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Sweet Sensation Vaal Sands (Pty) Ltd Environmental Management Programme Amendment

Chance Finds Procedure

Prepared for:

Sweet Sensation Vaal Sands (Pty) Ltd

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1. Introduction

Sweet Sensation Vaal Sands (Pty) Ltd (hereinafter Sweet Sensation) holds a Mining Right¹ (MR) and Environmental Management Programme² (EMPr) to undertake sand mining on the Remaining Extent (RE) of the farm Du Pont No. 228 in the Free State Province. The MR and EMPr have been approved in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA) and the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

The Mining Right Area (MRA) includes approximately 102 hectares (ha), of which 95 ha is being mined. Sweet Sensation commenced with the sand mining activities in 2017. The sand mine has a Life of Mine (LoM) of 22 years and the MR will expire on 30 March 2026.

The MR Application was supported by an Environmental Impact Assessment (EIA) process which included a Heritage Impact Assessment (HIA) process in compliance with Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA). Sweet Sensation, and the appointed Environmental Assessment Practitioner (EAP), appointed G & A Heritage to undertake the HIA process. The report (Gaigher, 2015) was submitted to the Heritage Resources Authorities (HRAs) online via the South African Heritage Resources Information System³ (SAHRIS). In this instance, the HRAs include Heritage Free State (HFS) and South African Heritage Resources Agency (SAHRA). The HIA was subsequently approved by SAHRA⁴.

Sweet Sensation intends to amend the MR and EMPr to include a screening process, which was not previously approved (the Project). This process aims to improve the efficiency of the sand mine and maximise the saleable product. To this effect, Sweet Sensation appointed Digby Wells Environmental (hereinafter Digby Wells) to complete an application in accordance with Regulation 29(a) of the NEMA EIA Regulations, 2014 (Government Notice Regulation [GN R] 982 of 4 December 2014 as amended).

Digby Wells submitted the amendment application to the Department of Mineral Resources and Energy (DMRE) on 28 May 2020. A number of Interested and Affected Parties (I&APs) subsequently raised objections to the Project and the DMRE now requires Sweet Sensation to complete a Regulation 31 Amendment Process in terms of the NEMA EIA Regulations, 2014, which includes various specialist studies in support of the application.

The specialist studies do not include an HIA as the current HIA report is not older than 5 years and the screening process will not change the scope of the current Environmental

¹ Reference Number: FS30/5/1/1/2/164 MR, approved 11 October 2016

² Reference Number: FS30/5/1/1/2/164 EM, approved 11 October 2016

³ Submitted 27 May 2015, SAHRIS Case ID 8128, accessible at: <https://sahris.sahra.org.za/cases/fs-30512210018-mr>

⁴ Dated 22 July 2015, accessible at: <https://sahris.sahra.org.za/node/316620>

Authorisation (EA) or the level or nature of the impacts. SAHRA has approved⁵ this approach subject to the conditions of the approval being implemented.

This document constitutes a Chance Finds Protocol (CFP) and Fossil Finds Protocol (FFP) for implementation should a previously-unidentified heritage resource be encountered within the MRA in partial compliance⁶ with the SAHRA Final Comments. Chance Finds encountered during Project activities must be managed in terms of the Conservation Management Plan (CMP).

2. Definitions

Table 2-1 presents the definitions applicable to this protocol. Table 2-2 below defines the acronyms applicable to this protocol.

Table 2-1: Applicable definitions

Alter	Any action affecting the structure, appearance or physical properties of a <i>place</i> whether by way of structural or other works, or any other means.
Archaeological	<p>Any material remains that were produced or created by humans or that resulted from any human activity and that are unused and older than 100 years. This includes artefacts, human and hominid remains and artificial features and structures.</p> <p>Archaeology also refers to Rock Art that is defined as any form of painting, engraving or other graphic representation on fixed rock surfaces or loose rocks or stones that was made by humans and that are older than 100 years, including a 10 m area surrounding such site.</p> <p>Archaeology also includes:</p> <ul style="list-style-type: none"> Any wrecks or parts thereof that was wrecked in South Africa more than 60 years ago, including any cargo, debris or artefacts found or associated with it; and Any features, structures and artefacts older than 75 years that are associated with military history, including the sites on which they are found.
Archaeologist	A trained professional who uses scientific methods to excavate record and study archaeological sites and deposits.
Conservation	The protection, maintenance, preservation and sustainable use of " <i>places</i> " to safeguard their " <i>cultural significance</i> ".

⁵ Final Comment on SAHRIS Case ID 15129, dated 06 July 2020 and accessible at: <https://sahris.sahra.org.za/node/537787>

⁶ The SAHRA Statutory Comments also require the development of a management plan to manage potential risks to heritage resources conserved *in situ*. To this effect, Digby Wells has developed a Heritage Site Management Plan (HSMP) in a separate document.

Cultural Significance (CS)	<p>The aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. A heritage may have cultural significance or other special value because of its:</p> <ul style="list-style-type: none"> • Importance in the community, or pattern of South Africa's history; • Possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage; • Potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage; • Importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects; • Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group; • Importance in demonstrating a high degree of creative or technical achievement at a particular period; • Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; • Strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and • Significance relating to the history of slavery in South Africa.
Development	<p>Any physical intervention, excavation, or action that could cause changes to the nature, appearance, fabric of a place. In addition, development might also influence the stability or future well-being of a place. Development could include:</p> <ul style="list-style-type: none"> • Construction, alteration, demolition, removal or change of use of a place or a structure at a <i>place</i>; • Carrying out any works on or over or under a <i>place</i>; • Any change to the natural or existing condition or topography of land; and • Any removal or destruction of trees, or removal of vegetation or topsoil.
Excavation	<p>The scientific excavation, recording and retrieval of archaeological deposit and objects through the use of accepted archaeological procedures and methods, and excavate has a corresponding meaning.</p>

Field Rating	<p>SAHRA requires heritage resources to be provisionally rated in accordance with Section 7 of the NHRA that provides a three tier grading system of resources that form part of the national estate. The rating system distinguishes between four categories:</p> <ul style="list-style-type: none"> • Grade I: Heritage resources with qualities so exceptional that they are of special national significance; • Grade II: Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; • Grade III: Other heritage resources worthy of conservation; and • General Protected: i.e. generally protected in terms of Sections 33 to 37 of the NHRA.
General Protection	<p>General protections are afforded to:</p> <ul style="list-style-type: none"> • Objects protected in terms of laws of foreign states; • Structures older than 60 years; • Archaeological and palaeontological sites and material and meteorites; • Burial grounds and graves; and • Public monuments and memorials.
Grave	The place of interment (burial ground) and includes the contents, headstone (or other marker of such a place) and any other structure on or associated with such <i>place</i> .
Heritage Resource	Any place of cultural significance.
Heritage Resources Authority	The South African Heritage Resources Agency (SAHRA), established in terms of Section 11, or, insofar as the NHRA is applicable in or in respect of a province, a provincial heritage resources authority, in this instance Heritage Free State (HFS).
Heritage Site	Any place declared to be a national heritage site by SAHRA or a place declared to be a provincial heritage site by a provincial heritage resources authority.
Living/Intangible Heritage	The intangible aspects of inherited culture that could include cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems, the holistic approach to nature, society and social relationships.
Major Find	If the resource cannot feasibly be rescued in a specified timeframe without compromising the detailed material recovery and contextual observations, the resource is considered a Major Find.

Object	Any movable property of cultural significance that are protected in terms of the NHRA, including: <ul style="list-style-type: none"> • All archaeological artefacts; • All palaeontological and rare geological specimens; • All meteorites; and • Any other object referred to in section 3 of the Act.
Owner	Includes the owner's (owners of the land on which a heritage <i>object</i> or <i>place</i> is located) authorised agent and any person with a real interest in the property.
Palaeontological	Any fossil remains or traces of animals or plants that were alive in the geological past, and any site that contains such fossils. Fossil fuels such as coal, and fossiliferous rock intended for industrial use are, however, excluded.
Palaeontologist	A trained professional who uses scientific methods to excavate, record and study fossils and palaeontological sites.
Place	A place may include: <ul style="list-style-type: none"> • (a) The <i>site</i>; • (b) A <i>structure</i> such as a stonewall or historic building; • (c) A group of structures such as a werf; and • (d) In relation to the management of a place, includes the immediate surroundings of a place.
Site	Any area of land, including land covered by water, and including any <i>structures</i> thereon.
Structure	Any works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Table 2-2: Acronyms

BGG	Burial Grounds and Graves
CE	Common Era
CFP	Chance Find Protocol
CMP	Conservation Management Plan
CS	Cultural Significance
ECO	Environmental Control Officer
ESA	Earlier Stone Age
ha	Hectare
HIA	Heritage Impact Assessment

HFS	Heritage Free State
HRAs	Heritage Resource Authorities
HRM	Heritage Resources Management
HSMP	Heritage Site Management Plan
I&APs	Interested and Affected Parties
ICOMOS	International Council on Monuments and Sites
Kya	Thousand years ago
LSA	Later Stone Age
MSA	Middle Stone Age
Mya	Million years ago
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NHRA	The National Heritage Resources Act, 1999 (Act No. 25 of 1999)
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SAPS	South African Police Service
WHCA	World Heritage Convention Act, 1999 (Act No. 49 of 1999)

3. Roles and Responsibilities

Table 3-1 outlines the various entities applicable to the implementation of the CFP.

Table 3-1: Responsible Entities

Entity	Role	Competencies
Sakhu Indlu	Owner / custodian	N/A
Sweet Sensation	Implementation	N/A
SAHRA	Competent authority	NHRA NHRA Regulations (GN R 548)
HFS	Commenting authority ⁷	SAHRA Minimum Standards (2007)

⁷ At the time of compilation of this HSMP, HFS has not been assessed as competent to manage NHRA Section 35 or Section 36 heritage resources, i.e., archaeological or palaeontological resources or burial grounds and graves.

Sweet Sensation is ultimately responsible for the conservation and ethical management of the impacts posed to the Chance Finds. Sweet Sensation's internal management structures, roles and responsibilities must therefore be replicated in this document for reference.

4. Cultural Heritage Baseline Description

This section provides a summary of the baseline presented by Gaigher (2015) in the HIA report to provide context for this document.

The Project area is underlain by geological layers of very high, high, moderate and low palaeosensitivity. Considering the nature of the Project, Gaigher (2015) does not present a description of the geological setting of the Project.

The archaeological landscape includes the Stone Age and the Farming Community period (referred to in the HIA report as the Iron Age). The Stone Age comprises three phases, the Earlier Stone Age (ESA), the Middle Stone Age (MSA) and the Later Stone Age (LSA).

The ESA ranges in time from 2 million years ago (mya) to approximately 200 000 years ago. The early stages of this period include simple flakes struck from cobbles and core and pebble tools. The later phases include handaxes, cleavers and picks that are shaped intentionally. The ESA includes the Oldowan and Acheulean industries.

The MSA occurs from 20 000 to 300 000 years ago. These tools include those created through the Levallois or prepared core techniques. Formal tools within this period include retouched points, backed artefacts, scrapers and denticulates. Blades, evidence of hafted tools, bone points, engraved ochre, engraved bone fragments, ostrich eggshell artefacts and grindstones occur in this period.

The LSA began approximately 40 000 years ago until recent times (i.e., the historical period). These tools are generally variable with a wide range of formal tools. Backed artefacts, evidence of hafted stone and bone tools, borers and bored stones, upper and lower grindstones, ostrich eggshell artefacts, rock art and ceramics occur in this period.

The Farming Community period is heavily influenced by the events of the Difaqane in and around the year 1823. During the Ndebele raids within the Difaqane, the Rolong and the Khudu from Parys fled west. The archaeology of this period is characterised by stonewalling. The two predominant types in this area are the Type N and the Type Z settlements.

Gold was discovered on the Witwatersrand in 1886. This led to large-scale developments in Parys, as the recently-established town was on a route between the goldfields and Bloemfontein. The outbreak of the South African War (also referred to as the Anglo-Boer War) brought these developments to a standstill and caused destruction within the area.

Gaigher (2015) identified a small, dilapidated mudbrick structure within the Sweet Sensation MRA. This structure could have historical significance and is to be avoided⁸.

⁸ Refer to the CMP for more details on the management of this heritage resource.

5. Chance Finds Protocol

This section presents the steps to be implemented should Sweet Sensation staff or contractors encounter a Chance Find during Project activities.

5.1. Palaeontological Heritage

This section describes the monitoring Programme for palaeontology which must commence once Project-related activities begin.

1. The following procedure is only required if fossils are seen on the surface during mining and/or screening operations.
2. When mining and/or screening activities begin, the appropriate Responsible Person or Persons (Site Manager, Site Foreman or Environmental Control Officer [ECO], for example) must give rocks or outcrops encountered during these activities a cursory inspection. Any fossiliferous material (plants, insects, bone, coal) must be put aside in a suitably protected place to ensure minimal disruptions to the mining activities.
3. Photographs of similar fossil plants must be provided to the Responsible Person to assist in recognizing potential fossils found in the different geological features;
4. Photographs of the putative fossils can be sent to a suitably-qualified palaeontologist for a preliminary assessment.
5. If there is any possible fossil material found by the Responsible Person, the qualified palaeontologist must visit the site to inspect the selected material and, where applicable, any other points of interest within the area affected by Project activities.
6. Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits.
7. Site inspections are necessary only in cases where fossil material is encountered during Project-related activities. In such a case, the palaeontologist will need to send a final report to SAHRA once the project has been completed.
8. If no fossils are found and Project-related activities have finished, then no further monitoring is required.

5.2. Archaeological Heritage

As described in Section 4 above, the regional cultural landscape includes archaeological resources which may be encountered during Project activities. Should these heritage resources be encountered, all Sweet Sensation staff and contractors must implement the following steps:

1. All activities within the immediate vicinity must be halted and the archaeological heritage resource must be avoided;
2. The staff member or contractor who identified the Chance Find must inform the appropriate Responsible Person;
3. The Responsible Person, together with the person who identified the find, must record the details of the encounter. Such details include, but are not limited to, the time and date of the encounter, the context of the find and photographs indicating the scale of the find; and
4. The Responsible Person must contact a suitably qualified archaeologist to notify them of the find. The archaeologist will be able to advise Sweet Sensation on the significance of the find and the way forward. The way forward may require a site inspection and/or notification of the relevant Heritage Resource Authorities (HRAs).

5.3. Burial Grounds and Graves

As described in Section 4 above, the identified mudbrick structure may have unidentified graves present in proximity to the structure. Sweet Sensation may also encounter previously unidentified burial grounds or individual graves elsewhere in the MRA during Project-related activities. Should these heritage resources be encountered, all Sweet Sensation staff and contractors must implement the following steps:

1. All activities within the immediate vicinity must be halted and the archaeological heritage resource must be avoided;
2. The staff member or contractor who identified the Chance Find must inform the appropriate Responsible Person as to the find (as with the archaeological resources);
3. The Responsible Person, together with the person who identified the find, must record the details of the encounter. Such details include, but are not limited to, the time and date of the encounter, the context of the find and photographs indicating the condition and (*where possible*) the age of the find;
4. Sweet Sensation must notify the South African Police Services (SAPS) of the find;
5. The Responsible Person must notify the Burial Grounds and Graves (BGG) Unit of the South African Heritage Resources Agency (SAHRA);
6. The SAPS and SAHRA BGG Unit⁹ must undertake a site inspection to determine the temporal context of the grave(s) to confirm whether the grave(s) is (are) forensic, an authentic burial grave (i.e. a grave older than 60 years old) or archaeological (i.e. a

⁹ It must be noted, however, that SAHRA generally delegate their responsibility to archaeologists or heritage practitioners to inspect the grave site and submit a report on the findings to the SAHRA BGG Unit for consideration. Should this be required, RBMR must enlist the services of a suitably-qualified specialist to inspect the exposed grave(s) in consultation with the SAPS.

grave older than 100 years). The SAPS and SAHRA BGG Unit will also determine whether additional graves or burials exist within the vicinity of the chance find; and

7. The SAPS and SAHRA BGG Unit will advise Sweet Sensation of any requirements they must undertake to mitigate or avoid any impacts to the chance find.

Where necessary, Sweet Sensation must appoint a suitably-qualified archaeologist, heritage specialist and/or palaeontologist to assist with recommendations for the mitigation of accidental discoveries or the exposure of chance finds.