

**AUGUST 2023**

**EZULWINI SOUTH TAILINGS  
 STORAGE FACILITY (TSF) 1**

**DETAILS OF TAILINGS STORAGE FACILITY**

<b>Tailings Storage Facility (TSF) Name</b>	Ezulwini South TSF
<b>Operation</b>	Ezulwini
<b>Operational Status</b>	Dormant since 1991
<b>Operating Segment</b>	RSA - Gold
<b>Location</b>	9km south-east of the town of Westonaria, West Rand – please refer to Figure 1
<b>Latitude, Longitude (decimals)</b>	-26,3811667, 27,7197667
<b>Ore Source</b>	Underground
<b>Type of Storage Facility</b>	Impoundment (upstream development)
<b>Deposition Methodology</b>	Day-Wall Paddock
<b>Year of Commissioning</b>	1990
<b>Consequence Classification (GISTM, 2020)</b>	Low
<b>Operating Contractor</b>	Stefanutti Stocks Inland (SSI)
<b>Engineer of Record (EoR)</b>	Knight Piesold (Pty) Ltd (KP)
<b>Current Maximum Height (m)</b>	36
<b>Final Maximum Height (m)</b>	36
<b>Total Volume Already Deposited (Mm<sup>3</sup>)</b>	39.1
<b>Life of TSF (year)</b>	N/A



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## TECHNICAL ASPECTS:

### Design Criteria

GISTM and best practice guidelines including Australian National Committee on Large Dams (ANCOLD) (Guidelines on Tailings Dams, July 2019). Site specific design criteria were specified by the EoR. Details are included in the Design Basis Report (DBR).

### Stability Assessment and Mitigation Measures

A detailed stability assessment based on test pits and laboratory test work was conducted in 2023. (KP Reference: PR301-00726/48-A Rev 0, July 2023)

All the static FoS are above the recommended limits and thus no mitigation measures were required.

Further testing of the facility by means of piezocone probing will be considered in order to clearly validate the tailings properties and layering assumptions.

### Dam Breach Assessment

Assessment completed in 2023  
 (KP Reference: PR301-00726/52-A-PR23-00210 Rev 0, August 2023)

### Are of Inundation

Credible failure modes have the potential to result in catastrophic failure should there be a "loss of containment" of the TSF. During the initial analyses no credible failure modes were identified sine the phreatic surface within the TSF is assumed to be very low (near natural ground level) due to the inactivity period of 31 years and the absence of a normal operating pond.

The tailings impounded at Ezulwini South TSF is not considered liquefiable. Release of liquefied tailings following loss of confinement, and slumping outflow of unsupported tailings are both considered non-credible, even if failure were to occur.

### Summary of Human Exposure

Consequence classification has been based on Population at Risk (PAR). Communities have been identified surrounding the TSF and are being engaged through various means including Community Engagement Forums (CEF)



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## DOCUMENTATION:

### Site Specific OMS Manual

Version 2023 available

Mandatory Code of Practice (MCOP) document No: SAND301-00726/09 is in place (dated July 2022)

### Design Basis Report (DBR)

Version 2023 available  
 (KP Reference: RI301-00726/52 Rev 0, 4 August 2023)

### Environmental Management System

The Environmental Management System is ISO accredited (ISO 14001:2015)

The initial Environmental Management Programme (EMPr) is dated 2015.

### Surveillance:

#### Surveillance Frequency

Daily by the Operator and quarterly reports of critical controls submitted to and reviewed by the EoR

#### Surveillance Technology/System

K2Fly Decipher

#### Deformation Monitoring

Interferometric Synthetic Aperture Radar (InSAR)

#### Phreatic Surface Levels & Pore Pressure Measurements

Standpipe piezometers

## RISK MANAGEMENT / EMERGENCY PREPAREDNESS:

### Risk Assessment

Annual Risk Assessment (FMEA) completed with no untoward risk identified

### Risk Management

Site specific OMS Manual  
 Site specific Trigger Action Response Plans (TARPs) in place  
 Critical controls established and implemented

### Site Specific Emergency Preparedness & Response Plans (EPRP)

Version 2023 is currently being finalised and will be available in Q4 2023

An annual emergency mock drill for a catastrophic TSF failure will be undertaken in Q4 2023 with SSW employees and contractors.



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## CLOSURE & POST CLOSURE

### Closure Planning

In place - report prepared by Golder Associates  
 (Golder Reference: 20353622-341342-2, April 2021)

### Closure Costing

Adequate financial capacity in place  
 Financials prepared by Golder Associates  
 (Golder Reference: 20447293-349380-3, December 2021)

### Asset Insurance Cover

In place – July 2022 to June 2023 (currently undergoing renewal)

## Independent Reviews:

### Independent Tailings Review Board (ITRB)

3 July 2023 with no material concerns identified

### Future ITRB Review

2026

### Performance Reviews

Annual and quarterly reports with inspections completed by EoR  
 (KP Reference: RI301-00726/09 Rev 0, 3 November 2022)

### Dam Safety Review (DSR)

Carried out by an independent third party in 2019/2020 with no material findings  
 (KP Reference: 301-00840/02-005 Rev 1, February 2020)

Next review scheduled for 2026



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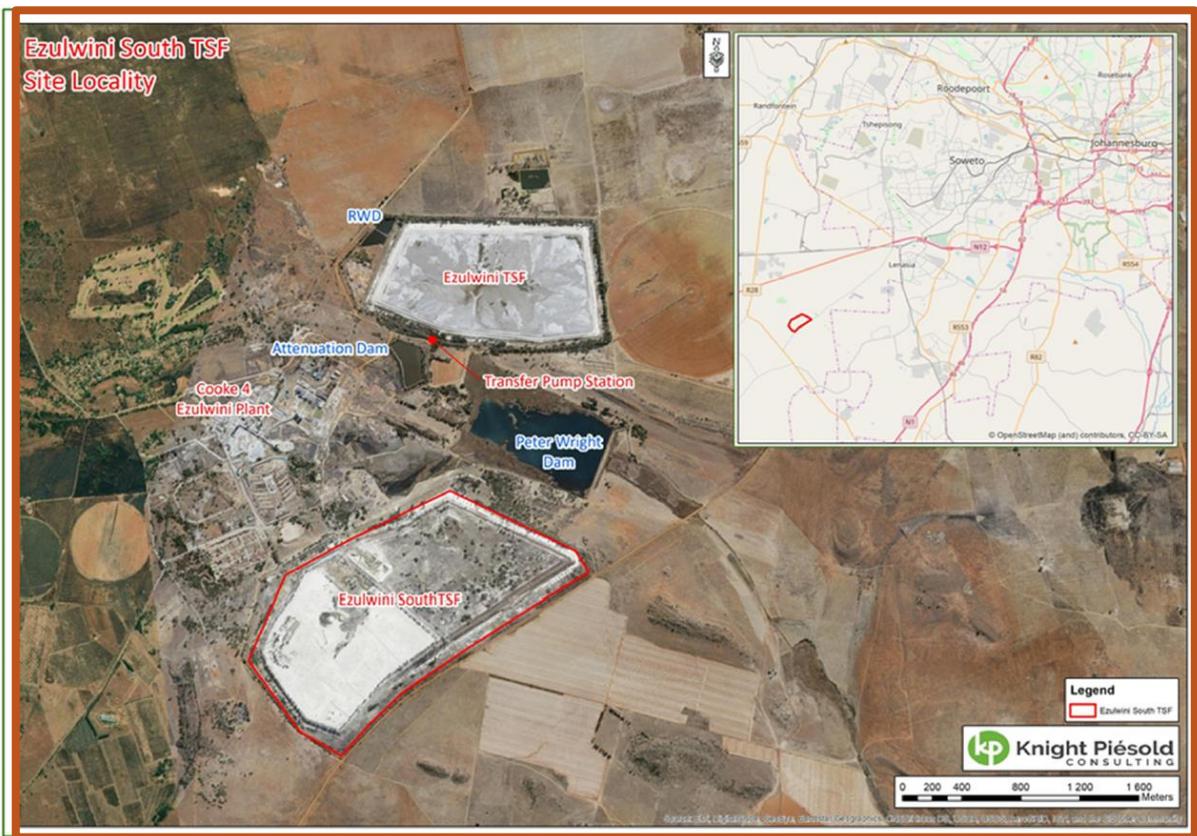


Figure 1: Layout of Ezulwini Mine Complex

