

# HERITAGE IMPACT ASSESSMENT

## A DESKTOP STUDY AND RECOMMENDATION FOR EXEMPTION FROM A FULL HERITAGE IMPACT ASSESSMENT

PROPOSED DEVELOPMENT BY SUPERCHICKS HATCHERY (PTY) LTD FOR  
POULTRY FARMING AND HATCHERY ON REMAINING PORTION 4 (PORTION  
OF PORTION 3) OF THE FARM KROKODILSPRUIT 290 JR FARM WITHIN THE  
JURISDICTION OF TSHWANE METROPOLITAN MUNICIPALITY, CULLINAN IN  
GAUTENG PROVINCE.

**For:** Ronell Group (Pty) Ltd  
Mr. R Tshibubudze

Prepared by Frans Roodt  
**February 2021**



— Sustainable community development is our speciality —

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## DECLARATION OF INDEPENDENCE

I, Frans Roodt representing Vhufa Hashu Heritage Consultants, hereby confirm my independence as a specialist archaeologist and heritage practitioner and declare that I have no business, financial, personal or other interest in any proposed activity, application or appeal in respect of this proposed project, other than fair remuneration for the work performed.



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**FRANSROODT** (*BA Hons, MA Archaeology, Post Grad Dip. in Museology; UP*)  
Principal Investigator (ASAPA member 120)

## **1. INTRODUCTION AND TERMS OF REFERENCE** (See Annexure **A** for relevant legislation and Annexure **B** for terminology)

The author was appointed by RONELL GROUP (PTY) LTD, the Environmental Assessment Practitioner, to conduct a Desktop Heritage Impact Assessment and application for the exemption of a full heritage impact assessment for the proposed development by Superchicks Hatchery (Pty) Ltd of a poultry farming and hatchery project on the remaining portion 4 (portion of portion 3) of the farm Krokodilspruit 290 JR within the jurisdiction of Tshwane Metropolitan Municipality, Cullinan in Gauteng Province.

### **1. LOCATION AND PROJECT DESCRIPTION**

The farm is located in the Cullinan area, approximately 10km north-west of Cullinan and 20km north-east of the Pretoria CBD. The project area is situated at coordinates -25.585843° 28.468163°. The farm is accessed via the R451 from Cullinan or the R573 (Moloto road) from Pretoria and then the R451 toward Cullinan (Figure 9).

The proposed project will consist of:

- The construction of 4x hatchery house (15m x 100m) of 1500m<sup>2</sup> per house.
- The construction of 3x layer houses (15m x 100m) of 1500m<sup>2</sup> per house together with its feeding silos.
- The construction of showers, bathrooms, offices, kitchen and storage rooms which will be of 9000m<sup>2</sup>.
- The development will also have a temporary waste storage/skip bin area which will be of 650m<sup>2</sup>.
- Each layer house will have 5500 hens and 500 cocks, which will be 6000 chickens per layer house, the layer houses will accommodate the total of 18 000 chickens.
- The development footprint will be 20 150m<sup>2</sup>.
- The development will also have 1x 40 000liters water tank for the supply of the whole site and water will be sourced from the borehole.
- The Developer is aiming on having a throughput of approximately 800 000 chicks per week on 90 % hatch rate.
- The Development will also have a Diesel Generator for Backup and Solar panels will be installed on top of the roof.

### **2. PROPERTY DISCRIPTION**

The property has an extent of approximately 59ha of which at least 70% had been ploughed in the past as can be seen on the Google imagery dated 2004 (Figures 1 – 2). Some re-growth of vegetation has occurred since then. The central area consists of a low ridge which is densely covered with vegetation (Figure 3). The development is concentrated on the previously ploughed fields.

### **3. METHODOLOGY**

A search for relevant previous studies, archaeological and archival sources, e.g., SAHRIS database, publications, local histories, internet articles, Google earth and historical maps

was conducted. The photographs and location of the graves were provided by the Environmental Assessment Practitioner.

#### **4. GENERIC BASELINE INFORMATION**

##### **5.1 The Stone Age**

The Stone Age covers most of southern Africa and the earliest consist of the Oldowan and Acheul artefacts assemblages. Oldowan tools are regularly referred to as “choppers”. Oldowan artefacts are associated with *Homo habilis*, the first true humans. In South Africa definite occurrences have been found at the sites of Sterkfontein and Swartkrans. Here they are dated to between 1.7 and 2 million years old. This was followed by the Acheulian technology from about 1.4 million years ago which introduced a new level of complexity. The large tools that dominate the Acheulian artefact assemblages range in length from 100 to 200 mm or more. Collectively they are called bifaces because they are normally shaped by flaking on both faces. In plan view they tend to be pear-shape and are broad relative to their thickness. Most bifaces are pointed and are classified as handaxes, but others have a wide cutting end and are termed cleavers. The Acheulian design persisted for more than a million years and only disappeared about 250 000 years ago.

The change from Acheulian with their characteristic bifaces, handaxes and cleavers to Middle Stone Age (MSA), which are characterized by flake industries, occurred about 250 000 years ago and ended about 30 000 – 22 000 years ago. For the most part the MSA is associated with modern humans, *Homo sapiens*. MSA remains are found in open spaces where they are regularly exposed by erosion as well as in caves. Characteristics of the MSA are flake blanks in the 40 – 100 mm size range struck from prepared cores, the striking platforms of the flakes reveal one or more facets, indicating the preparation of the platform before flake removal (the prepared core technique), flakes show dorsal preparation – one or more ridges or arise down the length of the flake – as a result of previous removals from the core, flakes with convergent sides (laterals) and a pointed shape, and flakes with parallel laterals and a rectangular or quadrilateral shape: these can be termed pointed and flake blades respectively. Other flakes in MSA assemblages are irregular in form.

The change from MSA to Later Stone Age (LSA) took place in most parts of southern Africa little more than about 20 000 years ago. It is marked by a series of technological innovations or new tools that, initially at least, were used to do much the same job as had been done before, but in a different way. Their introduction was associated with changes in the nature of hunter-gatherer material culture. The innovations associated with the LSA “package” of tools include rock art – both paintings and engravings – and smaller stone tools, so small that the formal tools less than 25mm long are called microliths (sometimes found in the final MSA) and bows and arrows. Rock art is an important feature of the LSA.

##### **5.2 The Iron Age**

In terms of \*Huffman’s (2007) distribution sequences of the Iron Age, the project area may contain the remains of the under-mentioned ceramic units which form distinct cultural groups:

➤ **The Urewe Tradition**, originating in the Great Lakes area of Central Africa, was a secondary dispersal centre for eastern Bantu speakers. It represents the eastern stream of

migration into Southern Africa. In the general project area the Uruwe Tradition consists of various Branches and their respective ceramic units which may occur in the project area:

- **Kwale Branch:**  
*Mzonjani facies* AD 450 – 750 (Early Iron Age)
  - **Blackburn Branch**  
*Uitkomst facies* AD 1650 – 1820 (Late Iron Age)
  - **Moloko Branch**  
*Olifantspoort facies* AD 1500 – 1700 (Late Iron Age)  
*Buispoort facies* AD 1700 – 1840 (Late Iron Age)
- **The Kalundu Tradition**, originating in the far North of Angola, was another secondary dispersal centre for eastern Bantu speakers and represents the western stream of migration into Southern Africa. This ceramic Tradition did not occur in the general project area.

No known Iron Age period cultural remains were observed in the vicinity of the project area by any of the reviewed studies.

### 5.3 The historical landscape

European settlers started occupying and establishing farms in the area during the mid-1800's and with that the pattern of resident farm labourers was established with their dwellings and burial sites.

The historical landscape could include aspects such as:

- Pioneer structures older than 60 years;
- Graves and burial sites (Graves younger than 60 years, graves older than 60 years, but younger than 100 years).
- Sites associated with early mining.

## 5. KNOW HERITAGE RESOURCES ON THE PROPERTY

A burial site is located on the south-western corner of the property adjacent to the boundary fence. This site was recorded by the Environmental Assessment Practitioner (EAP) and the coordinates and photographs were provided by the EAP. The site is located at coordinates: -25.592744° 28.462639° (Figures 4 – 5).

The site consists of seven (7) individual graves of the Mabena family, most probably farm workers on the parent farm. This site does not fall within the development footprint (Figure 8) and will not be affected.

## **6. MOTIVATION FOR THE EXEMPTION OF A FULL HERITAGE IMPACT ASSESSMENT.**

The result of the desktop study for the proposed development indicates that there will be no impact on any heritage resources. Apart from the graves mentioned above, there are no other recorded or known cultural heritage (archaeological and/or historical) sites in the study area and surrounds. Together with this and with clear evidence from the Google earth image and photographs, the under mentioned points motivate the application for the exemption of a full heritage impact assessment for the proposed Superchicks Hatchery project:

1. All of the project footprint area had been ploughed in the past. Any heritage material, such as possible Stone Age remains that may be present will be out of context and thus low in significance.
2. The area is not known for any specific Iron Age archaeology.
3. The parent farm has been sub-divided into many smaller units and the historical landscape no longer exists.
4. The application fits in with the general agricultural activities of the landscape
5. On the SAHRIS Palaeo – sensitivity map the property is colour coded green (moderately sensitive where a desktop study is required). A separate Palaeontological Desktop Study will be submitted by an accredited palaeontologist.

## **7. CONCLUSION**

Graves have been identified in the south-western part of the property, but outside of the development footprint. The desktop study has revealed no other evidence of significant heritage resources in the proposed project area and no significant heritage sites or cultural material had previously been recorded in the area. The proposed development will most likely have no negative impact on archaeological or other heritage resources. This document serves as a statement to that effect. From a heritage perspective we have no objection with regard to the proposed development, although the principal of *absence of evidence is not necessarily evidence of absence* applies.

## **8. RECOMMENDATIONS**

It is recommended that the development is exempted from a full Heritage Impact Assessment. Mitigation measures will, however, be required should any chance discoveries of subterranean archaeological material be made during the development. In such an event the heritage authority or the archaeologist must be informed immediately and work ceased in that particular area.

## **9. MANAGEMENT MEASURES**

The abovementioned graves should be appropriately protected by a fence and provided with a gate/turnstile to allow access to the Next of Kin.

## 10. REFERENCES

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Figure 1. General view of the ploughed landscape.



Figure 2. Another view of the previously ploughed area.



Figure 3. View of the vegetation on the central ridge area.





Figure 4. View of the western part of the existing piggery.



Figure 5. View of the western part of the existing piggery.





Figure 6. Google maps showing access to the project area via the R451 and R573..



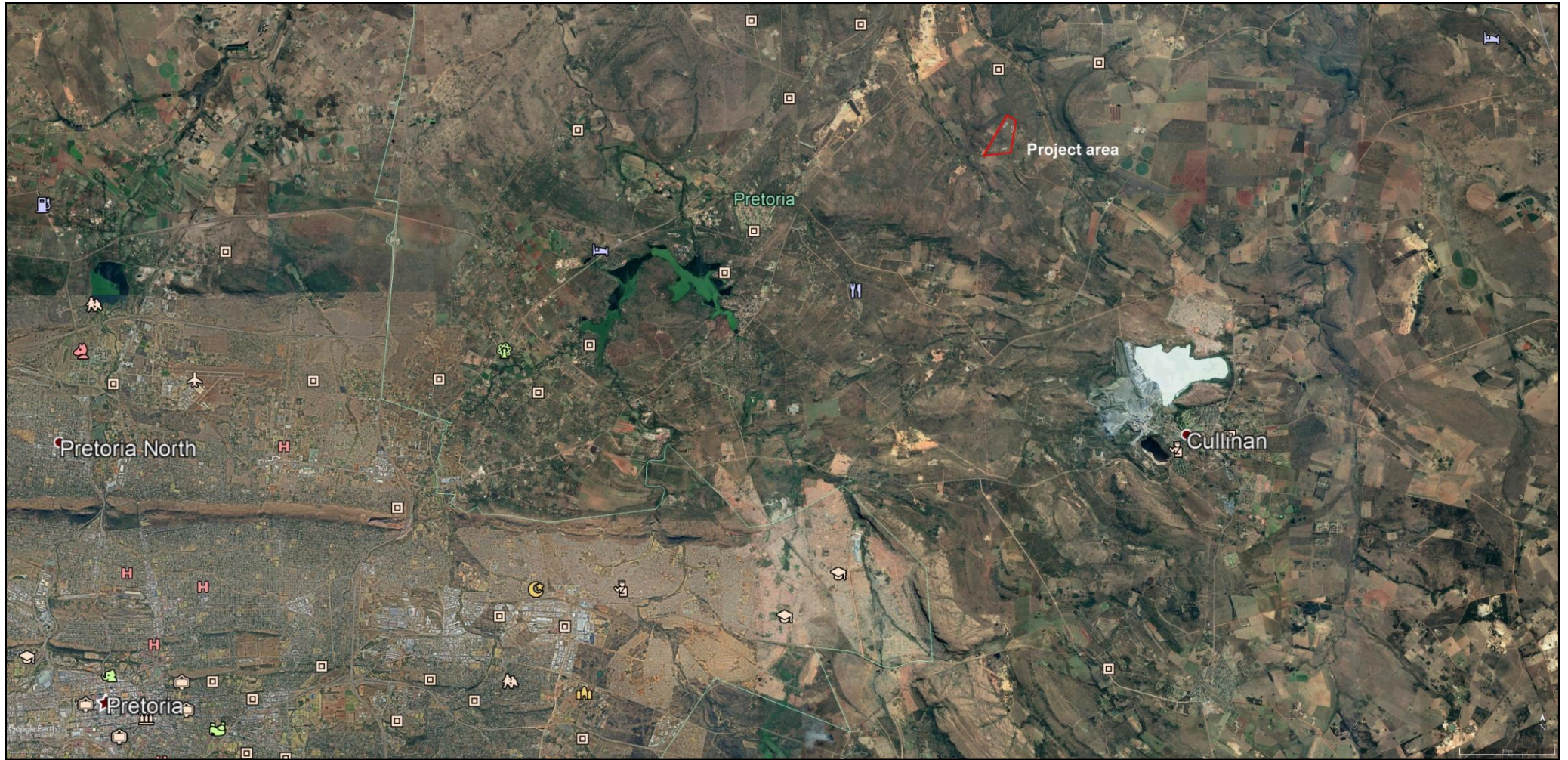


Figure 7. Google Earth image showing the location in relation to Cullinan and Pretoria.



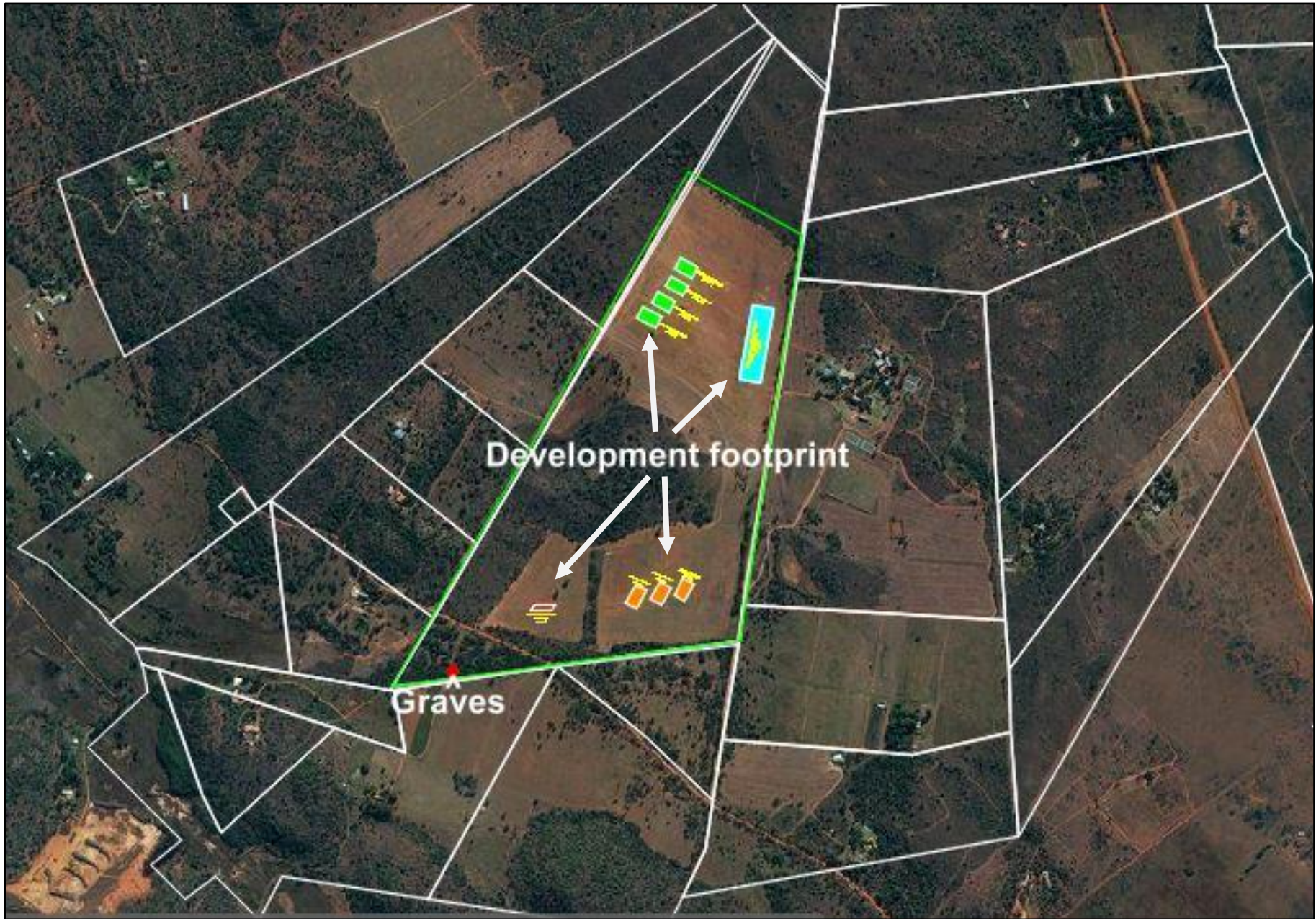


Figure 8. Google Earth image indicating the footprint of the proposed project.





Figure 9. Google Earth 2004 historical imagery clearly showing the extent of ploughing on the property.

## ANNEXURE A: RELEVANT LEGISLATION

Two sets of legislation are relevant for the protection of heritage resources and graves.

### **The National Heritage Resources Act (25 of 1999) (NHRA)**

This Act established the South African Heritage Resources Agency (SAHRA) and makes provision for the establishment of Provincial Heritage Resources Authorities (PHRA). The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38. It also provides for the grading of heritage resources (Section 7) and the implementation of a three-tier level of responsibilities and functions for heritage resources to be undertaken by the State, Provincial authorities and Local authorities, depending on the grade of the Heritage resources (Section 8).

In terms of the National Heritage Resources Act (1999) the following is of relevance:

#### **Historical remains**

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

#### **Archaeological remains**

**Section 35(3)** Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority or to the nearest local authority or museum, which must immediately notify such heritage resources authority.

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

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist with the detection or recovery of metals or archaeological material or objects, or use such equipment for the recovery of meteorites.

**Subsection 35(5)** When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and no heritage resources management procedures in terms of section 38 has been followed, it may-

- (a) serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
- (b) carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
- (c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
- (d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.



**Subsection 35(6)** The responsible heritage resources authority may, after consultation with the owner of the land on which an archaeological or palaeontological site or meteorite is situated; serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

### **Burial grounds and graves**

#### **Subsection 36(3)**

- (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-
- (c) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (d) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in detection or recovery of metals.

**Subsection 36(6)** Subject to the provision of any law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority-

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the content of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

### **Culture Resource Management**

**Subsection 38(1)** Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development\* ...

must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

\*‘**development**’ means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including-

- (a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (b) carry out any works on or over or under a place\*;
- (e) any change to the natural or existing condition or topography of land, and
- (f) any removal or destruction of trees, or removal of vegetation or topsoil;

\*‘**place**’ means a site, area or region, a building or other structure\* ...”

\*‘**structure**’ means any building, works, device or other facility made by people and which is fixed to the ground ...”

#### **The Human Tissues Act (65 of 1983)**

This Act protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

## ANNEXURE B: TERMINOLOGY

Early Stone Age:	The Oldowan “chopper” tools dating to between 1.7 and 2 million in southern Africa and the Acheulean hand axe industry complex dating to $\pm$ 1.4Myr – 250 000 yrs. before present.
Middle Stone Age:	Various lithic industries in SA dating from $\pm$ 250 000 yrs. - 22 000 yrs. before present.
Late Stone Age:	The period from $\pm$ 22 000 yrs. to the contact period with either Iron Age farmers or European colonists.
Early Iron Age:	Most of the first millennium AD.
Middle Iron Age:	10 <sup>th</sup> to 13 <sup>th</sup> centuries AD.
Late Iron Age:	14 <sup>th</sup> century to colonial period. <i>The entire Iron Age represents the spread of Bantu speaking peoples.</i>
Historical:	Mainly cultural remains of western influence and settlement from AD 1652 onwards – mostly structures older than 60 years in terms of Section 34 of the NHRA.
Phase 1 assessment:	Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.
Phase 2 assessment:	In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling.
Sensitive:	Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places or graves of persons that died during conflict. <i>Sensitive</i> may also refer to an entire landscape / area known for its significant heritage remains.