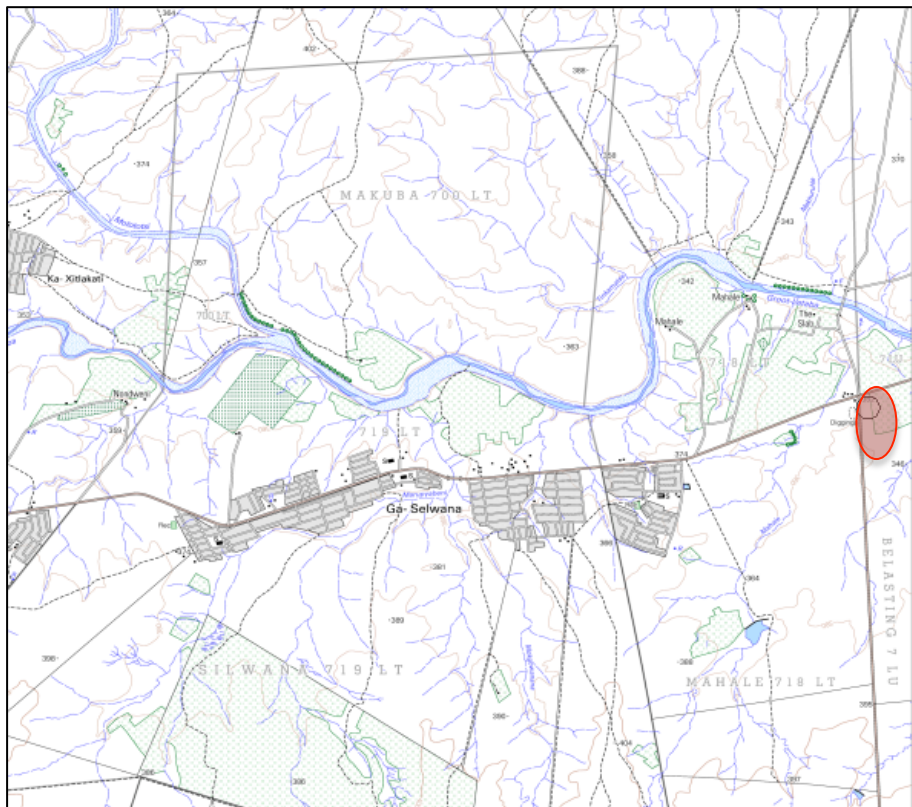


Figure 28. Development area at Section B

IMPACT STATEMENT

PALEONTOLOGICAL SITES

Should bedrock be affected a specialized paleontological study will be required.

PRE-CONTACT SITES

It is not anticipated that any sites of the pre-contact phase will be encountered. The predominant pre-colonial sites expected in these areas are Iron Age mining and reduction sites. These sites are almost exclusively associated with hills in the area. None of the study areas had any prominent hills on them. Any sites associated with the Letaba River would have been severely impacted on by the previous construction of the Rondalia Camp and associated infrastructure.

POST-CONTACT SITES

Two sites from the historic era with structures on were identified. These were found to not be of any heritage significance.

CULTURAL LANDSCAPE

The following landscape types could possibly be present in the study area.

Landscape Type	Description	Occurrence still possible?	Likely occurrence?
1 Paleontological	Mostly fossil remains. Remains include microbial fossils such as found in Baberton Greenstones	Yes, sub-surface	Unlikely
2 Archaeological	Evidence of human occupation associated with the following phases – Early-, Middle-, Late Stone Age, Early-, Late Iron Age, Pre-Contact Sites, Post-Contact Sites	Yes	Unlikely
3 Historic Built Environment	<ul style="list-style-type: none"> - Historical townscapes/streetscapes - Historical structures; i.e. older than 60 years 	No	No



	<ul style="list-style-type: none"> - Formal public spaces - Formally declared urban conservation areas - Places associated with social identity/displacement 		
4 Historic Farmland	<p>These possess distinctive patterns of settlement and historical features such as:</p> <ul style="list-style-type: none"> - Historical farm yards - Historical farm workers villages/settlements - Irrigation furrows - Tree alignments and groupings - Historical routes and pathways - Distinctive types of planting - Distinctive architecture of cultivation e.g. planting blocks, trellising, terracing, ornamental planting. 	Yes	Unlikely
5 Historic rural town	<ul style="list-style-type: none"> - Historic mission settlements - Historic townscapes 	No	No
6 Pristine natural landscape	<ul style="list-style-type: none"> - Historical patterns of access to a natural amenity - Formally proclaimed nature reserves - Evidence of pre-colonial occupation - Scenic resources, e.g. view corridors, viewing sites, visual edges, visual linkages - Historical structures/settlements older than 60 years - Pre-colonial or historical burial sites - Geological sites of cultural significance. 	Yes	Unlikely
7 Relic Landscape	<ul style="list-style-type: none"> - Past farming settlements - Past industrial sites - Places of isolation related to attitudes to medical treatment - Battle sites - Sites of displacement, 	No	Unlikely
8 Burial grounds and grave sites	<ul style="list-style-type: none"> - Pre-colonial burials (marked or unmarked, known or unknown) - Historical graves (marked or unmarked, known or unknown) - Graves of victims of conflict - Human remains (older than 100 years) - Associated burial goods (older than 100 years) - Burial architecture (older than 60 years) 	No	Unlikely
9 Associated Landscapes	<ul style="list-style-type: none"> - Sites associated with living heritage e.g. initiation sites, harvesting of natural resources for traditional medicinal purposes - Sites associated with displacement & contestation - Sites of political conflict/struggle - Sites associated with an historic event/person - Sites associated with public memory 	No	No
10 Historical Farmyard	<ul style="list-style-type: none"> - Setting of the yard and its context - Composition of structures - Historical/architectural value of individual structures - Tree alignments - Views to and from - Axial relationships - System of enclosure, e.g. defining walls - Systems of water reticulation and irrigation, e.g. furrows 	No	No



	- Sites associated with slavery and farm labour - Colonial period archaeology		
11 Historic institutions	- Historical prisons - Hospital sites - Historical school/reformatory sites - Military bases	No	No
12 Scenic visual	- Scenic routes	No	No
13 Amenity landscape	- View sheds - View points - Views to and from - Gateway conditions - Distinctive representative landscape conditions - Scenic corridors	No	No

IMPACT EVALUATION

This HIA Methodology assists in evaluating the overall effect of a proposed activity on the heritage environment. The determination of the effect of a heritage impact on a heritage parameter is determined through a systematic analysis of the various components of the impact. This is undertaken using information that is available to the heritage practitioner through the process of the heritage impact assessment. The impact evaluation of predicted impacts was undertaken through an assessment of the significance of the impacts.

DETERMINATION OF SIGNIFICANCE OF IMPACTS

Significance is determined through a synthesis of impact characteristics, which include context, and intensity of an impact. Context refers to the geographical scale i.e. site, local, national or global whereas Intensity is defined by the severity of the impact e.g. the magnitude of deviation from background conditions, the size of the area affected, the duration of the impact and the overall probability of occurrence. Significance is calculated as shown in the table below.

Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

IMPACT RATING SYSTEM

Impact assessment must take account of the nature, scale and duration of effects on the heritage environment whether such effects are positive (beneficial) or negative (detrimental). Each issue / impact is also assessed according to the project stages:

- planning
- construction
- operation
- decommissioning

Where necessary, the proposal for mitigation or optimisation of an impact should be detailed. A brief discussion of the impact and the rationale behind the assessment of its significance has also been included.



RATING SYSTEM USED TO CLASSIFY IMPACTS

The rating system is applied to the potential impact on the receiving environment and includes an objective evaluation of the mitigation of the impact. Impacts have been consolidated into one rating. In assessing the significance of each issue the following criteria (including an allocated point system) is used:

NATURE		
Include a brief description of the impact of the heritage parameter being assessed in the context of the project. This criterion includes a brief written statement of the heritage aspect being impacted upon by a particular action or activity.		
GEOGRAPHICAL EXTENT		
This is defined as the area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment of a project in terms of further defining the determined.		
1	Site	The impact will only affect the site
2	Local/district	Will affect the local area or district
3	Province/region	Will affect the entire province or region
4	International and National	Will affect the entire country
PROBABILITY		
This describes the chance of occurrence of an impact		
1	Unlikely	The chance of the impact occurring is extremely low (Less than a 25% chance of occurrence).
2	Possible	The impact may occur (Between a 25% to 50% chance of occurrence).
3	Probable	The impact will likely occur (Between a 50% to 75% chance of occurrence).
4	Definite	Impact will certainly occur (Greater than a 75% chance of occurrence).
REVERSIBILITY		
This describes the degree to which an impact on a heritage parameter can be successfully reversed upon completion of the proposed activity.		
1	Completely reversible	The impact is reversible with implementation of minor mitigation measures
2	Partly reversible	The impact is partly reversible but more intense mitigation measures are required.
3	Barely reversible	The impact is unlikely to be reversed even with intense mitigation measures.
4	Irreversible	The impact is irreversible and no mitigation measures exist.
IRREPLACEABLE LOSS OF RESOURCES		
This describes the degree to which heritage resources will be irreplaceably lost as a result of a proposed activity.		
1	No loss of resource.	The impact will not result in the loss of any resources.



2	Marginal loss of resource	The impact will result in marginal loss of resources.
3	Significant loss of resources	The impact will result in significant loss of resources.
4	Complete loss of resources	The impact is result in a complete loss of all resources.
DURATION		
This describes the duration of the impacts on the heritage parameter. Duration indicates the lifetime of the impact as a result of the proposed activity		
1	Short term	The impact and its effects will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase (0 – 1 years), or the impact and its effects will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0 – 2 years).
2	Medium term	The impact and its effects will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (2 – 10 years).
3	Long term	The impact and its effects will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter (10 – 50 years).
4	Permanent	The only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered transient (Indefinite).
CUMULATIVE EFFECT		
This describes the cumulative effect of the impacts on the heritage parameter. A cumulative effect/impact is an effect, which in itself may not be significant but may become significant if added to other existing or potential impacts emanating from other similar or diverse activities as a result of the project activity in question.		
1	Negligible Cumulative Impact	The impact would result in negligible to no cumulative effects
2	Low Cumulative Impact	The impact would result in insignificant cumulative effects
3	Medium Cumulative impact	The impact would result in minor cumulative effects
4	High Cumulative Impact	The impact would result in significant cumulative effects
INTENSITY / MAGNITUDE		
Describes the severity of an impact		
1	Low	Impact affects the quality, use and integrity of the system/component in a way that is barely perceptible.
2	Medium	Impact alters the quality, use and integrity of the system/component but system/ component still continues to function in a moderately modified way and maintains general integrity (some impact on integrity).
3	High	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.



4	Very high	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component permanently ceases and is irreversibly impaired (system collapse). Rehabilitation and remediation often impossible. If possible rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation.
SIGNIFICANCE		
<p>Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. This describes the significance of the impact on the heritage parameter. The calculation of the significance of an impact uses the following formula:</p> <p>(Extent + probability + reversibility + irreplaceability + duration + cumulative effect) x magnitude/intensity.</p> <p>The summation of the different criteria will produce a non weighted value. By multiplying this value with the magnitude/intensity, the resultant value acquires a weighted characteristic which can be measured and assigned a significance rating.</p>		
Points	Impact Significance Rating	Description
6 to 28	Negative Low impact	The anticipated impact will have negligible negative effects and will require little to no mitigation.
6 to 28	Positive Low impact	The anticipated impact will have minor positive effects.
29 to 50	Negative Medium impact	The anticipated impact will have moderate negative effects and will require moderate mitigation measures.
29 to 50	Positive Medium impact	The anticipated impact will have moderate positive effects.
51 to 73	Negative High impact	The anticipated impact will have significant effects and will require significant mitigation measures to achieve an acceptable level of impact.
51 to 73	Positive High impact	The anticipated impact will have significant positive effects.
74 to 96	Negative Very high impact	The anticipated impact will have highly significant effects and are unlikely to be able to be mitigated adequately. These impacts could be considered "fatal flaws".
74 to 96	Positive Very high impact	The anticipated impact will have highly significant positive effects.

RECOMMENDATIONS

This study analysed the documented data available as well as investigated the surface occurrences of heritage sites for the proposed development of a tourist lodge and staff village on the Letaba Ranch Game Reserve in the Limpopo Province. The heritage investigation showed that although there was man made structures present on the development footprint, these were of recent nature and held no heritage significance. No further heritage work is necessary on these sites and no other sites of heritage significance were identified on site.



Although unlikely, sub-surface remains of heritage sites could still be encountered during the construction activities associated with the project. Such sites would offer no surface indication of their presence due to the high state of alterations in some areas as well as heavy plant cover in other areas. The following indicators of unmarked sub-surface sites could be encountered:

- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Bone concentrations, either animal or human;
- Ceramic fragments such as pottery shards either historic or pre-contact;
- Stone concentrations of any formal nature.

The following recommendations are given should any sub-surface remains of heritage sites be identified as indicated above:

- 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.
 - All construction in the immediate vicinity (50m radius of the site) should cease.
 - The heritage practitioner should be informed as soon as possible.
 - In the event of obvious human remains the South African Police Services (SAPS) should be notified.
- Mitigation measures (such as refilling etc.) should not be attempted.
 - The area in a 50m radius of the find should be cordoned off with hazard tape.
 - Public access should be limited.
 - The area should be placed under guard.
 - No media statements should be released until such time as the heritage practitioner has had sufficient time to analyse the finds.

CONCLUSION

Although no sites of heritage potential were identified during this investigation it is important to note that unidentified or sub-surface sites might still be found during the construction phase of the project. The possibility of unmarked graves in the vicinity of the old homestead is also a possibility. Should any such sites be unearthed during the construction phase of the project the listed recommendations should be followed.

Since it is not anticipated that the development will impact on bedrock, and for this reason the palaeontology of the study area was not investigated in any depth. Should this situation change it is further recommended that a palaeontological impact assessment be performed.

Provided the recommendations followed in this report are adhered to, the proposed development should not impact negatively on any sites of heritage significance.



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Maps

The New Society for the Diffusion of Knowledge, Map of the Transvaal, 1907

Sketch Map of South Africa Showing British Possessions, July 1881 & 1885

South African Population Density Map, 1918

Map of the Boer Republic of Transvaal Showing Blockhouse Lines and South African Constabulary Posts with Dates of Completion, 1901



18/03/2014

