Phase 1 Heritage Impact Assessment Report

Heritage Impact Assessment for the Proposed Construction of a 60 – Sleeper Lodge at the Lion Farm, located at Ekland Safaris, Louis Trichardt, in the Vhembe District Municipality, Limpopo Province.

Prepared By:

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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

MANAGEMENT SUMMARY

Site name and location: Proposed Construction of a 60-Sleeper Lodge at the Lion Farm, Ekland Safaris.

Municipal Area: Makhado Local Municipality, Vhembe District Municipality.

Developer: Manupont (Pty) Ltd.

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

Date of Report: 23 August 2018

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 construction of a 60-sleeper Lodge on the Lion Farm, Ekland Safaris in the Limpopo Province.

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

Scope of Work
A Heritage Impact Assessment (including Archaeological, Cultural heritage, Built Heritage and Basic Paleontological Assessment) to determine the impacts on heritage resources within the study area.

The following are the required to perform the assessment:

- A desk-top investigation of the area;
- A site visit to the proposed development site;
- Identify possible archaeological, cultural, historic, built and paleontological sites within the proposed development area;
- Evaluate the potential impacts of construction and operation of the proposed development on archaeological, cultural, historical resources; built and paleontological resources; and
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural, historical, built and paleontological importance.
- Public Participation

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.

Alternatives Considered
Three alternatives for the proposed construction of the Lodge on the Lion Farm is being considered. Find the centre points of the proposed locations below.

- Alternative 1: 22°47'17.77"S 29°54'32.57"E
- Alternative 2: 22°47'22.40"S 29°55'57.99"E
- Alternative 3: 22°45'57.51"S 29°56'09.68"E

Findings & Recommendations
The area was investigated during a field visit and through archival studies.

Alternative 1: The site was found to be devoid of any heritage sites with significance. It is recommended that obscured, subterranean sites be managed, if they are encountered. A small rock shelter with signs of occupation was identified just outside the perimeter of the proposed development area – it will not be affected by the proposed development.

Alternative 2: A medium sized Early Iron Age site was discovered on the north-western side of the proposed development area. The absence of stone walling suggests a site possibly older than Venda or Mapungubwe industries. Only one decorated potsherd could be found with what appears to be K2 type cross hatching decoration. The site will have to be mitigated since it is inside the proposed development area.
Alternative 3: The site was found to be devoid of any heritage sites with significance. It is recommended that obscured, subterranean sites be managed, if they are encountered.

Site Selection:
Either Site 1 or Site 3 can be selected for development. Site 2 is the most sensitive from a heritage point of view.

Fatal Flaws
No fatal flaws were identified.

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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

SANRAL .....South African National Roads Agency SOC Ltd

S&EIR ..... Scoping & Environmental Impact Reporting

Um .....Micrometre (10^{-6} m)

WGS 84 ..... World Geodetic System for 1984

Chapter 1

PROJECT RESOURCES

HERITAGE IMPACT REPORT

HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED CONSTRUCTION OF A 60–SLEEPER LODGE ON THE LION FARM, LOCATED AT EKLAND SAFARIS, IN THE LIMPOPO PROVINCE.

1. INTRODUCTION

Legislation and methodology

G&A Heritage was appointed by Aurecon to undertake a heritage impact assessment for the proposed Proposed Construction of a 60-Sleeper Lodge on the Ekland Lion Farm in the Limpopo Province.

Section 38(1) of the South African Heritage Resources Act (25 of 1999) requires that a heritage study is 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 m^2 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.

While the above describes the parameters of developments that fall under this Act., Section 38 (8) of the NHRA is applicable to this development. This section states that;

(8) *The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.*

In regards to a development such as this that falls under Section 38 (8) of the NHRA, the requirements of Section 38 (3) applies to the subsequent reporting, stating that;

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2) (a): Provided that the following must be included:
(a) The identification and mapping of all heritage resources in the area affected;
(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7;
(c) An assessment of the impact of the development on such heritage resources;

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
(f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
(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 heritage impact assessment are as follows;

- Field investigations were performed on foot and by vehicle where access was readily available.
- Sites were evaluated by means of description of the cultural landscape, direct observations and analysis of written sources and available databases.
- It was assumed that the site layout as provided by Aurecon is accurate.
- We assumed that the public participation process performed as part of the Basic Assessment process was sufficiently encompassing not to be repeated in the Heritage Assessment Phase.

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	No impact	None
	36	Graves and burial sites	No 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	Three Proposed Alternatives for the Lodge on the Lion Farm at Ekland Safaris.
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	No	N/A

Any other development category, public open space, squares, parks or recreational grounds	No	N/A

2. Background Information

Proposed Construction of a 60–Sleeper Lodge on the Lion Farm at Ekland Safaris in the Limpopo Province.

2.1 Project Description

Manupont (Pty) Ltd is proposing the construction of a 60-Sleeper Lodge on the Lion Farm at Ekland Safaris in the Limpopo Province. Three alternative locations are being considered.

2.2 Project Location

The three alternatives that are being considered as the location of the proposed construction of a 60-Sleeper Lodge on the Ekland Lion Farm are located approximately 50km south of Musina in the Limpopo Province, on the Farms Juliana 647 MS and Coen Britz 646 MS and the following coordinates (centre points):
Alternative 1: 22°47'17.77"S 29°54'32.57"E (Red Polygon)
Alternative 2: 22°47'22.40"S 29°55'57.99"E (Blue Polygon)
Alternative 3: 22°45'57.51"S 29°56'09.68"E (Green Polygon)

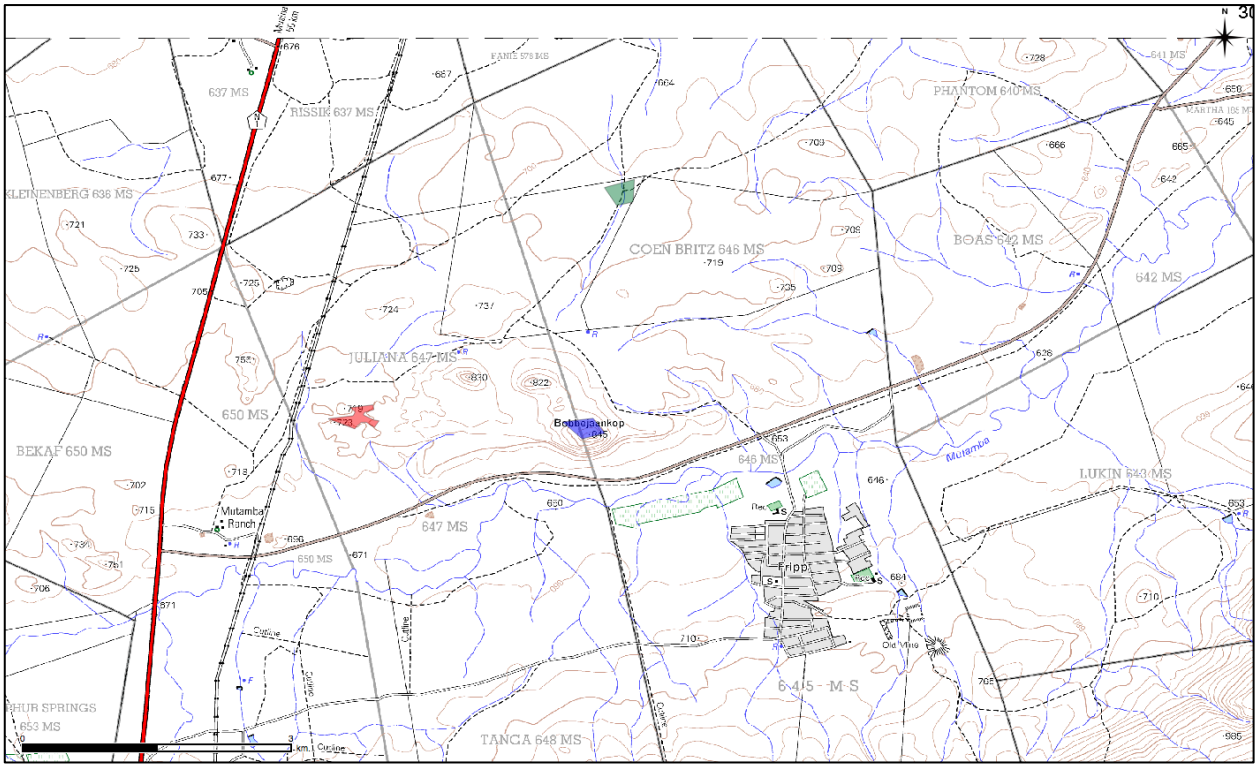

Figure 1. Location Map: Ekland Safaris Lion Farm

Figure 2. Google Earth Image

Chapter 2

FINDINGS

HERITAGE INDICATORS WITHIN THE RECEIVING ENVIRONMENT

3. REGIONAL CULTURAL CONTEXT

3.1 PALEONTOLOGY

Stand-alone Palaeontological Impact Assessment was performed and is appended to this report.

The areas fall within the "Orange & Green" demarcation on the *PalaeoSensitivity* Map. SAHRA states that in this case a desktop Palaeontological is required and based on the outcome of the desktop study, a field assessment is likely.

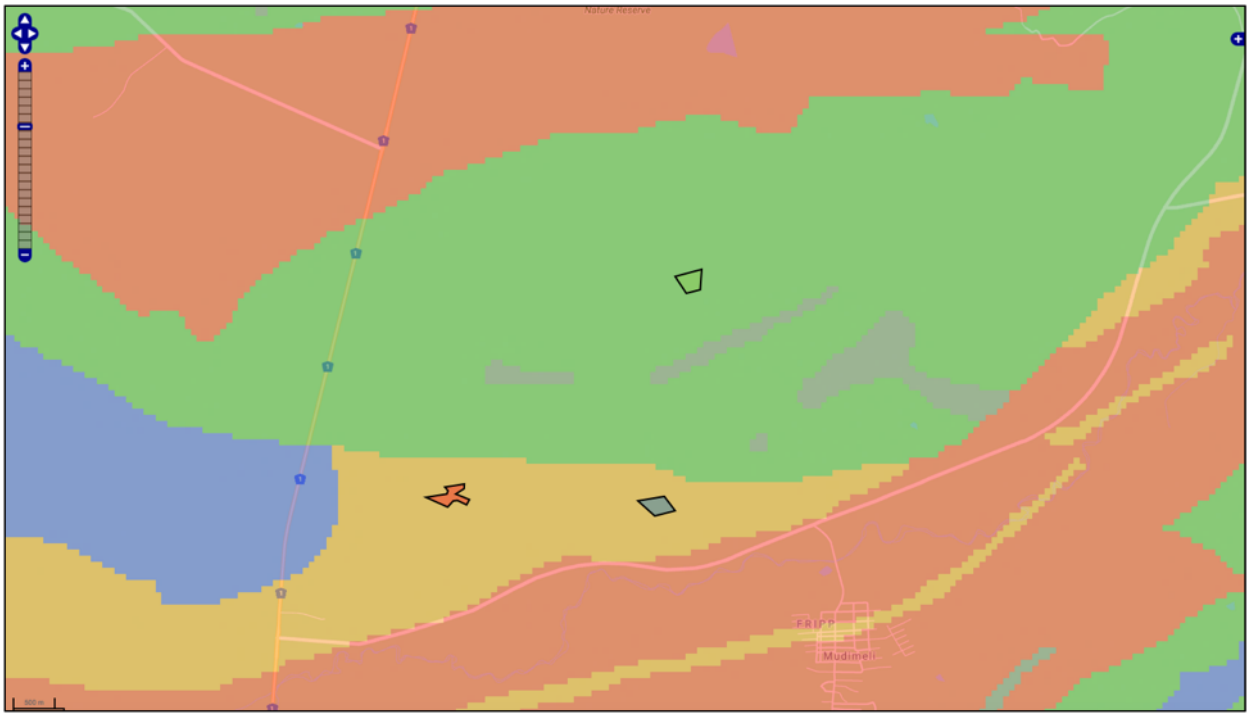

Figure 3. *PalaeoSensitivity* Map

Table 3. Palaeontological Sensitivity Classification

Colour	Sensitivity	Action Required
RED	VERY HIGH	Field assessment and protocol for finds is required.
ORANGE / YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely.
GREEN	MODERATE	Desktop study is required.
BLUE	LOW	No Palaeontological studies are required however, a protocol for finds is required.

GREY	INSIGNIFICANT / ZERO	No Palaeontological studies are required.
WHITE / CLEAR	UNKNOWN	These area will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

3.2 Stone Age

Stone implements belonging to the Early, Middle and Late Stone Age have been found in the area. These, with the rock paintings and a few engravings are evidence of the presence of hunter-gatherer communities in the past. The Sarwa, who were known to be hunters and gatherers, were still living alongside farming communities such as the Ngona in the area during historical times (Eastwood & Fish, 1995)

The antiquity of the LSA south of the Limpopo was realized only recently. Until about 40 years ago it was assumed that Middle Stone Age (MSA) industries gave way to LSA ones at the beginning of the Holocene or at the end of the Pleistocene. As recently as 1974, for example, Sampson's synthesis of the southern African Stone Age placed the earliest LSA at 12,000 years before present (B.P.). Radiocarbon dating after the early 1970s dramatically altered previous ideas and showed that the LSA has its origin in the late Pleistocene, which is defined here as dating between ca. 40,000 and ca. 10,000 B.P.
When Goodwin (1926) introduced the term Later Stone Age (LSA), and when the term was further developed by Goodwin and Van Riet Lowe (1929) in the late 1920s, their definition was unambiguous. The LSA was defined as several stone industries and/or cultures that included non-lithic items, such as ostrich eggshell beads and worked bone implements, and excluded Middle Stone Age (MSA) stone tools, except as recycled manuports. LSA people were explicitly linked with the biologically and behaviourally modern population of hunter gatherers, some being directly identified as Bushmen (Goodwin, 1926, p. 20; Goodwin and Van Riet Lowe, 1929, p. 171).

Today Goodwin and Van Riet Lowe's LSA definition is no longer entirely appropriate. First, ostrich eggshell beads and even a bone point have been found in MSA deposits that predate the LSA by tens of thousands of years. If the associations are reliable then these artifacts can no longer be seen as exclusively LSA. Second, fossils of anatomically modem humans, now thought to predate 100,000 B.P., have been found in MSA deposits at both Klasies River Mouth and at Border Cave (Beaumont et al, 1978; Singer and Wymer, 1982; Rightmire and Deacon, 1991). There is thus no correlation between the appearance of modern people and LSA technological evolution.
The only part of the 1920s definition that remains intact is the qualifier that LSA assemblages should lack MSA artifacts. Although LSA industries and their MSA predecessors share flaking traditions such as the bipolar technique and have some tool types in common, such as some generalized scraper types, they each have other flaking techniques and artifacts that are considered mutually exclusive.

From the 1950s onwards, archaeologists excavating MSA sites in the interior of South Africa recognised a lithic industry containing long blades, truncated blades with retouched edges, and long unifacial points. They named it after the town of Pietersburg (now Polokwane). Pietersburg Industries are located principally in the north of South Africa, but they have not yet been documented north of the Limpopo River. Most Pietersburg sites in Limpopo Province are caves or rockshelters, the best known being Cave of Hearths (Mason 1962, 1988; Sampson 1974; Sinclair 2009), Olieboomspoort (Mason 1962; Van der Ryst 2006), Bushman Rock Shelter (Plug 1981; Porraz et al. 2015) and Mwulu's Cave (Tobias 1949; Sampson 1974). The open site Blaaubank, a gravel donga near Rooiberg, has many felsite and quartzite Pietersburg tools overlying Earlier Stone Age ones (Mason 1962). Another open site, Kalkbank, also reported to have a Pietersburg industry, yielded only a few dozen lithics (Mason 1962) amongst the large faunal collection that is now known to have been accumulated predominantly by non-human agents (Hutson & Cain 2008).

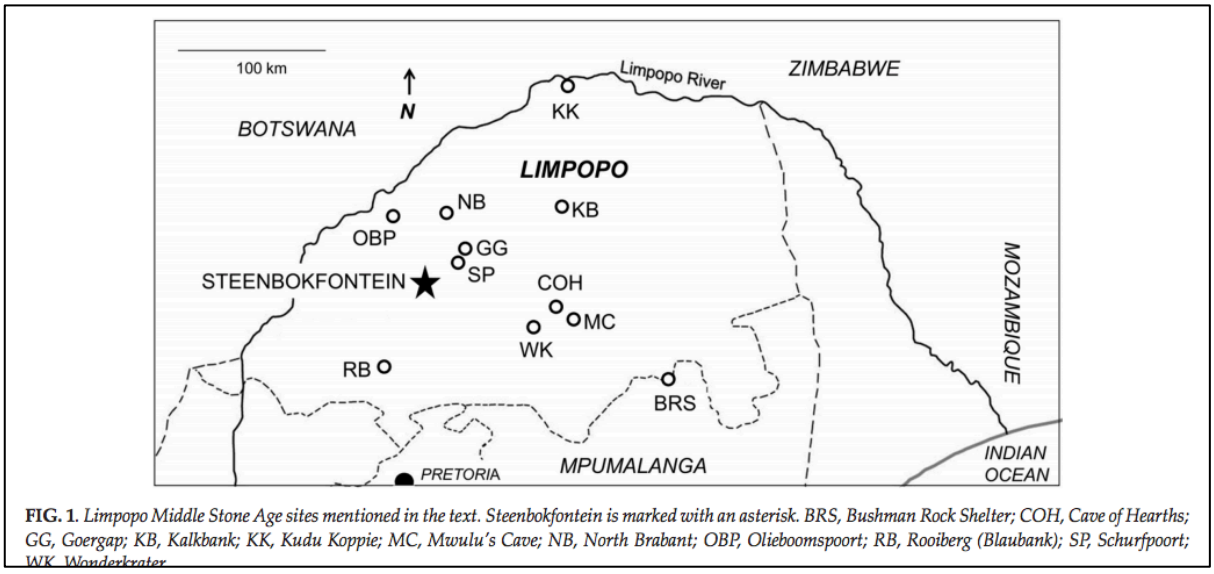

FIG. 1. *Limpopo Middle Stone Age sites mentioned in the text. Steenbokfontein is marked with an asterisk. BRS, Bushman Rock Shelter; COH, Cave of Hearths; GG, Goergap; KB, Kalkbank; KK, Kudu Koppie; MC, Mwulu's Cave; NB, North Brabant; OBP, Olieboomspoort; RB, Rooiberg (Blaubank); SP, Schurfpoort; WK, Wonderkrater.*

Figure 4. Limpopo Middle Stone Age sites mentioned in the text

Most excavated MSA sites in Limpopo are below the escarpment, but amongst the known ones on the Waterberg plateau, is a small rock shelter, North Brabant (New Belgium 608 LR), which was excavated by Schoonraad and Beaumont (1968).

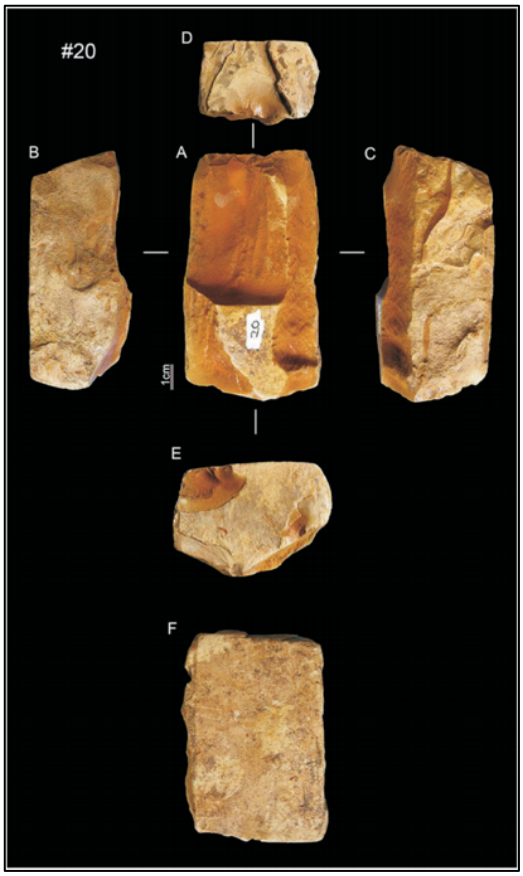

Figure 5. Middle Stone Age Tools

Figure 6. Middle Stone Age Tools

The Limpopo Province of South Africa has a rich archaeological heritage, not least of which is the sub-continent's first town, Mapungubwe, built a thousand years ago (Huffman 2000, 2007). The iron-using farmers who arrived here during the first millennium AD encountered indigenous, stone tool- using, 'Later Stone Age' (LSA) hunter-gatherers. The nature of this contact between two radically different ways of life, and the question of whether the hunter-gatherers survived it, has been much debated (e.g. Mazel 1989; Wilmsen 1989; Solway & Lee 1990; Wilmsen & Denbow 1990; Wadley 1996; Sadr 1997, 2002; Hall & Smith 2000; Schoeman 2006; Mitchell 2009). Where the Limpopo and Shashe Rivers meet, it seemed that the LSA hunting and gathering way of life ended with the rise of the first farmer towns (Sadr 2005; Van Doornum 2007). Recent excavations in rock shelters on the Makgabeng plateau, a hundred or so kilometres south of the Limpopo River, indicate that some hunter-gatherers found refuge there until the 19th century. [BRADFIELD, J., HOLT, S., & SADR, K. (2009). THE LAST OF THE LSA ON THE MAKGABENG PLATEAU, LIMPOPO PROVINCE. The South African Archaeological Bulletin, 64(190), 176-183.]

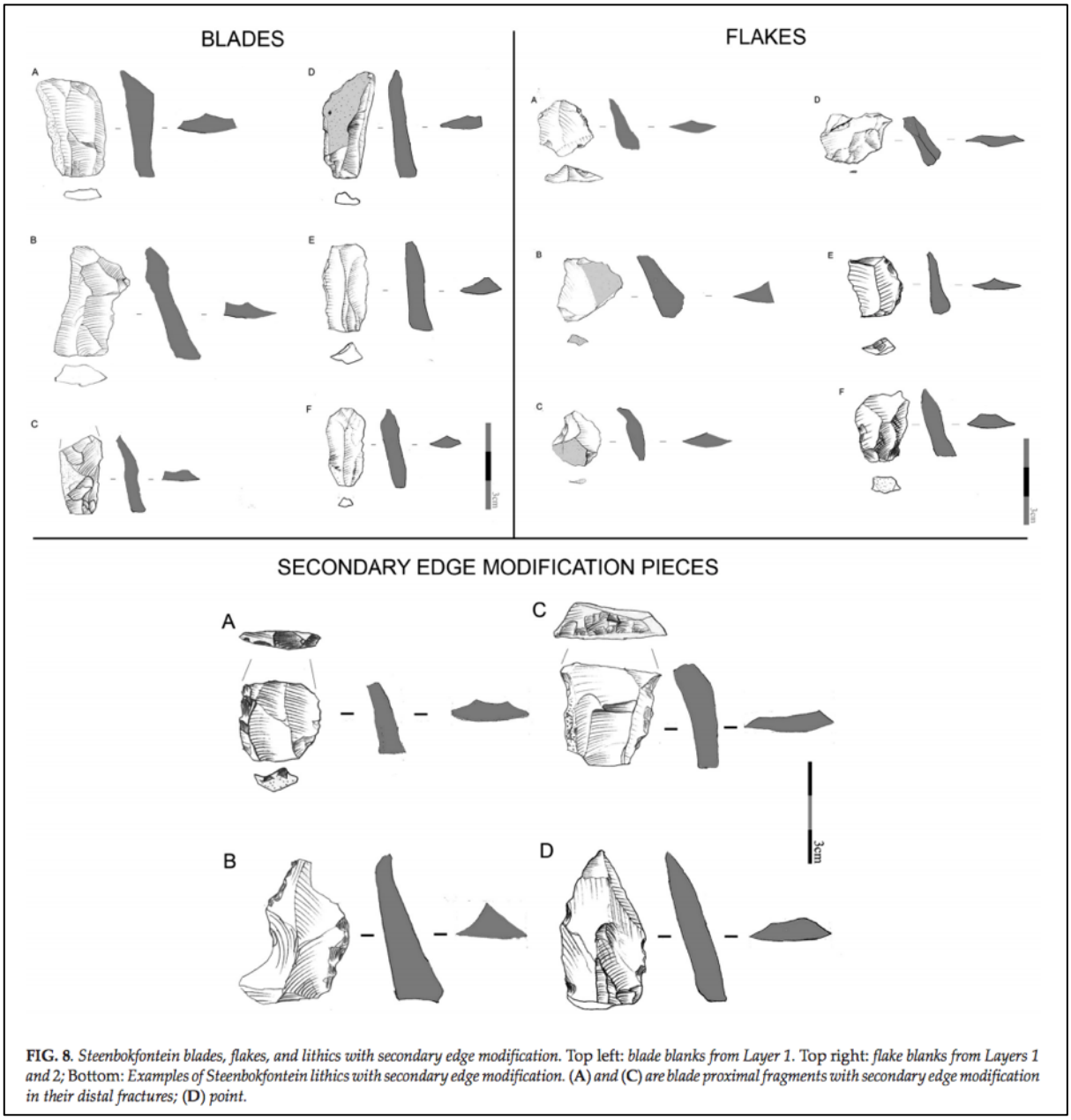

FIG. 8. *Steenbokfontein blades, flakes, and lithics with secondary edge modification.* Top left: *blade blanks from Layer 1.* Top right: *flake blanks from Layers 1 and 2;* Bottom: *Examples of Steenbokfontein lithics with secondary edge modification.* (**A**) *and* (**C**) *are blade proximal fragments with secondary edge modification in their distal fractures;* (**D**) *point.*

Figure 7. Steenbokfontein blades, flakes and lithics with secondary edge modification.

Rock Art

The Central Limpopo Basin (CLB) is situated nearly equidistant between the rock art concentrations of the Maloti/Drakensberg Mountains of Lesotho/South Africa and the Matopo Hills of Zimbabwe and comprises four separate and distinct rock art areas: the Limpopo-Shashe Confluence Area (LSCA), Northern Venda, the Soutpansberg and the Makgabeng Plateau (Fig. 1). The region is relatively well researched (e.g. Schoonraad 1960; Willcox 1963; Pager 1975, 1977, Eastwood 1999, 2003, 2005; Eastwood & Blundell 1999; Eastwood & Cnoops 1999; Eastwood et al. 1999; Hall & Smith 2000; Blundell & Eastwood 2001; Smith & Ouzman 2004), and since 1992 roughly 60% of the total land area has been surveyed and a total of 953 rock art sites have been located and recorded. Whilst the survey work continues, and much recording work remains to be done, the CLB data set is already amongst the most detailed in southern Africa. [Eastwood, E., & Smith, B. (2005). Fingerprints of the Khoekhoen: Geometric and Handprinted Rock Art in the Central Limpopo Basin, Southern Africa. *Goodwin Series, 9*, 63-76].

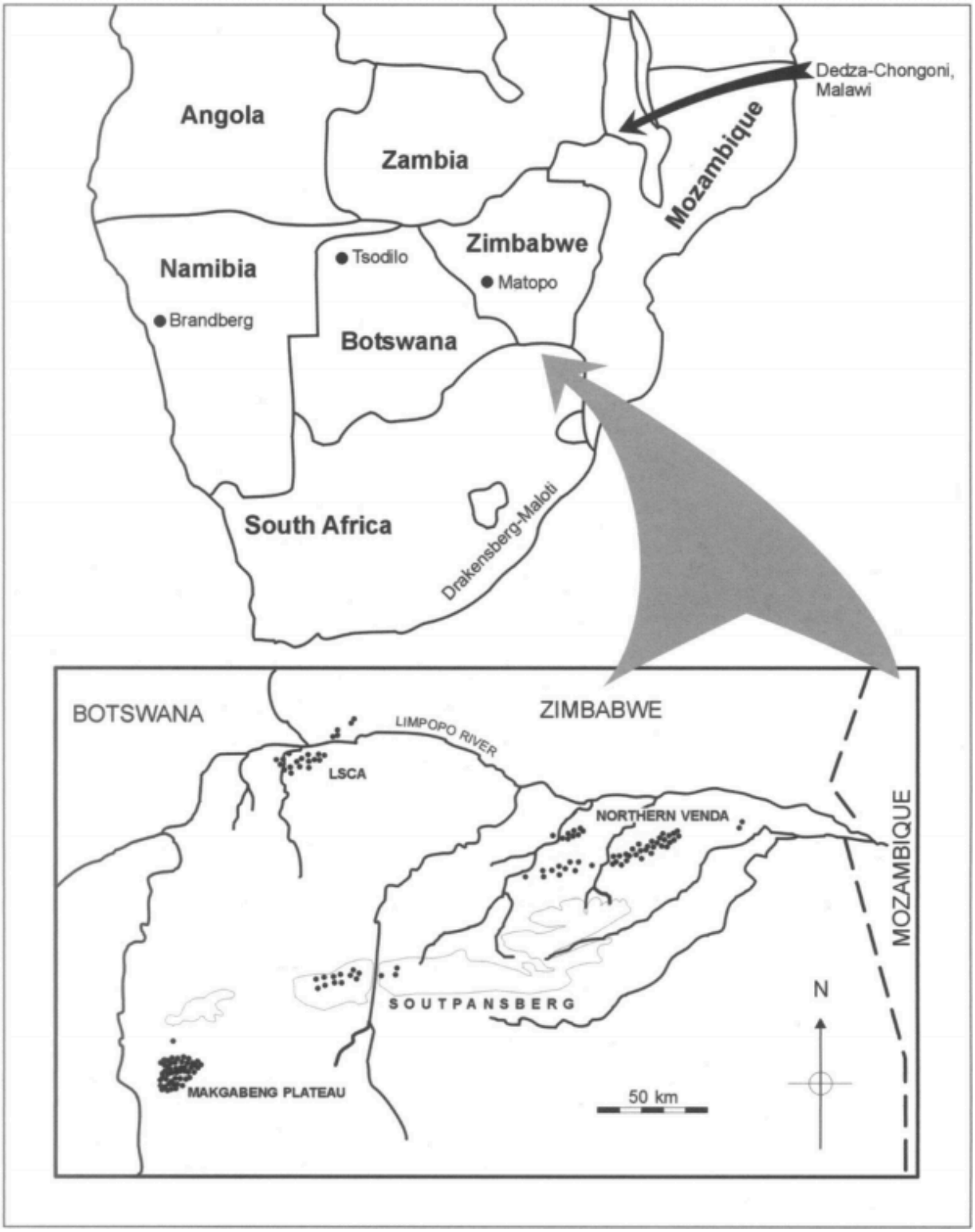

Figure 8. Rock Art Locations

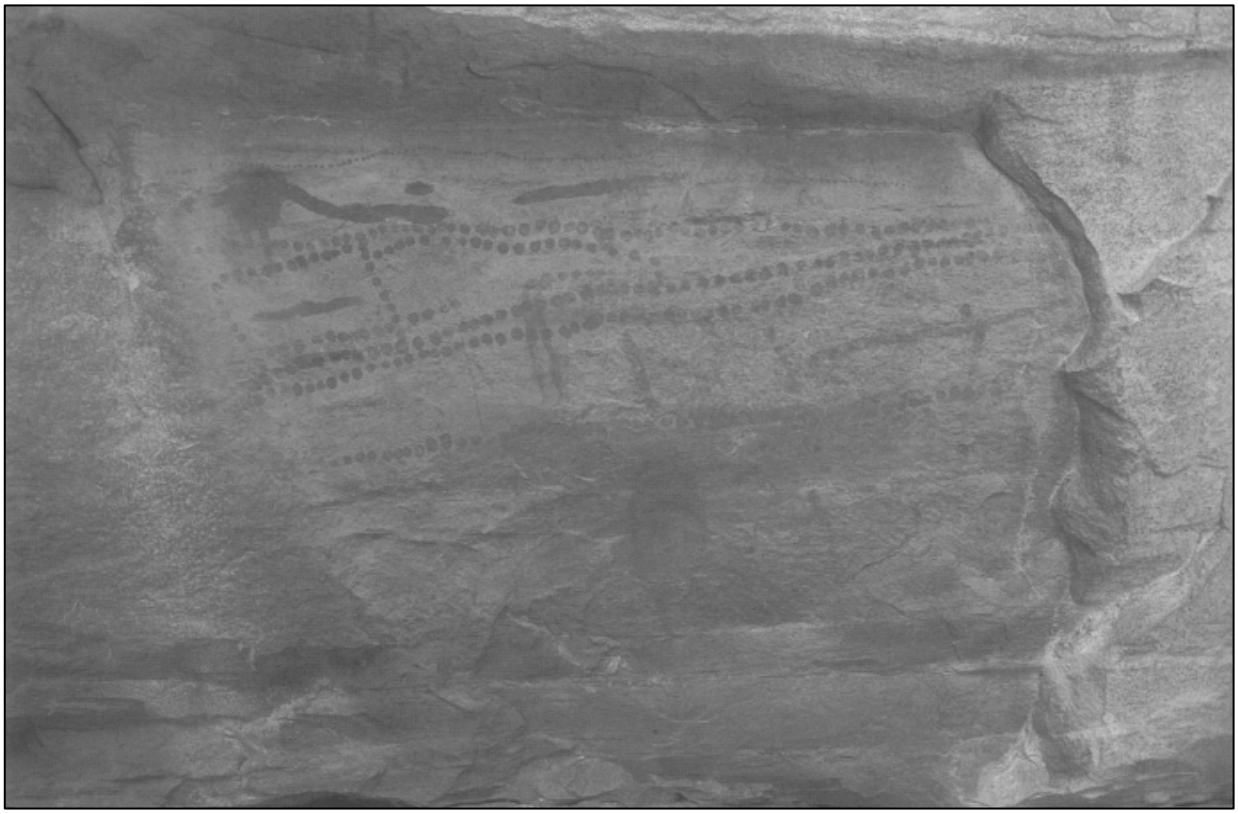

Figure 9. Khoekhoen Geometric Patterns and Finger Dot Painting (Makgabeng Plateau)

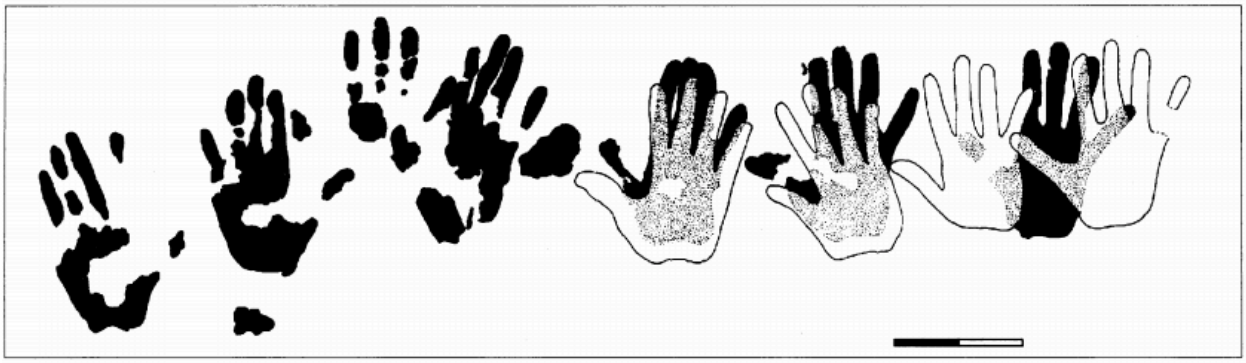

Figure 10. Red handprints overlain by white handprints, Soutpansberg, Central Limpopo Basin. Scale 200mm

3.3 Iron Age

The Limpopo Province and especially the Shashe/Limpopo Confluence area (SLCA)and the Limpopo Basin area contains many Iron Age sites. Although Early Iron age sites are limited (when a distinction is made between Early and Middle Iron Age) there are some important sites on the Soutpansberg such as Happy Rest.

The most significant Iron Age industry in Limpopo must be the Leopards Kopje of Mapungubwe/K2 Industry. These sites are found scattered across the province, although the majority of paramount sites seems to be concentrated on the Limpopo and Levhuvhu Rivers.

Sites that are culturally related to K2 and Mapungubwe have been observed on Hamilton 41 MS, Samaria 28 MS and Den Staat 27 MS (Fig. 1). Another site related to Mapungubwe was excavated by Van Ewyk (1987) on Skutwater to the east of Greefswald. Small Iron Age sites postdating Mapungubwe and K2 have been recorded on Greefswald, including some stone-walled sites on hilltops. Some of these sites have been identified by T.N. Huffman as Khami type ruins. According to oral tradition,

communities belonging to the Lea and Twa mamba tribes, related to the Venda and the Shona-speaking people, settled in the Greefswald region in historical times. They were followed, after c. AD 1700, by Sotho-speaking people.

A few physical features distinguish Khami muzinda (plural = mizinda , the Shona word for a chief's place) from Zimbabwe centres. For example, Khami palaces often bear check patterns, and the pottery usually incorporates black and red motifs on globular vessels and tall-necked jars. The distribution of Khami markers and the linguistic history of the Zimbabwe culture area show that the Khami phase marks the distribution of Kalanga-speaking polities.
Radiocarbon dates from Khami itself (Huffman 2007: 258-259), the name site (Robinson 1959) for the phase and the largest capital (second only to Great Zimbabwe), suggest an early 1 5th century beginning. At about the same time, Kalanga groups began to move southwards. The Letsibogo district of Botswana (Campbell et al 1996; Huffman & Kinahan 2002/2003) provides one example. Khami settlements first appear in the Mapungubwe landscape at this same time (Fig. 2). So far, there are some 255 commoner homesteads (Level 1 – Family Head) on record. These homesteads probably housed some 50 people at any one time, 20-30 being children (following Huffman 1986). There are 10 other hilltop sites with stonewalled palaces. These royal centres are all the same size (Level 3 - Petty Chief), supporting about 350 people each. [Huffman, T., & Du Piesanie, J. (2011). Khami and the Venda in the Mapungubwe Landscape. *Journal of African Archaeology, 9*(2), 189-206.]

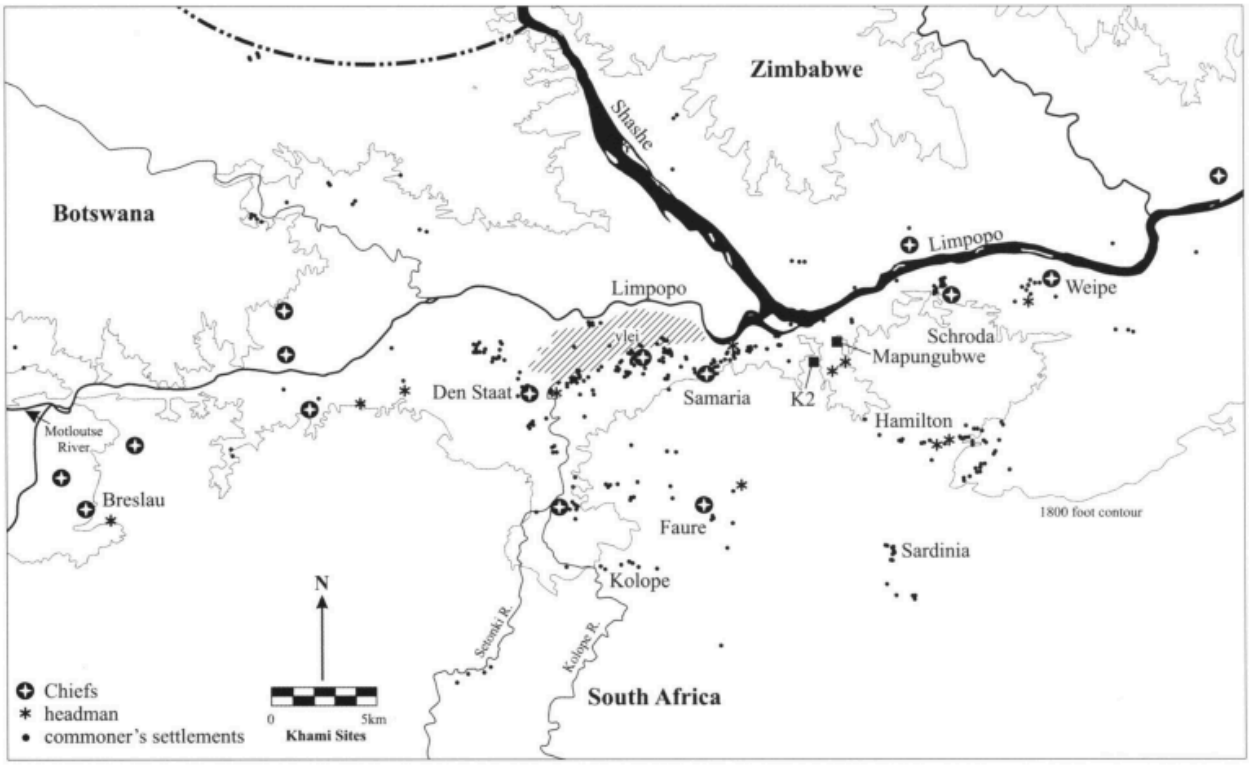

Figure 11. Khami-period sites in the Mapungubwe landscape

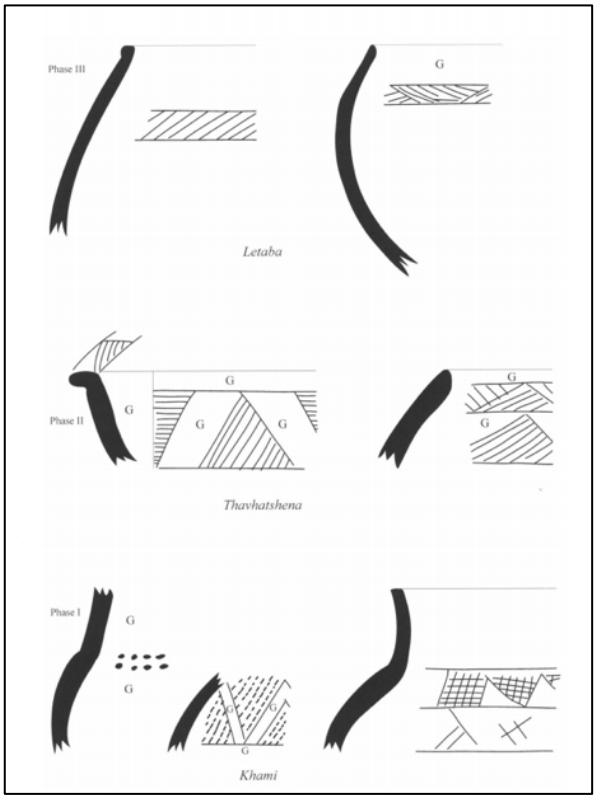

Figure 12. Ceramic facies associated with the three phases of occupation at Machemma

3.4 The Historic Era

Louis Johannes Tregard was born on the 10th of August 1783 in Oudtshoorn in the Karoo. Very little is known of his upbringing, but the diaries he kept of this endeavors, show him to be a reasonably well educated man. Tregard later wrote his name as Tregardt, but it must be noted that there are a number of variants of the name, i.e. Trigardt, Triegardt and the most common, Trichardt. The latter form has been used for towns named in his honour.

Tregardt started farming in Boschberg and later at Somerset East. He moved across the Fish River in 1834 and rented land new the Kei River from the Xhosa chief, Hintsa. Here, in Xhosa country, he was acknowledged as a leader among the exiled Boer community of approximately 30 families. There exists evidence to suggest that Tregardt had shown overt hostility towards the British regime and he was even accused of inciting the Xhosa to begin the frontier war of 1834-5. When he learned that the authorities had issued a warrant for his arrest, Tregardt slipped away from this farm in Hintsa's country and crossed the Orange River. There he received support and assistance from Hendrik Potgieter and Johannes van Rensburg.

Tregardt and his family, as well as Hans van Rensburg's group, started the trek into the far north and arrived at the foot of the Soutpansberg Mountain range in 1836 in two separate parties, as they had parted ways en route due to a disagreement. Van Rensburg's party continued east towards Inhambane, but his entire group was exterminated en route. Tregardt's group was joined by the first group to arrive in the area under the leadership of Coenraad De Buys (the progenitor of the De Buys / Buys people who still live in Buysdorp – a settlement west of Louis Trichardt), who came to the area in 1821. They formed an alliance and aided the Ramabulana to replace the western Venda Chief, Ramavhoya assuming control of the salt plan north of the Soutpansberg Mountain. Tregardt remained in the area for about one year, before leading reconnaissance missions into current day Zimbabwe and towards Mozambique in search of the van Rensburg clan, the made their way to Delagoa Bay 7 months after setting off in September 1837. The trek claimed the lives of many in the party, including Tregardt, who succumbed from malaria in October of 1938.

After his death other Voortrekkers settled in the area as ivory hunters but left after Chief Makhado and his vhaVenda people defeated them in 1867. Only in 1898 did the Zuid-Afrikaansche

Republiek take control of the region and established the town Louis Trichardt the following year in February 1899.

Along with other towns in Limpopo Province, Louis Trichardt was renamed Makhado in 2003, after the Venda King Makhado who ruled in the region from the mid-1800s until his death in 1887. However, there was local rejection to the new name, and it was claimed less than 1% of the town's population had been consulted on the change. It was not only the Afrikaans people who were opposed to the name change, many Shangaan people regarded Chief Makhado as an oppressor. A residents' association applied to Pretoria's High Court in 2005 to have the name overturned. They were rejected but rather astonishingly appealed in South Africa's Supreme Court and won, and the name was changed back to Louis Trichardt in 2007.

3.5 Cultural Landscape

The sites are situated near the National Route N1, infrastructural services are available in the vicinity. The surrounding land is predominantly used for game keeping. The Mutamba River is located just south of the study areas.

The study areas are devoid of any structures and is currently being used for game keeping.

Figure 13. Alternative 1 Study Area: General Landscape

Figure 14. Alternative 2 Study Area: General Landscape

Figure 15. Alternative 3 Study Area: General Landscape

3.6 Previous Studies

An extensive research into the SAHRIS database resulted in the identification of the following heritage related studies that have been performed over the last decade in the study area. Only studies within a radius of 50km from the study area were considered.

- Gaigher, S. 2010. Heritage Impact Assessment for the proposed extension of the existing Tabor Substation as well as the Proposed Re-alignment of the Tabor Louis Trichardt 132 kV Line.
- Hutten, M. 2008. Heritage Impact Assessment for the Proposed Development of a Wood Processing Factory East of Louis Trichardt, Limpopo Province.
- Roodt, H.M. 2002. Phase 1 Archaeological Impact Assessment – Proposed Filling Station and Overnight Accommodation, Louis Trichardt, Portion 4 of Rondebosch 287 LS.
- Van Schalkwyk, J. 1999. A Survey of Cultural Resources at the Mampakuil Base Station, Louis Trichardt Area.
- Roodt, F. 2007. Phase 1 Heritage Impact Assessment (Scoping and Evaluation) Black Hawk Golf and Spa: Phase 2 Residential Development Albasini Dam, Louis Trichardt, Limpopo.
- Hutten, M. 2014. Proposed Development of a Residential Lifestyle Estate on Portion 46 of the Farm Vondeling 285 LS, east of Louis Trichardt, in the Makhado Municipality, Vhembe District, Limpopo Province.
- Hine, P. 2012. Phase 1 Heritage Impact Assessment Report: Proposed Makhado Colliery.
- Roodt, F. 2011. Eskom Power Line Paradise Substation to the Proposed Makhado Colliery.
- Roodt, F. 2012. Phase 1 Heritage Impact Assessment Report: Proposed Makhado Colliery Integrated Report for the 1. Open Cast Mine and Infrastructure, 2. Bulk Power Supply and 3. Off Site Transport – Railway Line and Siding.
- Smith, K. 2017. Heritage Impact Assessment for the Proposed New Mutsho Power Project near Makhado.
- Mathoho, E. 2009. An Archaeological Investigation for the Proposed new Waste Disposal Facility on Portion 1 of the Farm Rietvly 276 LS, within the Makhado Local Municipality of Vhembe District, Limpopo Province, South Africa.
- Murinbika, McEdward. 2008. Cultural and Archaeological Heritage Assessment Study for the Proposed Construction of 1021km Powerline at Sereni Village in Makhado Local Municipality of Vhembe District, Limpopo Province.
- Roodt, F. 2003. Phase 1 Heritage Impact Assessment: Portion 7 of the Farm Bergvliet 288 LS – Makhado Municipality, Limpopo Province.
- Roodt, F., Munyai, R. 2008. Phase 1 Heritage Impact Assessment: An Archaeological Investigation of a Proposed Existing Borrow Tshiozwi Borrow Pit, Makhado Municipality, Limpopo.
- Butler, E. 2017. Palaeontological Impact Assessment of the Proposed Development of the new Coal-fired Power Plant and Associated Infrastructure near Makhado, Limpopo Province.
- Murinbika, McEdward. 2008. Cultural and Archaeological Heritage Assessment Study for the Proposed Construction of 2133.37km of 16 kV at Tshino/Ndlitwani Village in Makhado Local Municipality of Vhembe District, Limpopo Province.

3.7 Historical Maps

Four versions of 229 DD (1941, 1966, 1979 & 1999) of the Surveyor General's 1:50 000 topographic map sets could be found during the archival study.

No structures of heritage significance could be identified on the historical maps of the area.

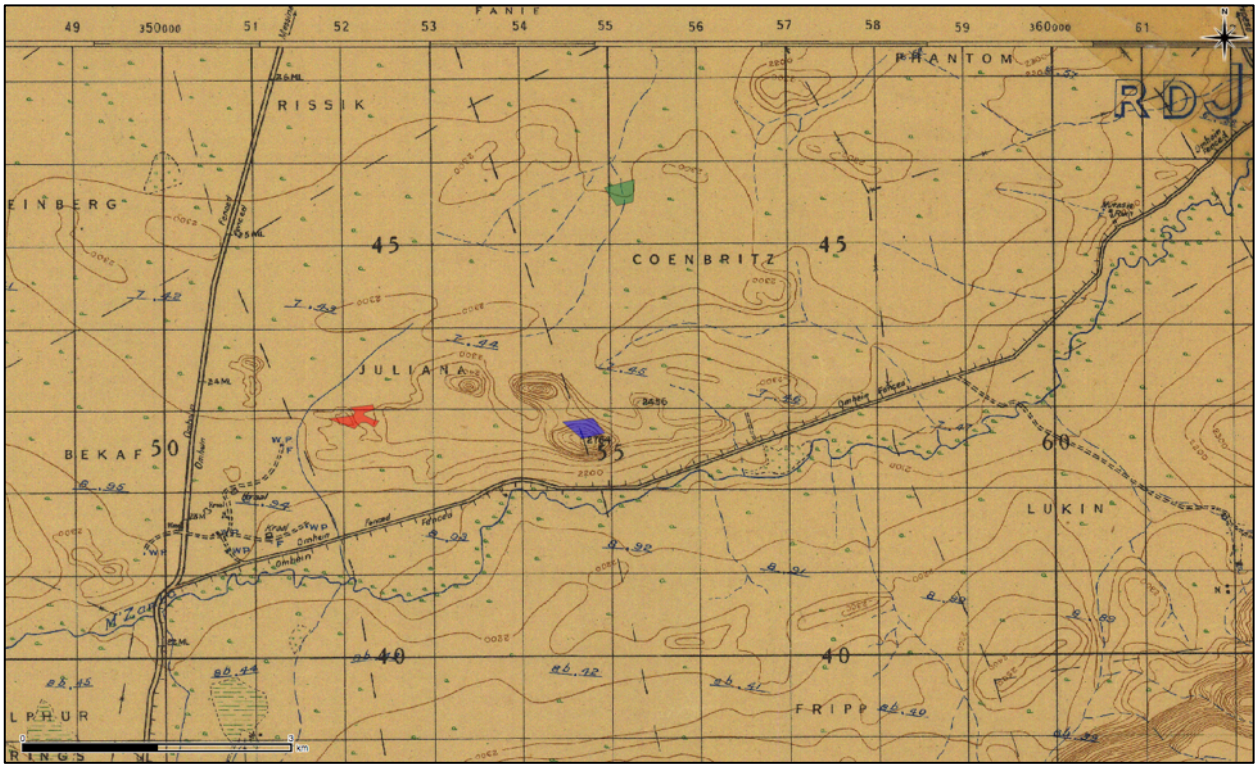

Figure 16. Topographical Map 2229 DD 1941

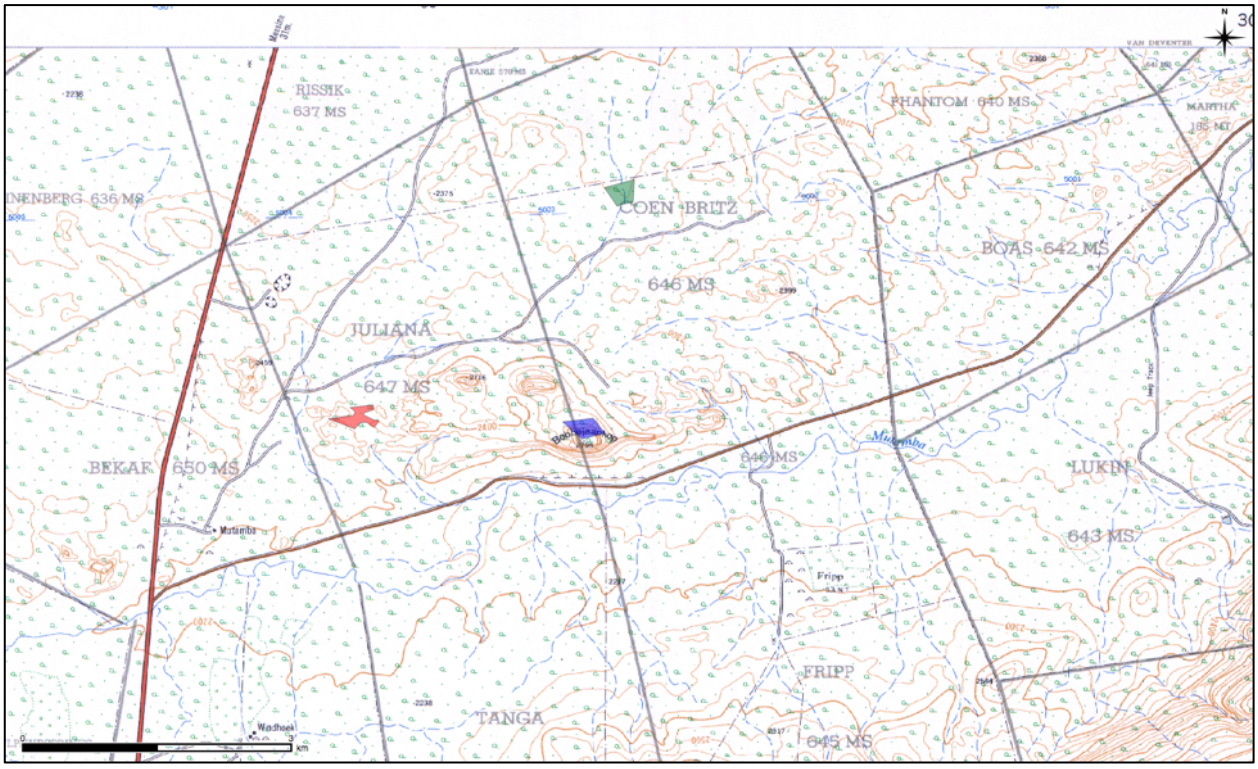

Figure 17. Topographical Map 2229 DD 1966

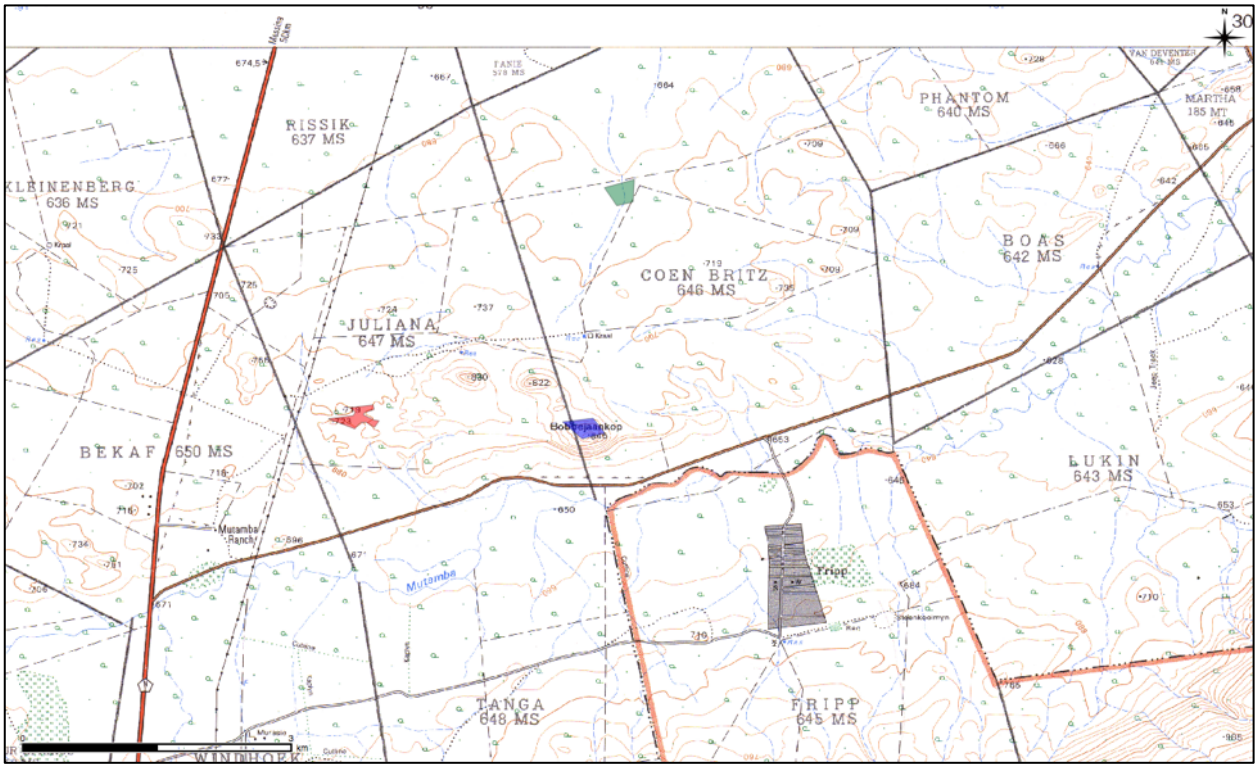

Figure 18. Topographical Map 2229 DD 1979

4. Findings

4.1 Fieldwork Results

4.1.1 Alternative 1 (Red Polygon)

GPS 22°47'17.77"S
29°54'32.57"E

Fieldwork studies and archival studies indicated that the site was found to be devoid of artefacts or occupation sites. Taking the geographic suitability for occupation of this site (protected on three sides with a constant water source nearby) it is surprising that only one Stone Age occupation site could be identified on site.

The surrounding rock formations were investigated for rock art or Mfuba (Marabaraba) games, however none were noted. There is a smaller amphitheatre to the south (where the access road ends) and this has been excavated to form a waterhole. The deposits seem to contain higher amounts of ash. This can be the result of veld fires that have been contained within the rock formations of it can be the result of human occupation. No other indicators of occupation were noted, however.

Figure 19. Sandstone rock formations delineating the site

Figure 20. The centre of the proposed site – note ash grey colour of sand

Figure 21. Possible ash in sand

Figure 22. Ash grey sand

Figure 23. Rock formation investigated for Mfuba Games

Figure 24. Rock formations on Eastern side of site

Figure 25. Rock formations on Western side of site

Figure 26. Looking south towards the rock shelter

Figure 27. Rock formations on Southern side

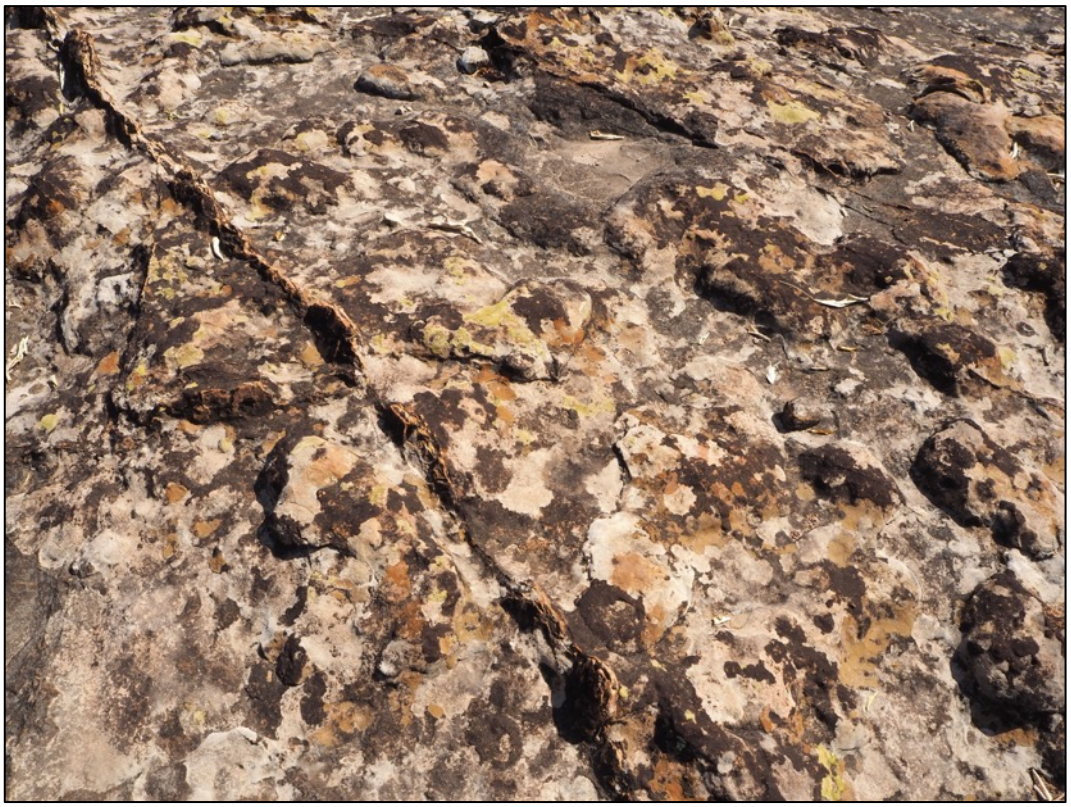

Figure 28. Lichen growth on rocks

Figure 29. Looking north from the shelter

Figure 30. North facing rock face with shelter at end

Figure 31. Rock shelter

Figure 32. Possible blackening from fires in shelter

Figure 33. Ash deposits in shelter – note possible fire hearth

Figure 34. Aerial view of Rock Shelter Location (Study area in red)

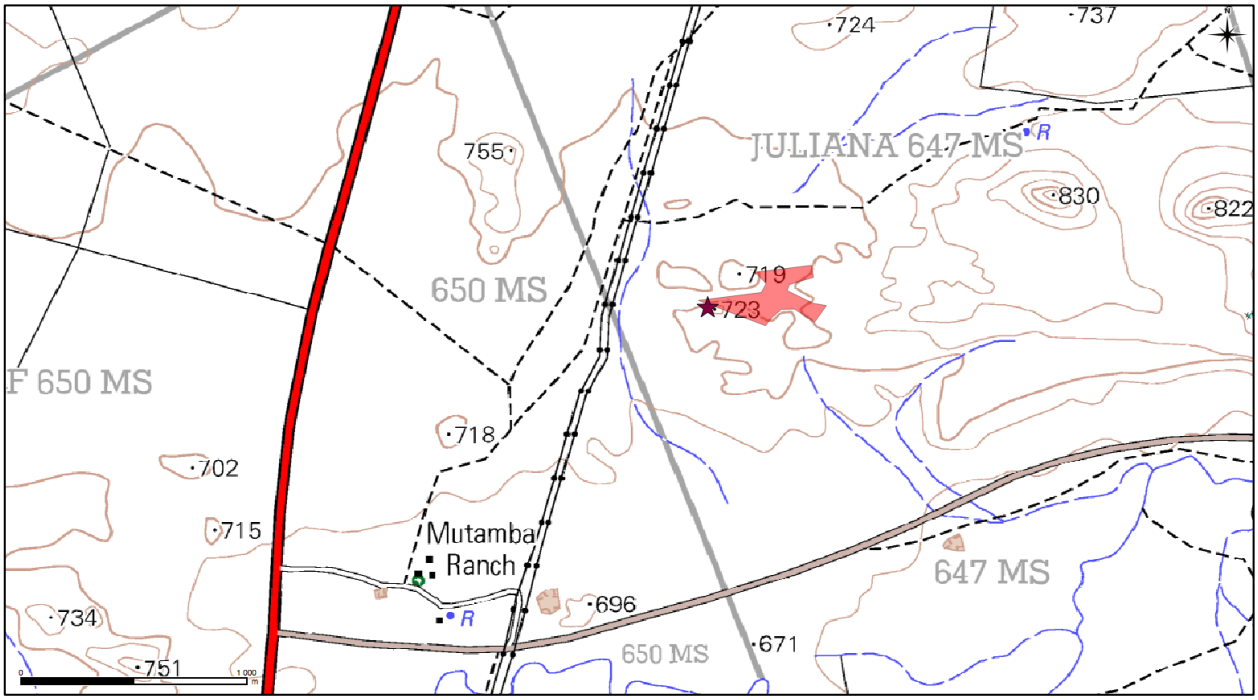

Figure 35. 1:50 000 Map location of Rock Shelter (star)

Figure 36. Looking north from the mouth of the shelter

4.1.2 Alternative 2 (Blue Polygon)

GPS 22°47'22.40"S
29°55'57.99"E

Fieldwork studies and archival studies indicated that this location contained a well-defined Early Iron Age (EIA) site. Although only one decorated sherd could be found during the short fieldwork session, the layout, location and lack of stone walling suggest either a very early Mapungubwe Industry site or a K2 industry site. The site is well defined by deep ash deposits as could be seen from animal burrows on site. It is protected on the southern side with a viewing corridor defined by a small rocky outcrop on the western side. Several possible grain bin foundations or foundations of some other kind was identified on site. As with many K2 industry sites the social layout of the site is poorly defined. It is located on the hill referred locally to as *Bobbejaankop*.

Figure 37. Looking South towards the summit of the ridge

Figure 38. Location of the EIA site – note the defining ash pattern

Figure 39. Deep ash concentrations define the site well

Figure 40. Potsherds found on site

Figure 41. Undecorated sherds found on site

Figure 42. Infilling of the natural rock

Figure 43. Looking North from the site

Figure 44. Possible grain bin foundation

Figure 45. High ash concentrations

Figure 46. Defining ash concentrations

Figure 47. The site is defined on the Southwest by this rocky outcrop

Figure 48. Viewing portal to the South

Figure 49. View towards the North from the site

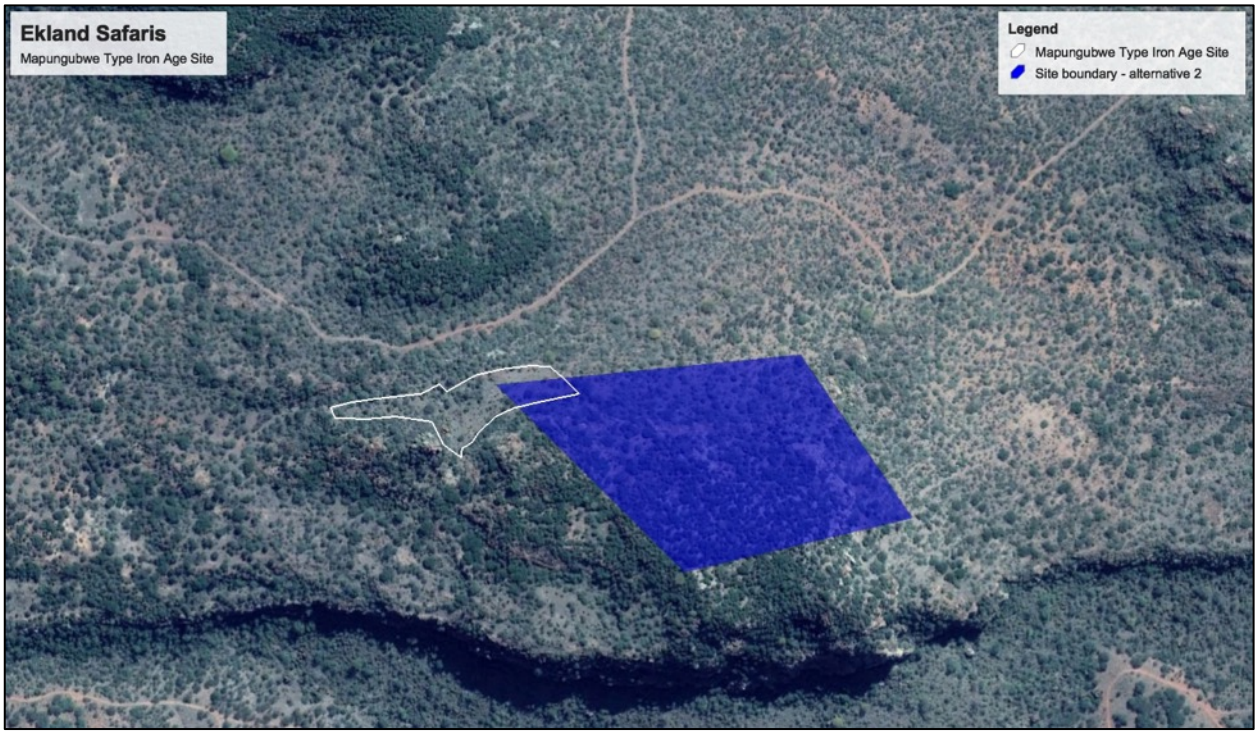

Figure 50. Aerial view of the EIA site location at Alternative 2

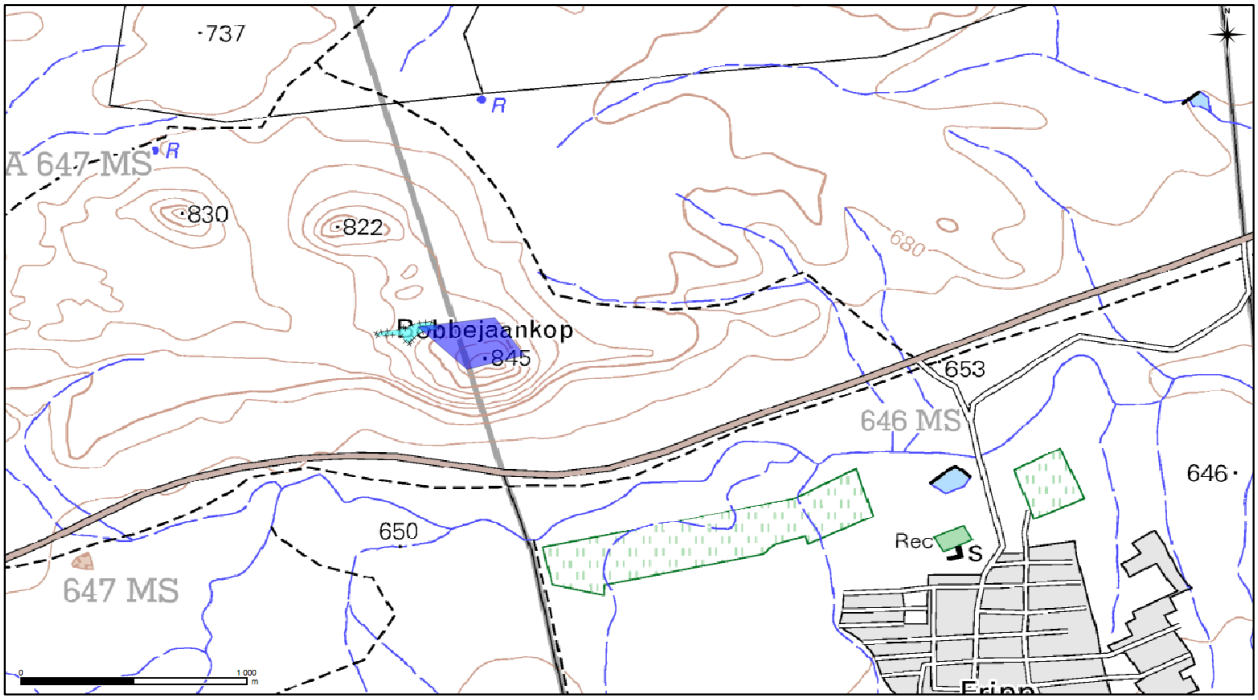

Figure 51. Location on 1:50 000 map of EIA site

Figure 52. Potsherds from site

Figure 53. Potsherds from site

Figure 54. Potsherds from site

Figure 55. Potsherds from site

Figure 56. Potsherds from site

Figure 57. Potsherds from site

Figure 58. Postherds (one showing cross hatching)

Figure 59. Potsherds from site

4.1.3 Alternative 3 (Green Polygon)

GPS 22°45'57.51"S
29°56'09.68"E

Fieldwork studies and archival studies indicated that the site was found to be devoid of any heritage sites with significance. The site has no geographic suitability for occupation (no water source, no protection or elevation) and therefore it is very unlikely that any sites will occur here. It should however be noted that the site is covered in very thick brush and high grass making the identification of any smaller sites nearly impossible.

Figure 60. Thick plant cover on site

Figure 61. General plant cover on site

Figure 62. Plant cover on site

4.2 Public Participation

As part of the heritage orientated public participation the following steps were taken to inform local residents of the planned development.

- Notices indicating the proposed development was placed on site (See Addendum 1)
- IAP's were invited to register with us to facilitate the dissemination of information and to enable them to log any queries or complains in regards the heritage of the are and how it will be affected by the proposed development.
- This HIA will be made available for public comment as part of the broader EIA report for this project.
- If a ROD is issued for the project, IAP's will be informed of their right to log complaints within 14 days.
- Notice of Intent to Develop documents were circulated with local residents, informing them of the proposed development and its possible impact on heritage resources ((See Addendum 1)).
- As part of the wider EIA stakeholder engagement component, advertisements regarding the development was placed in local newspapers.

Chapter 3

IMPACT ASSESSMENT

5. METHODOLOGY

This study defines the heritage component of the EIA process being undertaken for the Proposed Construction of a 60-Sleeper Lodge on the Ekland Safari Lion Farm in the Vhembe District of the Limpopo Province.

It is described as a first phase (HIA). This report attempts to evaluate both the accumulated heritage knowledge of the area as well as information derived from direct physical observations.

5.1 INVENTORY

Inventory studies involve the in-field survey and recording of archaeological resources within a proposed development and buffer area. The nature and scope of this type of study is defined primarily by the results of the overview study. In the case of site-specific developments, direct implementation of an inventory study may preclude the need for an overview.

There are a number of different methodological approaches to conducting inventory studies. Therefore, the proponent, in collaboration with the archaeological consultant, must develop an inventory plan for review and approval by the SAHRA prior to implementation (*Dincause, Dena F., H. Martin Wobst, Robert J. Hasenstab and David M. Lacy 1984)*.

5.2 EVALUATING HERITAGE IMPACTS

A combination of document research as well as the determination of the geographic suitability of areas and the evaluation of aerial photographs determined which areas could and should be accessed.

After plotting of the site on a GPS the areas were accessed using suitable combinations of vehicle access and access by foot.

Sites were documented by digital photography and geo-located with GPS readings using the WGS 84 datum.

Further techniques (where possible) included interviews with local inhabitants, visiting local museums and information centers and discussions with local experts. All this information was combined with information from an extensive literature study as well as the result of archival studies based on the SAHRA (South African Heritage Resource Agency) provincial databases.

This Heritage Impact Assessment relies on the analysis of written documents, maps, aerial photographs and other archival sources combined with the results of site investigations and interviews with effected people. Site investigations are not exhaustive and often focus on areas such as river confluence areas, elevated sites or occupational ruins.

The following documents were consulted in this study;

- South African National Archive Documents
- SAHRIS (South African Heritage Resources Information System) Database of Heritage Studies
- Internet Search
- Historic Maps
- 1941, 1966, 1979 & 1999 Surveyor General Topographic Map series
- 1952 1:10 000 aerial photo survey
- Google Earth 2018 imagery
- Published articles and books
- JSTOR Article Archive

5.3 Fieldwork

Fieldwork for this study was performed on the 21th of August 2018. Most of the areas were found to be accessible by vehicle. Areas of possible significance were investigated on foot. The survey was tracked using GPS and a track file in GPX format is available on request.

Where sites were identified it was documented photographically and plotted using GPS with the WGS 84 datum point as reference. GPX files are available on request from G&A Heritage.

The study area was surveyed using standard archaeological surveying methods. The area was surveyed using directional parameters supplied by the GPS and surveyed by foot. This technique has proven to result in the maximum coverage of an area. This action is defined as;

'an archaeologist being present in the course of the carrying-out of the development works (which may include conservation works), so as to identify and protect archaeological deposits, features or objects which may be uncovered or otherwise affected by the works' (DAHGI 1999a, 28).

Standard archaeological documentation formats were employed in the description of sites. Using standard site documentation forms as comparable medium, it enabled the surveyors to evaluate the relative importance of sites found. Furthermore, GPS (Global Positioning System) readings of all finds and sites were taken. This information was then plotted using a ***Garmin Colorado*** GPS (WGS 84- datum).

Indicators such as surface finds, plant growth anomalies, local information and topography were used in identifying sites of possible archaeological importance. Test probes were done at intervals to determine sub-surface occurrence of archaeological material. The importance of sites was assessed by comparisons with published information as well as comparative collections.

6. Measuring Impacts

In 2003 the SAHRA (South African Heritage Resources Agency) compiled the following guidelines to evaluate the cultural significance of individual heritage resources:

6.1 Type of Resource

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

6.2 Type of Significance

6.2.1 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.

6.2.2 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.

6.2.3 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.

(a) Does the site contain evidence, which may substantively enhance understanding of culture history, culture process, and other aspects of local and regional prehistory?

- internal stratification and depth
- chronologically sensitive cultural items
- materials for absolute dating
- association with ancient landforms
- quantity and variety of tool type
- distinct intra-site activity areas
- tool types indicative of specific socio-economic or religious activity
- cultural features such as burials, dwellings, hearths, etc.
- diagnostic faunal and floral remains
- exotic cultural items and materials
- uniqueness or representativeness of the site
- integrity of the site

(b) Does the site contain evidence which may be used for experimentation aimed at improving archaeological methods and techniques?

- monitoring impacts from artificial or natural agents
- site preservation or conservation experiments
- data recovery experiments
- sampling experiments
- intra-site spatial analysis

(c) Does the site contain evidence which can make important contributions to paleoenvironmental studies?

- topographical, geomorphological context
- depositional character
- diagnostic faunal, floral data

(d) Does the site contain evidence which can contribute to other scientific disciplines such as hydrology, geomorphology, pedology, meteorology, zoology, botany, forensic medicine, and environmental hazards research, or to industry including forestry and commercial fisheries?

6.2.4 Social Value / Public significance

- 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.

(a) Does the site have potential for public use in an interpretive, educational or recreational capacity?

- integrity of the site
- technical and economic feasibility of restoration and development for public use
- visibility of cultural features and their ability to be easily interpreted
- accessibility to the public

- opportunities for protection against vandalism
- representativeness and uniqueness of the site
- aesthetics of the local setting
- proximity to established recreation areas
- present and potential land use
- land ownership and administration
- legal and jurisdictional status
- local community attitude toward development

(b) Does the site receive visitation or use by tourists, local residents or school groups?

6.2.5 Ethnic Significance

(a) Does the site presently have traditional, social or religious importance to a particular group or community?

- ethnographic or ethno-historic reference
- documented local community recognition or, and concern for, the site

6.2.6 Economic Significance

(a) What value of user-benefits may be placed on the site?

- visitors' willingness-to-pay
- visitors' travel costs

6.2.7 Scientific Significance

(a) Does the site contain evidence, which may substantively enhance understanding of historic patterns of settlement and land use in a particular locality, regional or larger area?
(b) Does the site contain evidence, which can make important contributions to other scientific disciplines or industry?

6.2.8 Historic Significance

(a) Is the site associated with the early exploration, settlement, land use, or other aspect of southern Africa's cultural development?
(b) Is the site associated with the life or activities of a particular historic figure, group, organization, or institution that has made a significant contribution to, or impact on, the community, province or nation?
(c) Is the site associated with a particular historic event whether cultural, economic, military, religious, social or political that has made a significant contribution to, or impact on, the community, province or nation?
(d) Is the site associated with a traditional recurring event in the history of the community, province, or nation, such as an annual celebration?

6.2.9 Public Significance

(a) Does the site have potential for public use in an interpretive, educational or recreational capacity?

- visibility and accessibility to the public
- ability of the site to be easily interpreted
- opportunities for protection against vandalism
- economic and engineering feasibility of reconstruction, restoration and maintenance
- representativeness and uniqueness of the site
- proximity to established recreation areas
- compatibility with surrounding zoning regulations or land use
- land ownership and administration
- local community attitude toward site preservation, development or destruction
- present use of site

(b) Does the site receive visitation or use by tourists, local residents or school groups?

6.2.10 Other

(a) Is the site a commonly acknowledged landmark?
(b) Does, or could, the site contribute to a sense of continuity or identity either alone or in conjunction with similar sites in the vicinity?
(c) Is the site a good typical example of an early structure or device commonly used for a specific purpose throughout an area or period of time?
(d) Is the site representative of a particular architectural style or pattern?

6.3 Degrees of Significance

6.3.1 Significance Criteria

There are several kinds of significance, including scientific, public, ethnic, historic and economic, that need to be taken into account when evaluating heritage resources. For any site, explicit criteria are used to measure these values. These checklists are not intended to be exhaustive or inflexible. Innovative approaches to site evaluation which emphasize quantitative analysis and objectivity are encouraged. The process used to derive a measure of relative site significance must be rigorously documented, particularly the system for ranking or weighting various evaluated criteria.

Site integrity, or the degree to which a heritage site has been impaired or disturbed as a result of past land alteration, is an important consideration in evaluating site significance. In this regard, it is important to recognize that although an archaeological site has been disturbed, it may still contain important scientific information.

Heritage resources may be of scientific value in two respects. The potential to yield information, which, if properly recovered, will enhance understanding of Southern African human history, is one appropriate measure of scientific significance. In this respect, archaeological sites should be evaluated in terms of their potential to resolve current archaeological research problems. Scientific significance also refers to the potential for relevant contributions to other academic disciplines or to industry.

Public significance refers to the potential a site has for enhancing the public's understanding and appreciation of the past. The interpretive, educational and recreational potential of a site are valid indications of public value. Public significance criteria such as ease of access, land ownership, or scenic setting are often external to the site itself. The relevance of heritage resource data to private industry may also be interpreted as a particular kind of public significance.

Ethnic significance applies to heritage sites which have value to an ethnically distinct community or group of people. Determining the ethnic significance of an archaeological site may require consultation with persons having special knowledge of a particular site. It is essential that ethnic significance be assessed by someone properly trained in obtaining and evaluating such data.

Historic archaeological sites may relate to individuals or events that made an important, lasting contribution to the development of a particular locality or the province. Historically important sites also reflect or commemorate the historic socioeconomic character of an area. Sites having high historical value will also usually have high public value.

The economic or monetary value of a heritage site, where calculable, is also an important indication of significance. In some cases, it may be possible to project monetary benefits derived from the public's use of a heritage site as an educational or recreational facility. This may be accomplished by employing established economic evaluation methods; most of which have been developed for valuating outdoor recreation. The objective is to determine the willingness of users, including local residents and tourists, to pay for the experiences or services the site provides even though no payment is presently being made. Calculation of user benefits will normally require some study of the visitor population *(Smith, L.D. 1977)*.

6.3.2 Rarity

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

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

6.3.3 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

Table 4. Spheres of Significance

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

7. Assessment of Heritage Potential

7.1 Assessment Matrix

7.1.1 Determining the Archaeological Significance

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 Eastern 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 5. Classification of landforms and visible archaeological traces for estimating the potential for archaeological sites (after J. Deaon, 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 6. Site attributes and value assessment (adopted 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

7.2 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.

7.3 Impact Statement

7.3.1 Assessment of Impacts

A heritage resource impact may be broadly defined as the net change between the integrity of a heritage site with and without the proposed development. This change may be either beneficial or adverse.
Beneficial impacts occur wherever a proposed development actively protects, preserves or enhances a heritage resource. For example, development may have a beneficial effect by preventing or lessening natural site erosion. Similarly, an action may serve to preserve a site for future investigation by covering it with a protective layer of fill. In other cases, the public or economic significance of an archaeological site may be enhanced by actions, which facilitate non-destructive public use. Although beneficial impacts are unlikely to occur frequently, they should be included in the assessment.
More commonly, the effects of a project on heritage sites are of an adverse nature. Adverse impacts occur under conditions that include:
(a) destruction or alteration of all or part of a heritage site;
(b) isolation of a site from its natural setting; and
(c) introduction of physical, chemical or visual elements that are out-of-character with the heritage resource and its setting.

Adverse effects can be more specifically defined as direct or indirect impacts. Direct impacts are the immediately demonstrable effects of a project which can be attributed to particular land modifying actions. They are directly caused by a project or its ancillary facilities and occur at the same time and place. The immediate consequences of a project action, such as slope failure following reservoir inundation, are also considered direct impacts.
Indirect impacts result from activities other than actual project actions. Nevertheless, they are clearly induced by a project and would not occur without it. For example, project development may induce changes in land use or population density, such as increased urban and recreational development, which may indirectly impact upon heritage sites. Increased vandalism of heritage sites, resulting from improved or newly introduced access, is also considered an indirect impact. Indirect impacts are much more difficult to assess and quantify than impacts of a direct nature.
Once all project related impacts are identified, it is necessary to determine their individual level-of-effect on heritage resources. This assessment is aimed at determining the extent or degree to which future opportunities for scientific research, preservation, or public appreciation are foreclosed or otherwise adversely affected by a proposed action. Therefore, the assessment provides a reasonable indication of the relative significance or importance of a particular impact. Normally, the assessment should follow site evaluation since it is important to know what heritage values may be adversely affected.

The assessment should include careful consideration of the following level-of-effect indicators, which are defined below:

- magnitude
- severity
- duration
- range
- frequency
- diversity
- cumulative effect
- rate of change

7.4 Indicators of Impact Severity

Magnitude
The amount of physical alteration or destruction, which can be expected. The resultant loss of heritage value is measured either in amount or degree of disturbance.

Severity
The irreversibility of an impact. Adverse impacts, which result in a totally irreversible and irretrievable loss of heritage value, are of the highest severity.

Duration
The length of time an adverse impact persists. Impacts may have short-term or temporary effects, or conversely, more persistent, long-term effects on heritage sites.

Range
The spatial distribution, whether widespread or site-specific, of an adverse impact.

Frequency
The number of times an impact can be expected. For example, an adverse impact of variable magnitude and severity may occur only once. An impact such as that resulting from cultivation may be of recurring or on-going nature.

Diversity
The number of different kinds of project-related actions expected to affect a heritage site.

Cumulative Effect
A progressive alteration or destruction of a site owing to the repetitive nature of one or more impacts.

Rate of Change
The rate at which an impact will effectively alter the integrity or physical condition of a heritage site. Although an important level-of-effect indicator, it is often difficult to estimate. Rate of change is normally assessed during or following project construction.

The level-of-effect assessment should be conducted and reported in a quantitative and objective fashion. The methodological approach, particularly the system of ranking level-of-effect indicators, must be rigorously documented and recommendations should be made with respect to managing uncertainties in the assessment. *(Zubrow, Ezra B.A., 1984).*

7.5 Paleontological Sites
Stand-alone Palaeontological Impact Assessment is appended to this report.

7.6 Pre-Contact Sites
The only site that will possibly be affected is the EIA site at Alternative Location 2. This site can be classed as a Type 3 site with National importance and should be preserved and managed.

7.7 Post-Contact Sites
No sites associated with the post-contact era will be affected by the proposed development.

7.8 Built Environment
No structures were identified on site.

Table 7. Built Environment

No	Criteria	Significance Rating
1	***Are any of the identified sites or buildings associated with a historical person or group?*** No	N/A
2	***Are any of the buildings or identified sites associated with a historical event?*** No	N/A
3	***Are any of the identified sites or buildings associated with a religious, economic social or political or educational activity?*** No	N/A
4	***Are any of the identified sites or buildings of archaeological significance?***	

	No	N/A
5	***Are any of the identified buildings or structures older than 60 years?*** No	N/A

7.9 Architectural Significance

Table 8. Architectural Significance

No	Criteria	Rating
1	***Are any of the buildings or structures an important example of a building type?*** No	N/A
2	***Are any of the buildings outstanding examples of a particular style or period?*** No	N/A
3	***Do any of the buildings contain fine architectural details and reflect exceptional craftsmanship?*** No	N/A
4	***Are any of the buildings an example of an industrial, engineering or technological development?*** No	N/A
5	***What is the state of the architectural and structural integrity of the building?*** No	N/A
6	***Is the building's current and future use in sympathy with its original use (for which the building was designed)?*** N/A	-
7	***Were the alterations done in sympathy with the original design?*** N/A	-
8	***Were the additions and extensions done in sympathy with the original design?*** N/A	-
9	***Are any of the buildings or structures the work of a major architect, engineer or builder?*** No.	N/A

7.10 Spatial Significance

Even though each building needs to be evaluated as a single artefact the site still needs to be evaluated in terms of its significance in its geographic area, city, town, village, neighbourhood or precinct. This set of criteria determines the spatial significance.

Table 9. Spatial Significance

No	Criteria	Rating
1	***Can any of the identified buildings or structures be considered a landmark in the town or city?*** No	-
2	***Do any of the buildings contribute to the character of the neighborhood?*** No	-
3	***Do any of the buildings contribute to the character of the square or streetscape?*** No	-
4	***Do any of the buildings form part of an important group of buildings?*** No	-

8. 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 heritage impact assessment. The impact evaluation of predicted impacts was undertaken through an assessment of the significance of the impacts.

8.1 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 if 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 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.

8.2 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 will be detailed. A brief discussion of the impact and the rationale behind the assessment of its significance has also been included.

8.2.1 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:

Table 10. Classification of Impacts

NATURE		
Including 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		

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:

(Extent + probability + reversibility + irreplaceability + duration + cumulative effect) x magnitude/intensity.

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.

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.

9. Anticipated Impact of the Development

9.1 Ekland Safaris Lion Farm: Subterranean Deposits

Table 11. Mitigation of Impacts: *Subterranean Deposits*

IMPACT TABLE FORMAT	
Heritage component	*Ekland Safaris Lion Farm Lodge (All three Alternatives)*
Issue/Impact/Heritage Impact/Nature	*Heritage sites of significance: Subterranean Deposits*
Extent	*Provincial (3)*
Probability	*Possible (2)*
Reversibility	*Partly Reversible (2)*
Irreplaceable loss of resources	*Significant loss of resources (3)*
Duration	*Medium term (2)*
Cumulative effect	*Medium cumulative effect (3)*

Intensity/magnitude	*Medium (2)*	
Significance Rating of Potential Impact	*30 points. The impact will have a medium negative impact rating.*	
	Pre-mitigation impact rating	Post mitigation impact rating
Extent	3	2
Probability	2	1
Reversibility	2	2
Irreplaceable loss	3	1
Duration	2	2
Cumulative effect	3	1
Intensity/magnitude	2	1
Significance rating	30 (medium negative)	8 (low negative)
Mitigation measure	*Cognisance should be taken of possible subterranean deposits or unmarked graves on the site. It is recommended that an experienced heritage practitioner monitor the clearing and earthmoving phase of the project for unknown sites.*	

9.2 Ekland Safaris Lion Farm: Alternative 1 Rock Shelter

Table 12. Mitigation of Impacts: Rock Shelter at Alternative 1

IMPACT TABLE FORMAT		
Heritage component	*Ekland Safaris Lion Farm Lodge: Alternative 1*	
Issue/Impact/Heritage Impact/Nature	*Heritage sites of significance: Rock Shelter at Alternative 1*	
Extent	*Local*	
Probability	*Unlikely*	
Reversibility	*Totally Reversible*	
Irreplaceable loss of resources	*Insignificant loss of resources*	
Duration	*Medium term*	
Cumulative effect	*Low cumulative effect*	
Intensity/magnitude	*Low*	
Significance Rating of Potential Impact	*8 points. The impact will have a low negative impact rating.*	
	Pre-mitigation impact rating	Post mitigation impact rating
Extent	2	2
Probability	1	1
Reversibility	2	2
Irreplaceable loss	1	1
Duration	2	2
Cumulative effect	1	1
Intensity/magnitude	1	1

Significance rating	8 (low negative)	8 (low negative)
Mitigation measure	*The location of the site should be taken into consideration during the placement of construction camps or stockpiling areas.*	

9.3 Ekland Safaris Lion Farm: Alternative 2 Stone Tool Site

Table 13. Mitigation of Impacts: Stone Tool Site at Alternative 2

IMPACT TABLE FORMAT		
Heritage component	*Ekland Safaris Lion Farm Lodge: Alternative 2*	
Issue/Impact/Heritage Impact/Nature	*Heritage sites of significance: EIA Mapungubwe Site at Alternative 2*	
Extent	*Provincial (3)*	
Probability	*Probable (3)*	
Reversibility	*Irreversible(4)*	
Irreplaceable loss of resources	*Significant loss of resources (3)*	
Duration	*Medium term (2)*	
Cumulative effect	*Medium cumulative effect (3)*	
Intensity/magnitude	*High (3)*	
Significance Rating of Potential Impact	*60 points. The impact will have a low negative impact rating.*	
	Pre-mitigation impact rating	Post mitigation impact rating
Extent	2	2
Probability	3	1
Reversibility	3	2
Irreplaceable loss	4	1
Duration	3	2
Cumulative effect	2	1
Intensity/magnitude	3	1
Significance rating	60 (High negative)	8 (low negative)
Mitigation measure	*It is recommended that the site undergo a second phase of investigation to determine its exact heritage significance. Based on the outcome of this investigation further steps can be recommended.*	

9.2 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 Architects and The Department of Environmental Affairs and Development Planning (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 formalised. In these guidelines they recommend a buffer zone of 1km around significant heritage sites to minimise the visual impact.

Due to the fact that the project will mainly involve sub-surface infrastructure it is not anticipated that any visual impacts will be encountered. Pump stations will also be of low profile and will therefore have a minimum of impact.

9.3 Assumptions and Restrictions

- It is assumed that the South African Heritage Resources Information System (SAHRIS) database locations are correct.
- It is assumed that the paleontological information collected for the project is comprehensive.
- It is assumed that the social impact assessment and public participation process of the Basic Assessment will result in the identification of any intangible or unidentified sites of heritage potential.

10. Assessment of Impacts

10.1 Cultural Landscape

The following landscape types were identified during the study.

Table 14. Cultural Landscape

Landscape Type	Description	Occurrence still possible?	Identified on site?
1 Paleontological	Mostly fossil remains. Remains include microbial fossils such as found in Barberton Greenstones	Yes, sub-surface	No
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, sub-surface	Yes
3 Historic Built Environment	- Historical townscapes/streetscapes - Historical structures; i.e. older than 60 years - Formal public spaces - Formally declared urban conservation areas - Places associated with social identity/displacement	No	No
4 Historic Farmland	These possess distinctive patterns of settlement and historical features such as: - 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.	No	No
5 Historic rural town	- Historic mission settlements - Historic townscapes	No	No
6 Pristine natural landscape	- 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	No	No

	- Pre-colonial or historical burial sites - Geological sites of cultural significance.		
7 Relic Landscape	- Past farming settlements - Past industrial sites - Places of isolation related to attitudes to medical treatment - Battle sites - Sites of displacement,	No	No
8 Burial grounds and grave sites	- 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)	Yes	No
9 Associated Landscapes	- 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	- 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 - Sites associated with slavery and farm labour - Colonial period archaeology	No	No
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

Mitigation

It is recommended that the development designs consider the positive and negative characteristics of the existing cultural landscape type and that they endeavor to promote the positive aspects while at the same time mitigating the negative aspects.

11. Resource Management Recommendations

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 analyze the finds.

12. Site Selection

From a heritage management perspective, the least sensitive site for the proposed development will be Alternative 1 or 3. Development on Alternative 1 or 3 will have the least impact on the heritage resources of the site, provided the recommendations in this report is followed. The preferred sites in rising heritage significance is as follows;

- Alternative 1 or 3
- Alternative 2

12.1 Alternative 1

This site has a Stone Age rock shelter located on its periphery, although not inside the actual development footprint. As such the site can be avoided by the development making this the second least sensitive choice. As such the site can be avoided by the development making this with Site 3 one of the least sensitive selections. Clearing and earth-moving activities should be monitored by a qualified heritage practitioner.

12.2 Alternative 2

An important EIA site was located within the development footprint. It is recommended that this site be avoided since the archaeological deposits here are of great value both provincially and nationally and even internationally.

12.3 Alternative 3

The development is here is devoid of visible heritage sites, although clearing of the heavy plant-growth could result in the identification of more sites. With the information currently at hand this site has the least sensitive heritage value, however clearing and earthmoving should be monitored by a heritage practitioner

13. Conclusion

The site for the Proposed Construction of a 60-Sleeper Lodge on the Ekland Safari Lion Farm in the Vhembe District of the Limpopo Province was investigated, and it was determined that either Alternative 1 or 3 would have the least impact on the area's cultural heritage.

14. References Cited & Researched

Ahler, S.A. 1977. Functional analysis of nonobsidian chipped stone artefacts: terms, variables and quantification. In: Hayden, B. (ed.). Lithic use-wear analysis: 301-328. New York: Academic Press.

Greenfield, H. J. and van Schalkwyk, L. O. 2003. Intr a- settlement social and economic organization of Early Iron Age farming communities in southern Africa: view from Ndondondwane. Azania, 38: 121-37.

Huffman, T. N. 1993. Broederstroom and the Central Cattle Pattern. South African Journal of Science, 89: 220-26.

Huffman, T. N. 2001. The Central Cattle Pattern and interpreting the past. Southern African Humanities, 13: 19-35.

Kent, S. 1998. Invisible gender-invisible foragers: hunter-gatherer spatial patterning and the southern African archaeological record. In: Kent, S. (ed.) Gender in African prehistory: 39-67. California: Altamira Press.

Japha, D., Japha, V., Le grange, L & Todeschini, F. Mission Settlements in South Africa: A Report on their historical background and prospects for conservation. University of Cape Town.

Maggs, T. O. 1984c. The Iron Age south of the Zambezi. In Southern African Prehistory and Paleoenvironments (ed. R. Klein). Rotterdam: Balken, pp. 329-60.

Maggs, T. O. 1995. The Early Iron Age in the extreme south: some patterns and problems. Azania, 29/30: 171-8.

Bewsher, P K, & De Jong, R C, (1997), Ecotourism and cultural resource management. Document prepared for the SA Wildlife College. Pretoria: Centre for Ecotourism.

Department of Arts, Culture, Science and Technology, (1996). White Paper on Arts, Culture and Heritage. Pretoria: SA Communication Service.

DEAT, (1996). White Paper on the Development and Promotion of Tourism in South Africa. Pretoria: The Department.

DEAT, (1998). A national strategy for Integrated Environmental Management in South Africa. Discussion document. Pretoria: The Department.

DEAT, (1998). White Paper on environmental management policy for South Africa. Government Gazette, Vol 395, No 18894, 15 May 1998.

Department of Public Works, (1998), White Paper 1997. Public Works towards the 21st century.

Government Gazette, Vol 391, No 18616, 14 January 1998.

Cultural Heritage 146 Ekurhuleni SoER 2003.

Entries on towns in the Standard Encyclopedia of Southern Africa, published by Nasou, 1970-1976 (11 volumes).

Hall, C.M, & McArthur, S. (eds), (1996). Heritage management in Australia and New Zealand. Draft publication.

Harrison, R, (1994). Manual of heritage management. Oxford: Butterworth Heinemann.

Jote, K, (1994). International legal protection of cultural heritage. Stockholm: Juristförlaget.

Killick, D. 2004. Review Essay: "What Do We Know About African Iron Working?" Journal of African Archaeology. Vol 2 (1) pp. 135–152

McCarthy, T.S. 2006. The Witwatersrand Supergroup. In: Johnson MR, Anhaeusser and Thomas RJ (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg/Council for Geoscience, Pretoria. pp 155-186.

McCarthy, T.S. and Rubidge, B.S. 2005. The story of Earth and Life – a southern African perspective on the 4.6 billion year journey. Struik Publishers, Cape Town. pp 333.

Mason, R. (1986). Origins of Black People of Johannesburg and the Southern Western Central Transvaal AD350-1880. Occasional Paper No. 16 of the Archaeological Research Unit.

Musa, (1994). Museums for South Africa: Intersectoral investigation for national policy.Pretoria: MUSA Secretariat.

National Heritage Council Act, No 11 of 1999.

National Heritage Resources Act, No 25 of 1999.

National Research Foundation, Nexus database of current and completed research projects.

Republic of South Africa, (1996). Constitution of the Republic of South Africa, Act 108 of 1996. Government Gazette, Vol 378, No 17678, 18 December 1996.

Ross, M. (1996). Planning and the heritage. Policy and procedures. Second edition. London:E &FN Spon. SAHRA website http://www.sahra.org.za

Stark, F, (1986). Germiston: The heart of South Africa. Germiston: Felstar Publishing.

UNESCO, (1983). Conventions and recommendations concerning the protection of the cultural heritage. Paris: UNESCO.

US National Parks Service, (1988). Management Policies.

ADDENDUM 1

PUBLIC PARTICIPATION BID

BACKGROUND INFORMATION DOCUMENT

PROPOSED LODGE AT LION FARM, EKLAND SAFARIS, LIMPOPO PROVINCE

INVITATION TO REGISTER AND COMMENT

AURECON REFERENCE NO: 113527/LION FARM LODGE

PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to provide stakeholders with the opportunity to register as interested and affected parties in the Basic Assessment process and to obtain their initial comments on the proposed project.

The purpose of the Basic Assessment is to identify and evaluate feasible alternatives and potential impacts, and to recommend measures to avoid or reduce negative impacts and enhance positive impacts. The decision-making authority is the Limpopo Department of Economic Development, Environment and Tourism (LEDET) and the Environmental Impact Assessment Regulations, 2014.

Please register yourself as an interested and affected party and submit your comments on the proposed project.

Either complete a Response Form, write a letter, call or e-mail the public participation office.

Public Participation office

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Nelspruit, 1200
Tel: (013) 752 7055
Fax: 086 5711464
Email:
Anne-Mari.White@aurecongroup.com

YOUR COMMENT IS IMPORTANT

Your comment on any aspect of the proposed project, the Basic Assessment, its public participation process and issues that need to be investigated, will help focus the process and assist the authorities in their decision-making.

Background

Aurecon South Africa (Pty) Ltd was appointed by Manuponf (Pty) Ltd , to provide environmental services for the Basic Assessment Process(BA), Water Use License and respective specialist studies for the proposed construction of a 60-sleeper lodge on the remainder of the farm Juliana 647 MS and portion 1 of the farm Coen Brits 646 MS, within the boundaries of the Lion Farm, located at Ekland Safari's, Louis Trichardt, Limpopo Province.

Legal Requirements

The Environmental Impact Assessment Regulations, Regulation GN 324 and GN 327 of 2017, promulgated in terms of the National Environmental Management Act (NEMA), lists activities which may not commence without a BA process and environmental authorisation from the competent authority, in this case the Limpopo Department of Economic Development, Environment and Tourism (LEDET).

With the information available, the relevant listed activities read as follows:

- **GN 327 of 2017, Activity 12:** "The development of structures and/or infrastructure with a physical footprint of 100 square meters or more, where such development occurs –
  (a) Within a watercourse.
- **GN 327 of 2017, Activity 19:** "The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from –
  (i) A watercourse.
- **GN 327 of 2017, Activity 27:** "The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance is required for –
  (i) The undertaking of a linear activity; or
  (ii) Maintenance purposes undertaken in accordance with a maintenance management plan.
- **GN 324 of 2017, Activity 6**: "The development of resorts, lodges, hotels and tourism or hospitality facilities that sleeps 15 people or more within the specific areas identified in the systematic biodiversity or bioregional plans"

- **GN 324 of 2017, Activity 2**: "The development of reservoirs for bulk water supply with a capacity of more than 250 cubic metres:
  - Within Limpopo (ii) outside urban areas, within (dd) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.
- **GN 324 of 2017, Activity 12:** "The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan:
  - Within (a) Limpopo, within (i) critical biodiversity areas identified in bioregional plans.
- **GN 324 of 2017, Activity 14:** "The development of (xii) infrastructure or structures with a physical footprint of 10 square metres or more where such development occurs within a (a) watercourse
  - Within (a) Limpopo, (ii) outside urban areas, in (ff) critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.

WATER USE LICENSE APPLICATION

Section 21 of the National Water Act 36 of 1998, lists activities which requires a Water Use License Application prior to commencement of such activities. With the information available, a Water Use License will be required for the following listed activities:

- Section 21 (a): Taking water from a water resource;
- Section 21 (b): Storage of water
- Section 21 (c): Impeding or diverting the flow of water in a watercourse;
- Section 21 (g): Disposing of waste in a manner which may detrimentally impact on a water resource:
- Section 21 (i): Altering the bed, banks, course or characteristics of a watercourse.

HERITAGE IMPACT ASSESSMENT

Notice is hereby given that an application for a Phase 1 Heritage Impact Assessment (HIA) in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999) will be lodged with the Provincial Heritage Resources Authority of Limpopo (LIHRA).

Section 38(1) of the South African Heritage Resources Act (25 of 1999) requires that a heritage study is 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;

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BACKGROUND INFORMATION DOCUMENT

(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.

While the above describes the parameters of developments that fall under this Act., Section 38 (8) of the NHRA is applicable to this development. This section states that;

(8) *The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.*

In regard to a development such as this that falls under Section 38 (8) of the NHRA, the requirements of Section 38 (3) applies to the subsequent reporting, stating that;

(3) *The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2) (a): Provided that the following must be included:*

(a) The identification and mapping of all heritage resources in the area affected;

(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6 (2) or prescribed under section 7;

(c) An assessment of the impact of the development on such heritage resources;

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and

(g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.

(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

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(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;

BACKGROUND INFORMATION DOCUMENT

(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 heritage impact assessment are as follows;

- Field investigations were performed on foot and by vehicle where access was readily available.
- Sites were evaluated by means of description of the cultural landscape, direct observations and analysis of written sources and available databases.
- It was assumed that the site layout as provided by LEAP is accurate.
- We assumed that the public participation process performed as part of the Basic Assessment process was sufficiently encompassing not to be repeated in the Heritage Assessment Phase.

Please note that some project details may change as engineering investigations proceed.

BACKGROUND INFORMATION DOCUMENT

What is a Basic Assessment?

A BA is a short environmental impact assessment process used to identify and assess potential negative and positive consequences of a proposed project and recommend ways to enhance positive impacts and to avoid or reduce negative impacts. The BA process will include:

a) Stakeholder engagement;
b) Assessment of current site conditions;
c) A description of the proposed activity;
d) Description of the environment which may be affected;
e) Description of the need and desirability of the proposed activity and identification of alternatives;
f) Assessment of all environmental impacts identified;
g) Authority decision-making process and a public appeal opportunity will occur after this phase.

Process to be followed

Consideration of authority and stakeholder comments forms an intrinsic part of this process. In terms of the Basic Assessment process, authority decision-making and a public appeal opportunity will occur after the submission of the final Basic Assessment Report to LEDET.

During the public participation phase, consultation with the following parties will take place:

- Relevant authorities at various levels;
- Relevant stakeholders;
- The proponent; and
- The public at large.

The following activities will take place as part of public participation:

- Advertising: On-site and in a local newspaper;
- Supplying people with an opportunity to comment and register as interested and affected parties; and
- The Draft Basic Assessment Report will be made available for public review. I&APs will be notified when the document will be available for review and will then have a 30-day opportunity to comment on the draft report prior to submission to the LEDET for consideration;

Once LEDET and DWS has made a decision, all registered I&APs will be notified of the decision and where the decision will be available for review.

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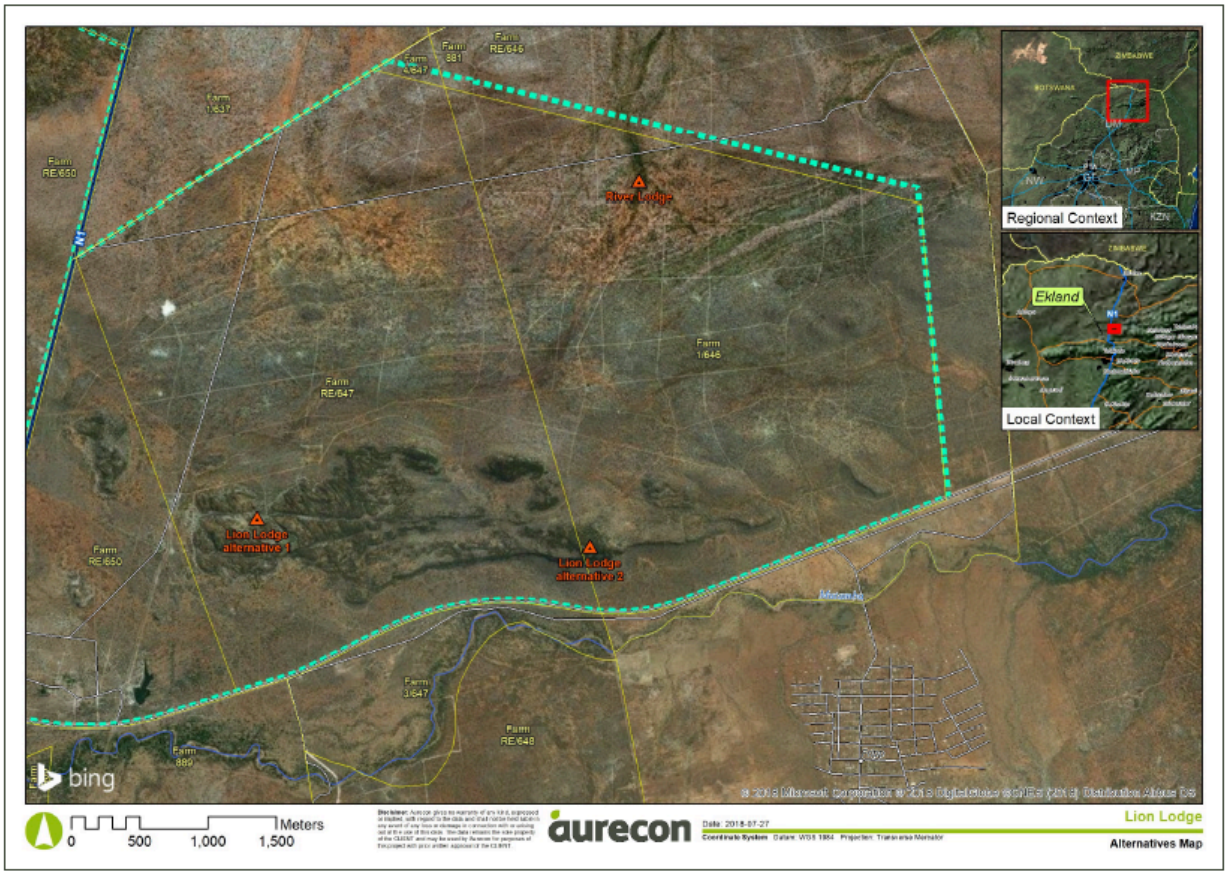

Figure 1: Locality map of the proposed lodge at Lion Farm, Ekland Safaris

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BACKGROUND INFORMATION DOCUMENT

Environmental Basic Assessment for the
Proposed lodge at Lion Farm, Ekland Safaris, Limpopo Province
INVITATION TO REGISTER AND COMMENT, August 2018

Please complete and return to Aurecon in order to be included in the public participation process:

10 Nel Street, Sonheuwel Central,
Nelspruit,1200
Fax: 086 571 1464

Tel: 013 752 7055
Anne-Mari.White@aurecongroup.com

TITLE		**FIRST NAME**	
INITIALS		**SURNAME**	
ORGANISATION			
POSTAL ADDRESS			
		POSTAL CODE	
TEL NUMBER		**FAX NUMBER**	
CELL NUMBER			
E-MAIL			

Yes, I would like to participate in this Basic Assessment ☐ YES

No, I am not interested ☐ NO

COMMENTS: (please use separate sheets if you wish)

1. The following issues must be considered in the Basic Assessment process:
……
……
……
……
……
……

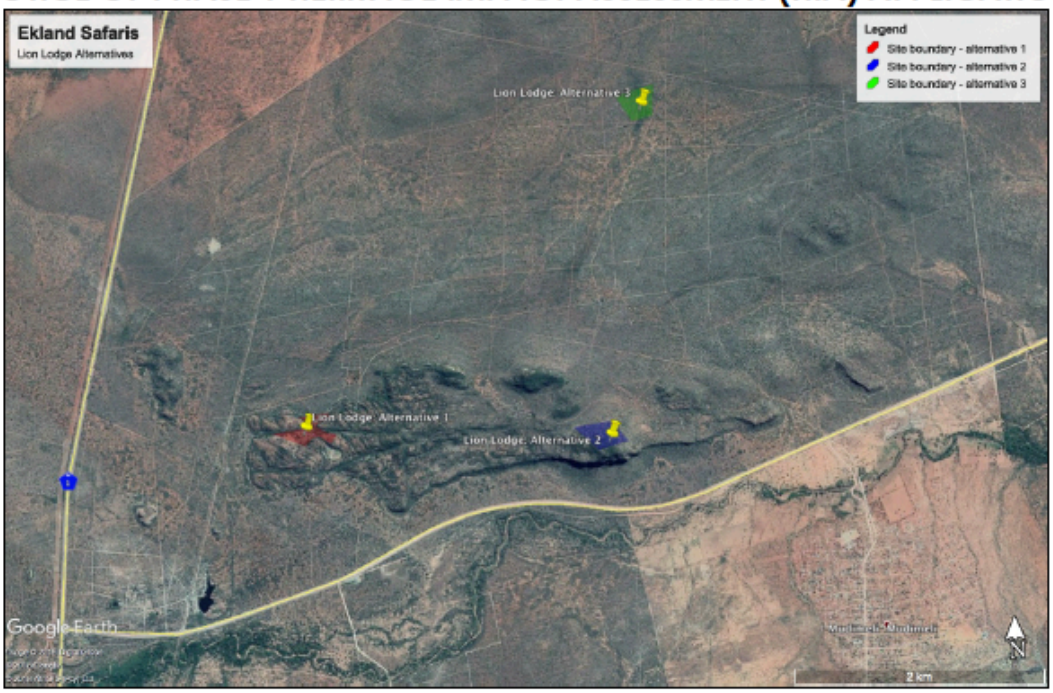
2. Please add the following people / organisations to the mailing list:
……
……
……

We thank you for your participation

ADDENDUM 1

PUBLIC PARTICIPATION
SITE SIGNAGE

NOTICE OF PHASE 1 HERITAGE IMPACT ASSESSMENT (HIA) APPLICATION



Notice is hereby given that an application for a Phase 1 Heritage Impact Assessment (HIA) in terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999) will be lodged with the Provincial Heritage Resources Authority of Limpopo (LIHRA).

Project Name: Proposed Lodge at Lion Farm, Ekland Safaris, Limpopo Province.

Proponent: Manupont (Pty) Ltd

Location: The proposed Ekland Safaris Lion Lodge alternatives are located approximately 50km south of Musina in the Limpopo Province, on the Farms Juliana 647 MS and Coen Britz 646 MS and the following coordinates:

Alternative 1: 22°47'17.77"S 29°54'32.57"E
Alternative 2: 22°47'22.40"S 29°55'57.99"E
Alternative 3: 22°45'57.51"S 29°56'09.68"E

Project & Property Description: Manupont (Pty) Ltd proposes the construction of a 60-sleeper lodge at either one of the three alternatives as mentioned above.

Date of Notice: 2018/08/21

The comment period for the Phase 1 Heritage Impact Assessment (HIA) is 30 Days.

Queries regarding this matter should be referred to:

G&A Heritage Properties (Pty) Ltd.
Public Participation Registration and Enquiries
P.O. Box 522
Louis Trichardt
0920
LESLEY GAIGHER
C: 082 551 5082
E: pp@gaheritage.co.za
www.gaheritage.co.za

G&A Heritage
Heritage Management Consultants

ADDENDUM 1

PUBLIC PARTICIPATION
SITE SIGNAGE PHOTOS

Figure 63. Site Signage

Figure 64. Site Signage

ADDENDUM 1

PUBLIC PARTICIPATION
LEGAL ADVERSTISEMENT

Spring festival at Magoebaskloof

Nature

Residents are invited to the Magoebaskloof Spring Festival at Magoebaskloof Hotel from 23 September to 1 October.

The festival offers an authentic and original craft and food market, open gardens, orchid exhibition and much more.

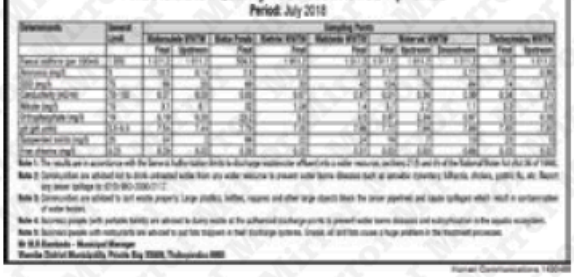
For more information, phone Annemarie Brook at Tel 082 883 4449, write to her at haen@telkomsa.net or visit www.springfestival.co.za.

This group of young people received bursaries to enrol for a computer skills course for six months at the Avuxeni Computer Academy at Louis Trichardt. From left are Luambao Libago, Vusani Machaba, Elelwani Thenga, Mukondeleli Mulaudzi and Unarine Rathongwa from the Avuxeni Academy.

VHEMBE District Municipality

Wastewater Quality Test Results: Compliance

Period: July 2018



THULAMELA MUNICIPALITY

Private Bag X5066
Thohoyandou
0950
Limpopo Province
Tel: (015) 962 7500
Fax: (015) 962 4020
(015) 962 5328

PUBLIC NOTICE
INVITATION TO STAKEHOLDERS/ORGANIZATIONALS/ GOVERNMENT DEPARTMENT TO ATTEND IDP/ BUDGET REPRESENTATIVE FORUM MEETING

Notice is hereby given in terms of Local Government: Municipal System Act, NO: 32 of 2000, section 28, that Thulamela Municipality invites Government Department /stakeholders/ structures to attend IDP/Budget Representatives Forum Meeting.

Details of the Meeting are indicated below:

DATE : 6 September 2018

TIME : 10h00

VENUE : Thohoyandou Indoor Sports Centre

Enquiries can be directed to **Mr Mbedzi R.V Mr Ramaano MR @ 015 962 7500(During office hours).**

MALULEKE HE
MUNICIPAL MANAGER
Thulamela Municipality
Civic Centre
Old Agriven Building
Thohoyandou 0950

Ad designed by Zoutnet Publishers

PUBLIC PARTICIPATION PROCESS

Environmental Authorisation in terms of the NEMA 107 of 1998 for the proposed construction of a 60-bed Lodge on the Lion Farm located at Ekland Safaris, near Louis Trichardt, Makhado Local Municipality, Limpopo.

Notice is hereby given, in terms of Section 41 of the Environmental Impact Assessment Regulations of 2014 (GNR 327 and GNR 324, 2017) read with the National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA], the National Water Act 36 of 1998 (Act No.36 of 1998) as well as Section 38 of the National Heritage Resources Act (Act 25 of 1999) of the following:

Manupont (Pty) Ltd is proposing to construct a 60-bed lodge with associated structures and infrastructures on the remainder of the farm Juliana 647 MS and portion 1 of the farm Coen Brits 646 MS, within the boundaries of the Lion Farm located within Ekland Safaris, near Louis Trichardt. Application for Environmental Authorisation for all listed activities associated with the construction and operation of the lodge will be submitted to the Limpopo Department of Economic Development, Environment and Tourism (LEDET) in terms of the NEMA 107 of 1998 via a Basic Assessment process. A Water Use Licence Application will be submitted to the Department of Water and Sanitation for activities triggered that are listed within section 21 of the National Water Act 36 of 1998 and an application for a Phase 1 Heritage Impact Assessment will also be submitted to the Provincial Heritage Resources Authority of Limpopo (LIHRA).

For more information, to raise any initial issues or concerns or register as an Interested and Affected Party, please contact Aurecon at the contact details provided below:

Anne-Mari White
anne-mari.white@aurecongroup.com
PO Box 3135, Nelspruit, 1200
Tel: (013) 752 7055
Fax: 086 571 1464

Heritage
G&A Heritage Properties (Pty) Ltd.
ATT: Lesley Gaigher
pp@gaheritage.co.za
PO Box 522, Louis Trichardt, 0920
Tel: 082 5515 082

aurecon G&A Heritage

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MAKHADO LOCAL MUNICIPALITY

Tel: (015) 519 3000 Fax: (015) 516 1195 Private Bag X2596 Makhado 0920

PUBLIC NOTICE CALLING FOR INSPECTION OF THE 1ST AND 2ND SUPPLEMENTARY VALUATION ROLLS AND LODGING OF OBJECTIONS: 2018/19

Notice is hereby given in terms of Section 49(1) (a) (i) read together with Section 78(1) and (2) of the Local Government Municipal Property Rates Act, 2004 (Act 6 of 2004), hereinafter referred to as the "Act" that Makhado Local Municipality 1st and 2nd Supplementary valuation rolls for 2018/2019 financial year will be open for public inspection at designated municipal venues from the **4th of September 2018 to the 16th of October 2018**

Designated venues: Makhado Municipality Civic Centre, 83 Krogh Street, Makhado Town, Office C027 (DDP new building), from 8H00 to 13H00 and from 14H00 to 16H00 week days. Supplementary valuation rolls can also be inspected at the Regional Administrator's Offices at Waterval, Dzanani and Vleifontein Satelite Office and in addition they are also available at website www.makhado.gov.za.

An invitation is hereby made in terms of Section 49(1) (i) of the Act, that any property owner or other person who so desires should lodge an objection with the Municipal Manager in respect of any matter reflected in, or omitted from the Supplementary valuation rolls within the above mentioned period, that

NOTICE

PUBLIC PARTICIPATION PROCESS

AND INVITATION TO REGISTER AS AN INTRESTED AND AFFECTED PARTY

THE PROPOSED CONSTRUCTION OF COLLINS CHABANE MUNICIPALITY OFFICES AT MALAMULELE, COLLINS CHABANE LOCAL MUNICIPALITY WITHIN PORTION 48 OF THE FARM MALAMULELE 234 - LT

Notice is hereby given in accordance with Regulations **41(2) (c) (i)** of Government Notice No. R326 of 2017 promulgated in terms of the National Environmental Management Act (Act 107 of 1998) as amended.

P Enviro Holdings Cc has been commissioned by Collins Chabane Municipality to act as an independent environmen-