

DECEMBER 2023

BLUE RIDGE TAILINGS STORAGE FACILITY (TSF)

DETAILS OF TAILINGS STORAGE FACILITY

Tailings Storage Facility (TSF) Name	Blue Ridge
Operation	Limpopo
Operational Status	Dormant since 2010
Operating Segment	RSA - PGM
Location	Approximately 22km south-east of Groblersdal – please refer to Figure 1
Latitude, Longitude (decimals)	-25.24845, 29,574672
Ore Source	Underground
Type of Storage Facility	Impoundment (upstream development)
Deposition Methodology	Spigot
Year of Commissioning	2009
Consequence Classification (GISTM, 2020)	High
Operating Contractor	N/A
Independent Senior Technical Reviewer	In place
Current Maximum Height (m)	9
Final Maximum Height (m)	9
Total Volume Already Deposited (Mm³)	1.6 Mm ³
Life of TSF (year)	N/A



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

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 Design Engineer. Details are included in the Design Basis Report (DBR).

Stability Assessment and Mitigation Measures (if applicable)

A detailed stability assessment based on limited information was conducted in 2023 (KP Reference: RI301-01024/01-A, 30 November 2023).

All the FoS are above the recommended limits provided all drains are working and thus no mitigation measures were required. Recommendations for in-situ testing and borehole drilling to improve the stability analysis and the material properties used in the analysis.

Dam Breach Assessment

Assessment completed in 2023
(KP Reference:RI301-01024/01-A-PR23-00262, 27 November 2023)

Area of Inundation

Has been identified by Independent Senior Technical Reviewer – please refer to Figures 2 & 3

Summary of Human Exposure

Consequence classification has been based on Population at Risk (PAR). There are no risks to external stakeholders since they are not within the Area of Inundation

DOCUMENTATION:

Site Specific OMS Manual

Version 2023 available

Mandatory Code of Practice (MCOP) Document No: AISP.P87.D02 is in place (dated November 2008)

Design Basis Report (DBR)

Version 2023 available
(KP Reference: RI301-001024/1, 29 November 2023)



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

Environmental Management System

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

The initial Environmental Management Programme (EMPr) is dated 2010.

Surveillance:

Surveillance Frequency

Monthly by the RTFE

Surveillance Technology/System

K2Fly Decipher

Deformation Monitoring

Interferometric Synthetic Aperture Radar (InSAR)

Phreatic Surface Levels & Pore Pressure Measurements

None

RISK MANAGEMENT / EMERGENCY PREPAREDNESS:

Risk Assessment

Annual Risk Assessment (Failure Mode Effect Analysis) 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

Site Specific Emergency Preparedness & Response Plans (EPRP)

Version 2023 available

Annual emergency mock drill for a catastrophic TSF failure – undertaken on 25 May 2023 with SSW employees and contractors.

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



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

CLOSURE & POST CLOSURE

Closure Planning

In place - report prepared by Golder Associates
(Golder Reference: 20138272-341347-2, April 2021)

Closure Costing

Adequate financial capacity in place
Financials prepared by Golder Associates
(Golder Reference: 21467970-349390-1, March 2022)

Asset Insurance Cover

In place – July 2023 to June 2024

Independent Reviews:

Independent Senior Technical Review

Undertaken in 2023

Performance Reviews

Although Blue Ridge has a high consequence classification and hence requires an EoR (GISTM Requirement 9.1), improving freeboard will downgrade the consequence classification to significant, i.e. an EoR is not required. The intention is to continue carrying out independent senior technical reviews while closure commences during 2024. The freeboard will be included as part of the closure and the TSF deemed to be in safe closure once complete

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)

Next review scheduled for 2024/2025



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

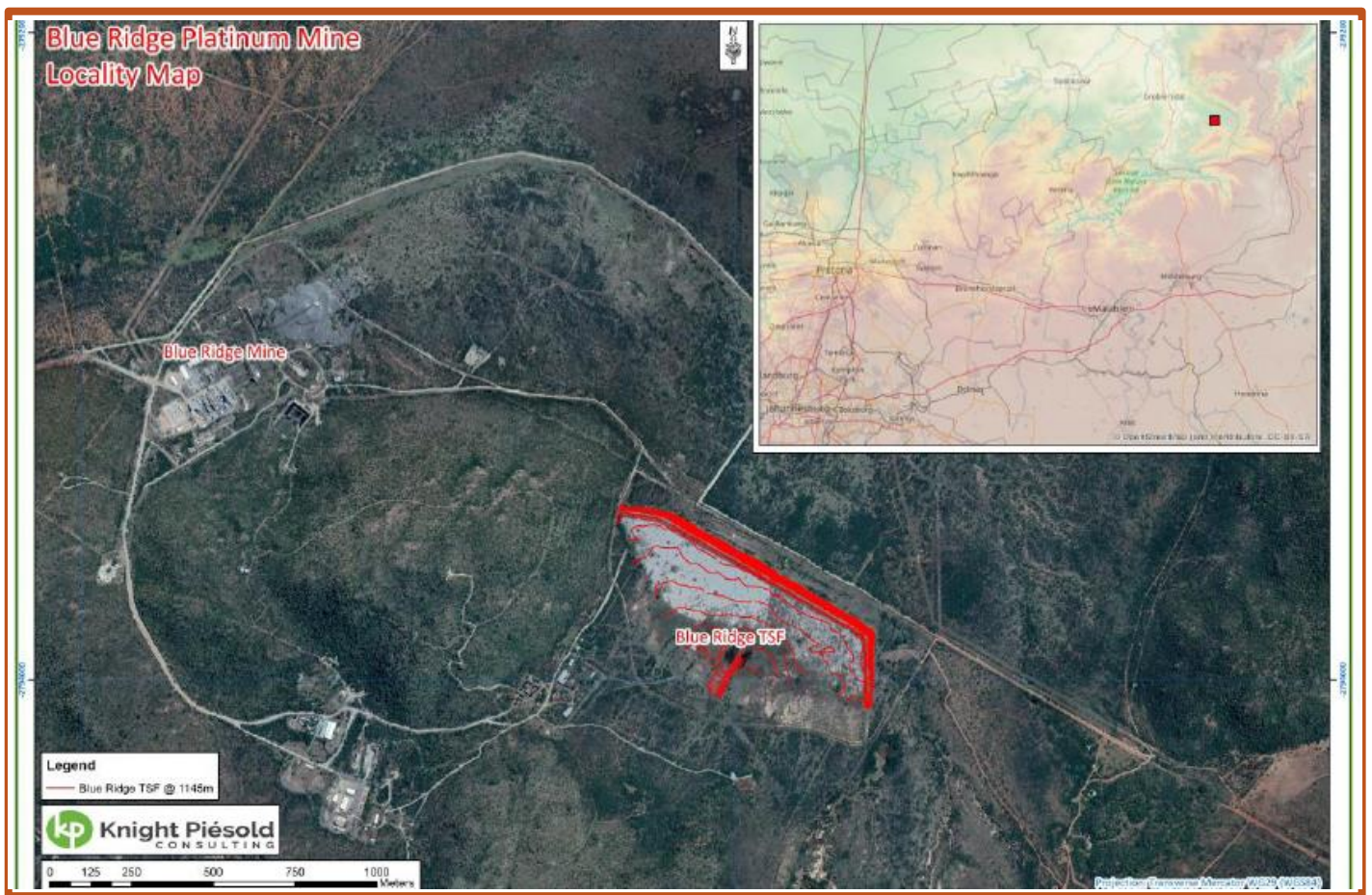


Figure 1: Layout of Blue Ridge TSF



INNOVATION



COMMITMENT



ACCOUNTABILITY



RESPECT



ENABLING



SAFETY

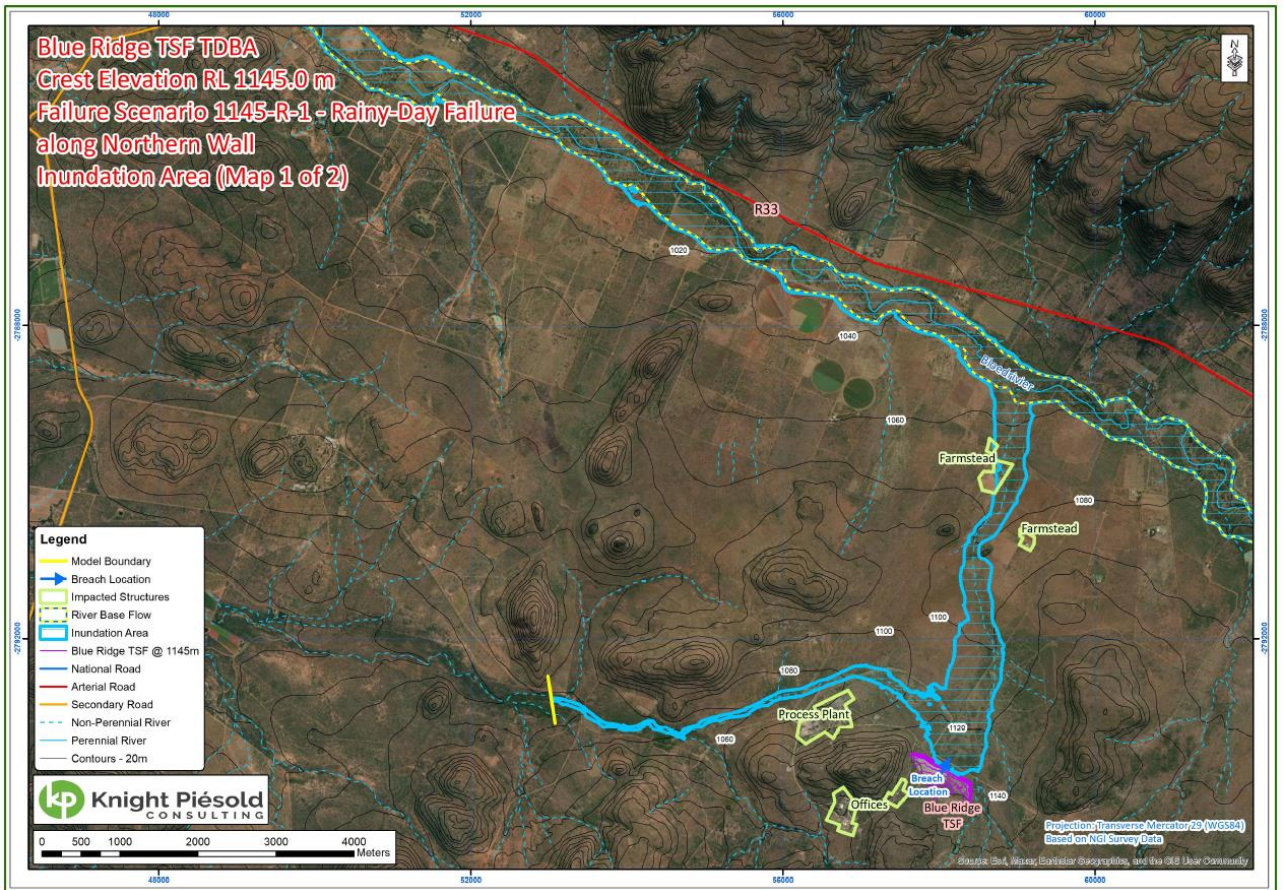


Figure 2: Rainy Day Failure - Area of Inundation (Map 1 of 2)

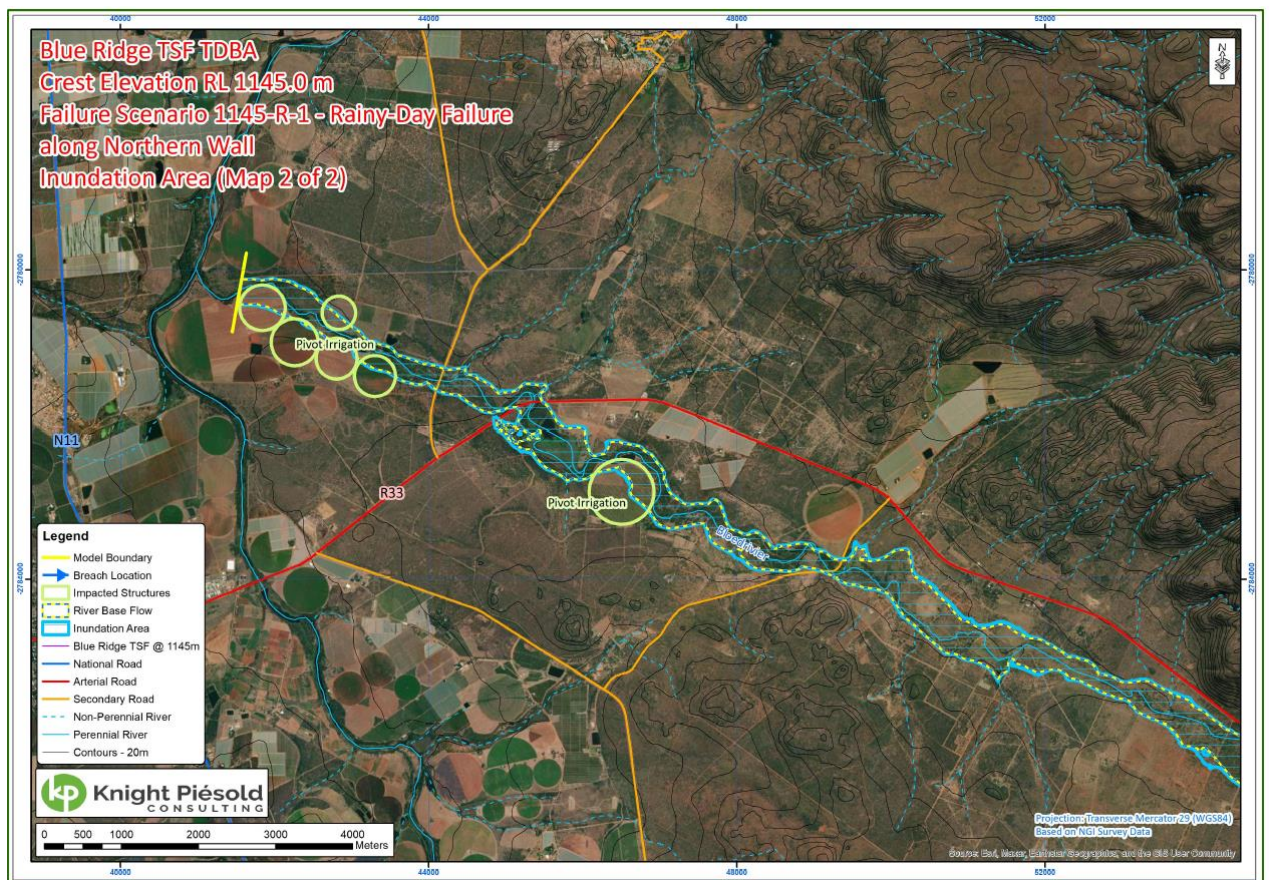


Figure 3: Rainy Day Failure - Area of Inundation (Map 2 of 2)