

DECEMBER 2022

WESTERN PLATINUM MINE
 TAILINGS STORAGE
 FACILITY (TSF) 6

DETAILS OF TAILINGS STORAGE FACILITY

Tailings Storage Facility (TSF) Name	Western Platinum Tailings Dam Complex - Tailings Dam 6 (WPL TD6)
Operation	Marikana
Operational Status	Active
Operating Segment	RSA - PGM
Location	5 km east of the town of Marikana in the North-West province - please refer to Figure 1
Latitude, Longitude (decimals)	-25.6745, 27.5582
Ore Source	Underground
Type of Storage Facility	Impoundment (upstream development)
Deposition Methodology	Spigot, converting to Hybrid Paddock System during 2023
Year of Commissioning	1992
Consequence Classification (GISTM, 2020)	Extreme
Operating Contractor	Fraser Alexander (Pty) Ltd (FAT)
Engineer of Record (EoR)	SLR Consulting (Pty) Ltd
Current Maximum Height (m)	36
Final Maximum Height (m)	65
Maximum Storage Capacity (tons/month)	350 000
Life of TSF (year)	2034 @2.5m/yr

TECHNICAL ASPECTS:

Adopted Factor of Safety	Australian National Committee on Large Dams (ANCOLD) (July 2019)
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Stability Assessment and Mitigation Measures (if applicable)

A detailed stability assessment based on piezocone probing and laboratory test work was conducted in 2022. (SLR Project No: 720.19129.00042 rev A, December 2022)

The piezocone probing indicates that the tailings is strongly dilative and thus not susceptible to liquefaction.

All the FoS are above the required limits

Dam Breach Assessment

Assessment completed in 2022 (SLR Ref No: 425.V03471.00065 Rev 1, December 2022)

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 2022 available

Dam Safety Review (DSR)

Carried out by an independent third party in 2020. All recommendations at the time have been addressed in the last 2 years. (KP Reference: RI301-00877/02 Rev B, 26 August 2020)

Design Basis Report (DBR)

Version 2022 available (SLR Project No: 720.19129.00035 Rev 1, June 2022)

Environmental Management Programme (EMPr)

In place

Surveillance:

Surveillance Frequency

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

Surveillance Technology/System

K2Fly Decipher

Deformation Monitoring

Interferometric Synthetic Aperture Radar (InSAR)



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

Phreatic Surface Levels & Pore Pressure Measurements

Standpipe piezometers
 AquaSense Retrofit piezometers (IoT device)
 Vibrating Wire Piezometers (VWP's) currently being installed

RISK MANAGEMENT / EMERGENCY PREPAREDNESS:

Risk Assessment

Annual Risk Assessment (Bowtie and Fault Event Tree) completed with no untoward risk identified

Risk Management

Site specific OMS Manual in place
 Site specific Trigger Action Response Plans (TARPs) in place
 Critical controls established and implemented
 Operating contractor Technical and Operational Risk Assessment System (TORAS)

Site Specific Emergency Preparedness & Response Plans (EPRP)

Version 2022 available

Annual emergency mock drill for a catastrophic TSF failure – undertaken on 2 November 2022 with SSW employees and contractors.

CLOSURE & POST CLOSURE

Closure Planning

In place - report prepared by Golder Associates (Golder Reference: 20141966-340280-9, June 2021)

Closure Costing

Adequate financial capacity in place
 Financials prepared by Golder Associates (Golder Reference: 21467970-349390-1, December 2021)

Asset Insurance Cover

In place – July 2022 to June 2023

Independent Reviews:

Independent Tailings Review Board (ITRB)

13 July 2022 with no material concerns identified

Future ITRB Review

2025

Performance Reviews

Annual and quarterly reports and inspections completed by EoR (SLR Project No: 720.19129.00035 Rev A, September 2022)



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SAFETY

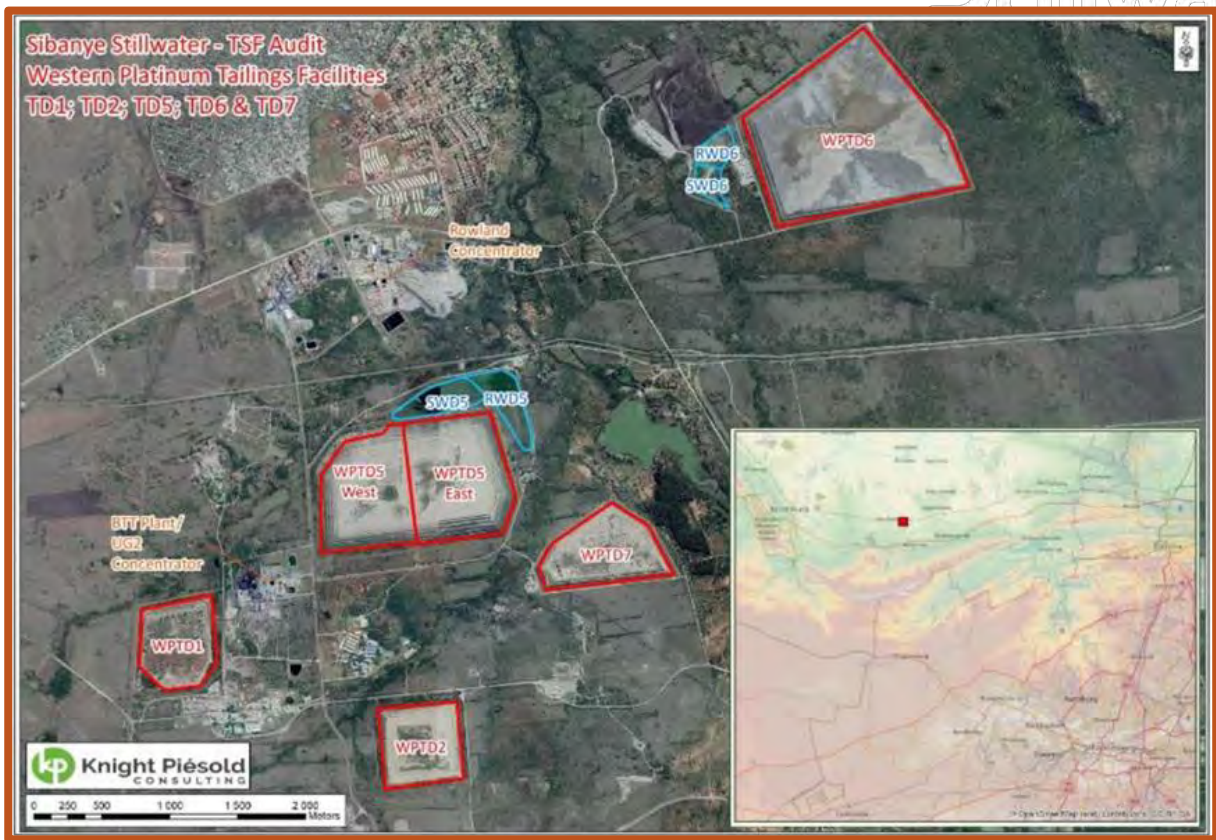


Figure 1: Layout of Western Platinum (WPL) Tailings Dam Complex

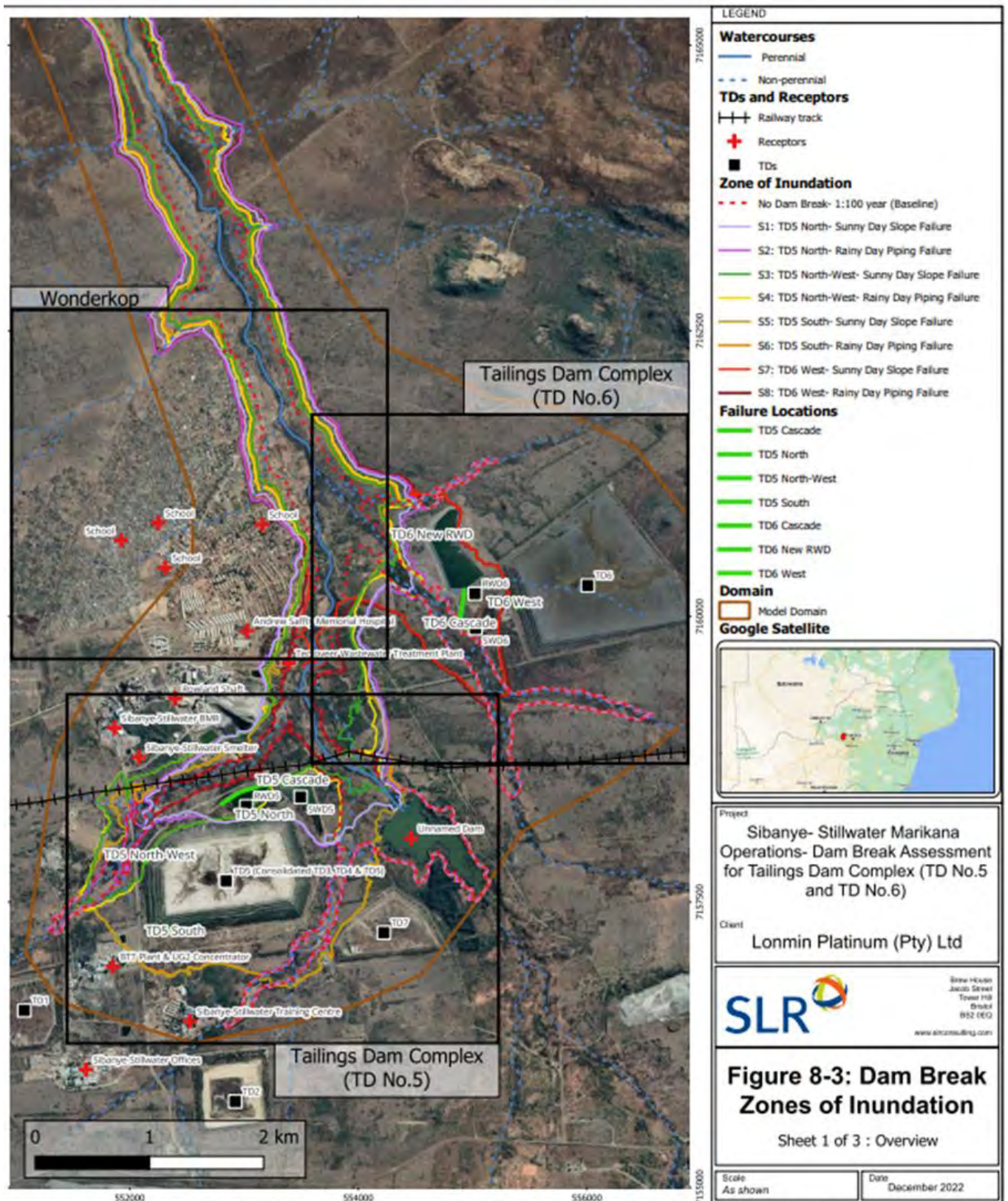


Figure 2: Summary of Area of Inundation for all scenarios