NOTIFICATION OF INTENT TO DEVELOP

Digby Wells Reference: GOL2376

SIBANYE GOLD'S WEST RAND TAILINGS RETREATMENT PROJECT

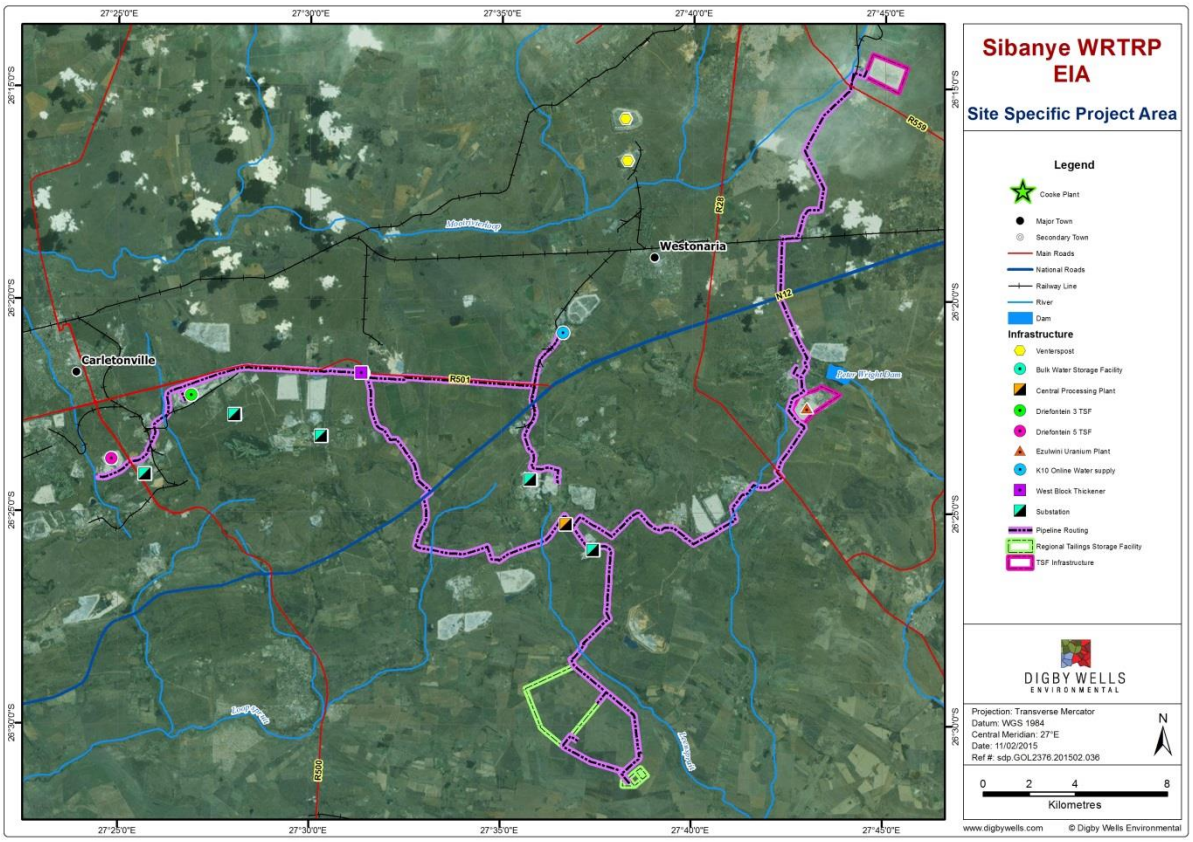
1 Introduction

Digby Wells Environmental (hereafter DWE) services have been enlisted to undertake the environmental authorisation process for the proposed West Rand Tailings Retreatment Project (WRTRP). The Notification of Intent to Develop (NID) and Heritage Scoping Report (HSR) were submitted in compliance with Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

1.1 Project Location

Town or District	West Rand District Municipality (WRDM)
Responsible Municipality	Merafong City Local Municipality (MCLM) Randfontein Local Municipality (RLM) Westonaria Local Municipality (WLM) City of Johannesburg Metropolitan Municipality (CoJ)
Maximum extent of proposed development	Reclamation of 1662 ha of TSF Installation of approximately 120 km of pipelines
Current use	Agriculture and Mining
Predominant land use/s of surrounding properties	Agriculture, Residential

1.2 Illustrative Material



1.3 Registered Owner/s of Property/ies

Please refer to Appendix D of the Heritage Scoping Report

2 Project / Development Details

Sibanye Gold Limited (hereafter SGL) intends to undertake a project known as the West Rand Tailings Retreatment Project (WRTRP). It is understood by SGL that many of the historical Tailings Storage Facilities (TSFs) have adverse impacts on society and the environment. In addition, many of these historical TSFs are on dolomitic strata, posing risks for groundwater contamination through Acid Mine Drainage (AMD), radioactive contamination and collapse through the development of sinkholes. As part of the WRTP, SGL envisages that existing TSFs will be retreated, including those of the Driefontein Complex, Kloof Complex, Rand Uranium and Ezulwini. Future reclamation of other dumps in the area is also likely. Treatment of the dump material will take place at a proposed new Central Processing Plant (CPP); resultant tailings will be deposited on a proposed new Regional TSF (RTSF).

2.1 NHRA Section 38 Triggers

The following aspects of Section 38 of the NHRA may be triggered by the proposed project.

	NHRA Section 38 (1) Activities / Triggers			Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
☒	a		Any linear development or barrier >300 m	Installation of pipelines Construction of power lines
☐	b		Any bridge or similar structure >50 m	
☐	c		Any development or activity that will change the character of a site:	Construction of infrastructure including the CPP and RTSF
	☒	i	≥5 000m^2 in extent	
	☐	ii	Involving ≥3 existing erven/ subdivisions	
	☐	iii	Involving ≥3 or more erven/ divisions consolidated within past 5 years.	
☐	d		Rezoning of a site ≥10 000m^2 in extent.	
☒	e		Other triggers, e.g.: in terms of other legislation, (i.e.: National Environment Management Act, etc.)	MPRDA, NEMA, NWA

2.2 Activities

The following activities will take place during the lifespan of the proposed project.

Category	Activity
Infrastructure	Pipeline Routes (water, slurry and tailings).
	West Block and Cooke Thickeners (WBT and CT) and West and North Bulk Water Storage (BWS) complexes.
	Collection sumps and pump stations at the Driefontein TSF 3 and 5, Ezulwini South TSF and Cooke TSF.
	Central processing Plant (CPP) incorporating Module 1 float and gold plants and No1 uranium, roaster and acid plants) and Regional Tailings Storage Facility (RTSF) stage 1.
	RTSF Return Water Dams (RWD) and the Advanced Water Treatment Facility (AWTF).

Category	Activity
Processes	Abstraction of water: K10 shaft, Cooke 1 and 2 Cooke 4 shaft
	Disposal of the residue from the AWTF.
	Hydraulic reclamation of the TSFs (which include surge storage of the slurry in a sump/tank).
	Gold, uranium and sulfur extraction at the CPP (tailings to RTSF) and possible uranium extraction at Ezulwini (tailings to Ezulwini North Dump).
	Water distribution at the AWTF for discharge or sale.
Pumping in Western Block	Pumping water from K10 to the BWSF located next to the WBT.
	Pumping water from the BWSF to the Driefontein TSFs that will be reclaimed.
	Pumping slurry from the TSF sump to the WBT (for Driefontein TSF 3 and 5).
	Pumping the thickened slurry from the WBT to the CPP (2 pipeline route options).
Pumping in Southern Block	Pumping 50 kt/m of uranium and sulfur rich slurry from the CPP to Ezulwini for extraction of uranium.
	Pumping of up to 1.5Mt/m of tailings to the RTSF.
	Pumping water from the RTSF return water dams to the AWTF.
	Discharging treated water to the Leeuspruit or end user.
	Pumping of 1Mt/m of tailings from the C4S to the SBT.
	Pumping residue from the AWTF to the RTSF.
Pumping in Northern Block	Pumping 500 kt/m of tailings from the Cooke Dump to the Cooke thickener and ultimately the northern TSF @1Mt/m to the NBT and on to the CPP
	Pumping from the Cooke thickener to the CPP.
Electricity supply	Power supply from West Drie 6 substation to Driefontein TSF 3.
	Power supply from West Drie Gold substation to Driefontein TSF 5.
	Power supply from East Drie Shaft substation to WBT and BWSF.
	Power supply from Kloof 1 substation to the CPP.
	Power supply from Kloof 4 substation to the RTSF and AWTF.
	Power supply from the Cooke Plant to the Cooke TSF
	Power supply from Ezulwini plant to the C4S TSF

2.3 Additional Impact Assessment Process

The following impact assessment process/es are currently being undertaken for the proposed project.

Legislation, i.e. NEMA, MPRDA, etc.	**MPRDA, NEMA, NWA**
Consenting Authority that has/will receive information	**DMR**
Present phase of process at Authority, e.g. Draft Scoping Report	**Application and Draft Scoping Report**

3 Identified / Known Heritage Resources and Potential Impacts

The following categories of heritage resources as defined in Section 3 of the NHRA are known to occur within the proposed project area.

☒	**3(2)(a)**	**Places, buildings, structures and equipment of cultural significance**
		Description of resource: Built structures and historical werwe older than 60 years and generally protected under Section 34 of the NHRA
		Potential impact: Damage and / or Destruction
☐	**3(2)(b)**	**Places to which oral traditions are attached or which are associated with living heritage**
		Description of resource: None
		Potential impact: None
☒	**3(2)(c)**	**Historical settlements and townscapes**
		Description of resource: Historic mining landscape
		Potential impact: Alteration to the sense-of-place
☐	**3(2)(d)**	**Landscapes and natural features of cultural significance**
		Description of resource: None
		Potential impact: None
☐	**3(2)(e)**	**Geological resources of scientific or cultural importance**
		Description of resource: Malmani subgroup
		Potential impact: None

☒	**3(2)(f)**	**Archaeology and/or palaeontology *(Including archaeological sites and material, fossils, rock art, battlefields & wrecks)***
		Description of resource: Stonewalled settlements associated with Late Farming Communities
		Potential impact: Potential damage
☒	**3(2)(g)**	**Graves and burial grounds *(eg: ancestral graves, graves of victims of conflict, historical graves & cemeteries)***
		Description of resource: Burial grounds comprising of approximately 27 graves
		Potential impact: Destruction
☐	**3(2)(a)**	**Other human remains**
		Description of resource: None
		Potential impact: None
☐	**3(2)(h)**	**Sites of significance relating to the history of slavery in South Africa**
		Description of resource: None
		Potential impact: None
☐	**3(2)(i)**	**Movable objects**
		Description of resource: None
		Potential impact: None

4 Recommendation

Is a Heritage Impact Assessment required?		☒ Yes	☐ No
If NO, provide motivation:			
If YES, provide suggested components that may be required or undertaken during HIA.			
☒	Archaeology	☐	Architecture
☒	Built Environment	☒	Burial Grounds and Graves

☐	Palaeontology	☐	Public Participation
☐	Townscapes	☐	Visual Impact
☐	Other:		

- No physical activities are associated with the inclusion of the Venterspost North and South TSFs into the mining right area. This activity should be exempt from any further heritage studies.
- Exemption from further palaeontological assessment based on the current project activities should be granted
- An HIA must be undertaken for the proposed infrastructure development footprint, including linear infrastructure outside of established servitudes. This must include the following components:
  - An Archaeological Impact Assessment (AIA) including reconnaissance of the proposed development footprint of the Central Processing Plant (CPP), Regional Tailings Storage Facility (RTSF) and linear infrastructure outside of existing servitudes
  - An assessment of burial grounds and graves including reconnaissance to identify, record and document all burials that may exist in the development footprint; and
  - Integration of additional specialist studies to determine any possible living heritage in the project area.
- Where linear infrastructure is contained within existing servitudes, these should be exempted from further heritage assessment

Recommendation made by:

Name: Justin du Piesanie

Capacity: Heritage Management Consultant: Archaeologist