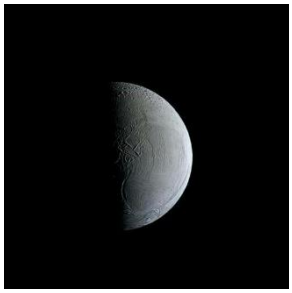


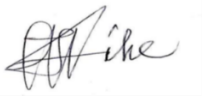
(AHSA) Archaeological and Heritage Services Africa (Pty) Ltd

Reg. No. 2016/281687/07

PHASE I HERITAGE IMPACT ASSESSMENT (INCLUDING PALAEONTOLOGICAL ASSESSMENT) REQUESTED IN TERMS OF SECTION 38 OF THE NATIONAL HERITAGE RESOURCES ACT NO 25/1999 FOR A MINING RIGHT ON A PORTION OF PORTION 1 & PORTION OF PORTION 351 OF FARM VOORUITZIGT 81 KIMBERLEY DISTRICT, NORTHERN CAPE PROVINCE

FOSSSIL FINDS PROCEDURE

DOCUMENT CONTROL

	Name	Signature	Date
Palaeontological Specialist	Joseph Chikumbirike		26/05/2017

8843 Odessa Cres,
Cosmo City Ext 7, Northriding 2188,
Johannesburg
Cell: 073 981 0637, Email e.matenga598@gmail.com

CONTENTS

1. INTRODUCTION

The Fossil Finds Procedure (FFP) provides the developer with a framework for the conservation of fossil finds if they are present or have been unearthed during prospecting and the mining phase. This is to ensure compliance with Section 38 of the National Heritage Resources Act (Act No. 25 of 1999).The aim the FFP is to reduce the risk of destruction of chance fossil finds during excavations and other earth-moving operations.

2. GENERAL PRECAUTIONS

1) The person (s) who identify(ies) or expose(s) the finds must cease all activity in the immediate vicinity of the site;
2) The identifier must immediately inform his/her supervisor of the discovery;
3) The supervisor must ensure that the site is secured and control access; and
4) The supervisor must then inform the Environmental Control Officer (ECO).

3. ISOLATED CHANCE FOSSIL FIND PROCEDURES

The following steps must be taken if in the process of excavations, isolated fossil finds may occur in trench sides or bottom, or are spotted in the excavated spoil heap:

Step 1: The exposed material must be retrieved before it is covered by further spoil from the excavation and set aside;
Step 2: The site supervisor and ECO must be informed;
Step 3: The ECO must take custody of the fossil. The following information is to be recorded:

(i) Position (excavation position);
(ii) Depth of find in hole;
(iii) Digital image of hole showing vertical section (side); and
(iv) Digital image of fossil.

Step 4: The fossil should be placed in a plastic bag and labelled with the date of the find, locational reference, and depth; and

Step 5**:** The EC Officer must contact the relevant heritage authority who will appoint a palaeontological specialist to attend. The EC Officer provides a brief report supported by digital images.

3.1. Palaeontological Specialist Intervention

The palaeontologist will assess the information and liaise with the developer and the EC Officer and a suitable responses will be established.

4. MAJOR FOISSIL FINDS PROCEDURE

The threshold definition of a Major Find takes into account quantity (numbers or volume), areal extent and depth. In this case total recovery often becomes difficult because of sheer size or time constraints. In consultations among the developer, heritage authority and specialists the following options are recommended:

.

Option 1: Avoidance

Avoidance of the Major Find, which entails project redesign or relocation. This ensures minimal impact to the site and is the preferred option from a conservation perspective. When feasible, it can also be the least expensive option from a construction perspective.

The find site will require site protection measures, such as erecting fencing or barricades. Alternatively, the exposed finds can be stabilised and the site refilled or capped. The latter is preferred if excavation of the find will be delayed substantially or indefinitely. Appropriate protection measures should be identified on a site-specific basis and in wider consultation with the heritage and scientific communities. This option is preferred as it will allow the later excavation of the finds with due scientific care and diligence.

Option 2: Emergency Excavation

Emergency excavation are carried out where avoidance is not feasible due to project design constrains, financial and time limitations. The operation is therefore hurried with consequent implications on scientific quality. It often involves extraction of a sample / sample for examination later. Destruction to the site/fossil is inevitable and irreversible. This option is least recommended and only resorted to where delays will be prohibitively expensive or there are other pressing constraints.

.

Option 3 Rescue Excavation

Rescue Excavation refers to the removal of the material from the site. This is often applied where the amount of material is localised and contextual data can be captured in the

process. Rescue excavation must be undertaken in a short time span to avoid or minimise the cost of time.

5. EXPOSURE OF FOSSIL SHELL BEDS[1], FOSSIL WOOD AND PEATS[2]

Step 1: The site foreman and EC Officer must be informed;

Step **2:** The responsible field person (site foreman or EC Officer) must record the following information:

1) Position (excavation position);
2) Depth of find in hole;
3) Digital image of the hole showing the vertical section (side); and
4) Digital images of the fossiliferous material.

Step 3: A reasonable quantity of the excavated material containing the fossils should be stockpiled near the site, for later examination and sampling;

Step 4: The EC Officer must inform the developer who must inform the heritage authority. The EC Officer is to describe the occurrence and provide images via email.

5.1. Palaeontological specialist intervention

The palaeontologist will assess the information and liaise with the developer and the EC Officer and a suitable response will be established. As site visit will be necessary to document and sample the exposure in detail, before it is covered up.

6. GENERAL MONITORING FOR FOSSILS

A monitoring framework when excavations are in progress must be put in place implemented by the field supervisor. This may entail general training or awareness campaigns for workers to watch for potential fossil materials and report them immediately to their immediate supervisor.

[1] Dense accumulations of fossils.

[2] Peat is a heterogeneous mixture of more or less decomposed plant (humus) material that has accumulated in a water-saturated environment and in the absence of oxygen.