AIA - MEYERTON MALL AND RESIDENTIAL DEVELOPMENT

Archaeological Impact Assessment for Meyerton Mall and Residential Development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng, Province.

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Client: EnviroPro

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DECLARATION OF INDEPENDENCE

The report has been compiled by PGS Heritage, an appointed Heritage Specialist for EnviroPro, Environmental Consultants. The views stipulated in this report are purely objective and no other interests are displayed in the findings and recommendations of this Archaeological Impact Assessment.

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Report Title	Archaeological Impact Assessment for Meyerton Mall and Residential Development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng, Province.		
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Reviewed	**Wouter Fourie**		**Heritage Specialist / PGS Heritage**

EXPLANATION OF ABBREVIATIONS USED IN THIS DOCUMENT

Abbreviations	Description
AIA	Archaeological Impact Assessment
ASAPA	Association of Southern African Professional Archaeologists
BF	Badfontein
CMP	Conservation Management Plan
CRM	Cultural Resource Management
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPR	Environmental Management Programme Report
ESA	Earlier Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
HoK	Henley-on-Klip
LCTs	Large Cutting tools (LCTs)
LIA	Late Iron Age
LSA	Later Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
NOSA	Northern Stone Age area
PGS	PGS Heritage
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System

EXECUTIVE SUMMARY

PGS Heritage was appointed by EnviroPro to undertake an Archaeological Impact Assessment (AIA) for the proposed Meyerton Mall and Residential Development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng Province.

Due to the significance of the Stone Age sites from the surrounding landscape, and in adherence with the recommendation made by SAHRA in their letter of response to the initial submission of the proposed development on SAHRIS, Drs Tim Forssman, Matthew Caruana and Matt Lotter were appointed to survey the proposed development area and report on any Stone Age occurrences.

A desktop study was undertaken and was used to compile an archaeological layering of the study area within its regional context. This component indicated that the landscape within which the project area is located has a fairly extensive archaeological history. The desktop study component of the project was followed by fieldwork. The methodology comprised a detailed walk through of the study area by experienced and qualified Stone Age archaeologists.

The Vaal River gravel terraces in Vereeniging (Gauteng Province) were first recognized as preserving Earlier Stone Age (ESA) archaeological materials by van Riet Lowe (1937). Collectively, these sites are referred to as the 'Three Rivers sites', which include Klip River Quarry, Henley-On-Klip, Meyerton Townlands and Badfontein Farm (van der Elst Donga) (see Desktop Study section). Furthermore, previous HIAs in this area have also identified younger archaeological sites associated with Later Stone Age (LSA) and Iron Age remains (Huffman, 2008). However, the archaeological record of this area has not been explored in depth, and significant literature on these sites is presented in the desktop study section.

The following mitigation are recommended:

- The point of interest labelled "CT1" is classified as medium significance and warrants excavation and collection of Stone Age materials. This is based on the following observations:
    - Middle Stone Age stone tools were found in subterranean stratigraphic context, named the 'Upper Colluvial Unit'.
    - Artefacts are in near-pristine condition.

- The occurrence of diagnostic pieces that place this assemblage within the Middle Stone Age.
- The rare occurrence of Middle Stone Age sites in the Meyerton area.

TABLE OF CONTENTS **PAGE**

LIST OF APPENDICES:

TABLE OF FIGURES

1 INTRODUCTION

PGS Heritage (Pty) Ltd was appointed by EnviroPro to produce a heritage statement on the potential disturbance of heritage resources on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng Province. Upon identifying Stone Age materials, PGS contacted Heritage Research and Management Specialists (HRMS) to produce an Archaeological Impact Assessment (AIA) to understand the extent and significance of the archaeological occurrences on this property.

1.1 Scope of the Study

The aim of the study is to investigate specific areas where archaeological materials were previously identified on the proposed development area of Farm Rietfontein 364IQ, Meyerton, Gauteng Province by Mr Wouter Fourie (PGS Heritage). The resulting AIA provides results of the archaeological survey conducted by HRMS and recommendations regarding the significance of these findings, as well as suggested mitigation actions. The purpose of this AIA is to assist the developer in managing the identified archaeological resources in a responsible manner in order to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

1.2 Specialist Qualifications

This AIA was compiled by PGS Heritage, the staff of which has a combined experience of nearly 70 years in the heritage consulting industry and have extensive experience in managing HIA processes.

Mr Wouter Fourie, Principal Heritage Specialist for this project, is registered as a Professional Archaeologist with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation, as well as being accredited as a Professional Heritage Practitioner with the Association of Professional Heritage Practitioners – Western Cape (APHP).

Dr Tim Forssman, acted as a Stone Age specialist and surveyor. He has undertaken extensive and in-depth research at several Stone Age, Iron Age and rock art localities around southern Africa. He has also published several scientific articles with a focus on the Later Stone Age, Iron Age, rock

art and archaeological method. He is registered with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation.

Dr Matthew Caruana, acted as a Stone Age specialist and surveyor. He has undertaken extensive and in-depth research at several Earlier, Middle and Later Stone Age localities around southern Africa. He has also published several scientific articles with a focus on Earlier Stone Age technologies. He is registered with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation.

Dr Matt Lotter, acted as a Stone Age specialist and surveyor. He has undertaken extensive and in-depth research at several Earlier, Middle and Later Stone Age localities around southern Africa. He has also published several scientific articles with a focus on Earlier Stone Age technologies. He is registered with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation.

1.3 Assumptions and Limitations

Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the archaeological sites located during the fieldwork do not necessarily represent all the archaeological occurrences present within the area. Should any archaeological remains not included in the inventory be located or observed, an archaeological specialist must immediately be contacted. Such observed or located heritage features and/or objects may not be disturbed or removed in any way, until such time that the archaeological specialist has been able to make an assessment as to the significance of the site (or material) in question.

1.4 Legislative Context

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

i. National Environmental Management Act (NEMA) Act 107 of 1998
ii. National Heritage Resources Act (NHRA) Act 25 of 1999
iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

i. National Environmental Management Act (NEMA) Act 107 of 1998

a. Basic Environmental Assessment (BEA) – Section (23)(2)(d)
b. Environmental Scoping Report (ESR) – Section (29)(1)(d)
c. Environmental Impacts Assessment (EIA) – Section (32)(2)(d)
d. EMP (EMP) – Section (34)(b)

ii. National Heritage Resources Act (NHRA) Act 25 of 1999
a. Protected Areas – Section 28;
b. Protection of Heritage Resources – Sections 34 to 36; and
c. Heritage Resources Management – Section 38

iii. Minerals and Petroleum Resources Development Act (MPRDA) Act 28 of 2002
a. Section 39(3)

The NHRA (s34, 35, 36) stipulates that cultural heritage resources may not be disturbed without authorization from the relevant heritage authority. The NEMA (No 107 of 1998) states that an integrated EMP should (23:2 (b)) "…identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage". In accordance with legislative requirements and EIA rating criteria, the regulations of SAHRA and ASAPA have also been incorporated to ensure that a comprehensive and legally compatible HIA report is compiled.

1.5 Terminology and Abbreviations

Archaeological resources

i. 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;
ii. 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 a 10m buffer area;
iii. 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 in the Maritimes Zones Act, 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;
iv. structures, features and artefacts associated with military history which are older than 75 years and the site on which they are found.

Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Development

This means any physical intervention, excavation or action other than those caused by natural forces, which may according to the heritage agency result in a change to the nature, appearance or physical nature of a place or influence its stability & future well-being, including:

i. construction, alteration, demolition, removal or change in use of a place or a structure at a place;
ii. carrying out any works on or over or under a place;
iii. subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
iv. constructing or putting up for display signs or boards;
v. any change to the natural or existing condition or topography of land; and
vi. any removal or destruction of trees, or removal of vegetation or topsoil

Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

Heritage resources

This means place or object of cultural significance

Late Iron Age (Early Farming Communities)

The archaeology of the last 2000 years up to the 1800s associated with ironworking and farming activities such as herding and agriculture.

Later Stone Age (LSA)

The archaeology of the Stone Age period lasting from ~40-20 000 to 2 000 years ago, represented by Early, Robberg, Oakhurst, Wilton, Final and Ceramic Final phases. The LSA is associated with *H. sapiens sapiens*.

Middle Stone Age (MSA)

The archaeology of the Stone Age from ~300 000 to 40-20 000 years ago – a period represented by Early, Klasies River, Mossel Bay, Pre-Still Bay, Still Bay, Howieson's Poort, Sibudu, Final phases. The MSA is associated with archaic *H. sapiens* and (modern) *H. sapiens sapiens*.

Earlier Stone Age (ESA)

The archaeology of the Stone Age from ~3.2 Million years ago to 250 000 years ago – a period represented by the Lomekwian, Oldowan and Acheulean industries. The ESA is associated with Australopith-grade hominins (e.g. *Au. afarensis, Au. garhi, K. platyops, P. robustus*) and early *Homo* hominins (*H. habilis, H. erectus, H. heidelbergensis*).

Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past and any site which contains such fossilised remains or trace.

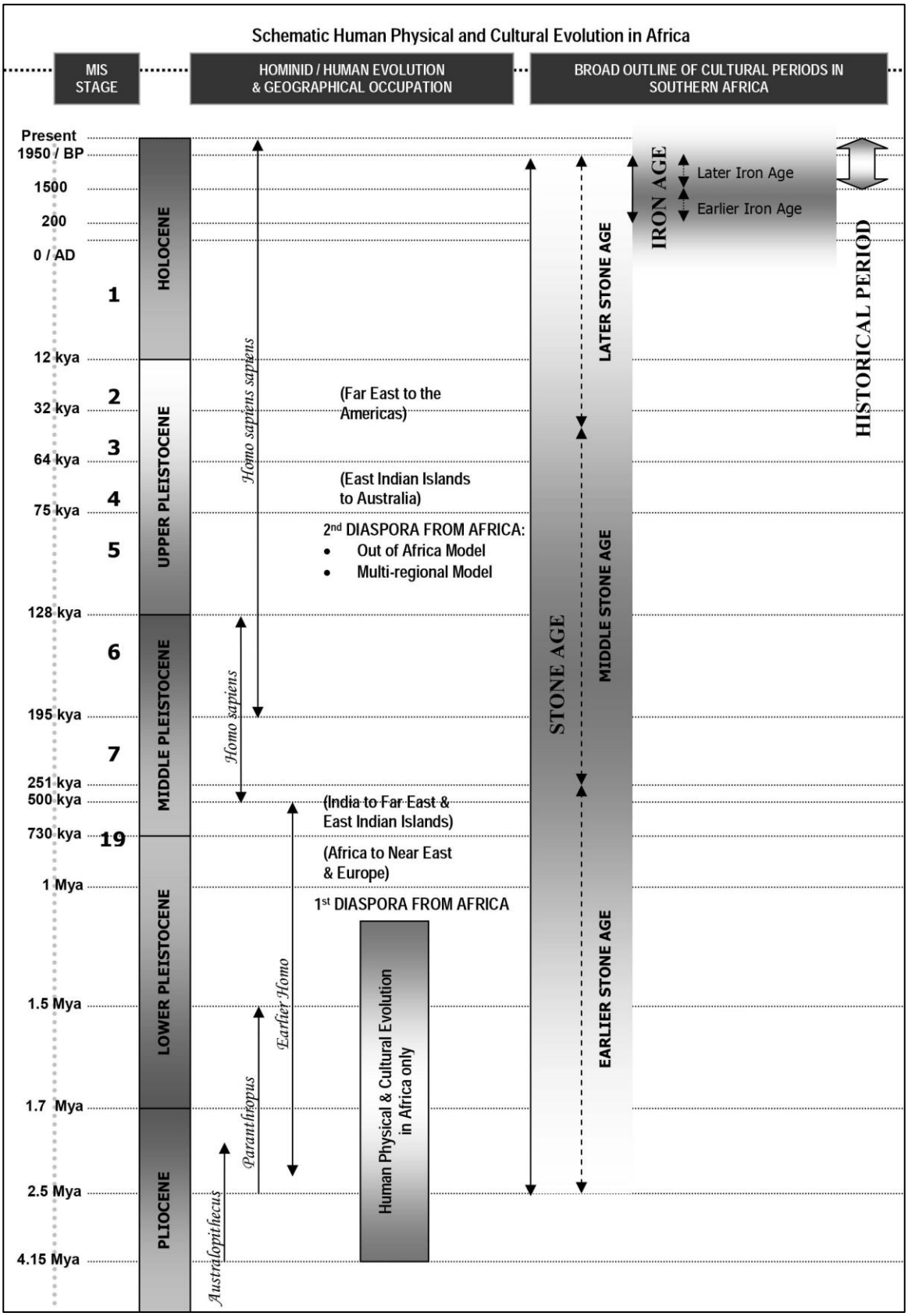

Figure 1 – Human and Cultural Time line in Africa (Morris, 2008; Lomekwian not included)

2 TECHNICAL DETAILS OF THE PROJECT

2.1 Site Location and Description

Coordinates	Meyerton Mall & Residential Development Area: S-26° 34' 41.6" E28° 01' 08.5"
Property	Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton (Fig. 2)
Location	The proposed development area is located in the South-East of Meyerton, Gauteng, approximately 2 km from the R59 Highway. The property borders Verwoerd Rd. to the West, between Boundary Rd. and Begonia St., and the Klip River to the East.
Extent	The proposed development area measures approximately 37.5 hectares
Land Description	The proposed development area is currently unused and covered in grass, with minimal tufts of trees. Sediments are colluvial in the upper stratigraphic layers and these overly quartzite outcrops and degrading diabase bedrock. Large portions of this area have been used as a landfill (refuse dumping) and are exceptionally modified. Two informal settlements also occur on the property.

2.2 Technical Project Description

The area discussed in this report is under review for a mixed (commercial and residential) development. PGS Heritage was contacted to evaluate the potential impact on heritage remains in this area, as well as to assess the need for an HIA report.

The proposed development area spans approximately 37.5 hectares bordering the Klip River to the East and industrial buildings to the West. PGS Heritage then appointed Heritage Research and Management Specialists (HRMS) to conduct a survey of this area and evaluate the potential Stone Age significance of this area.

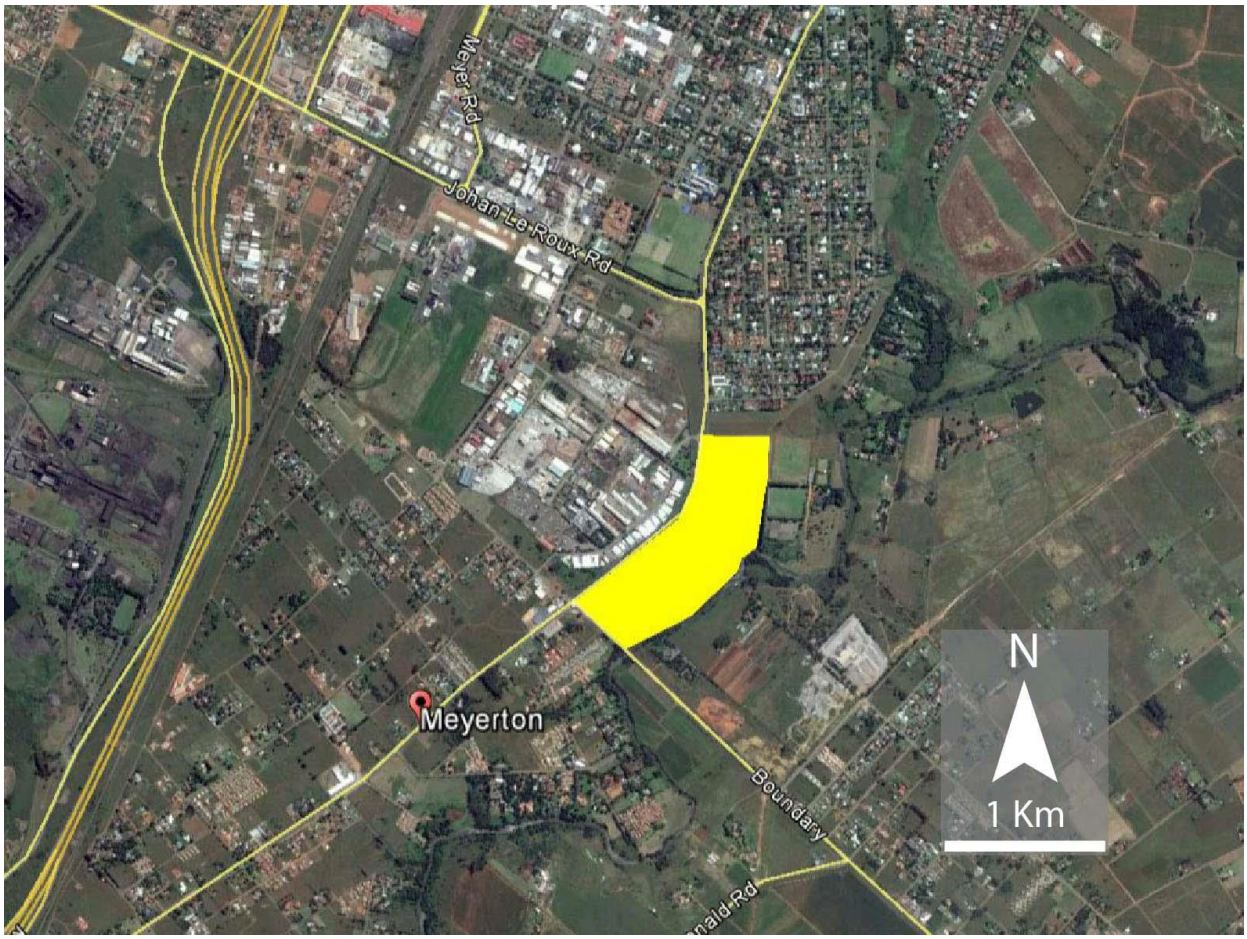

Figure 2. Map showing the position of the proposed development area in Meyerton, Gauteng.

3 ASSESSMENT METHODOLOGY

3.1 Methodology for Assessing Heritage Site Significance

This report was compiled by PGS Heritage for the proposed commercial and residential development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng Province. The applicable maps, tables and figures are included as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (no 107 of 1998). The AIA process consisted of three steps:

Step I – Literature Review: The background information to the field survey leans greatly on the archival and historical cartographic material assessed as part of the study as well as a study of the available literature.

Step II – Physical Survey: The physical survey, where points of interest (POI) were inspected for their archaeological significance. All POIs that were of archaeological significance were

photographed and recorded. The identification of POIs were based on two factors: 1) Mr Wouter Fourie (PGS Heritage) provided a heritage statement that identified two areas of interest where stone tools were found. Mr Fourie then suggested that Stone Age specialists from HRMS conduct a detailed survey of these areas to assess their archaeological importance. 2) Geotechnical trenches (labelled as "cuttings") previously excavated on the property were investigated to assess the local stratigraphy of the survey area and provide sedimentary context to any archaeological remains. These trenches were inspected for subterranean occurrences of archaeological materials. If any diagnostic archaeological materials were discovered at depth or bounded by a sedimentary unit, this would impact the significance level of the survey area. The field work was conducted on 27th April, 2017. The fieldwork was conducted by archaeologists, Drs Timothy R. Forssman, Matthew Caruana and Matt G. Lotter. The survey focused on the study area as provided by the client.

Step III – Report: The final step involved the recording and documentation of relevant heritage resources, the assessment of resources regarding the heritage impact assessment criteria and report writing, as well as mapping and recommendations.

The significance of heritage sites was based on five main criteria:

- Site integrity (i.e. primary vs. secondary context);
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures);
- Density of scatter (dispersed scatter);
    - Low - <10/50m2
    - Medium - 10-50/50m2
    - High - >50/50m2
- Uniqueness; and
- Potential to answer present research questions.

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

A - No further action necessary;
B - Mapping of the site and controlled sampling required;
C - No-go or relocate development position
D - Preserve site, or extensive data collection and mapping of the site; and

E - Preserve site.

3.1.1 Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region were used for the purpose of this report (see Table 1).

Table 1: Site significance classification standards as prescribed by SAHRA

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)		High/Medium	Mitigation before destruction
Generally Protected B (GP.B)		Medium	Recording before destruction
Generally Protected C (GP.C)		Low	Destruction

3.2 Methodology for Impact Assessment

In order to ensure uniformity, a standard impact assessment methodology has been utilised so that a wide range of impacts can be compared. The impact assessment methodology makes provision for the assessment of impacts against the following criteria:

- Significance;
- Spatial scale;
- Temporal scale;
- Probability; and
- Degree of certainty.

A combined quantitative and qualitative methodology was used to describe impacts for each of the aforementioned assessment criteria. A summary of each of the qualitative descriptors, along with the equivalent quantitative rating scale for each of the aforementioned criteria, is given in Table 2.

Table 2: Quantitative rating and equivalent descriptors for the impact assessment criteria

RATING	SIGNIFICANCE	EXTENT SCALE	TEMPORAL SCALE
1	VERY LOW	*Isolated corridor / proposed corridor*	Incidental
2	LOW	*Study area*	Short-term
3	MODERATE	*Local*	Medium-term
4	HIGH	*Regional / Provincial*	Long-term
5	VERY HIGH	*Global / National*	Permanent

A more detailed description of each of the assessment criteria is given in the following sections.

3.2.1 Significance Assessment

The significance rating (importance) of the associated impacts embraces the notion of extent and magnitude, but does not always clearly define these, since their importance in the rating scale is very relative. For example, 10 structures younger than 60 years might be affected by a proposed development, and if destroyed the impact can be considered as VERY LOW in that the structures are all of Low Heritage Significance. If two of the structures are older than 60 years and of historic significance, and as a result of High Heritage Significance, the impact will be considered to be HIGH to VERY HIGH.

A more detailed description of the impact significance rating scale is given in Table 3 below.

Table 3: Description of the significance rating scale

RATING		DESCRIPTION
5	VERY HIGH	Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit.
4	HIGH	Impact is of substantial order within the bounds of impacts which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination

		of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these.
3	MODERATE	Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc.
2	LOW	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these.
1	VERY LOW	Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity is needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale.
	0	There is no impact at all - not even a very low impact on a party or system.

3.2.2 Spatial Scale

The spatial scale refers to the extent of the impact i.e. will the impact be felt at the local, regional, or global scale. The spatial assessment scale is described in more detail in Table 4.

Table 4: Description of the spatial significance rating scale

RATING		DESCRIPTION
5	Global/National	The maximum extent of any impact.
4	Regional / Provincial	The spatial scale is moderate within the bounds of possible impacts, and will be felt at a regional scale (District Municipality to Provincial Level). The impact will affect an area up to 50 km from the proposed site / corridor.
3	Local	The impact will affect an area up to 5 km from the proposed site.
2	Study Area	The impact will affect an area not exceeding the boundary of the study area.
1	Isolated Sites / proposed site	The impact will affect an area no bigger than the site.

3.2.3 Temporal/Duration Scale

In order to accurately describe the impact, it is necessary to understand the duration and persistence of an impact in the environment.

The temporal or duration scale is rated according to criteria set out in Table 5.

Table 5: Description of the temporal rating scale

RATING		DESCRIPTION
1	Incidental	The impact will be limited to isolated incidences that are expected to occur very sporadically.
2	Short-term	The environmental impact identified will operate for the duration of the construction phase or a period of less than 5 years, whichever is the greater.
3	Medium-term	The environmental impact identified will operate for the duration of life of the project.
4	Long-term	The environmental impact identified will operate beyond the life of operation of the project.
5	Permanent	The environmental impact will be permanent.

3.2.4 Degree of Probability

The probability or likelihood of an impact occurring, will be outlined in Table 6 below.

Table 6: Description of the degree of probability of an impact occurring

RATING	DESCRIPTION
1	Practically impossible
2	Unlikely
3	Could happen
4	Very likely
5	It's going to happen / has occurred

3.2.5 Degree of Certainty

As with all studies, it is not possible to be 100% certain of all facts, and for this reason a standard "degree of certainty" scale is used, as discussed in Table 7. The level of detail for specialist studies is determined according to the degree of certainty required for decision-making.

Table 7: Description of the degree of certainty rating scale

RATING	DESCRIPTION
Definite	More than 90% sure of a particular fact.
Probable	Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring.
Possible	Between 40 and 70% sure of a particular fact, or of the likelihood of an impact occurring.
Unsure	Less than 40% sure of a particular fact or the likelihood of an impact occurring.
Can't know	The consultant believes an assessment is not possible even with additional research.

3.2.6 Quantitative Description of Impacts

To allow for impacts to be described in a quantitative manner, in addition to the qualitative description given above, a rating scale of between 1 and 5 was used for each of the assessment criteria. Thus the total value of the impact is described as the function of significance, spatial and temporal scale, as described below:

$$\textbf{\textit{Impact Risk}} = \frac{(\text{SIGNIFICANCE} + \textit{Spatial} + \text{Temporal})}{3} \times \frac{\text{Probability}}{5}$$

An example of how this rating scale is applied is shown below:

Table 8: Example of Rating Scale

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
	Low	Local	Medium Term	Could Happen	**Low**
Impact on heritage resources	2	3	3	3	**1.6**

Note: The significance, spatial and temporal scales are added to give a total of 8, which is divided by 3 to give a criterion rating of 2.67. The probability (3) is divided by 5 to give a probability rating of 0.6. The criteria rating of 2.67 is then multiplied by the probability rating (0,6) to give the final rating of 1,6.

The impact risk is classified according to five classes as described in Table 9 below.

Table 9: Impact Risk Classes

RATING	IMPACT CLASS	DESCRIPTION
0.1 – 1.0	1	Very Low
1.1 – 2.0	2	Low
2.1 – 3.0	3	Moderate
3.1 – 4.0	4	High
4.1 – 5.0	5	Very High

Therefore, with reference to the example used for heritage structures above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

4 CURRENT STATUS QUO

4.1 Description of Study Area

The proposed development area measures approximately 37.5 ha within the South-East Meyerton, Gauteng Province, approximately 2 km from the R59 highway. The site borders Verwoerd Rd. to the West, between Boundary Rd. and Begonia St., and the Klip River to the East. The area is currently unused and covered in grass, with minimal tufts of trees. Sediments are colluvial in the upper stratigraphic layers and these overly quartzite outcrops and degrading diabase bedrock. Large portions of this area have been used as a landfill (refuse dumping) and are exceptionally modified. Two informal settlements also occur on the property.

5 DESKTOP STUDY FINDINGS

The examination of heritage databases, historical data and cartographic resources represents a critical additional tool for locating and identifying heritage resources and in determining the historical and cultural context of the study area. Therefore, an internet literature search was conducted and relevant archaeological and historical texts were also consulted.

5.1 Previous Studies

5.1.1 SAHRA APM REPORTS

Researching the SAHRA APM Report Mapping Project records and the SAHRIS online database (http://www.sahra.org.za/sahris), it was determined that no previous archaeological studies overlapped or were adjacent to the study area. Several other previous archaeological or historical studies had been performed within the wider vicinity of the study area. A selection of previous studies for the area in the APM Report Mapping Project are listed in chronological order.

- Küsel, U. 2007. **Cultural Heritage Resources Impact Assessment for Proposed New Development on Holding 111 Valley Settlements No. 3 Agricultural Holdings I.R., Midvaal Local Municipality, Gauteng Province.** An unpublished report by African Heritage Consultants CC on SAHRIS, Ref. N/A.

- Huffman, T. 2008. **Mountain View Heritage Assessment, Gauteng**. An unpublished report by Prof. T. N. Huffman, Heritage Consultant on SAHRIS, Ref. N/A.

- van Vollenhoven, A. C.; and Pelser, A. J. 2008. **A Report on A Cultural Heritage Impact Assessment for Two Proposed Water Pipe Lines In The Midvaal Municipal Area, Gauteng Province.** An unpublished report by Archaetnos Culture & Cultural Resource Consultants on SAHRIS, Ref. N/A.

- van Vollenhoven, A. C. 2011. **A Report on a Phase 1 Heritage Impact Assessment (HIA) for the proposed Sicelo Substation and Power Line in the Meyerton Area, Gauteng Province.** An unpublished report by Archaetnos Culture & Cultural Resource Consultants on SAHRIS, Ref. N/A.

- Pelser, A. J. 2011. **A Heritage Impact Assessment Study for The Proposed Expansion of the Meyerton Waste Water Treatment Works Near Meyerton, Midvaal Local Municipality, Gauteng**. An unpublished report by Archaetnos Culture & Cultural Resource Consultants on SAHRIS, Ref. 3366.

- Mtongana, N. 2012. **The Meyerton Mall and Residential Development, Midvaal Municipality**. An unpublished report by Gauteng - Department of Agriculture and Rural Development on SAHRIS, Ref. 10253.

- Pelser, A. J. 2012. **Heritage Impact Assessment Report for the Henley-On-Klip General Landfill Closure Application, Midvaal Local Municipality, Gauteng**. An unpublished report by A. Pelser Archaeological Consulting on SAHRIS, Ref. N/A.

- Coertzen, N.; and Badenhorst, P. 2013. **Archaeological Impact Assessment (AIA) of Portions of the Farms Witkoppies 373 IR, Farm Slangfontein 372 IR And Erf 303 of Highbury Township For The Proposed Glen Douglas Dolomite Burning Plant, Meyerton, Gauteng Province**. An unpublished report by Pieter Badenhorst Professional Services on SAHRIS, Ref. 6494.

- Pelser, A. 2013. **Basic Assessment Report for an Atmospheric Emission Licence Application, R&D Furnace, DMS Powders, Meyerton Portion 4 of Kookfontein 545IQ, Gauteng**. An unpublished report by A. Pelser Archaeological Consulting on SAHRIS, Ref. N/A.

- van Schalkwyk, J. 2013. **Cultural Heritage Assessment for The Establishment of the Proposed Paramount Park Township, Meyerton Region, Midvaal Local Municipality, Gauteng Province**. An unpublished report by J. Van Schalkwyk, Heritage Consultant on SAHRIS, Ref. N/A.

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5.1.2 Archaeological Literature

Archaeological investigations in the Meyerton area date to the late 1930's when C. van Riet Lowe (1937) investigated the occurrence of archaeological materials stratified within the Vaal River Gravel sequence. This led to the discovery of several sites near Vereeniging and Meyerton, preserving Large Cutting tools (LCTs) from the Acheulean Industry (van Riet Lowe, 1937, 1952; Breuil, 1943; van Riet Lowe & van der Elst, 1949; van der Elst 1950; le Roux & le Roux, 1959; Mason, 1962). This established an ESA sequence closely located to the proposed development area that is collectively known as the 'Three Rivers Sites' or the 'Vereeniging Sites' (Kuman, 2007), which include Klip River Quarry, Henley-on-Klip, Badfontein (van der Elst donga) and the Meyerton Townlands (van Riet Lowe & van der Elst, 1949; le Roux & le Roux, 1959) (Fig. 3).

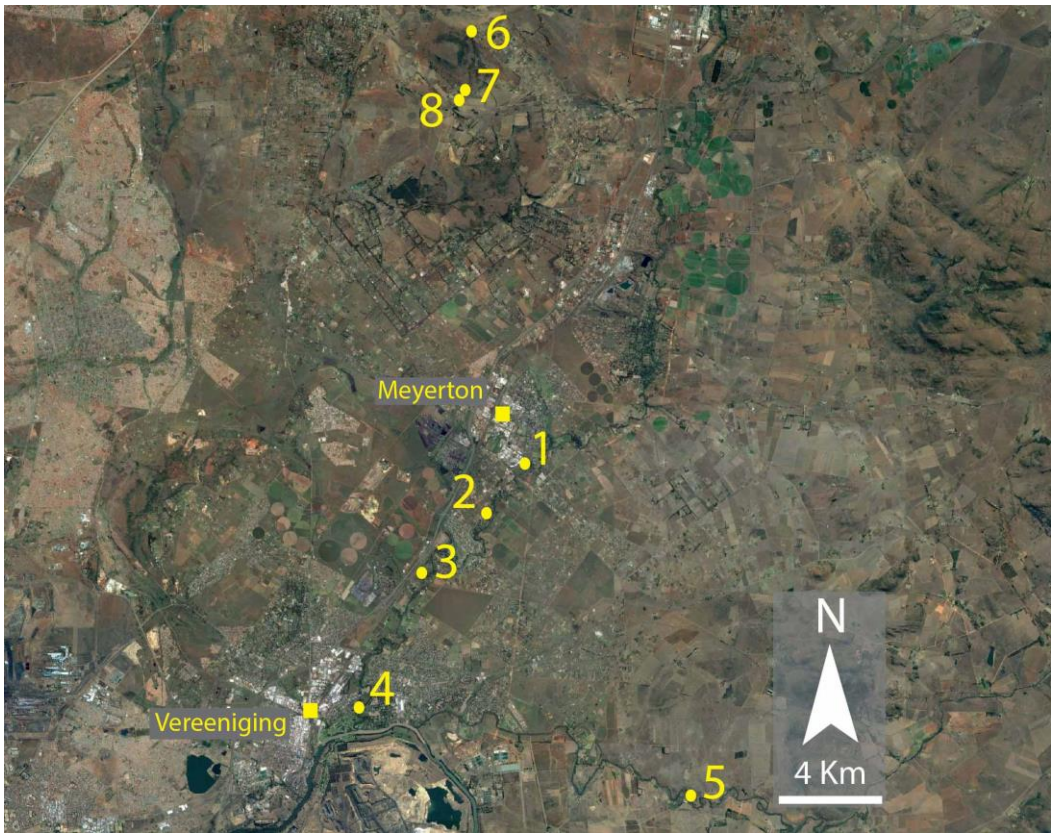

Figure 3. Archaeological site map: 1) Proposed development area on Farm Rietfontein 364IQ; 2) Meyerton Townlands; 3) Henley-on-Kilp; 4) Kilp River Quarry; 5) Badfontein; 6) Iron Age stone walling (Huffman, 2008); 7) "Uitkomst facies" site (Huffman, 2008); 8) Oakhurst quarry site (Huffman, 2008).

The 'type site' of the Vaal River Gravel sequence, for the Vereeniging sites mentioned above, is the Klip River Quarry, discovered by C. van Riet Lowe (1937). The gravel sequence of this area comprises rocks of shales and sandstones from the Karoo Supergroup with diabase intrusions (dolerites and andesites). The latter rock types are the major toolstone materials utilized in

Acheulean assemblages. Characteristic Acheulean LCTs were discovered, including handaxes and cleavers, yet detailed descriptions of this assemblage have not been provided.

After the description of the Klip Quarry site, W. van der Elst, working with C. van Riet Lowe, discovered Henley-on-Klip (HoK) and Badfontein (BF) (van Riet Lowe & van der Elst, 1949). The former site was identified in a road cutting, leading from Meyerton to Heidelberg, which preserved Acheulean LCTs. All artefacts were made on quartzite, which originate from the Witwatersrand Supergroup exposed to the North of Vereeniging. Further, the HoK LCTs were produced through bipolar and large-flaking methods, and most of the specimens within this assemblage are rolled or weathered (van Riet Lowe & van der Elst, 1949). BF is a sequence of tool-bearing river-gravel terraces exposed within an erosional donga, locally called the 'van der Elst donga' near the Suikerbosrand River (van Riet Lowe & van der Elst, 1949; van der Elst 1950). This donga exposes Dwyka and Ecca formations with artefact-bearing layers preserving LSA, MSA, Fauresmith and Acheulean assemblages. Most of the Acheulean implements are rolled, although the Fauresmith, MSA and LSA assemblages are in a relatively un-weathered condition (van der Elst 1950).

Lastly, le Roux and le Roux (1959) briefly reported the Meyerton Townlands site, located near the proposed development area (see Fig. 3). Trenches excavated by the Rand Water Board exposed gravels associated with the Klip River. Over 100 artefacts made on quartzite were collected from this site, and a large percentage was rolled. LCTs were produced through bipolar and large-flaking techniques, similar to other assemblages from the Vereeniging Sites.

While MSA and LSA assemblages have been identified from the area surrounding the proposed development site (van der Elst, 1950), no assemblage associated with these techno-complexes has been recovered. Huffman (2008) identified a purported Oakhurst quarry site (see Fig. 3, no. 8), although no additional studies have been conducted to affirm this observation. As such, MSA and LSA records are important to preserve from the Meyerton and Vereeniging areas.

Iron Age sites have been identified in an AIA produced by Huffman (2008) for the Mountain View development on Farm Nooitgedacht 176 IR, Gauteng, located approximately 10 km from the proposed development site. Stone walling and ceramic residues were identified at several localities near Perdeberg hill, located on Farm Nooitgedacht. Some ceramics were associated with the "Uitkomst facies" (AD 1800) and of high significance (Fig. 3, No. 7).

5.2 Archaeological & Historical Sequence

DATE	DESCRIPTION
~3.2 million to 250 000 years ago	The Earlier Stone Age (ESA) is the oldest techno-complex identified in the African archaeological record, which is comprised of three industries: 1) Lomekwian, 2) Oldowan and 3) Acheulean. The Lomekwian industry (3.2 Myr) is associated with percussive tools and large flakes although it is only found at a single site in West Turkana, Kenya. The Oldowan industry (2.6 – 1.5 Myr) is found in East and South Africa and characterised by expedient yet organised flaking systems, with primarily core- and flake-based assemblages. Finally, the Acheulian industry (1.7 Myr – 250 kyr) is the last ESA industry to develop, comprised by Large Cutting Tools (i.e. handaxes and cleavers) and organised core reduction (i.e. Levallois). Several Acheulean-bearing sites have been identified from the area around Meyerton, mostly concentrated towards Vereeniging.
>250 000 to 40 000 years ago	The Middle Stone Age (MSA) is associated with flakes, points and blades manufactured by means of the prepared core technique. This phase is furthermore associated with modern humans and complex cognition (Wadley 2013). MSA stone tools were identified on the property in stratigraphic context (see Fieldwork Findings Section).
~40 000 years ago to 2 000	The Later Stone Age (LSA) is associated with an abundance of very small stone tools known as microliths. One identified LSA site has been found in the region of Meyerton (Huffman, 2008), although no archaeological work has been carried out in this area concerning this techno-complex.
~2 000 years ago to 1800's	The Iron Age is the archaeology of the last 2000 years up to the 1800s, associated with ironworking and farming activities such as herding and agriculture. Several Iron Age sites have been identified in the Meyerton region (Huffman, 2008), although no archaeological research has been conducted on these localities.

6 FIELDWORK FINDINGS

The survey conducted on 27th April, 2017 by Drs Tim Forssman, Matthew Caruana and Matt Lotter was mapped with a Garmin 62s GPS Maps unit. Figure 4 shows the track log and waypoints taken during the survey. The track displays the mid-line of the survey, one surveyor was on either side of the track. The following data log was generated to report on the archaeological significance of the survey area. Photographs were taken only at POIs that were relevant to the aims of this survey.

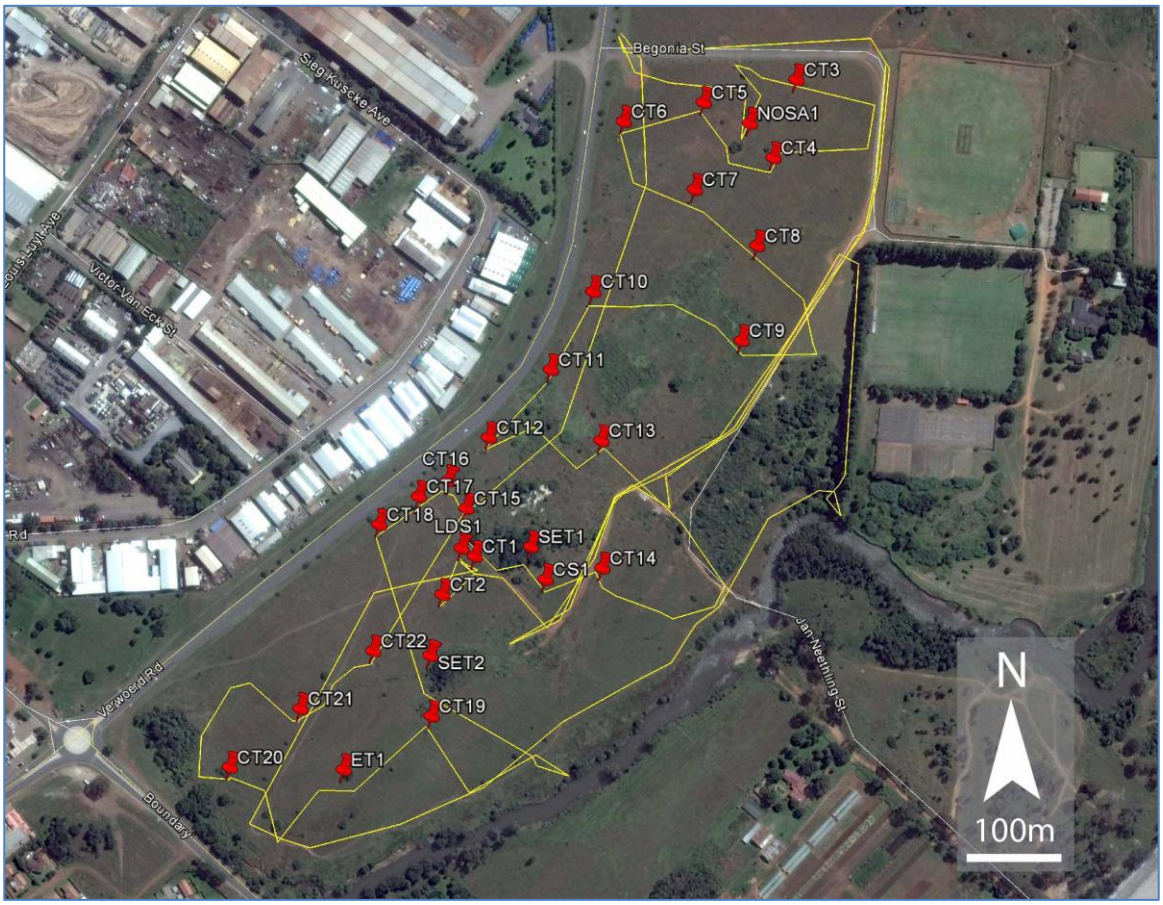

Figure 4. Track logs and POIs identified during the field survey.

6.1 POI Descriptions

Site: Cutting 1 (CT1) (Fig. 5)

GPS: -26° 34' 46.4"S; 28° 01' 04.1"E

Type: Geotechnical trench

Chronology: Middle Stone Age

Description: Large (4x2m) open trench showing sequence with upper and lower colluvial units, separated by a hiatus of somewhat sterile sediments (with sporadic artefacts). Upper unit comprises a poorly sorted colluvial pebble to cobble matrix-supported deposit. The hiatus contains sediment, likely colluvial in origin that is highly weathered/degraded. The lower colluvial unit comprises a poorly sorted cobble to boulder clast-supported deposit (no visible artefacts). Diagnostic Middle Stone Age artefacts were identified around Cutting 1 and within the exposed stratigraphic profile (Upper Colluvial Unit and into the hiatus sediments) (Figs. 6 & 7). Artefact density in upper unit and mid-way into the hiatus is medium to high (10-15 artefacts exposed in profile within 80x80cm area). Almost all clasts and artefacts occur on quartzite.

Significance: Medium. This site warrants mitigation through excavation and sampling. Middle Stone Age archaeology is not well reported from this area. Further, this site clearly indicates the burial depth of artefacts and the high possibility of their exposure during development (Fig. 8).

Figure 5. Cut 1 on landscape

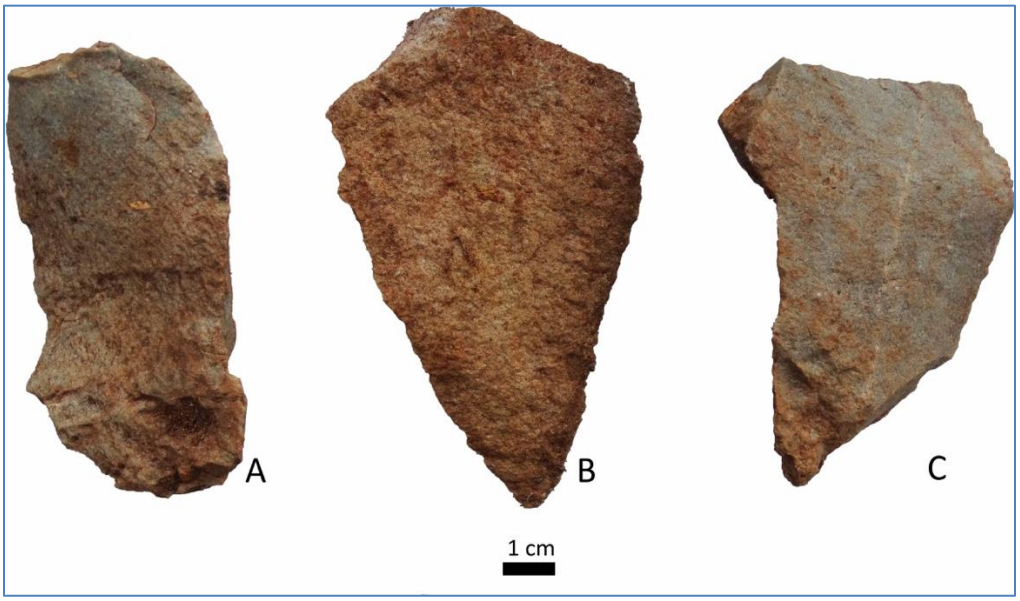

Figure 6. MSA artefacts identified from Cut 1: A) Blade; B) Point; C) Point.

Figure 7. Stratigraphic profile of Cut 1.

Figure 8. Artefacts buried at depth in Cut 1.

Site: Low-density scatter 1 (LDS1) (Fig. 9)

GPS: -26° 34' 46.1"S; 28° 01' 03.6"E

Type: Surface exposure of artefacts

Chronology: Modern with older Stone Age material, likely MSA with additional LSA (Fig. 10).

Description: Surface scatter of lithics, porcelain, modern glass and metal.

Significance: Low (poor context due to exposure, but based on findings from Cutting 1 these pieces are likely eroding out from the ground).

Figure 9. LDS1 on landscape.

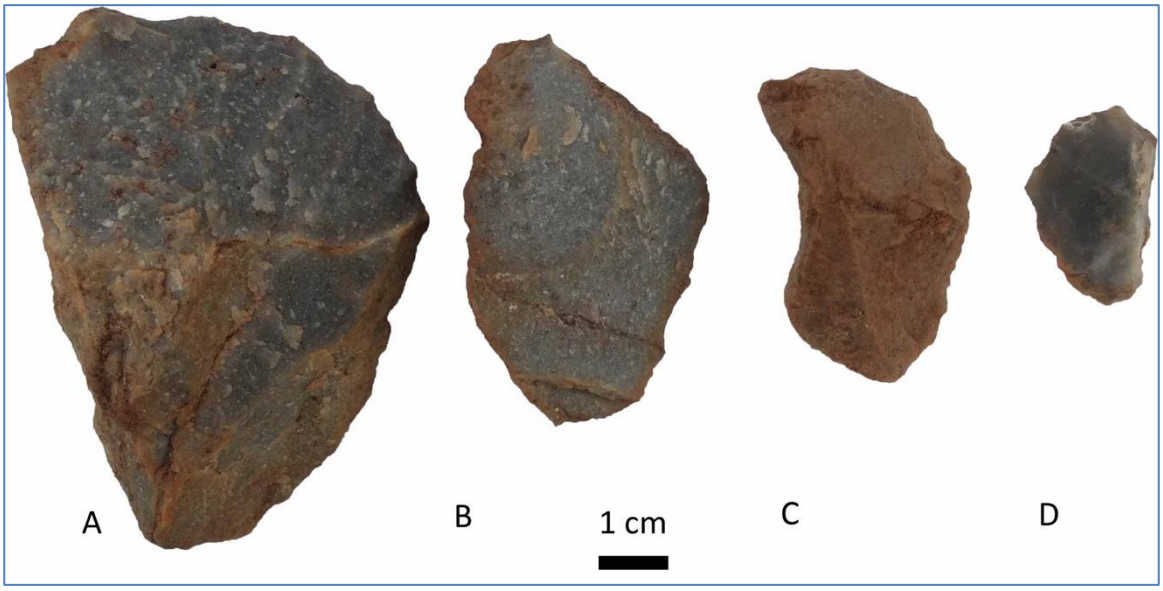

Figure 10. Stone Age artefacts identified at LDS1: A) Core; B-D) Flakes.

Site: Cutting 2 (CT2) (Fig. 11)

GPS: -26° 34' 47.7"S; 28° 01' 02.8"E

Type: Geotechnical trench

Chronology: Stone Age, possibly MSA

Description: Large open trench showing deposits with mainly large cobble to boulder sized material. Sequence is similar to Cutting 1, where upper and lower units occur. Low density of artefacts is present.

Significance: Low

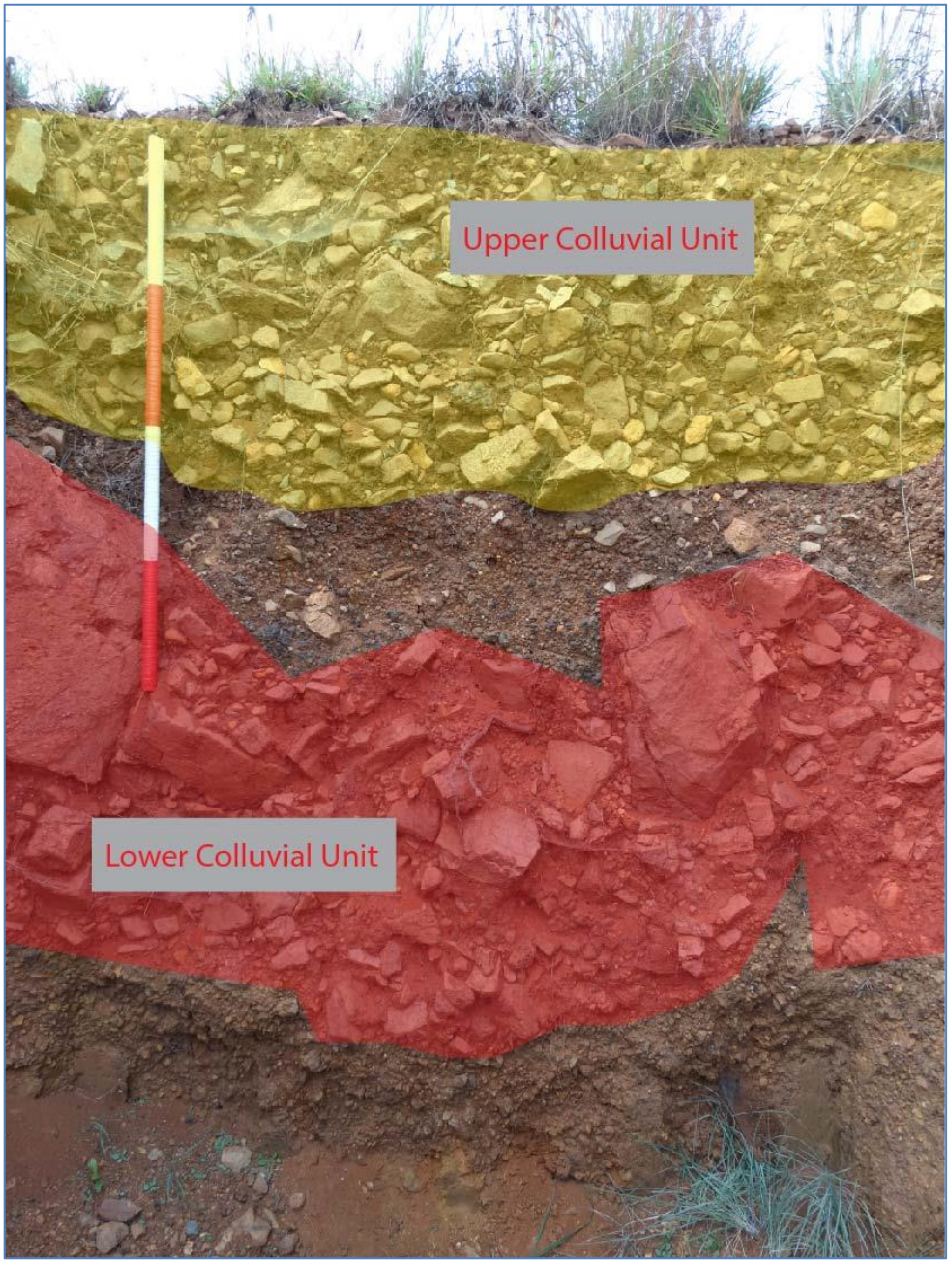

Figure 11. Stratigraphic layers exposed in Cut 2 demonstrating continuity of Upper and Lower Colluvial Units.

Site: Northern Stone Age area (NOSA) (Fig. 12)

GPS: -26° 34' 31.6"S; 28° 01' 14.6"E

Type: Surface site with exposed bedrock (quartzite)

Chronology: Stone Age, likely MSA

Description: Large area with exposed bedrock. Originally referred to as a quarry, where lithics were being produced and struck from blanks obtained from the nearby outcrop. This does not seem to be the case. These rocks appear to be spalled/damaged, naturally, through either repeated heat exposure (veld fires) or some other kind of natural process/es (Fig. 13). Artefacts do occur here though, albeit sporadically (core and flakes, on quartzite), yet their production here '*in-situ'* is unlikely.

Significance: Low

Figure 12. NOSA on landscape

Figure 13. Spalling scar likely due to natural processes.

Site: Cutting 3 (CT3) (Fig. 14)

GPS: -26° 34' 30.1"S' 28° 01' 16.4"E

Photo numbers: 57-62

Type: Geotechnical trench

Chronology: Stone Age

Description: Shallow trench (4x1m by 0.5m deep) showing similar gravel/cobble deposit at depth. Sporadic artefacts found, most likely MSA (Fig. 15).

Significance: Low

Figure 14. Cut 3 on landscape.

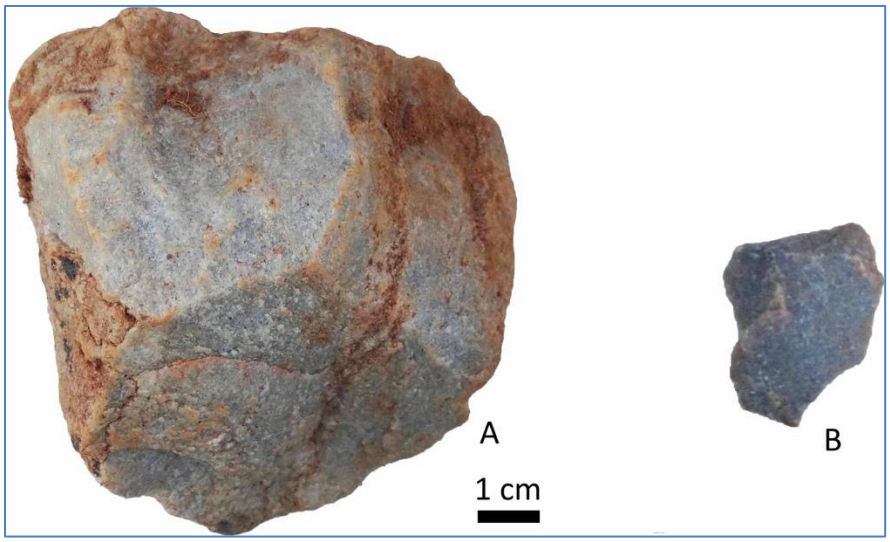

Figure 15. Stone Age artefacts identified at Cut 3: A) Core; B) Flake.

Site: Cutting 4 (CT4)

GPS: -26° 34' 32.8"S; 28° 01' 15.5"E

Type: Geotechnical trench

Chronology: Stone Age, possibly MSA

Description: Open trench with very low-density scatter of Stone Age lithics

Significance: Low

Site: Cutting 5 (CT5) (Fig. 16)

GPS: -26° 34' 30.9"S; 28° 01' 12.8"E

Type: Geotechnical trench

Chronology: Stone Age, possibly MSA

Description: Open trench with very low-density scatter of Stone Age lithics, primarily on quartzite but also on opaline. This cutting does show variation in the local bedrock with exposures of platy slate/shale.

Significance: Low

Figure 16. Cut 5 on the landscape.

Site: Cutting 6 (CT6)

GPS: -26° 34' 31.5"S; 28° 01' 09.8"E

Type: Geological trench

Chronology: N/A

Description: This trench shows a sequence of weathered quartzite underlain by slate/shale and a final calcretised horizon.

Significance: None

Site: Cutting 7 (CT7)

GPS: -26° 34' 33.8"S; 28° 01' 12.5"E

Type: Geotechnical trench

Chronology: Stone Age

Description: Open trench showing exposure of colluvial band/deposit in upper horizon, underlain by weathered dolerite bedrock (basal material)

Significance: Low

Site: Cutting 8 (CT8)

GPS: -26° 34' 35.8"S; 28° 01' 14.9"E

Type: Geotechnical trench

Chronology: N/A

Description: Open trench showing 2m deep sequence of sterile sediments. This shows variation in the sub-surface deposits with no colluvial artefact-bearing deposit evident

Significance: None

Site: Cutting 9 (CT9) (Fig. 17)

GPS: -26° 34' 39.0"S; 28° 01' 14.3"E

Type: Geotechnical trench showing historic dump

Chronology: Historic

Description: Trench showing ashy deposits containing various implements (ceramics, metal, all modern). Suggests burning of dumped material and then re-deposition.

Significance: Low

Figure 17. Cut 9 showing ashy deposits.

Site: Cutting 10 (CT10)

GPS: -26° 34' 37.3"S; 28° 01' 08.6"E

Type: Geotechnical trench

Chronology: Stone Age

Description: Open trench showing colluvial horizon at top (±30-40cm) with weathered dolerite at base

Significance: Low

Site: Cutting 11 (CT11)

GPS: -26° 34' 40.0"S; 28° 01' 07.0"E

Type: Old land fill

Chronology: Modern

Description: Trench showing 1.5m thick ashy layer with assorted modern implements

Significance: None

Site: Cutting 12 (CT12)

GPS: -26° 34' 42.3"S; 28° 01' 04.6"E

Type: Geotechnical trench

Chronology: Stone Age

Description: Open trench of mostly exposed sediments, with upper quartzite colluvial layer

Significance: Low

Site: Cutting 13 (CT13)

GPS: -26° 34' 42.3"S; 28° 01' 04.6"E

Type: Geotechnical trench

Chronology: Modern

Description: Trench cutting into layer of dump ash, although this trench does contain the artefact-bearing colluvial horizon with a low density of artefacts (e.g., one bifacial core) (Fig. 18)

Significance: Low

Figure 18. Bifacial core identified from Cut 13.

Site: Cutting 14 (CT14)

GPS: -26° 34' 46.8"S; 28° 01' 08.9"E

Type: Geotechnical trench

Chronology: N/A

Description: Open trench that contains no artefacts or significant deposits

Significance: None

Site: Concrete structure 1 (CS1) (Fig. 19)

GPS: -26° 34' 47.2"S; 28° 01' 06.8"E

Type: Trough-like concrete structure

Chronology: Modern

Description: Concrete platform and trough. Platform likely for borehole pump, to pump water up from the river.

Significance: None

Figure 19. Concrete platform and trough identified at CS1.

Site: Settlement 1 (SET1)

GPS: -26° 34' 46.1"S; 28° 01' 06.2"E

Type: Informal settlement

Chronology: Modern

Description: Informal settlement amongst dense vegetation

Significance: None

Site: Cutting 15 (CT15)

GPS: -26° 34' 44.8"S; 28° 01' 03.7"E

Type: Geotechnical trench

Chronology: Modern

Description: Trench showing concrete at depth with lower weathered bedrock

Significance: None

Site: Cutting 16 (CT16)

GPS: -26° 34' 43.8"S; 28° 01' 03.1"E

Type: Geotechnical trench

Chronology: N/A

Description: Trench with very poor grade/weathered quartzite/sandstone

Significance: None

Site: Cutting 17 (CT17)

GPS: -26° 34' 44.3"S; 28° 01' 01.9"E

Type: Geotechnical trench

Chronology: N/A

Description: Trench showing dolerite layer with manganese staining

Significance: None

Site: Cutting 18 (CT18)

GPS: -26° 34' 45.3" 28° 01' 00.4"E

Type: Geotechnical trench

Chronology: N/A

Description: Shallow trench.

Significance: None

Site: Settlement 2 (SET2)

GPS: -26° 34' 49.8"S; 28° 01' 02.3"E

Photo numbers: 71-72

Type: Informal settlement

Chronology: Modern

Description: Informal settlement amongst dense vegetation. Occurs around pre-existing structure with pipeline (perhaps linked to sewage pipes) (Fig. 20). Sporadic Stone Age artefacts occur on the surface in poor context.

Significance: None

Figure 20. Pipeline Cover identified at SET2.

Site: Cutting 19 (CT19)

GPS: -26° 34' 51.9"S; 28° 01' 02.4"E

Type: Geotechnical trench

Chronology: Stone Age

Description: Trench with deposits but no colluvial cobble horizon. Very sporadic artefacts.

Significance: Low

Site: Excavated trench 1 (ET1)

GPS: -26° 34' 53.8"S; 28° 00' 59.0"E

Type: Excavated trench

Chronology: Modern

Description: Trench that appears to be part of some kind of rock quarrying, or borrow pit sediment removal.

Significance: None

Site: Cutting 20 (CT20)

GPS: -26° 34' 53.7"S; 28° 00' 54.6"E

Type: Geotechnical trench

Chronology: N/A

Description: Trench showing bedrock.

Significance: None

Site: Cutting 21 (CT21)

GPS: -26° 34' 51.6"S; 28° 00' 57.4"E

Type: Geotechnical trench

Chronology: Stone Age

Description: Trench with exposed degraded bedrock and very sporadic lithics.

Significance: Low

Site: Cutting 22 (CT22)

GPS: -26° 34' 49.7"S; 28° 01' 00.2"E

Type: Geotechnical trench

Chronology: N/A

Description: Trench with weathered quartzite at surface.

Significance: None

7 IMPACT OF PROPOSED DEVELOPMENT ON ARCHAEOLOGICAL OCCURRENCES

Based on the results of the field survey and desktop study the significance of the proposed development on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton is MEDIUM-LOW. The identification of MSA lithics in a stratigraphic layer is of value because of the rarity of this techno-complex in this region.

With the implementation of mitigation measures this impact and risk can be reduced to LOW.

IMPACT	SIGNIFICANCE	SPATIAL SCALE	TEMPORAL SCALE	PROBABILITY	RATING
Impact on archaeological deposits					
No mitigation	HIGH	Study Area	Permanent	Definite	
	4	2	5	5	2.88
With mitigation	MODERATE	Study Area	Permanent	Could happen	
	3	2	5	3	1.98

8 MITIGATION MEASURES AND GENERAL RECOMMENDATIONS

Due to the discovery of subterranean Stone Age materials in the Cut 1 locality the following general recommendations are required:

- It is recommended that a sample of the MSA material from the Colluvial Units in Cut 1 be excavated for preservation. The relatively un-weathered state of the tools found here and rarity of this techno-complex in this area heighten the scientific value of these materials.
- A permit must be gained through SAHRA under Section 35 of the NHRA (Act 25 of 1999) to a qualified and experienced Stone Age archaeologist.
- It is further recommended that an archaeologist suitably qualified in Stone Age fieldwork and research must be appointed to undertake an Archaeological Watching Brief during the Construction Phase of the project. The appointed archaeologist will be responsible for the following:

    - Provide training to the project Environmental Control Office (ECO) in Stone Age archaeology and the identification of Stone Age artefacts and sites. The ECO will be responsible for daily on-site monitoring during the Construction Phase with the appointed archaeologist visiting the site every two weeks.

    - Conduct an archaeological monitoring program whereby the construction site is visited once every two weeks for at least the first three months of the project.

    - On-site assessment of any Stone Age material exposed during construction and the provision of recommendations for the way in which the exposed material must be mitigated.

- Compile and submit an archaeological monitoring report at the end of the monitoring process.

- During the monitoring undertaken everyday on-site by the ECO and once every two weeks by the appointed archaeologist, all construction work must be closely monitored. Should any Stone Age material or any archaeological material be identified, all construction work in that area must immediately stop and the ECO or archaeologist (if he/she is already present on site) must demarcate a construction free area around the discovery. If the ECO made the discovery, the archaeologist must be contacted immediately to visit the construction site to assess the exposed material. After assessing the exposed material the archaeologist would provide recommendations for the exposed material, which may range from destruction without mitigation (if the exposed material is found to be of little significance) to archaeological mitigation (if the exposed material is found to be significant).

9 CONCLUSIONS

PGS was appointed by EnviroPro to assess the occurrence of heritage resources on Portion 64 of Portion 81 of the Farm Rietfontein 364IQ, Meyerton, Gauteng Province. Upon identifying Stone Age materials, PGS then contacted HRMS to produce an Archaeological Impact Assessment (AIA) to understand the extent and significance of the archaeological occurrences on this property.

To achieve this, a desktop study was undertaken and was used to compile an archaeological layering of the study area within its regional context. This component indicated that the landscape within which the project area is located has a fairly extensive history.

This was followed by a field survey of the area where POIs were identified and studied. The locality "Cut 1" (see Fig. 4) was found to contain MSA stone tools bounded within a stratigraphic layer, here referred to as the Upper Colluvial Unit (see Figs. 6-8).

The lack of MSA assemblages from this area and the lack of weathering on the identified materials heighten their significance to scientific research. Thus the following recommendations are proposed:

- A sample of the MSA materials from "Cut 1" should be excavated for preservation.

- These excavations and sampling must be done after a permit has been granted under Section 35 of the NHRA (Act 25 of 1999) to a qualified and experienced Stone Age archaeologist.
- A archaeologist suitably qualified in Stone Age fieldwork and research must be appointed to undertake an Archaeological Watching Brief during the Construction Phase of the project. The appointed archaeologist will be responsible for the following:

    - Provide training to the project Environmental Control Office (ECO) in Stone Age archaeology and the identification of Stone Age artefacts and sites. The ECO will be responsible for daily on-site monitoring during the Construction Phase with the appointed archaeologist visiting the site every two weeks.
    - Conduct an archaeological monitoring program whereby the construction site is visited once every two weeks for at least the first three months of the project.
    - On-site assessment of any Stone Age material exposed during construction and the provision of recommendations for the way in which the exposed material must be mitigated.
    - Compile and submit an archaeological monitoring report at the end of the monitoring process.

- During the monitoring undertaken everyday on-site by the ECO and once every two weeks by the appointed archaeologist, all construction work must be closely monitored. Should any Stone Age material or any archaeological material be identified, all construction work in that area must immediately stop and the ECO or archaeologist (if he is already present on site) must demarcate a construction free area around the discovery. If the ECO made the discovery, the archaeologist must be contacted immediately to visit the construction site to assess the exposed material. After assessing the exposed material the archaeologist would provide recommendations for the exposed material which may range from destruction without mitigation (if the exposed material is found to be of little significance) to archaeological mitigation (if the exposed material is found to be significant).

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www.sahra.org.za/sahris

Appendix A

LEGISLATIVE REQUIREMENTS – TERMINOLOGY AND ASSESSMENT CRITERIA

General principles

In areas where there has not yet been a systematic survey to identify conservation worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected.

Archaeological and palaeontological sites, materials, and meteorites are the source of our understanding of the evolution of the earth, life on earth and the history of people. In terms of the heritage legislation, permits are required to damage, destroy, alter, or disturb them. Furthermore, individuals who already possess heritage material are required to register it. The management of heritage resources is integrated with environmental resources and this means that, before development takes place, heritage resources are assessed and, if necessary, rescued.

In addition to the formal protection of culturally significant graves, all graves which are older than 60 years and are not located in a cemetery (such as ancestral graves in rural areas), are protected. The legislation also protects the interests of communities that have an interest in the graves: they should be consulted before any disturbance takes place. The graves of victims of conflict and those associated with the liberation struggle are to be identified, cared for, protected and memorials erected in their honour.

Anyone who intends to undertake a development must notify the heritage resources authority and, if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the construction company's cost. Thus, the construction company will be able to proceed without uncertainty about whether work will have to be stopped if an archaeological or heritage resource is discovered.

According to the National Heritage Act (Act 25 of 1999 section 32) it is stated that:
An object or collection of objects, or a type of object or a list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including –

- objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;

- visual art objects;
- military objects;
- numismatic objects;
- objects of cultural and historical significance;
- objects to which oral traditions are attached and which are associated with living heritage;
- objects of scientific or technological interest;
- books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1 (xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives; and
- any other prescribed category.

Under the National Heritage Resources Act (Act No. 25 of 1999), provisions are made that deal with, and offer protection to, all historic and prehistoric cultural remains, including graves and human remains.

Graves and cemeteries

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are under the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning, or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years, fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are under

the jurisdiction of the South African Heritage Resources Agency (SAHRA). The procedure for Consultation regarding Burial Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in the category located inside a formal cemetery administrated by a local authority will also require the same authorisation as set out for graves younger than 60 years, over and above SAHRA authorisation.

If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.