

**HERITAGE IMPACT ASSESSMENT:  
BASIC ASSESSMENT FOR THE PROPOSED DEVELOPMENT  
OF A BROILER CHICKEN FACILITY ON PLOT 1109,  
REMAINDER OF FARM KLIPPAN 102 JR,  
GA-RANKUWA MAGISTERIAL DISTRICT, GAUTENG**

Required under Section 38 (8) of the National Heritage Resources Act (No. 25 of 1999).

*Report for:*

**CSIR – Environmental Management Services**

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*On behalf of:*

**Nkunzi Agricultural Co-Operative**



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06 February 2017

## Specialist declaration

I, Jayson Orton, as the appointed independent specialist, in terms of the 2014 EIA Regulations, hereby declare that I:

- I act as the independent specialist in this application;
- I perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I have no vested interest in the proposed activity proceeding;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Name of Specialist: Jayson Orton

Signature of the specialist: 

Date: 6 March 2017

## EXECUTIVE SUMMARY

ASHA Consulting (Pty) Ltd was appointed by the Council for Scientific and Industrial Research (CSIR) to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a broiler chicken facility on Plot 1109, remainder of the farm Klippan 102 JR, Ga-Rankuwa Magisterial District, Gauteng. The site lies at S25° 26' 15" E28° 02' 09" and is about 35 km northwest of Pretoria.

The site is flat, sandy land but was found to be covered in very dense grass and pioneer bush. Ground visibility was very poor, but the desktop study showed that few archaeological remains have ever been recorded in the general area.

No archaeological remains were seen in the study area but a residential structure that may be older than 60 years of age was present. The house is in very poor condition and is of low heritage significance. Direct impacts to this structure would be of low significance.

Because no significant heritage impacts are expected, it is recommended that the proposed broiler chicken facility should be authorised. The larger house on the site should be retained and reused if possible, although this should not be a condition of authorisation. The following condition should be incorporated into the Environmental Authorisation:

- If any archaeological material or human burials are uncovered during the course of development then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

## Glossary

**Early Stone Age:** Period of the Stone Age extending approximately between 2 million and 200 000 years ago.

## Abbreviations

**APHP:** Association of Professional Heritage Practitioners

**ASAPA:** Association of Southern African Professional Archaeologists

**BAR:** Basic Assessment Report

**CSIR:** Council for Scientific and Industrial Research

**CRM:** Cultural Resources Management

**ECO:** Environmental Control Officer

**ESA:** Early Stone Age

**GDARD:** Gauteng Department of Agriculture and Rural Development

**GPS:** global positioning system

**HIA:** Heritage Impact Assessment

**NEMA:** National Environmental Management Act (No. 107 of 1998)

**NHRA:** National Heritage Resources Act (No. 25) of 1999

**PHRAG:** Provincial Heritage Resources Authority Gauteng

**PPP:** Public Participation Process

**SAHRA:** South African Heritage Resources Agency

**SAHRIS:** South African Heritage Resources Information System

## Compliance with Appendix 6 of the 2014 EIA Regulations

	Addressed in the Specialist Report
1. (1) A specialist report prepared in terms of these Regulations must contain-	Section 1.4 Appendix 1
a) details of- i. the specialist who prepared the report; and ii. the expertise of that specialist to compile a specialist report including a curriculum vitae;	
b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	Page ii
c) an indication of the scope of, and the purpose for which, the report was prepared;	Section 1.3
d) the date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 3.2
e) a description of the methodology adopted in preparing the report or carrying out the specialised process;	Section 3
f) the specific identified sensitivity of the site related to the activity and its associated structures and infrastructure;	Section 1.1.1
g) an identification of any areas to be avoided, including buffers;	n/a
h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	n/a
i) a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 3.5
j) a description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives on the environment;	Section 6
k) any mitigation measures for inclusion in the EMPr;	n/a
l) any conditions for inclusion in the environmental authorisation;	Section 12
m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Section 9
n) a reasoned opinion- i. as to whether the proposed activity or portions thereof should be authorised; and ii. if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Section 12
o) a description of any consultation process that was undertaken during the course of preparing the specialist report;	n/a (see Section 3.6)
p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	n/a
q) any other information requested by the competent authority.	n/a

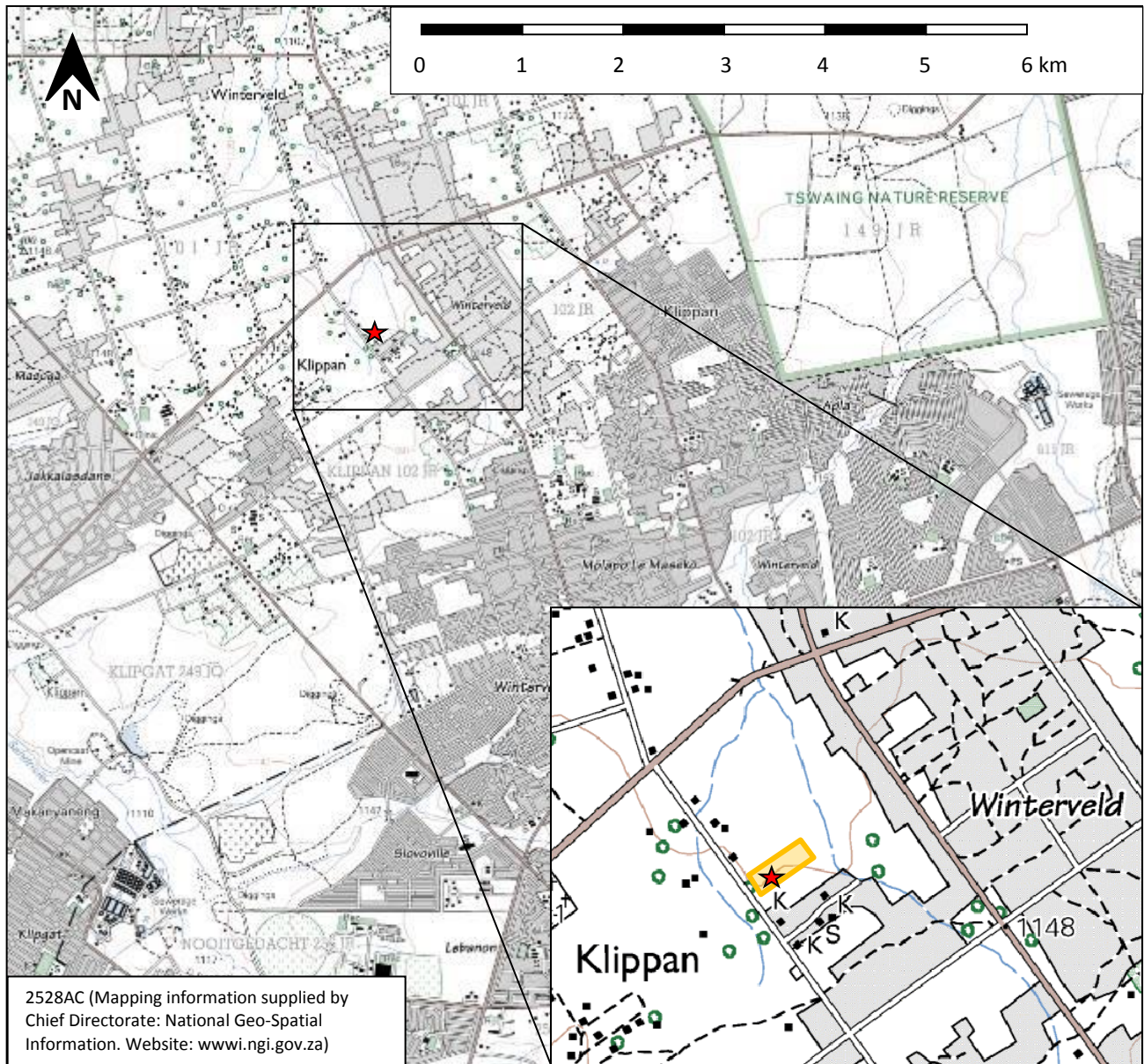
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# 1. INTRODUCTION

ASHA Consulting (Pty) Ltd was appointed by the Council for Scientific and Industrial Research (CSIR) to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a broiler chicken facility on Plot 1109, remainder of the farm Klippan 102 JR, Ga-Rankuwa Magisterial District, Gauteng. The site lies at S25° 26' 15" E28° 02' 09" and is about 35 km northwest of Pretoria (Figure 1).



**Figure 1:** Map showing the location of the site (red star) and Plot boundary (shaded orange polygon).

## 1.1. Project description

Nkunzi Agricultural Co-Operative is proposing a small-scale broiler chicken raising of 4.2 hectares extent. The proposed project will include the following components:



- Office building with shower facilities;
- A bulk feed silo; and
- Two 1800 square meter chicken houses.

The operation will source its water from a borehole and electricity from a generator.

#### 1.1.1. Aspects of the project relevant to the heritage study

All aspects of the proposed development are relevant since excavations for foundations may impact on archaeological and/or palaeontological remains, while the above-ground aspects create potential visual (contextual) impacts to the cultural landscape and any significant heritage sites that might be visually sensitive.

### 1.2. Terms of reference

ASHA Consulting (Pty) Ltd was asked to:

- Determine what aspects of heritage were relevant to the proposed site and development;
- Conduct a site visit to locate any physical heritage resources that might be present; and
- Compile a Heritage Impact Assessment (HIA) that would assess all relevant heritage resources.

### 1.3. Scope and purpose of the report

An HIA is a means of identifying any significant heritage resources before development begins so that these can be managed in such a way as to allow the development to proceed (if appropriate) without undue impacts to the fragile heritage of South Africa. This HIA report aims to fulfil the requirements of the heritage authorities such that a comment can be issued for consideration by the Gauteng Department of Agriculture and Rural Development (GDARD) who will review the Basic Assessment Report (BAR) and grant or withhold authorisation. The HIA report will outline any management and/or mitigation requirements that will need to be complied with from a heritage point of view and that should be included in the conditions of authorisation should this be granted.

### 1.4. The author

Dr Jayson Orton has an MA (UCT, 2004) and a D.Phil (Oxford, UK, 2013), both in archaeology, and has been conducting Heritage Impact Assessments and archaeological specialist studies in the Western Cape and Northern Cape provinces of South Africa since 2004 (Please see curriculum vitae included as Appendix 1). He has also conducted research on aspects of the Later Stone Age in these provinces and published widely on the topic. He is an accredited heritage practitioner with the Association of Professional Heritage Practitioners (APHP) and also holds archaeological accreditation with the Association of Southern African Professional Archaeologists (ASAPA) CRM section (Member #233) as follows:

- Principal Investigator: Stone Age, Shell Middens & Grave Relocation; and
- Field Director: Colonial Period & Rock Art.

Jaco van der Walt conducted the fieldwork and necessary background research. He has an MA in Archaeology (Wits, 2012) and has worked in the heritage field since 2001 across much of southern

Africa (Please see curriculum vitae included in Appendix 1). He has carried out and published research on Iron Age sites and is an accredited heritage practitioner with the Association of Southern African Professional Archaeologists (ASAPA) CRM section (Member #159) as follows:

- Field Director: Iron Age, Shell Middens & Grave Relocation; and
- Field Supervisor: Colonial Period, Stone Age & Grave Relocation.

## 2. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources as follows:

- Section 34: structures older than 60 years;
- Section 35: palaeontological, prehistoric and historical material (including ruins) more than 100 years old;
- Section 36: graves and human remains older than 60 years and located outside of a formal cemetery administered by a local authority; and
- Section 37: public monuments and memorials.

Following Section 2, the definitions applicable to the above protections are as follows:

- Structures: “any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith”;
- Palaeontological material: “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”;
- Archaeological material: a) “material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures”; b) “rock art, being any 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 which is older than 100 years, including any area within 10m of such representation”; c) “wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation”; and d) “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found”;
- Grave: “means a place of interment and includes the contents, headstone or other marker of such a place and any other structure on or associated with such place”; and
- Public monuments and memorials: “all monuments and memorials a) “erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government”; or b) “which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual.”

While landscapes with cultural significance do not have a dedicated Section in the NHRA, they are protected under the definition of the National Estate (Section 3). Section 3(2)(c) and (d) list

“historical settlements and townscapes” and “landscapes and natural features of cultural significance” as part of the National Estate. Furthermore, Section 3(3) describes the reasons a place or object may have cultural heritage value; some of these speak directly to cultural landscapes.

Section 38 (2a) states that if there is reason to believe that heritage resources will be affected then an impact assessment report must be submitted. This report fulfils that requirement.

Under the National Environmental Management Act (No. 107 of 1998; NEMA), as amended, the project is subject to a BAR. The Provincial Heritage Resources Authority Gauteng (PHRAG; for built environment and landscapes) and the South African Heritage Resources Agency (SAHRA; for archaeology and palaeontology) are required to provide comment on the proposed project in order to facilitate final decision making by the GDARD

### **3. METHODS**

#### **3.1. Literature survey and information sources**

A survey of available literature was carried out to assess the general heritage context into which the development would be set. This literature included published material, unpublished commercial reports and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS). The 1:50 000 map and historical aerial images were sourced from the Chief Directorate: National Geo-Spatial Information.

#### **3.2. Field survey**

The site was subjected to a detailed foot survey on 28 February 2017. This was in late summer and the grass cover was dense meaning that visibility of any surface archaeological resources was very limited. During the survey the positions of finds were recorded on a hand-held GPS receiver set to the WGS84 datum. Photographs were taken at times in order to capture representative samples of both the affected heritage and the landscape setting of the proposed development.

#### **3.3. Impact assessment**

For consistency, the impact assessment was conducted through application of a scale supplied by the CSIR.

#### **3.4. Grading**

Section 7 of the NHRA provides for the grading of heritage resources into those of National (Grade 1), Provincial (Grade 2) and Local (Grade 3) significance. Grading is intended to allow for the identification of the appropriate level of management for any given heritage resource. Grade 1 and 2 resources are intended to be managed by the national and provincial heritage resources authorities, while Grade 3 resources would be managed by the relevant local planning authority. These bodies are responsible for grading, but anyone may make recommendations for grading.

It is intended under S.7(2) that the various provincial authorities formulate a system for the further detailed grading of heritage resources of local significance but this is generally yet to happen.

SAHRA (2007) has formulated its own system<sup>1</sup> for use in provinces where it has commenting authority. In this system sites of high local significance are given Grade IIIA (with the implication that site should be preserved in its entirety) and Grade IIIB (with the implication that part of the site could be mitigated and part preserved as appropriate) while sites of lesser significance are referred to as having 'General Protection' and rated with an A (high/medium significance, requires mitigation), B (medium significance, requires recording) or C (low significance, requires no further action).

### **3.5. Assumptions and limitations**

The study is carried out at the surface only and hence any completely buried archaeological sites will not be readily located. Similarly, it is not always possible to determine the depth of archaeological material visible at the surface. The surface was densely covered in grass which hampered visibility of archaeological remains. Part of the site was also found to be waterlogged and could not be surveyed in detail.

### **3.6. Consultation processes undertaken**

The NHRA requires consultation as part of an HIA but, since the present study falls within the context of an EIA which includes a public participation process (PPP), no dedicated consultation was undertaken as part of the HIA. Interested and affected parties would have the opportunity to provide comment on the heritage aspects of the project during the PPP. The landowner was asked about heritage resources on site but was not aware of any within the proposed development footprint.

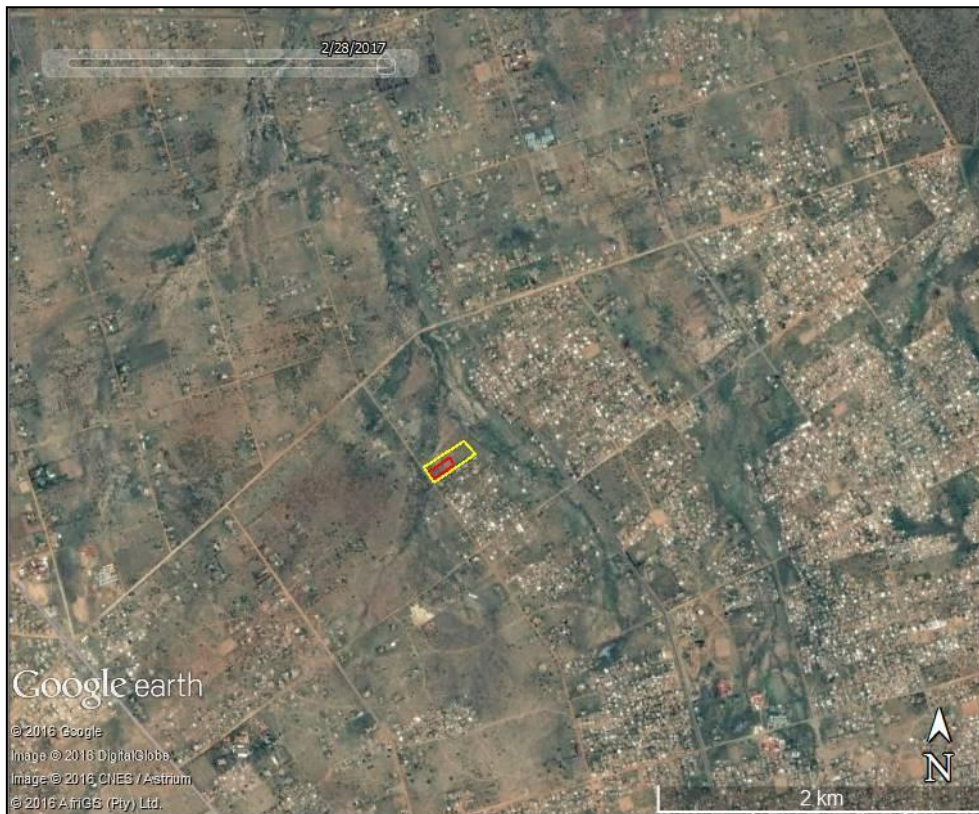
## **4. PHYSICAL ENVIRONMENTAL CONTEXT**

### **4.1. Site context**

Winterveld is a large, rural settlement with some commerce, largely in the form of general dealers, bottle stores and automotive spares and repair services. It is supported by a subsistence farming community producing mainly maize and having live-stock such as cattle, goats and sheep. These subsistence farming activities occur in the area surrounding the settlement. A gravel road passes by the south-western edge of the site, while telephone and electricity lines are present in the area. The property to the northwest is vacant, while to the southwest is a church, pre-school and some residences.

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<sup>1</sup> The system is intended for use on archaeological and palaeontological sites only.



**Figure 2:** Aerial view of the property (yellow polygon) and study area (red polygon) showing their broader context.

#### 4.2. Site description

The site is a level, sandy area with a good covering of grass. Rocky outcrops do not occur on the site but there are two buildings and a few trees and bushes. Drainage is presumably poor because some areas were water-logged. Figures 3 to 6 show some views of the site.



**Figure 3:** View towards the south across the western end of the study area showing the house and long grass present.



**Figure 4:** View towards the east along the southern edge of the study area. The house is just visible on the left.



**Figure 5:** View of the water-logger ground in the eastern part of the property.



**Figure 6:** View towards the southwest along the length of the study area.

## 5. HERITAGE CONTEXT

This section of the report contains the desktop study and establishes what is already known about heritage resources in the vicinity of the study area. What was found during the field survey as presented below may then be compared with what is already known in order to gain an improved understanding of the significance of the newly reported resources.

### 5.1. Archaeological aspects

The nearby Tswaing crater formed c. 220 000 years ago when a meteorite crashed into the earth. As there is no outlet for rain water, evaporation causes precipitation of the natural salts that have been leached out of the soil. The salt has been collected and used by humans ever since the Early Stone Age (ESA). A single ESA site – Wonderboompoort – is known from the area (Mason 1957), while several Later Iron Age Sites also occur (Bergh 1999: 4 & 7).

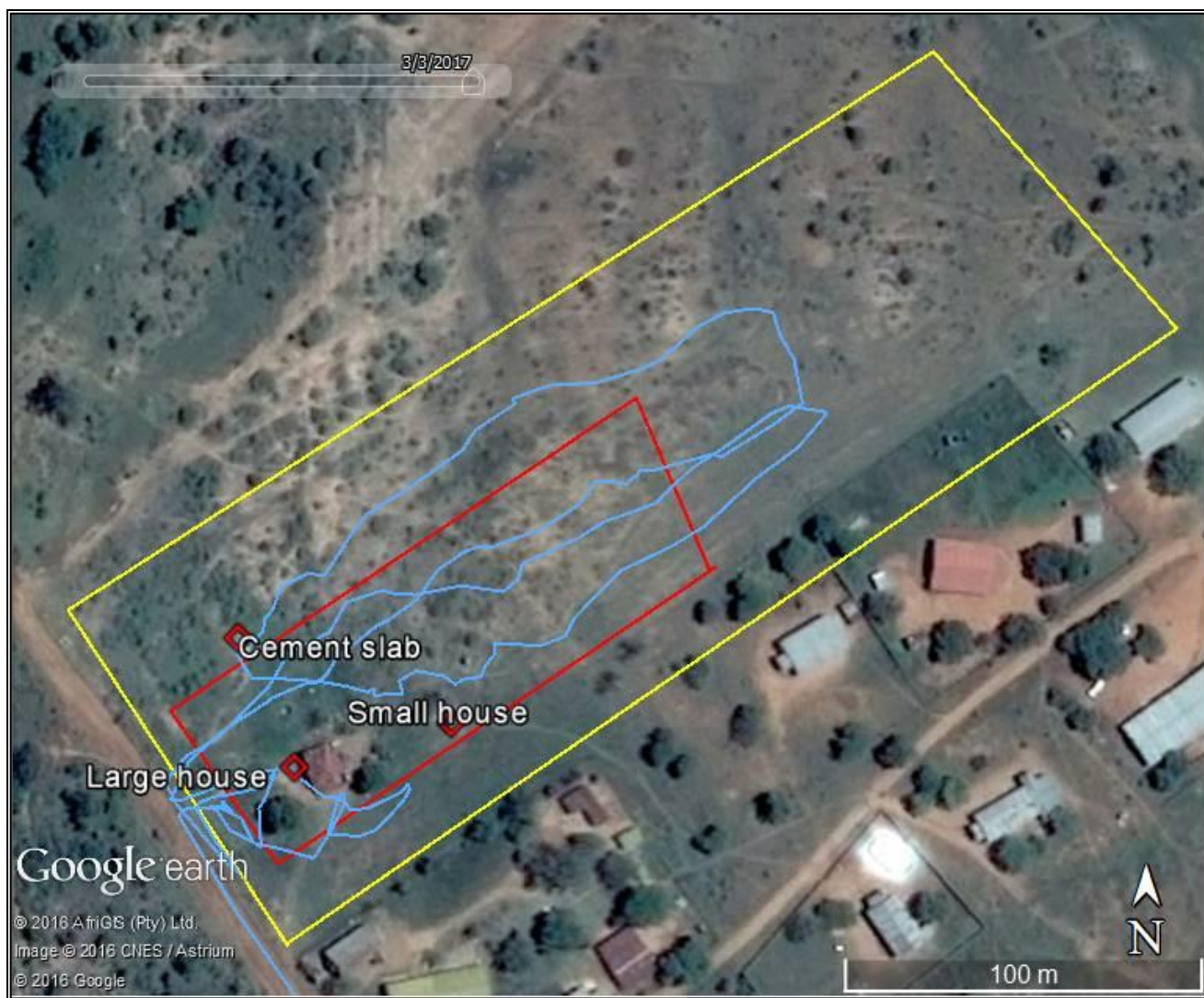
This part of South Africa tends to be dominated by Iron Age archaeology, although such material is generally far less common in areas where building stone was not available. Because this site is on a flat sandy plain there was no opportunity to build stone-walled structures and as such important Iron Age sites will not be present in the wider area. Very few archaeological surveys have been conducted in the area but Van der Walt (2012) and Van Schalkwyk (2013, 2015) did not find any archaeological sites during their surveys. Van Schalkwyk (2013, 2015) did, however, record some burial sites.

### 5.2. Historical aspects and the built environment

Winterveld became one of the first private black freehold areas in South Africa following the 1936 Native Trust and Land Act. It later became part of the Bophuthatswana administrative jurisdiction in 1977 (Coombes 2003). Historical aerial photography shows that the area was completely undeveloped in 1944.

## 6. FINDINGS OF THE HERITAGE STUDY

This section describes the heritage resources recorded in the study area during the course of the project. They are mapped in Figure 7.



**Figure 7:** Aerial view of the property (yellow polygon) and study area (red polygon) showing the finds recorded on site and the survey paths (blue lines).

### 6.1. Archaeology

No archaeological resources were recorded in the study area.

### 6.2. Palaeontology

The SAHRIS Palaeosensitivity map indicates the entire area to be of zero palaeontological sensitivity (Figure 8). This is because it is underlain by granite which is unfossiliferous. Further assessment of this aspect is thus not required.



**Figure 8:** Aerial view of the study area extracted from the SAHRIS Palaeosensitivity Map and indicating the site (red arrow) to be of zero sensitivity (grey shading).

### 6.3. Graves

No graves were observed in the study area or its immediate surrounds.

### 6.4. Built environment

Three structures were present on the site. Aerial photography dating to 1944 shows the site to be entirely undeveloped which means that all structures are younger than 73 years. At least the main house appears to be present by 1968 though (Figure 9). This house (labelled 'large house' on Figure 7), although still occupied, is in a partially derelict state with broken windows and gutters (Figure 10). Its exact age is unknown but, although it might be older than 60 years of age. It lies at  $S25^{\circ} 26' 15.25'' E28^{\circ} 02' 09.43''$ . A second structure (labelled 'small house' on Figure 7) lies some 35 m to the east. It appears to be slightly more modern and has an outside toilet present to its north (Figures 11 & 12). It is at  $S25^{\circ} 26' 14.47'' E28^{\circ} 02' 07.23''$ . A cement slab was also noted to the north of these structures ( $S25^{\circ} 26' 15.71'' E28^{\circ} 02' 07.67''$ ). It presumably indicates the position of some sort of structure.





**Figure 9:** 1961 aerial photograph (Job 453, strip 009, photograph 06395) and modern view of the study area. Although the structures look like they are at a slightly different angle, it is generally not easy to be sure given the resolution of the imagery. The smaller structure towards the east is not visible.



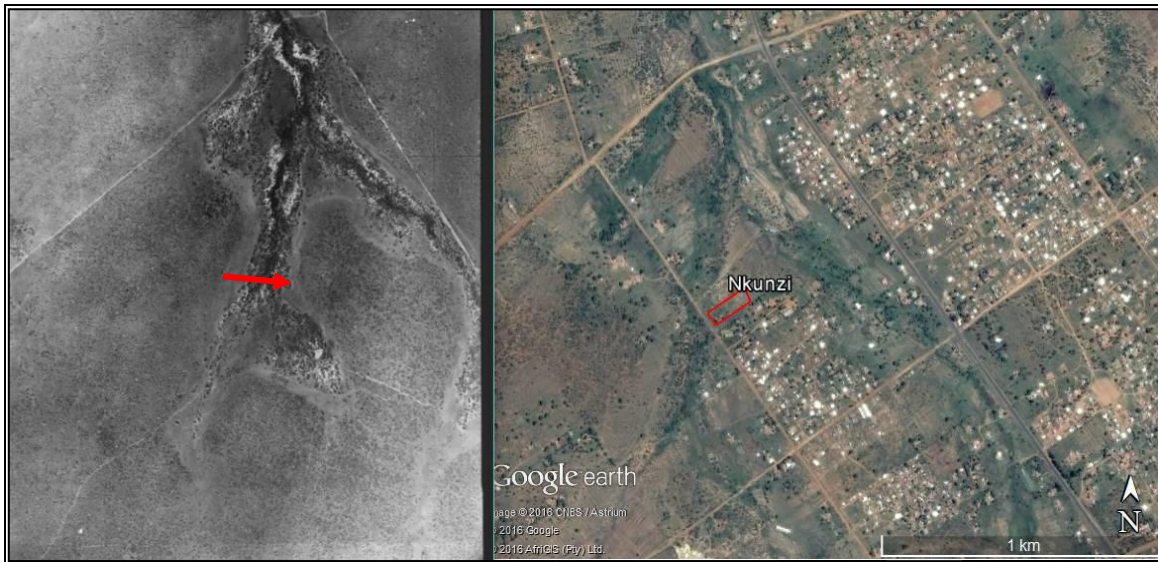
**Figure 10:** View of the south face of the main house on the site.



**Figure 11:** The small house as seen from the west. **Figure 12:** The nearby outside toilet.

### 6.5. Cultural landscape

The 1944 aerial imagery indicates that the general vicinity of the study area was entirely undeveloped (Figure 13). Just two tracks were present some distance to the north and east. By 1961 we see that the area has started being developed for agricultural practices (Figure 14). Development was obviously very rapid since a wider view from 1961 shows the small holdings to be extensive (Figure 15). This means that the present rural/agricultural cultural landscape is a relatively recent development. It nevertheless does have significance for the nature of the landuse which is what gives the area its pleasant rural character. It is interesting to note that the 1965 topographical map shows a 'hut' present on the site (Figure 16), while in 1984 no structures are marked (Figure 17). The map does, however, show that there had been a general increase in the number of buildings in the area.



**Figure 13:** 1944 (Job 14, strip 014, photograph 14130) and modern views of the vicinity of the study area.



**Figure 14:** 1961 landscape (Job 453, strip 009, photograph 06395) and modern aerial views of the vicinity of the study area showing the developing cultural landscape.



**Figure 15:** 1961 landscape (Job 453, strip 009, photograph 06395) and modern aerial views of the vicinity of the study area showing the newly developed cultural landscape to be extensive.



**Figure 16:** 1965 topographical map (1<sup>st</sup> edition) of the area showing a hut on the site. (Location determined through aerial overlay on Google Earth).



**Figure 17:** 1984 topographical map of the area showing the number of structures in the vicinity to have increased markedly.

## 6.6. Summary of heritage indicators

There is only one possible heritage resource in the study area. This is a house that is in very poor condition and may only just be older than 60 years.

## **6.7. Statement of significance and provisional grading**

Section 38(3)(b) of the NHRA requires an assessment of the significance of all heritage resources. In terms of Section 2(vi), “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Although it is presently unknown whether the house on site is greater than 60 years of age or not, it is assumed following the precautionary principle that it is a heritage resource. It can be considered to have low heritage significance for its architectural and social values. PHRAG does not have grading guide and the SAHRA system applies only to archaeological and palaeontological resources.

## **7. IMPACT ASSESSMENT**

The chances of impacting unknown archaeological sites in the study area is considered to be negligible. Any direct impacts that did occur would be during the construction phase only and would be of very low significance (Table 1).

It is unclear whether the house would be demolished or incorporated within the proposed development. However, the assessment presented here assumes total demolition. It has very low heritage significance which means that the extent of the impact can be regarded as site-specific. The impact significance is low but if the structure is retained and incorporated in the development then it would be very low. Indirect, contextual impacts to the surrounding structures would also occur, but because the project is essentially adding another agricultural building to an existing agricultural landscape, this is an impact that is in keeping with the agricultural land use and is thus given a neutral status. The significance of this impact is regarded as being very low (Table 1).

No significant cumulative impacts are expected because of the general lack of significant impacts to heritage resources that will result from this development and the general lack of significant resources known from the surroundings (Table 1).

## **8. LEGISLATIVE AND PERMIT REQUIREMENTS**

Once a comment has been obtained from the relevant heritage authorities, the only further requirement would be that if the house is to be altered or demolished and is greater than 60 years of age then a permit will be required from the PHRAG.

## **9. ENVIRONMENTAL MANAGEMENT PROGRAMME INPUTS**

Due to the lack of heritage resources on the site, no heritage-related input to the environmental management programme is required.

**Table 1: Impact assessment summary table.**

Aspect/ Impact pathway	Nature of potential impact/risk	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	Significance of impact/risk = consequence x probability		Ranking of impact/risk	Confidence level
										Without mitigation /management	With mitigation /management (residual risk/impact)		
<b>CONSTRUCTION PHASE: direct impacts to archaeological and built heritage resources</b>													
Clearing of site and construction of facility	Destruction of archaeological artefacts	Negative	Site	Permanent	Slight	Extremely unlikely	Non-reversible	High	None	Very Low	Very Low	5	High
	Destruction of structures	Negative	Site	Permanent	Moderate	Definite	Non-reversible	High	None	Low	Low	4	
<b>CONSTRUCTION &amp; OPERATION PHASES: indirect impacts to built heritage resources</b>													
Construction and operation of facility	Existence of new structure on the landscape	Neutral	Site	Long term	Slight	Very likely	Reversible	High	None	Very Low	Very Low	5	High
<b>CUMULATIVE IMPACTS: all heritage resources</b>													
Clearing of site and construction and operation of facility	Impacts to heritage resources	Negative	Site	Permanent	Slight	Extremely unlikely	Non-reversible	High	None	Very Low	Very Low	5	High

## **10. EVALUATION OF IMPACTS RELATIVE TO SUSTAINABLE SOCIAL AND ECONOMIC BENEFITS**

Section 38(3)(d) requires an evaluation of the impacts on heritage resources relative to the sustainable social and economic benefits to be derived from the development. In this instance there is a clear economic benefit to be derived from the proposed development and no significant heritage resources will be impacted.

## **11. CONCLUSIONS**

Although there is a possibility that the existing house on site is older than 60 years and might be demolished, this is not regarded as a significant impact. No other heritage resources were recorded on the site.

## **12. RECOMMENDATIONS**

Because no significant heritage impacts are expected, it is recommended that the proposed broiler chicken facility should be authorised. The larger house on the site should be retained and reused if possible, although this should not be a condition of authorisation. The following condition should be incorporated into the Environmental Authorisation:

- If any archaeological material or human burials are uncovered during the course of development then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

## **13. REFERENCES**

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- Mason, R.J. 1957. Preliminary note on an earlier Stone Age site at Wonderboom South, Pretoria. *South African Journal of Science* 53: 431 – 434.
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- Van der Walt, J. 2012. Archaeological Impact Assessment Report for the proposed Soutpan Low Cost Housing Development close to Pretoria, Gauteng. Wierda Park: Heritage Contracts and Archaeological Consulting.
- Van Schalkwyk, J. 2013. Heritage Impact Assessment for the Proposed Winterveld 132kv Power Line, Garankuwa Region, North West and Gauteng Provinces. Monument Park: J van Schalkwyk.
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## APPENDIX 1 – Curriculum Vitae



### *Curriculum Vitae*

**Jayson David John Orton**

ARCHAEOLOGIST AND HERITAGE CONSULTANT

#### **Contact Details and personal information:**

**Address:** 40 Brassie Street, Lakeside, 7945  
**Telephone:** (021) 788 8425  
**Cell Phone:** 083 272 3225  
**Email:** jayson@asha-consulting.co.za

**Birth date and place:** 22 June 1976, Cape Town, South Africa  
**Citizenship:** South African  
**ID no:** 760622 522 4085  
**Driver's License:** Code 08  
**Marital Status:** Married to Carol Orton  
**Languages spoken:** English and Afrikaans

#### **Education:**

SA College High School	Matric	1994
University of Cape Town	B.A. (Archaeology, Environmental & Geographical Science)	1997
University of Cape Town	B.A. (Honours) (Archaeology)*	1998
University of Cape Town	M.A. (Archaeology)	2004
University of Oxford	D.Phil. (Archaeology)	2013

\*Frank Schweitzer memorial book prize for an outstanding student and the degree in the First Class.

#### **Employment History:**

Spatial Archaeology Research Unit, UCT	Research assistant	Jan 1996 – Dec 1998
Department of Archaeology, UCT	Field archaeologist	Jan 1998 – Dec 1998
UCT Archaeology Contracts Office	Field archaeologist	Jan 1999 – May 2004
UCT Archaeology Contracts Office	Heritage & archaeological consultant	Jun 2004 – May 2012
School of Archaeology, University of Oxford	Undergraduate Tutor	Oct 2008 – Dec 2008
ACO Associates cc	Associate, Heritage & archaeological consultant	Jan 2011 – Dec 2013
ASHA Consulting (Pty) Ltd	Director, Heritage & archaeological consultant	Jan 2014 –

#### **Memberships and affiliations:**

South African Archaeological Society Council member	2004 –
Assoc. Southern African Professional Archaeologists (ASAPA) member	2006 –
ASAPA Cultural Resources Management Section member	2007 –
UCT Department of Archaeology Research Associate	2013 –
Heritage Western Cape APM Committee member	2013 –
UNISA Department of Archaeology and Anthropology Research Fellow	2014 –
Fish Hoek Valley Historical Association	2014 –

### **Professional Accreditation:**

**ASAPA membership number: 233, CRM Section member**

Principal Investigator: Coastal shell middens (awarded 2007)  
Stone Age archaeology (awarded 2007)  
Grave relocation (awarded 2014)

Field Director: Rock art (awarded 2007)  
Colonial period archaeology (awarded 2007)

### **Fieldwork and project experience:**

Extensive fieldwork as both Field Director and Principle Investigator throughout the Western and Northern Cape, and also in the western parts of the Free State and Eastern Cape as follows:

#### Phase 1 surveys and impact assessments:

- Project types
  - Notification of Intent to Develop applications (for Heritage Western Cape)
  - Heritage Impact Assessments (largely in the Environmental Impact Assessment or Basic Assessment context under NEMA and Section 38(8) of the NHRA, but also self-standing assessments under Section 38(1) of the NHRA)
  - Archaeological specialist studies
  - Phase 1 test excavations in historical and prehistoric sites
  - Archaeological research projects
- Development types
  - Mining and borrow pits
  - Roads (new and upgrades)
  - Residential, commercial and industrial development
  - Dams and pipe lines
  - Power lines and substations
  - Renewable energy facilities (wind energy, solar energy and hydro-electric facilities)

#### Phase 2 mitigation and research excavations:

- ESA open sites
  - Duinefontein, Gouda
- MSA rock shelters
  - Fish Hoek, Yzerfontein, Cederberg, Namaqualand
- MSA open sites
  - Swartland, Bushmanland, Namaqualand
- LSA rock shelters
  - Cederberg, Namaqualand, Bushmanland
- LSA open sites (inland)
  - Swartland, Franschhoek, Namaqualand, Bushmanland
- LSA coastal shell middens
  - Melkbosstrand, Yzerfontein, Saldanha Bay, Paternoster, Dwarskersbos, Infanta, Knysna, Namaqualand
- LSA burials
  - Melkbosstrand, Saldanha Bay, Namaqualand, Knysna
- Historical sites
  - Franschhoek (farmstead and well), Waterfront (fort, dump and well), Noordhoek (cottage), variety of small excavations in central Cape Town and surrounding suburbs
- Historic burial grounds
  - Green Point (Prestwich Street), V&A Waterfront (Marina Residential), Paarl

## CV Jaco van der Walt

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### PERSONAL PARTICULARS:

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**NAME:** Jaco van der Walt  
**MARITAL STATUS:** Married with two dependants  
**DATE OF BIRTH:** 1977-11-04  
**Work Address** 37 Olienhout Street, Modimolle, 0510  
**E-MAIL:** jaco.heritage@gmail.com  
**MOBILE:** +27 82 373 8491  
**FAX:** +27 86 691 6461

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### SYNOPSIS

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Jaco has been actively involved as a professional archaeologist within the heritage management field in southern Africa for the past 15 years. Jaco acted as council member for the Association of Southern African Professional Archaeologist (ASAPA Member #159) in the Cultural Resource Management (CRM) portfolio for two years (2011 – 2012). Jaco was also a Research Associate with the University of Johannesburg from 2011 – 2013. He is well respected in his field and published in peer reviewed journals and presented his findings on various national and international conferences.

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### ACADEMIC QUALIFICATIONS:

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**Date of matriculation:** 1995  
**Particulars of degrees/diplomas and/or other qualifications:**  
**Name of University or Institution:** University of Pretoria  
**Degree obtained** : BA  
**Major subjects** : Archaeology  
Cultural Heritage Tourism  
**Year of graduation** : 2001

**Name of University or Institution:** University of the Witwatersrand  
**Degree obtained** : BA [Honours]  
**Major subjects** : Archaeology  
**Year of graduation** : 2002

**Name of University or Institution** : University of the Witwatersrand  
**Degree Obtained** :BA [Masters]  
**Major subject** :Archaeology  
**Year of Graduation** :2012

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### EMPLOYMENT HISTORY:

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2011 – Present: **Owner - Heritage Contracts and Archaeological Consulting CC.**  
2007 – 2010 : **CRM Archaeologist**, Managed the Heritage Contracts Unit at the  
University of the Witwatersrand.  
2005 - 2007: **CRM Archaeologist**, Director of Matakoma Heritage Consultants  
2004: **Technical Assistant**, Department of Anatomy University of Pretoria  
2003: **Archaeologist**, Mapungubwe World Heritage Site  
2001 - 2002: **CRM Archaeologists**, For R & R Cultural Resource Consultants,  
Polokwane  
2000: **Museum Assistant**, Fort Klapperkop.

### Countries of work experience include:

Republic of South Africa, Botswana, Zimbabwe, Mozambique, Tanzania, The Democratic Republic of the Congo, Lesotho and Zambia.

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**MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS:**

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- o Association of Southern African Professional Archaeologists. Member number 159
- o Association of Southern African Professional Archaeologists Cultural Resource Management Section  
Accreditation: Field Director Iron Age Archaeology  
Field Supervisor – Colonial Period  
Archaeology, Stone Age Archaeology and Grave  
Relocation
- o Accredited CRM Archaeologist with SAHRA
- o Accredited CRM Archaeologist with AMAFA
- o Co-opted council member for the CRM Section of the Association of Southern African Association Professional Archaeologists (2011 – 2012)

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**REFERENCES:**

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1. Prof Marlize Lombard Senior Lecturer, University of Johannesburg, South Africa  
E-mail: mlombard@uj.ac.za
2. Prof TN Huffman Department of Archaeology Tel: (011) 717 6040  
University of the Witwatersrand
3. Alex Schoeman University of the Witwatersrand E-mail: Alex.Schoeman@wits.ac.za