

**STATE OF CONSERVATION REPORT  
FOR THE FOSSIL HOMINID SITES OF SOUTH AFRICA WORLD HERITAGE SITE  
(C 915 BIS)**



**SOUTH AFRICA**

**BY THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA  
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT**

**DECEMBER 2022**

## **IDENTIFICATION OF THE PROPERTY**

**Name of property:** Fossil Hominid Sites of South Africa

**Identification Number:** C 915 BIS

**State Party and Province(s):** South Africa: Gauteng, North-West and Limpopo Provinces

**Criteria:** (iii) and (iv)

## 1. EXECUTIVE SUMMARY

This State of Conservation report outlines the conservation status of the Fossil Hominid Sites of South Africa as well as the activities that have been undertaken or are ongoing within the property to protect the Outstanding Universal Value. It is the State Party of South Africa's response to **Decision: 44 COM 7B.121** adopted at the 44<sup>th</sup> session of the World Heritage Committee (WHC) meeting in 2021.

In this decision, the WHC commended the State Party's efforts in the conservation of the property, in particular the continued monitoring of the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs (FHSSSKE) component and the process initiated to develop similar risk prevention strategies for other components, the gazette of water quality targets and the extensive ground and surface water quality monitoring results provided for the FHSSSKE component, and encourages the State Party to continue efforts in this direction;

Processes towards the development of a Risk Prevention Strategy for the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs (FHSSSKE) component have been initiated, and it will be integrated into the Risk Prevention Strategy for the Fossil Hominid Sites of South Africa. The 2018 identified risk reduction and risk prevention interventions continue to be monitored by the Management Authority, the Council for Scientific and Industrial Research (CSIR) and the South African Heritage Resources Agency (SAHRA). The State Party is also committed in continuing with the monitoring of the water resources in the FHSSSKE component.

The development and finalisation of the Integrated Management Plan (IMP) is at an advanced stage, and this will be submitted to the World Heritage Centre as soon as possible.

The State Party has not identified any other current conservation issues or major projects, including mining licenses issued adjacent to or in the vicinity of all components of the property which may have a negative impact on the property's Outstanding Universal Value.

## **2. RESPONSE TO THE DECISION OF THE WORLD HERITAGE COMMITTEE**

### **2.1. Recalling Decision 43 COM 7B.111 adopted at its 43<sup>rd</sup> session (Baku, 2019)**

The State Party notes the recall of **Decision 43 COM 7B.111** adopted at the 43<sup>rd</sup> session of the World Heritage Committee in Baku.

**2.3. Acknowledges the continued implementation and extension of the Short-Term Solution (STS) to prevent a future Acid Mine Discharge event as well as continued water quality monitoring and finalisation of water quality targets, but regrets the limited progress made in developing the required Long-Term Solution (LTS) for the Western Basin Treatment Works, and the requested Environmental Impact Assessment (EIA);**

The statement is noted and accepted. Water Quality trends and updates on the current progress made with the STS and LTS is attached as **Annexure A** for analysis. To provide clarity on the limited progress made regarding the LTS, the Feasibility Study concluded in 2013 listed various recommendations to take the LTS forward. These recommendations were presented to National Treasury (NT) to access funding. Unfortunately, due to the financial climate at the time, National Treasury requested the Department of Water and Sanitation (DWS) to relook the initial Inter-Ministerial Committee Report on Acid Mine Drainage (AMD) (2010) as well as the Feasibility Study on AMD in the Witwatersrand (2013) and come forth with alternative/cheaper options. Since then, a specialist committee on AMD comprising of the following institutions; Department of Water and Sanitation, Department of Mineral Resources and Energy, Department of Forestry, Fisheries and the Environment, Department of Science and Innovation and various Universities, was established to look at progress made on the STS and to evaluate the recommendations made and come up with new recommendations on the best way forward for the LTS. A draft report has been done and is currently in its final stages of approval. Once this report has been finalised and approved, it will be shared with the World Heritage Centre. The outcomes of this report will then determine the way forward of the LTS (if approved by NT) and will then also initiate the EIA process which will then also be shared with all relevant parties, especially the World Heritage Centre.

**2.4. Supports the extension of the STS, but requests the State Party to:**

**a) Augment the STS to allow for sufficient capacity to deal with high-rainfall events and submit details of these measures to the World Heritage Centre for review by the Advisory Bodies,**

The State Party acknowledges the threat that high rainfall events may have on the water level within the Western Basin and continues to monitor the water level on a daily basis. It should however be noted that over the past few years no decant has occurred at 18 Winze in the Western Basin. There is adequate buffer capacity in place to address any surge of water that the basin may experience. Even though there has not been a decant in the Western Basin in recent years, the Department is still investigating the possibility of increasing pumping and treating capacity to create an even bigger buffer zone. As can be seen in Annexure A, water levels have been stable in the Western Basin even during high rainfall

events. Additionally, there is also infrastructure in place in the event of decant and/or seepage at the Western Basin site in the form of pollution control dams. Should a decant and/ or seepage occur, the polluted water is then captured by the PCD and pumped back to the Western Basin AMD treatment plant for treatment before discharging to the environment.

**b) Submit the design specification and the EIA for the second phase of the Western Basin Treatment Works (LTS) for review by the Advisory Bodies within the three- year STS extension period and before implementation thereof;**

It remains the State Party's commitment to submit the LTS and EIA reports, including the design specification to the World Heritage Centre before commencement. The state party would like to inform the World Heritage Centre of the current fiscal constraints experienced that is hampering progress with the LTS. A detailed report that evaluated the current situation of the STS aimed at providing recommendations for the best possible way forward for the LTS is being drafted. The State Party is committed to submitting the report to the World Heritage Centre once completed.

## **2.5. Reiterates its request to the State Party to:**

**a) Finalize the Integrated Management Plan (IMP) under preparation in conformity with recommendations of the Advisory Bodies and the World Heritage Centre,**

The State Party has finalised and submitted the Integrated Management Plan for the Fossil Hominid Sites of South Africa to UNESCO World Heritage Centre and for further dissemination to the Advisory Bodies. The Integrated Management Plan was submitted to the World Heritage Centre on the 13 October 2022, the IMP is attached as **Annexure B**.

**b) Extend the Risk Prevention Strategy to the Taung Skull Fossil site and the Makapan Valley components of the property and incorporate these into the IMP,**

The Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs (FHSSSKE) has initiated the process of developing the Risk Prevention Strategy for the component, in order to expand on the Risk Prevention Strategy developed in 2018. The State Party has commenced with the planning phase towards the development of a Risk Prevention Strategy for the Fossil Hominid Sites of South Africa, and it will be submitted to the World Heritage Centre once completed.

**c) Submit the IMP and Risk Prevention Strategy to the World Heritage Centre for review as soon as possible,**

The State Party has finalised and submitted the Integrated Management Plan for the Fossil Hominid Sites of South Africa to UNESCO World Heritage Centre and for further dissemination to the Advisory Bodies. The Integrated Management Plan was submitted to the World Heritage Centre on the 13 October 2022, the IMP is attached as **Annexure B**.

**d) Address the bacteriological pollution from the municipal wastewater effluent on the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs component of the property;**

The State Party wishes to inform the WHC that inter-governmental discussions are ongoing regarding the current status of the Percy Stewart Waste-Water Treatment Works (WWTW).

The results from the microbiological analysis of water samples collected during the September 2022 monitoring run have indicated bacteriological contamination of surface water and groundwater resources. The bacteriological pollution in both surface water and groundwater resources is evidenced by total coliform and *Escherichia coli* (*E. coli*) bacteria values that routinely exceed a most probable number (MPN) count of 2419.6 per 100 mL. The affected surface water resources include the Blougatspruit, Bloubankspruit, Tweelopiespruit and Rietspruit. However, the Blougatspruit and Bloubankspruit, which are downstream from the Percy Stewart Wastewater Treatment Works show the most severe faecal contamination, an indication that they receive inadequately treated wastewater.

The bacterial count of groundwater samples collected in the south-western portion of the property showed less than one (<1.0) MPN per 100 mL for *E. coli*, which may indicate an improvement from the water samples last collected and analysed in September 2020. However, with the information gap between September 2020 and September 2022, there is not enough analytical data to indicate what would have happened in the intervening period and therefore make a solid conclusion. A similar apparent improved water quality was observed for the water sampled directly at the eye of the Zwartkrans, Plover's Lake, Broederstroom, Nouklip and Nash spring, indicating apparent minimal groundwater contamination. However, the water sampled at the Aquamine, Danielsrust, Kromdraai springs and Sterkfontein Cave Lake respectively showed *E. coli* contamination with the bacterial count ranging from 14.4 MPN/ 100 mL for the Sterkfontein Cave Lake to 727 MPN/ 100 mL at the Kromdraai spring. The water at these localities was sampled from available surface runoff generated by the spring and may therefore be directly impacted by local surface flow, animal droppings etc. The Aquamine spring and sampling site is also quite close to a human settlement which uses pit latrines for sanitation, which would explain the elevated levels of contamination by *E. coli*.

In water resource management, the count of total coliform bacteria and *E. coli* is used as an indicator of sanitary quality of water and degree of pollution. Total coliform bacteria are common in natural environments, i.e., they are naturally occurring in soil, vegetation and aquatic ecosystems and therefore may not necessarily be harmful to the fossil environment. However, an elevated count of total coliform does indicate vulnerability to contamination by more harmful microorganisms of affected water resources. *E. coli*, particularly, is a strain of coliform bacteria that is only found in the intestines of mammals, including humans, and can therefore enter natural environments via poorly treated municipal effluent (sewerage), stormwater runoff, manure used in agricultural practises and dropping from domestic animals and wildlife. The South African Water Quality Guidelines (DWAF, 1996) do not have an applicable target water quality range for coliform in aquatic ecosystems, however the drinking water guidelines (SANS 241, 2015) stipulate less than 10 MPN/100 mL (<10 MPN/100 mL) for total coliforms and zero detection for *E. coli*. These drinking water guidelines are applied to the water

resources of the property as several fossil site landowners, tourism/recreational businesses and the general community of the Cradle of Humankind World Heritage Site rely on the surface water and groundwater resources for domestic water use.

Therefore, although there are no foreseeable threats caused by the bacteriological pollution on the *in-situ* fossils, the current concern is focused on the impact of the pollution on the natural environment, the health of the local community and the aesthetic appeal of the property's natural resources. These attributes all, directly or indirectly, contribute to the upkeep of OUV of the property.

**2.6. Also requests the State Party to submit designs and all impact assessments as well as the Heritage Management Plan/s for the visitors' facilities and infrastructure upgrades at the Taung Fossil Site and Makapan Valley components of the property to the World Heritage Centre for review by the Advisory Bodies before any further implementation of these projects.**

The Makapan Valley funding for the visitors' facility and infrastructure upgrades has been secured and is undergoing the Department of Forestry, Fisheries and the Environment Supply Chain Management process. The relevant Impact Assessments will be further submitted to the World Heritage Centre once completed. Taung Skull Fossil Site World Heritage Site has previously submitted the Heritage and Visual Impact assessment report and Environmental Impact Assessment which informed the planned infrastructure restoration process. An annexure to emphasise the restoration approach and objectives is attached (**Annexure C**).

**2.7. Further requests the State Party to submit to the World Heritage Centre, by 1 December 2022, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session.**

The State Party has updated information on the State of Conservation of the property as evidenced by the contents on this report.

### **3. OTHER CURRENT CONSERVATION ISSUES IDENTIFIED BY THE STATE PARTY WHICH MAY HAVE AN IMPACT ON THE PROPERTY'S OUTSTANDING UNIVERSAL VALUE**

The State Party has not identified any other current conservation issues which may have an impact on the property's Outstanding Universal Value.

**4. IN CONFORMITY WITH PARAGRAPH 172 OF THE OPERATIONAL GUIDELINES, DESCRIBE ANY POTENTIAL MAJOR RESTORATIONS, ALTERATIONS AND/OR NEW CONSTRUCTIONS INTENDED WITHIN THE PROPERTY, THE BUFFER ZONE, AND/OR CORRIDORS OR OTHER AREAS, WHERE SUCH DEVELOPMENTS MAY AFFECT THE OUTSTANDING UNIVERSAL VALUE OF THE PROPERTY INCLUDING AUTHENTICITY AND INTEGRITY.**

The State Party commits that the restoration and construction project will be according to best practice and will inform the World Heritage Centre of any developments in this regard.

#### **5. PUBLIC ACCESS TO THE STATE OF CONSERVATION REPORT**

The State Party has no objection against the uploading of the State of Conservation report on the World Heritage Centre's State of Conservation Information System, thereby providing public access towards the report.

#### **6. SIGNATURE OF THE AUTHORITY**

A handwritten signature in dark ink, appearing to read 'K. Matibe', is written over a horizontal line.

Mr Khorommbe Matibe

Acting Deputy Director-General – Biodiversity and Conservation: Department of Forestry, Fisheries and the Environment

Date: 01/12/2022