

DECEMBER 2023

COOKE TAILINGS STORAGE FACILITY (TSF) 1

DETAILS OF TAILINGS STORAGE FACILITY

Tailings Storage Facility (TSF) Name	Cooke 1 TSF
Operation	Cooke Mine
Operational Status	Dormant since January 2015
Operating Segment	RSA - Gold
Location	6.5 km south-east of the town of Randfontein on the West Rand – please refer to Figure 1
Latitude, Longitude (decimals)	-26,2434528, 27.749525
Ore Source	Underground
Type of Storage Facility	Impoundment (upstream development)
Deposition Methodology	Day-Wall Paddock
Year of Commissioning	1977
Consequence Classification (GISTM, 2020)	High
Operating Contractor	Stefanutti Stocks Inland (SSI)
Engineer of Record (EoR)	Knight Piesold (Pty) Ltd (KP)
Current Maximum Height (m)	66
Final Maximum Height (m)	66
Total Volume Already Deposited (Mm³)	65.9
Life of TSF (year)	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 : PR301-00726/48-A-PR23-00175 Rev 0, July 2023)

Area of Inundation

Has been identified by EoRs – please refer to Figure 2

Summary of Human Exposure

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

DOCUMENTATION:

Site Specific OMS Manual

Version 2023 available

Mandatory Code of Practice (MCOP) Document No: SER.EE 2.4B COP is in place (dated November 2021)

Design Basis Report (DBR)

Version 2023 available
(KP Reference: RI301-00726/48 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 2013.



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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 available

Annual emergency mock drill for a catastrophic TSF failure – undertaken on 29 June 2023 with SSW employees and contractors.

Environmental emergency preparedness is managed on site according to ISO14001: 2015.

CLOSURE & POST CLOSURE

Closure Planning

In place - report prepared by Golder Associates
(Golder Reference: 20355171-341341-4, April 2021)

Closure Costing

Adequate financial capacity in place
Financials prepared by Golder Associates
(Golder Reference: 20447293-349378-1, December 2021)

Asset Insurance Cover

In place – July 2023 to June 2024



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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: 301-00840/02-008 Rev 1, February 2020) Next review scheduled for 2026



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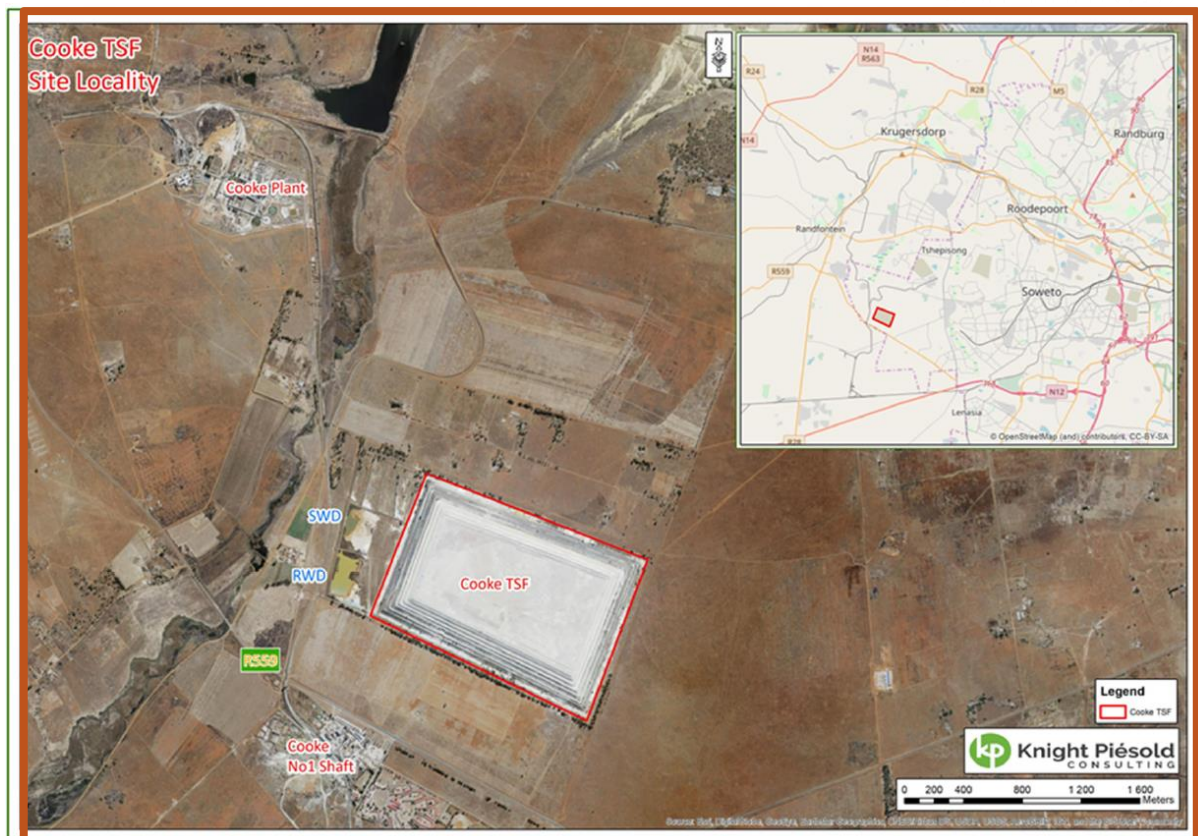


Figure 1: Layout plan of Cooke TSF

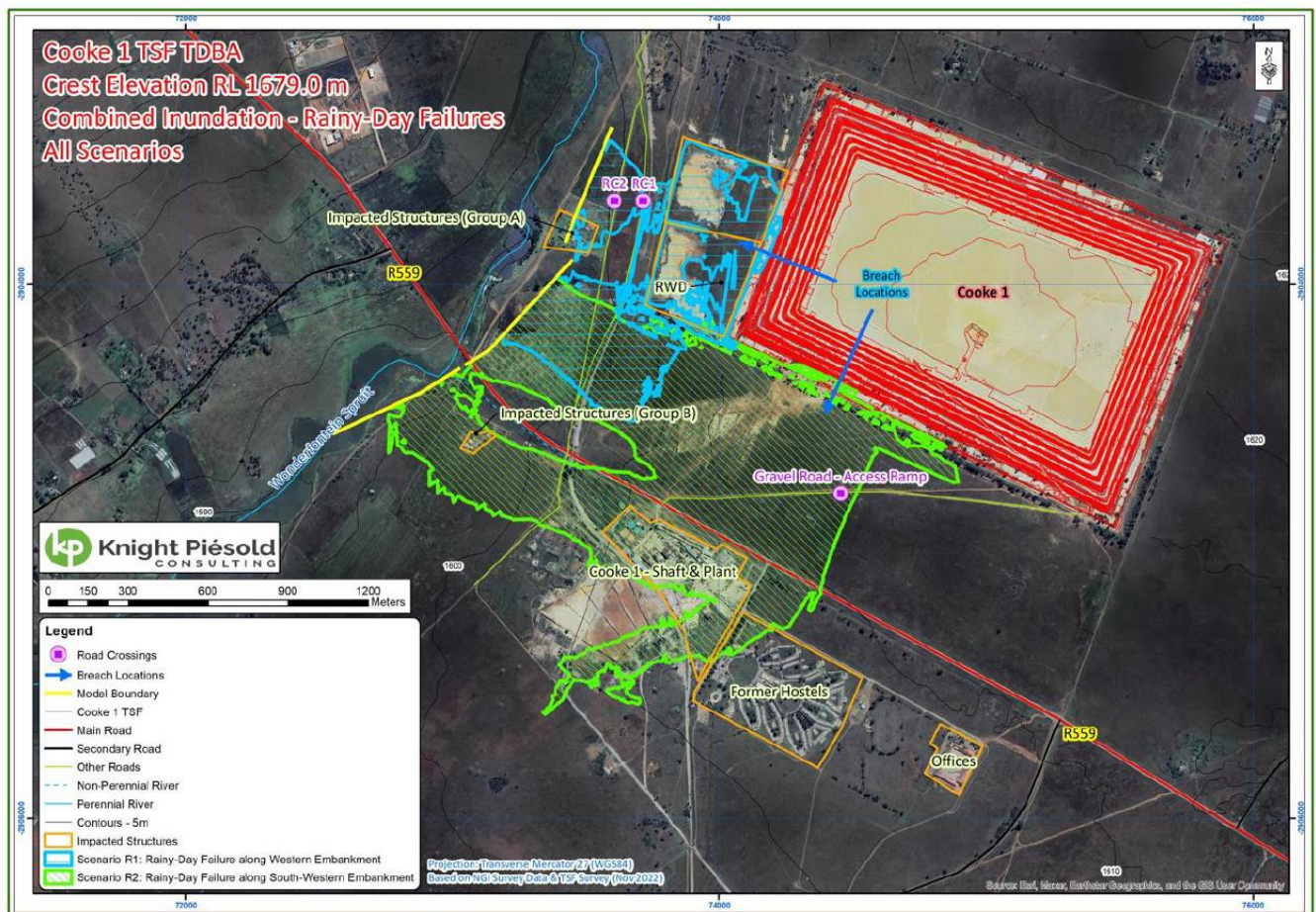


Figure 2: Consolidated view of all Rainy-Day Failure Scenario Inundation Boundaries