



# Non-Technical Summary

for

**Client Name: Ergo Mining (Pty) Limited**

**Project Number: DRDG#086**

**Project Name: Reclamation of the 6L14 TSF**

**Kongiwe Environmental (Pty) Ltd.**

Registration Number 2016/135562/07

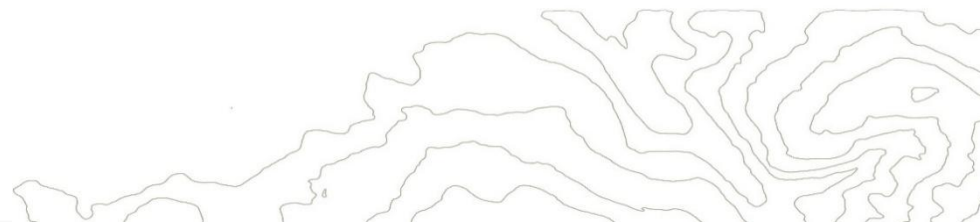
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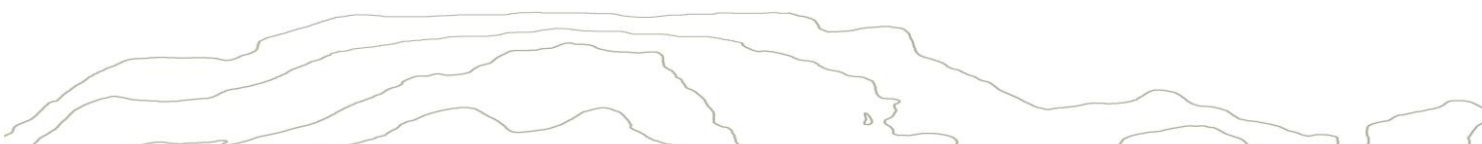
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## 1. Introduction

### 1.1 This Document

This Non-Technical Summary (NTS) provides an overview of the Draft Scoping (DSR) process for the proposed Reclamation 6L14 of the Tailings storage Facility (TSF) Project, situated in the City of Ekurhuleni Municipal area, Gauteng Province. It has been prepared by Kongiwe Environmental (Pty) Ltd. The Scoping and Environmental Impact Assessment (S&EIA) was undertaken in compliance with the National Environmental Management Act (Act 107 of 1998), as amended, and the EIA Regulations, as amended. The Proposed Project will require environmental permitting in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and the National Environmental: Waste Management Act, 2004 (Act No 59 of 2008) (NEM:WA), Category B activities. The Proposed Project thus triggers the need for the Scoping and Environmental Impact Assessment (S&EIA) to be undertaken.

The NTS describes the project proposal, and the potential impacts the Proposed Project may have on the biophysical and socio-economic environments. It also addresses the measures that the Proposed Project will implement to reduce significant negative impacts and to enhance potential social benefits, and how environmental and social issues will be managed during the construction, operation and decommissioning phases. The NTS is a short document written in non-technical language that can be used to share the findings of the EIA and Amendment process to the public.

### 1.2 Non-Technical Summary

Kongiwe Environmental (Pty) Ltd (Kongiwe) has been appointed by Ergo Mining (Pty) Limited, as the independent Environmental Assessment Practitioner (EAP) tasked with conducting the S&EIA process which is aimed at critically evaluating the potential environmental and social impacts of the proposed Reclamation of the 6L14 TSF (hereafter the Proposed Project). Ergo a wholly owned subsidiary of DRDGOOLD - within which the Group's Eastern surface retreatment assets are consolidated, is a major surface gold tailings retreatment operation that focuses on old and abandoned TSFs.

The Application for Environmental Authorisation (EA) was submitted to the Department of Mineral and Petroleum Resources (DMPR), which is the Competent Authority (CA) for the Proposed Project, on **Wednesday 06 May 2026**. The Draft Scoping (DSR) is available for public review from **06 May 2026 to 04 June 2026**.

### 1.3 Project Introduction and Background

Ergo a wholly owned subsidiary of DRDGOOLD - within which the Group's Eastern surface retreatment assets are consolidated, is a major surface gold tailings retreatment operation that focuses on old and abandoned TSFs.

Ergo Mining (Pty) Limited (Ergo) is the largest gold tailings retreatment company in South Africa. The surface deposits controlled by Ergo are waste products created from the historical processing of gold and uranium ores of the Witwatersrand Supergroup. Ergo has Mining Right (ERGO-GP158MR) over the dump, this facility was historically used previously as a mining waste deposition site and has been dormant for some time.

The dump will be reprocessed via the existing pipeline network through the 5L27 Transfer Pumpstation to the Ergo Beneficiation Plant (Ergo Plant) which is currently in operation, with ultimate residue deposition taking place on the Brakpan/Withok TSF and /or Daggafontein TSF. A new reclamation pumpstation will be developed for the Proposed Project.

As part of Ergo’s rehabilitation strategy, the removal of TSF’s like this will allow repurposing of the land in a more sustainable manner and ultimate offsetting of environmental impacts. The reclamation projects are in line with the objectives of the Gauteng Mine Residue Area Strategy (2012), which are to reclaim and/or rehabilitate TSFs to the point where they become safe for adjacent communities and land can be made available for other purposes.

Ergo aims to reclaim and reprocess the 6L14 TSF with the objective of recovering gold using top-down hydraulic reclamation. Hydraulic reclamation is a largely mechanised process with a risk profile that is significantly lower than that of conventional mining. During hydraulic reclamation, a water monitor blasts the sides of the TSF, the process water mixes with the unconsolidated material, resulting in what is known as a ‘slurry’. The slurry will report to a pumpstation, located at the lowest point of a TSF, where it will then be pumped and conveyed to Ergo Plant for reprocessing.

The Proposed Project will be consolidated into a single Environmental Authorisation (EA) application. This application will be submitted to the Department of Mineral and Petroleum Resources (DMPR), which serves as the Competent Authority responsible for assessing and approving mining-related environmental projects in the Gauteng Province. In addition to the EA, a Water Use License (WUL) will be required for any activities that may impact water resources. The Integrated Water Use Licence Application (IWULA) will be reviewed and considered by the Department of Water and Sanitation (DWS), ensuring that all water-related aspects of the Proposed Project comply with National Regulations.

#### 1.4 Description of the Project Location

The Proposed Project activities will be undertaken within Farm Portion 6 of Grootvaly 124 IR, as well as Portions 84 and 192 of Geduld 123 IR. In addition, the proposed transfer pump station currently in operation is situated on Farm Portion 3 of Modderfontein 76 IR. See Table 1 below.

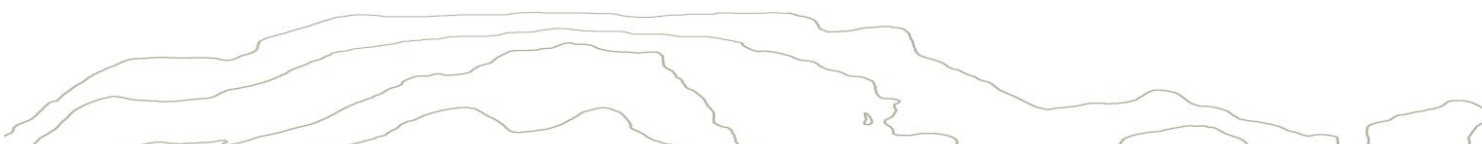
**Table 1: Property Details**

<b>Application Area (ha)</b>	Total footprint of the 6L14 TSF is approximately 63.21 hectares.
<b>Magisterial District</b>	Ward 72 of the City of Ekurhuleni Municipality (CoE), Gauteng Province.
<b>Distance and Direction from Nearest Town</b>	Located approximately 4 km north-east of Springs.

#### 1.5 Infrastructure for the Project

The following infrastructure will be utilised for 6L14 TSF reclamation Proposed Project in Figure 2 will be established for the reclamation and processing of the TSF

- Reclamation infrastructure at each TSF consisting of a pump station which includes:
  - Slurry sump;
  - Vibrating Screen;
  - Water tank;



- Motor control centre; and
- Slurry and associated Pumps.
- Lined catchment paddocks;
- Stormwater management infrastructure including:
  - Water Pumpstation and PCD infrastructure and stormwater systems;
  - Existing paddocks on the TSF footprint; and
  - Pollution control paddock.
- 11 kV overhead powerlines capable of transmitting 3 kVA of electricity and electricity reticulation;
- Administration buildings, including change houses and ablution facilities;
- Access roads, routed from existing entry points;
- Construction contractors' yards (temporary facilities); and
- Process water will be required for the 6L14 reclamation operations to support the Proposed Project via the existing pipeline network.

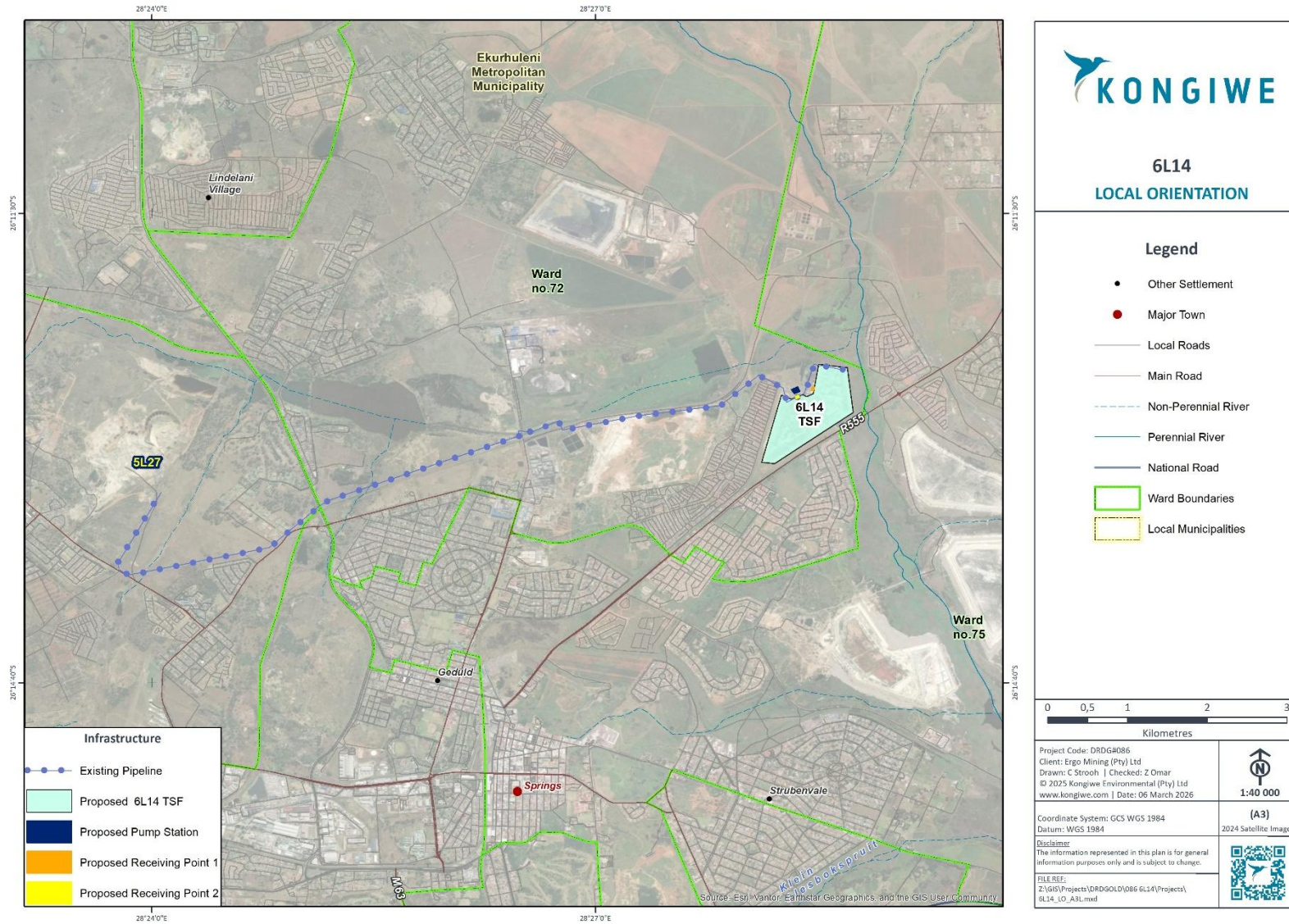


Figure 1: Project Location

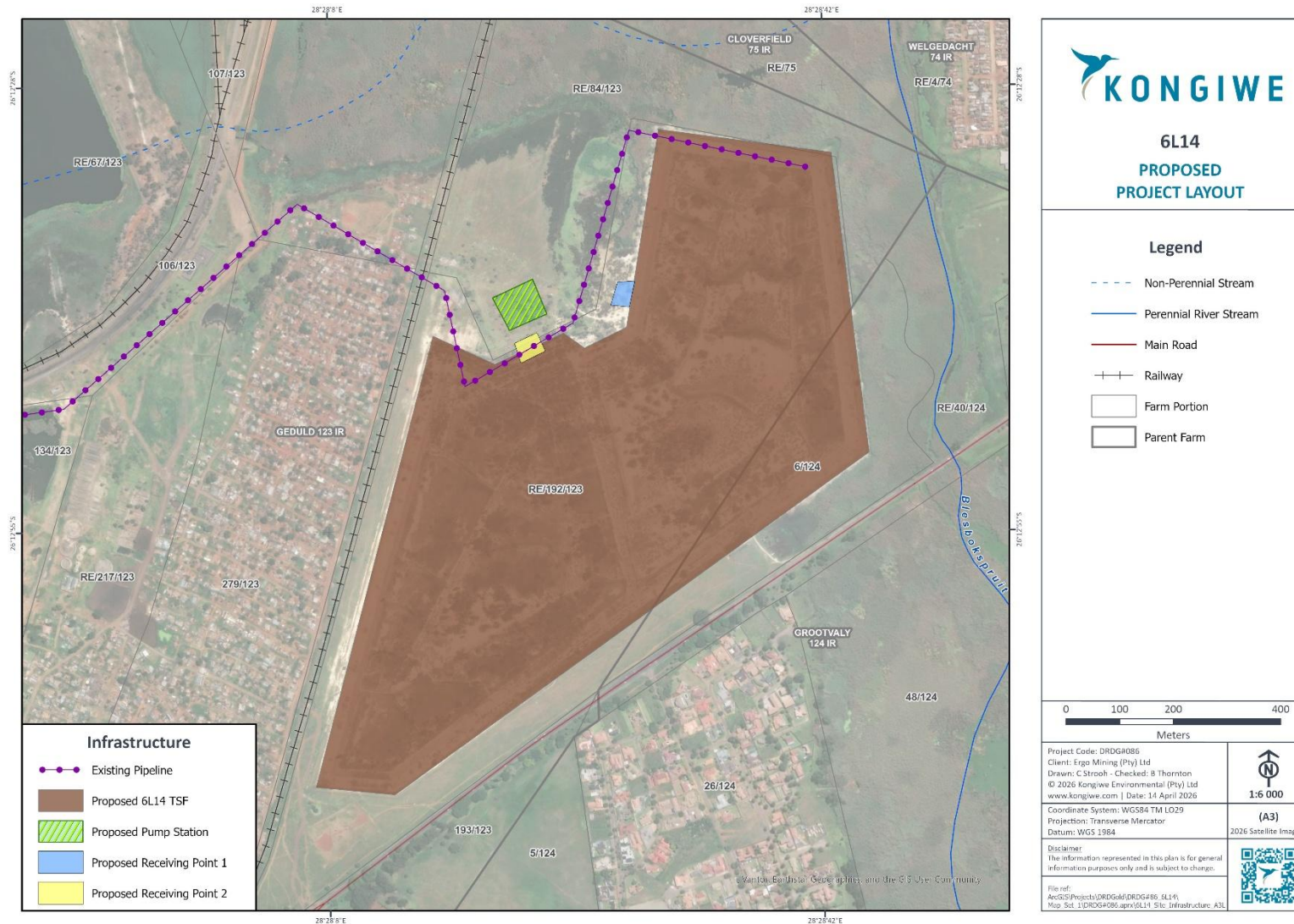


Figure 2: Proposed Project Layout Map

## 2. Method of Reclamation

### 2.1 Hydraulic Reclamation

The proposed reclamation method which will be used to reclaim the TSF is referred to as top-down hydraulic reclamation. This technique uses high-pressure water monitors / cannons to deliver a high-pressure water jet to excavate unconsolidated tailings material within the TSF hydraulically. The water from the cannon mixes with the tailings and forms a slurry with a high solids content. The slurry then flows under gravity along trenches at the base of the TSF to a collection sump which is positioned at the lowest elevation of the bench being mined.

At the sump, finger screens remove any debris that may impact pumping operations, and the screened slurry then flows into the sump and is subsequently conveyed to the station. The position of the collection sump will change as the reclamation progresses. From the collection sump, the slurry reports to a reclamation station. To control the volume of water reporting to the reclamation station, flapper valves are used to hold, and release slurry contained in the collection sump. The slurry will then report to a pumpstation, located at the lowest point of a TSF, where it will then be pumped and conveyed to Ergo Plant for reprocessing. An example of mechanical reclamation is indicated in Figure 3.

### 2.2 Rehabilitation

Once reclamation is completed, the areas will then be assessed for contamination (particularly in terms of radiation). Contaminated soils will be removed, and the land levelled to its original functioning topography levels.

Following rehabilitation, it is anticipated that the land will be returned to the landowner to use at their discretion. The Proposed Project is for the purpose of reclaiming the historic TSFs and removing a pollution source from the area, aiding in the rehabilitation of the mining legacy left behind in the area. Oversized vegetative material generated during the reclamation process, which does not contain radiological contamination, may be reused following completion of TSF reclamation activities during the rehabilitation phase. The material may be applied as organic

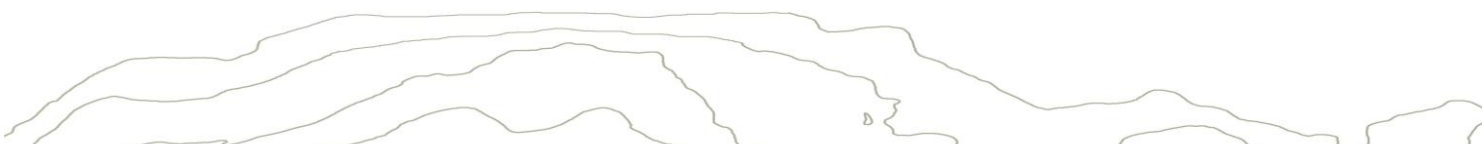


*Figure 3: Example of Hydraulic Reclamation*

compost to rehabilitation areas to improve soil structure, increase organic matter content, support revegetation, and assist in maintaining the integrity and quality of the topsoil layer. This measure promotes sustainable material reuse and contributes to the successful rehabilitation.

### 2.3 Works schedule and lifecycle of the project

The anticipated life span of the project is approximately 12 years. It is expected that there would be a 1 year construction and ramp-up period which would include the placement of infrastructure and site preparation, a 6 year Life of Operation (LOO) where active hydraulic reclamation and mechanical removal would take place, a 2 year ramp-down period and 3 years to rehabilitate the reclaimed site.



### 3. Project Alternatives

- **Location:** The Proposed Project is the reclamation of an existing TSF. Therefore, there can be no alternative sites.
- **Activity to be undertaken:** The only optional activity for Ergo is to reclaim and reprocess the existing TSF. Gold reclamation and processing is the recovery and treatment of gold surface tailings generated from historical underground mining operations.
- **Layout:** The design and layout plan alternatives for the Proposed Project will be refined during the EIA Phase. The final preferred layout will be confirmed by the Ergo once all proposed infrastructure components and their associated onsite locations have been finalised and approved. The layout plan is dictated by the existing location of the TSF and its associated infrastructure, will be assessed by specialist studies and will be addressed in the EIA phase.
- **Technology:** The dump will be reclaimed using top-down Hydraulic reclamation method.
- **Operational:** Only pipeline route is being considered for the transportation of slurry and return water. There are no alternatives to the processing plant and depositional facility, as all reclaimed slurry will be processed at the existing Ergo Brakpan Plant and deposition will take place at the RTSF.
- **The “No-Go” option:** The Option of the project not proceeding would mean that the environmental and social status would remain the same as current.

### 4. Environmental Authorisation Process

In terms of the environmental legislation, Ergo is required to undertake a Scoping and Environmental Impact Assessment (S&EIA) process which evaluates the environmental impacts associated with the Proposed Project as part of an Environmental Authorisation (EA). The S&EIA and specialist studies are being undertaken for the applications for the required approvals. The following applications

are being made to the Department of Mineral and Petroleum Resources (DMPR) for the Proposed Project:

- **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R9851 published pursuant to the EIA Regulations 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA); and
- **Application for a Waste Management Licence (WML)** authorising waste management activity listed in GN 921 of 29 November 2013 published in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (as amended) (NEM:WA).

In addition, the following application is being made to the relevant Competent Authority:

- **An Integrated Water Use Licence Application (IWULA)** in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) will be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project. In this regard, any objection to that application may be lodged in writing within sixty days of the date of this notice to the Minister of the DWS as provided in Section 41(4) of the NWA.

#### 4.1 Listed Activities Triggered by the Proposed Project

Table 2 for Listed activities are activities identified in terms of Section 24 of NEMA which are likely to have a detrimental effect on the environment, which may not commence without an EA from the CA.

**Table 2: Listed Activities Triggered by the Proposed Project**

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
Reclamation of a Residue stockpile or a residue deposit	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR – 21F</b>	Any activity including the operation of that activity required for the reclamation of a residue stockpile or a residue deposit as well as any other applicable activity as contained in this Listing Notice or in Listing Notice 3 of 2014, required for the reclamation of a residue stockpile or a residue deposit.	<b>Category B, Activity 11</b>  The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	
Satellite pump station / Reclamation Station		<b>GNR 984 – 6</b>	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—	<b>Category B, Activity 11</b>  The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of	

<sup>1</sup> Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities. These have not been specifically listed in this Application, but the necessary application will be submitted to the DWS

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			<p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>	<p>the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
Slurry receiving facility	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR 983 – 13</b>	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2.	<b>Category B, Activity 11</b>  The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	
Slurry receiving facility	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR 984 – 6</b>	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—  (i) activities which are identified and included in Listing Notice 1 of 2014;  (ii) activities which are included in the list of waste management		

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			<p>activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>		
Screening facility at the pump station	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR 984 – 6</b>	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the	<b>Category B, Activity 11</b>  The establishment or reclamation of a residue stockpile or residue deposit resulting from activities	

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			<p>generation or release of emissions, pollution or effluent, excluding—</p> <p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where</p>	<p>which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	



Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			the wastewater discharge capacity will not exceed 50 cubic metres per day.		
Storage	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR 984 – 6</b>	<p>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—</p> <p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of</p>	<p><b>Category B, Activity 11</b></p> <p>The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			<p>effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>		
Transfer pumps in series	The total area of the reclamation and associated areas is approximately <b>63.21 hectares.</b>	<b>GNR 984 – 6</b>	<p>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—</p> <p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of</p>	<p><b>Category B, Activity 11</b></p> <p>The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
			<p>section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>		
<p>Dust Suppression of access roads</p> <p>Earth Materials and Gravel.</p>	<p>The total area of the reclamation and associated areas is approximately <b>63.21 hectares</b>.</p>				<p><b>21(g)</b></p> <p>Disposing of waste in a manner which may detrimentally impact on a water resource.</p>

Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
Lined Catchment Paddock	Disposing of excess stormwater and slurry during a stormwater event				<b>21(g)</b>  Disposing of waste in a manner which may detrimentally impact on a water resource.
Access Road	The construction, operation, and rehabilitation of the access road located within 500m of a wetland.				<b>21 (c) and (i)</b>  Impeding or diverting the flow of water in a watercourse and, Altering the bed, banks, courses or characteristics of a watercourse
Lined Catchment Paddock	The construction, operation, decommissioning and rehabilitation of a lined catchment paddock, as well as the construction of the associated stormwater management infrastructure within 500 m of a wetland and within the 1:100-year floodline.				<b>21 (c) and (i)</b>  Impeding or diverting the flow of water in a watercourse and, Altering the bed, banks, courses or characteristics of a watercourse



Name of Activity	Aerial Extent of the Activity (ha)	Applicable Listing Notice as Amended	Listed activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>1</sup>
Pump station	The construction, operation, decommissioning and rehabilitation of a Pumpstation within 500 m of a wetland.				<b>21 (c) and (i)</b>  Impeding or diverting the flow of water in a watercourse and, Altering the bed, banks, courses or characteristics of a watercourse
Slurry Receiving Point 1 and Slurry Receiving Point 2	The construction, operation, decommissioning and rehabilitation of a Slurry Receiving Point 1 and Slurry receiving Point 2 within a wetland and a 500 m of a wetland.				<b>21 (c) and (i)</b>  Impeding or diverting the flow of water in a watercourse and, Altering the bed, banks, courses or characteristics of a watercourse
Tailings Storage Facility	Reclamation of the 6L14 TSF, as well as the operation, decommissioning and rehabilitation of the associated reclamation.				<b>21 (c) and (i)</b>  Impeding or diverting the flow of water in a watercourse and, Altering the bed, banks, courses or characteristics of a watercourse

## **5. Key Baseline Conditions at the project area and surrounds**

### **5.1 Climate**

The dominant vegetation type within the Proposed Project area is the Soweto Highveld Grassland. The area is characterised with strongly summer rainfall with very dry winters. The overall Mean Annual Precipitation (MAP) of the Proposed Project area ranges from 630 - 720 mm.

### **5.2 Topography**

The majority of Proposed Project is characterised by a generally flat topography that lies on gentle north-easterly slopes of less than 10%. To the north, the elevation ranges from 1575m to 1580m, with a stream located to the north of the site. Elevation data in the form of 5m contour intervals was obtained from Chief Directorate National Geospatial Information (CD:NGI).

### **5.3 Geology**

The 6L14 TSF terrain falls within the eastern basin of the greater Witwatersrand basin which is (ANmal geology type). Rock formations from three Supergroups are present on the 6L14 TSF terrain; they are as follows:

- Quartzite and interbedded conglomerates of the Central Rand Group (Johannesburg and Turffontein Subgroups) forms the basement of the Eastern Gold Mining Basin.
- Dolomite with interbedded chert horizons belonging to the Malmani Subgroup of the Chuniespoort Supergroup; overlain by Tillites and mudrock (shale) of the Dwyka Group of the Karoo Supergroup.
- Sandstones and mudrock of the Ecca Group (Vryheid Formation) of the Karoo Supergroup.

### **5.4 Soil**

The Ba 1 land type mainly consists of Hutton, Willowbrook and Rensburg soil forms according to the Soil Classification Working Group (1991), with the occurrence of other soils within the landscape. The Proposed Project falls within the Ba 1 land type are characterised by the plinthic catena with the duplex soils occurring in the upland areas and marginal soils are rare in this land types.

### **5.5 Land Capability and Use**

Most of the land cover of the Project area is classified as mines and quarries, grassland, build-up, barren land, shrubland, wetlands and waterbodies. The Proposed Project is currently vacant. However, it was previously utilised as a fill and rubble dumping site. The TSF footprint is visible at the eastern extent of the study area, with industrial infrastructure situated immediately west of the TSF area. Additionally, a railway line traverses the northern extent of the study area, and the Eskom East Geduld Refinery Substation is situated west of the Proposed Project.

## 5.6 Biodiversity

The Proposed Project area falls within the Soweto Highveld Grassland vegetation is widely distributed in the Gauteng province. According to Mucina and Rutherford (2006), Soweto Highveld Grassland (Gm 8) is a gentle to moderately undulating landscape on the Highveld plateau, characterized by dense, short-to-medium high grassland. It is dominated by *Themeda triandra*, with abundant species including *Elionurus muticus*, *Eragrostis racemosa*, *Heteropogon contortus*, and *Tristachya leucothrix*.

The Screening Tool indicates the avifauna; invertebrate mammalian has the potential to occur within the Proposed Project. The Screening Tool provided the following list of fauna that may occur on the Proposed Project such as *Aves-Circus ranivorus*; *Aves-Hydroprogne caspia*; *Insecta-Aloeides dentatis dentatis*; *Insecta-Lepidochrysops procera*; *Mammalia-Crocidura maquassiensis* (*Maquassie Musk Shrew*); *Mammalia-Hydrictis maculicollis*; and *Invertebrate-Clonia uvarovi*.

The Biodiversity Impact Assessment will be undertaken in the EIA Phase to confirm any sensitive floral and fauna species on site.

## 5.7 Noise

The Proposed Project site is in an area with a mixed-use development character, with built up, agricultural and mining activities being the predominant activities in the area. The major noise sources in the area include vehicular traffic on the national and provincial roads in the areas, noises from the local communities, and other industrial and mining related noises.

## 5.8 Surface Water

The Proposed Project is located within the Vaal Water Management Area (WMA), specifically in quaternary catchment C21D which has a catchment area of approximately 445.9 km<sup>2</sup>. A non-perennial river is situated about 80 meters north of the Proposed Project. The Blesbokspruit, which flows in a southerly direction, is located approximately 1 km east of the site. It features a broad floodplain that reaches a width of around 1 km. The Blesbokspruit flows into the Suikerbosrant River, approximately 135 km southeast of the Proposed Project.

## 5.9 Groundwater

Groundwater occurrence in the Witwatersrand rock is generally associated with zones of deep weathering, or faulting and jointing. Groundwater is often encountered in both the saturated weathered material below the regional groundwater rest level and in the transition zone between weathered and fresh formations. The Klipriviersberg Group and Vryheid formation present aquifers that have a combination of loose unconsolidated/weathered material and hard rock formations, in which fractures, fissures or joints potentially hold water. A detailed Geohydrological (Groundwater) study will be conducted in the EIA Phase which will provide information regarding the Proposed Project and the impact on groundwater.

### 5.10 Traffic

The Proposed Project is situated in an area with an established road network. Public routes in close proximity to the site include R555 Road, which provides access to the site and Welgedacht Road which is located south of the Proposed Project. It is anticipated that the Proposed Project will result in a slight increase in traffic impacts during the construction and operation of the reclamation and well as during the decommissioning on the TSF.

### 5.11 Wetland

A wetland is an area where water covers the soil, either seasonally or permanently. It can be saltwater, freshwater, or a mix of both. Wetlands function as distinct ecosystems and are characterised by vegetation adapted to wet soil (Keddy, Paul A, 2010).

National Freshwater Ecosystem Priority Areas (NFEPA) wetlands refer to wetland areas identified as part of South Africa’s National Freshwater Ecosystem Priority Areas (NFEPA) project. NFEPA was developed to map and prioritise freshwater ecosystems including rivers, wetlands and estuaries that are important for biodiversity conservation and support national ecological processes. These priority areas help guide planning, conservation, sustainable land use and development decisions.

Types of wetlands that may occur in the areas surrounding the Proposed Project include the following: Unchannelled valley-bottom wetlands; Valley bottom wet areas; Seepage zones; and Seasonal depressional wetlands.

The specific wetland types, their extent, condition and ecological function will be confirmed and presented in detail during the EIA Phase, following a comprehensive Wetland Delineation and Functionality Assessment.

### 5.12 Heritage

The Screening Tool indicates that the Archaeological and Cultural Heritage theme is Low and Palaeontological Sensitivity of the development is Very High (dark red) that corresponds with the Palaeontological Sensitivity on the SAHRIS PalaeoMap (Table 3). The Heritage and Palaeontological Impact Assessment will be undertaken in the EIA Phase.

**Table 3: Palaeontological sensitivity**

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Impact study is required and based on the outcome of the Impact study; a field assessment is likely
GREEN	MODERATE	Impact study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required

Colour	Sensitivity	Required Action
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of an Impact study. As more information comes to light, SAHRA will continue to populate the map.

## 6. Key findings of the scoping

The report provides a scoping-level identification of potential environmental impacts (physical, biological and social) associated with the Proposed Project, as well as a strategy for how these impacts will be investigated and assessed further in the EIA Phase. The preliminary environmental impacts identified in Table 4 will be further refined, calculated and assessed for all the feasible alternatives identified.

**Table 4: Potential impacts Associated with the Proposed Project**

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
<b>Physical Environment (non-living)</b>	Hydrology (including wetlands, surface water and ground water);	<ul style="list-style-type: none"> <li>• Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface water and groundwater if runoff from operations is not adequately managed through efficient storm water management structures;</li> <li>• Water and ground contamination due to pipeline leaks/spillages if inadequate preventative measures are not implemented;</li> <li>• Improved surface and ground water quality around the project area due to the removal of the TSF;</li> <li>• Changes in natural surface water flow parameters as a result of the removal of the TSF;</li> <li>• Potential impact on drainage lines from access runoff during the operational phase of the project; and</li> <li>• Improved visual aesthetics of the area after the removal of the TSF.</li> </ul>	Groundwater Impact Assessment Surface water Impact Assessment Wetland Impact Assessment

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
<b>Biological Environment (living)</b>	Ecology and Biodiversity (including fauna and flora)	<ul style="list-style-type: none"> <li>Displacement of animal habitat by removing the TSF;</li> <li>Removal of invasive species from the TSF;</li> <li>Long-term improvement of ecosystem health and functioning of the project area following rehabilitation; and</li> <li>Loss of migration corridors, and access to nesting and refuge areas, watering points, food supplies for faunal species.</li> </ul>	Biodiversity Impact Assessment
<b>Cultural Environment</b>	Heritage Resources	<ul style="list-style-type: none"> <li>Since the footprint was a TSF previously, it is unlikely for there to be any heritage resources on site; and</li> <li>Should heritage resources be present in the area, the reclamation project could potentially impact these.</li> </ul>	Heritage Impact Assessment
<b>Social and Economic Environment</b>	Land use	<ul style="list-style-type: none"> <li>Land use will change to an active reclamation site;</li> <li>Restoration and unlocking of land for future land uses;</li> <li>Better management and control of the area against illegal/informal mining.</li> </ul>	Social Impact Assessment
	Noise	<ul style="list-style-type: none"> <li>Noise associated with the reclamation project mainly originates from construction activities of required infrastructure as well as noises from motors, pumps and increased vehicular travel during the operational phase as well as processing activities; and</li> <li>Noise associated with the mechanical and hydraulic reclamation.</li> </ul>	Noise Impact Assessment
	Transport and traffic	<ul style="list-style-type: none"> <li>Temporary increase in heavy vehicle traffic during the construction phase due to mobilisation of equipment, and material deliveries.</li> <li>Increased pressure on existing public and access roads, potentially accelerating road surface wear and degradation.</li> </ul>	Traffic Impact Assessment

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
		<ul style="list-style-type: none"> <li>Elevated road safety risks for other road users, particularly along local and access roads used by construction vehicles.</li> <li>Short-term traffic delays or congestion during peak construction activities.</li> <li>Reduced reliance on road-based haulage during the operational phase, as slurry and process water will be transported via existing pipelines.</li> <li>Long-term reduction in heavy vehicle movements on public roads, improving traffic flow and road safety.</li> <li>Potential improvements to access roads as a result of maintenance or upgrades undertaken for project needs.</li> <li>Implementation of traffic management measures (e.g. signage, speed control, designated routes), which may enhance overall road safety.</li> <li>Improved compliance with municipal traffic and road safety requirements through project-related monitoring and management</li> </ul>	
	Employment	<ul style="list-style-type: none"> <li>Continued employment and job security;</li> <li>Continued investment in local economy;</li> <li>Removal of the TSF could eliminate the attraction of illegal/informal miners who seek gold.</li> </ul>	Social Impact Assessment
	Air Quality	<ul style="list-style-type: none"> <li>Possible increase in dust levels in some areas during operations;</li> <li>Overall removal of an air pollution source after the removal of the TSF; and</li> </ul>	Air Quality Impact Assessment

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
		<ul style="list-style-type: none"> <li>Health impacts on livestock and people in proximity to the project site due to fine particulate emissions during construction and operational phases.</li> </ul>	
	Geology, Soil, Ground stability, Surface water, Groundwater, Infrastructure sensitivity, Land use suitability and Health and Safety.	<ul style="list-style-type: none"> <li>Improved understanding of dolomite conditions through investigations and risk management planning.</li> <li>Ground instability, sinkholes, subsidence, or structural damage due to disturbance and water ingress.</li> <li>Reprofiling and rehabilitation may improve disturbed landforms and drainage patterns.</li> <li>Alteration of natural landforms, erosion, slope instability, and increased runoff.</li> <li>Soil compaction, contamination, erosion, and loss of topsoil during construction and reclamation.</li> <li>Sedimentation, pollution, altered drainage patterns, ponding, and downstream water quality impacts.</li> <li>Improved stormwater controls and water management infrastructure.</li> <li>Damage to roads, pipelines, or buildings due to subsidence or construction activities.</li> <li>Safety risks to workers/public, traffic disruption, and nuisance impacts to nearby communities.</li> <li>Rehabilitation may enable safer future land uses and improved infrastructure planning.</li> </ul>	Dolomite Impact Assessment

## 7. Mitigation, Management and Monitoring of Identified Impacts

The possible mitigation measures that could be applied and the level of risk is depicted as follows (refer to Table 5).

The potential impacts identified for the reclamation of the Proposed Project have been described above (refer to Table 4). It is important to note that these impacts have not been ground-truthed or rated for significance. The impacts have been described based on what the current status of the sites, as well as existing information assessed at a desktop level. The above impacts and mitigation measures, and other identified impacts, will be fully described during the EIA Phase.

Table 5: High Level Mitigation Measures for Potential Impacts Identified for the Project.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
<b>Construction</b>			
<p>Construction of infrastructure, temporary infrastructure, and potential roads.</p> <p>All necessary activities involved with site preparation including site clearing.</p>	<p><b>Socio-economic:</b></p> <ul style="list-style-type: none"> <li>• Potential to further contractor opportunities;</li> <li>• Disruption of movement patterns and other displacement impacts;</li> <li>• Project-induced population influx ;</li> <li>• Local &amp; regional economic development;</li> <li>• Increase in the availability of land;</li> <li>• Nuisance factors;</li> <li>• Community Health and Safety; and</li> <li>• Negative impact on adjacent Economic Activities</li> </ul> <p><b>The removal of the dump will result in a certain short-term impact, however, it is envisaged that the long term impact will be positive.</b></p>		<ul style="list-style-type: none"> <li>• Attempt to extend goods and services from local businesses who are BBBEE compliant and currently contracted by Ergo.</li> <li>• If jobs are available, should ensure that local communities are made aware of the employment opportunities by means of a structured stakeholder engagement programme Ergo.</li> <li>• Develop skills development and training targets for local procurement and include these in contractor management plans;</li> <li>• Successfully complete the removal of all Dumps and the rehabilitation of the remaining footprints to prevent the creation of new/more contaminated areas;</li> <li>• Assess end-land uses for each individual rehabilitated site. Rehabilitation must be consistent with the relevant end land-use objectives of closure plans;</li> <li>• Unauthorised access to the TSF should be prevented. The area must have strict access control and must be fenced off;</li> <li>• Mitigation against potential impacts of air pollution and radiation strict adherence to air quality impact and health impact studies related to the project;</li> <li>• Strict adherence to standards of Occupational Health and Safety Act, 1993 for personnel working close to the TSF;</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
			<ul style="list-style-type: none"> <li>• Strictly adhere to management plan of the groundwater report;</li> <li>• Grievance management mechanism should be in place to receive incident related queries; and</li> <li>• Construction hours must preferably be limited to daylight day hours e.g., 6 am to 6 pm where possible.</li> </ul>
	<p><b>Air quality:</b> Short-term air quality impacts could arise from:</p> <ul style="list-style-type: none"> <li>• Increased particulate matter (PM10 and PM2.5) load in the atmosphere leading to deteriorated air quality.</li> </ul> <p><b>The removal/reclamation of the dumps will result in the reduction of current air quality issues. There is a long-term positive impact envisaged.</b></p>		<ul style="list-style-type: none"> <li>• Regular, light watering of unpaved roads;</li> <li>• Strict speed control on unpaved roads;</li> <li>• Wet suppression wherever possible,</li> <li>• Wind-speed reduction barriers around construction sites.</li> </ul>
	<p><b>Noise:</b> Construction activities will result in a short-term increase in noise levels.</p> <p><b>Noise impacts are anticipated to only contribute to the surrounding ambient sound levels for a short period of time.</b></p>		<ul style="list-style-type: none"> <li>• Undertake construction operations during working hours only.</li> <li>• Construction equipment should be properly maintained and switched off when not operational.</li> <li>• Regular planned vehicle services are considered best practise.</li> <li>• Comply with the Gauteng Noise Control Regulations</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p><b>Surface Water:</b> Potential pollution from:</p> <ul style="list-style-type: none"> <li>• Increase sedimentation on downstream watercourses due to exposed surfaces resulting in siltation of surface water resources.</li> <li>• Mixing of upstream clean water runoff with dirty water runoff from cleared site areas.</li> <li>• Potential for flooding of pipeline structures at river crossings.</li> <li>• Seepages/spillages of excess rainfall stored on the dumps and the existing paddocks.</li> </ul> <p><b>The removal/reclamation of the dumps will result in the removal of a source of environmental pollution.</b></p>		<ul style="list-style-type: none"> <li>• The runoff from the upstream clean water catchment is to be diverted away from the proposed infrastructure.</li> <li>• Infrastructure to be established should be outside any modelled flood lines.</li> <li>• Surface water quality monitoring must be implemented according to a detailed plan.</li> <li>• Dirty water runoff should be captured and contained within the dedicated storage facility such as the existing paddocks.</li> <li>• To minimise seepage and the effects of ponding, water volumes should be contained when necessary, pumped out and re-used where required during the construction phase of the project.</li> </ul>
	<p><b>Groundwater:</b> Decrease in surface and groundwater quality as a result of water.</p> <p><b>The removal/reclamation of the dumps will result in the removal of a source of environmental pollution.</b></p>		<ul style="list-style-type: none"> <li>• Surface water management measures must ensure that runoff and dirty water spills are contained;</li> <li>• Implement a detailed groundwater monitoring plan for the project as described in the ground water impact report.</li> </ul>
	<p><b>Wetland:</b> Potential loss and disturbance of wetland and aquatic habitat due to site preparation and clearing of vegetation.</p>		<ul style="list-style-type: none"> <li>• Adhere to any prescribed buffers should any be recommended;</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>There could also be alien plant infestation due to the disturbance.</p> <p><b>The removal of the TSF will reduce the current risk of AMD seepage, and the removal of the environmental point source in the long term.</b></p> <p><b>Heritage:</b></p> <ul style="list-style-type: none"> <li>• Construction activities could cause damage to or destroy any physical heritage resources that may be present in the development footprint areas;</li> <li>• The installation of power lines outside of existing servitudes will cause damage to or destroy any physical heritage resources that may be present within the development footprint.</li> </ul>		<ul style="list-style-type: none"> <li>• Adhere to the recommendations proposed in the surface water and groundwater reports;</li> <li>• Minimise the footprint of any areas disturbed during construction;</li> <li>• Locate all temporary offices, constructors' camps, laydown areas, ablution facilities etc. a minimum of the prescribed distance from any delineated sensitive watercourse/wetland (should wetlands exist).</li> <li>• Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities;</li> <li>• A rehabilitation Plan for disturbed wetland must be in place as prescribed by the wetland specialist study.</li> </ul> <ul style="list-style-type: none"> <li>• Conduct heritage impact assessment to identify heritage sites within the project area</li> <li>• If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken.</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p><b>Traffic:</b></p> <ul style="list-style-type: none"> <li>• Increase in traffic volumes on existing traffic network</li> <li>• Cumulative impact on the road surface condition</li> </ul> <p><b>This impact is expected to be localised and short-term.</b></p>		<ul style="list-style-type: none"> <li>• Traffic signage at site access points</li> <li>• Upgrade gravel roads to tarred roads where required.</li> <li>• Road maintenance, on the public road network, is not a responsibility of Ergo. It is therefore recommended that Ergo engages with the planning authorities regarding future maintenance needs of the surrounding road network.</li> </ul>
	<p><b>Fauna and Flora:</b></p> <ul style="list-style-type: none"> <li>• Direct loss of floral species/vegetation types and biodiversity.</li> <li>• Direct habitat loss for species that has established on the dumps.</li> <li>• Alien vegetation recruitment.</li> </ul>		<ul style="list-style-type: none"> <li>• Minimise disturbance and destruction of areas that are not going to be directly reclaimed.</li> <li>• In the case of plants, if this is not possible relocation permits may be required.</li> <li>• The ecosystem present must be preserved, this includes areas not directly affected by project activities and can be achieved by limiting project activities to areas where they are essential.</li> <li>• The risk of habitat fragmentation must be reduced through preservation of natural corridors.</li> <li>• Rehabilitation plans must be initiated during construction to minimise disturbed areas.</li> <li>• Follow any local and national policies and plans regulating and protecting biodiversity in the project area.</li> </ul>
	<p><b>Dolomite:</b></p> <ul style="list-style-type: none"> <li>• Ground instability due to excavation</li> </ul>		<ul style="list-style-type: none"> <li>• Undertake detailed geotechnical and dolomite investigations prior to construction. Limit excavation depths where possible and implement engineer-</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>activities, earthworks, and vibrations in dolomitic terrain.</p> <ul style="list-style-type: none"> <li>• Triggering of sinkholes or subsidence due to uncontrolled ingress of water from leaking pipes, poor drainage, or ponding.</li> <li>• Damage to construction infrastructure, equipment, or injury to personnel due to unstable ground conditions.</li> </ul> <p>Soil erosion and increased runoff exposing susceptible dolomite zones.</p>		<p>approved excavation methods. Monitor ground movement during construction.</p> <ul style="list-style-type: none"> <li>• Implement strict stormwater management controls. Prevent ponding of water on site. Inspect and maintain temporary water pipelines and storage facilities regularly. Repair leaks immediately.</li> <li>• Demarcate high-risk or no-go areas. Develop and implement a Dolomite Risk Management Plan. Induct personnel on dolomite hazards and emergency response procedures.</li> <li>• Stabilise exposed surfaces promptly. Install erosion control measures such as berms, silt fences, and diversion channels. Rehabilitate disturbed areas progressively.</li> </ul>
<b>OPERATION</b>			
<p><b>Reclamation of the TSF by Hydraulic Reclamation.</b></p>	<p><b>Socio-economic:</b> These are anticipated to be the same as those impacts predicted during the construction phase.</p>		<ul style="list-style-type: none"> <li>• These should be read with what is proposed as mitigation measures for the Construction Phase.</li> </ul>
	<p><b>Air quality:</b> These are anticipated to be the same as those impacts predicted during the construction phase. As the dumps will be hydraulically mined, this could create dust fall out.</p>		<ul style="list-style-type: none"> <li>• Regular, light watering of unpaved roads;</li> <li>• Strict speed control on unpaved roads;</li> <li>• Ensuring that all tailings material is removed to 'red earth' before moving on to the next section (this will reduce the area of fine material exposed to wind erosion);</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p><b>Noise:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Potential for noise disturbance from the operation of the reclamation station and pipelines.</li> </ul>		<ul style="list-style-type: none"> <li>• Comply with the Gauteng Noise Control Regulations;</li> <li>• If complaints are received about the noise from the pump station, then noise barriers could potentially be installed between the pump station and the specific complainant.</li> <li>• Regular service maintenance on the pumps and pipelines to mitigate water hammer noise as well as maintaining a constant flow rate during pumping of water and slurry.</li> <li>• Machines and vehicles used during reclamation must be serviced to ensure noise suppression mechanisms are effective.</li> <li>• Machines and vehicles should be switched off when not in use.</li> </ul>
	<p><b>Surface Water:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Overflow of the collection sumps to the downstream surface water resources.</li> <li>• Overflow dirty of the water collected in the dumps during a severe weather event.</li> <li>• Decrease of salt loads reporting to the waterbodies/watercourse in the area due to reduction in discharges</li> </ul>		<ul style="list-style-type: none"> <li>• The pumps located at each of the sumps should be installed within closed off/bunded areas to contain material spillages.</li> <li>• In times of power failure, manual monitoring of the sump associated with the reclamation station should be carried out.</li> <li>• Overflow channels should be constructed so as to contain any spillages that do occur into the pollution control area.</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p><b>Groundwater:</b> Seepage from the dumps and existing Paddocks could negatively influence the groundwater quality in the underlying aquifers during the operational phase.</p>		<ul style="list-style-type: none"> <li>• These are expected to be the same as the mitigation measures proposed for the Construction phase. Mitigation would thus include:</li> <li>• Continuous monitoring of groundwater quality.</li> </ul>
	<p><b>Wetlands and Aquatics:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Continued loss of water input into surrounding watercourses</li> <li>• Pipeline could pollute the watercourse if failure of the pipeline occurs;</li> <li>• Potential for sedimentation and salt loading in the watercourse</li> <li>• Potential to discharge treated water, if required.</li> </ul> <p>The pipelines are designed to minimise spillages and failure as far as possible.</p>		<ul style="list-style-type: none"> <li>• Adhere to any prescribed buffers, should any be recommended;</li> <li>• Adhere to the recommendations proposed in the surface water and groundwater reports;</li> <li>• Minimise the footprint of any areas disturbed during construction;</li> <li>• Locate all temporary offices, constructors’ camps, laydown areas, ablution facilities etc. a minimum of the prescribed distance from any delineated sensitive watercourse/wetland (should wetlands exist).</li> <li>• Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities;</li> <li>• A rehabilitation plan for disturbed wetland must be in place as prescribed by the wetland specialist study.</li> <li>• Dust suppression for the farm roads will decrease the windblown sediments, this should be read with the Air Quality Impact Assessment during the EIA Phase.</li> </ul>
	<p><b>Heritage:</b> During operation, the sources of risk to heritage resources are primarily restricted to the processes associated with</p>		<ul style="list-style-type: none"> <li>• Conduct heritage impact assessment to identify heritage sites within the project area</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>the hydraulic reclamation of the historical dumps.</p> <p>This will be confirmed by a Heritage Impact Assessment.</p>		<ul style="list-style-type: none"> <li>If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken</li> </ul>
	<p><b>Traffic:</b> These are expected to be the same as for construction.</p>		<ul style="list-style-type: none"> <li>Mitigation measures for the construction phase apply here</li> </ul>
	<p><b>Fauna and Flora:</b> The major impacts are expected during construction. During operation, the following impact could occur:</p> <ul style="list-style-type: none"> <li>Disturbance of local biodiversity during operation and routine maintenance.</li> <li>Potential for windblown particulates to pollute habitat quality.</li> </ul>		<ul style="list-style-type: none"> <li>Minimise disturbance and destruction of areas that are not going to be directly reclaimed.</li> <li>Create awareness regarding environmental preservation amongst all personnel involved in the TSF reclamation project.</li> <li>Monitor surrounding vegetation to assess the affect the reclamation activities on the said vegetation.</li> </ul>
	<p><b>Dolomite:</b></p> <ul style="list-style-type: none"> <li>Sinkhole formation caused by leaking potable/process water pipelines, poor stormwater management, or prolonged infiltration.</li> <li>Settlement or structural damage to infrastructure associated with gradual subsidence.</li> <li>Groundwater level changes affecting</li> </ul>		<ul style="list-style-type: none"> <li>Conduct routine inspections and maintenance of pipelines, valves, and water-bearing infrastructure. Implement leak detection systems. Ensure effective stormwater drainage and rapid repair of defects.</li> <li>Design infrastructure in accordance with dolomite-specific engineering standards. Conduct regular structural inspections and geotechnical monitoring. Repair defects promptly.</li> <li>Monitor groundwater levels where required. Control seepage and infiltration. Manage water use and</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	dolomite stability. <ul style="list-style-type: none"> <li>Restricted land use or safety risks to workers due to unstable areas.</li> </ul>		discharge in line with approved water management plans. <ul style="list-style-type: none"> <li>Maintain hazard zoning plans and update risk registers regularly. Restrict access to identified high-risk areas. Provide ongoing awareness training.</li> </ul>
<b>DECOMMISSIONING</b>			
<b>Completed Reclamation of the TSF.</b>  <b>Rehabilitation to Red Earth and the removal of infrastructure.</b>	<b>Socio-economic:</b> Potential impacts include: <ul style="list-style-type: none"> <li>Improved Quality of life.</li> <li>Increased access to land.</li> <li>Potential for dependency on the Project for sustaining the local economy.</li> </ul>		<ul style="list-style-type: none"> <li>Appointment of workforce and investment in the local economy where applicable during rehabilitation.</li> </ul>
	<b>Air quality:</b> The final rehabilitation of the dumps will make use of heavy machinery and vehicles similar to the construction phase. The landscaping and transportation of material to and off site will result in fugitive dust generation. It is anticipated that this will be very short term.		<ul style="list-style-type: none"> <li>Monitoring dust levels on site, at upwind and downwind locations preferably at discrete receptors (if identified).</li> </ul>
	<b>Noise:</b> Potential for noise disturbance when rehabilitating. However, with the rehabilitation activities using similar machinery and vehicles than the construction phase, it is expected that the noise impact during this phase will be		<ul style="list-style-type: none"> <li>Refer to the construction phase mitigation measures.</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>similar.</p> <p><b>Surface Water:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Water pollution from accidental spillages of decommissioned infrastructure.</li> <li>• Residual water pollution from rehabilitated infrastructure footprints post closure</li> </ul> <p><b>Groundwater:</b> If Seepage continues, this could negatively influence the groundwater quality in the underlying aquifers</p> <p><b>Wetlands and Aquatics:</b> Potential impacts include those associated with removing site infrastructure, including pipelines.</p> <p><b>Heritage:</b> No sources of risk to heritage resources are envisaged for the decommissioning phase of the project at this</p>		<ul style="list-style-type: none"> <li>• Ensure that the pipelines are emptied of all residual material before decommissioning.</li> <li>• Ensure the consideration of the durability and longevity of water management designs, e.g. provision of erosion protection for long-term control of erosion and potential pollution to water resources during decommissioning.</li> <li>• It should be ensured that the potential future impacts from the reclamation of the dumps has been identified.</li> <li>• The final topography should be planned, as far as possible, to be free-draining.</li> </ul> <ul style="list-style-type: none"> <li>• These are expected to be the same as the mitigation measures proposed for the Construction and operation phase.</li> </ul> <ul style="list-style-type: none"> <li>• Rehabilitation of the footprints must be done according to the Rehabilitation Plan.</li> <li>• Pipelines must be flushed clean and rendered safe for decommissioning and removal.</li> <li>• Decommissioning and rehabilitation should be done in the dry season. However, it is recommended that seeding be done with the first rains.</li> </ul> <ul style="list-style-type: none"> <li>• Conduct heritage impact assessment to identify heritage sites within the project area</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>stage. However, if structures older than 60 or 100 years at the time of decommissioning exists, these may be impacted upon by decommissioning.</p> <p><b>Traffic:</b> These are expected to be the same as for construction.</p>		<ul style="list-style-type: none"> <li>If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken</li> <li>Mitigation measures for the construction phase apply here</li> </ul>
	<p><b>Fauna and Flora:</b> No impacts are envisioned during this stage.</p>		<ul style="list-style-type: none"> <li>Follow a detailed rehabilitation plan.</li> <li>Minimise disturbed areas.</li> <li>Follow any local and national policies and plans regulating and protecting biodiversity in the project area.</li> </ul>
	<p><b>Dolomite:</b></p> <ul style="list-style-type: none"> <li>Instability caused by removal of infrastructure, foundations, or changes in surface drainage.</li> <li>Sinkhole risk due to abandoned pipelines, unsealed services, or unmanaged water ingress.</li> <li>Erosion and land degradation on disturbed surfaces post-closure.</li> <li>Long-term residual safety risk to future land users.</li> </ul>		<ul style="list-style-type: none"> <li>Prepare a decommissioning plan incorporating dolomite risk controls. Sequence demolition carefully under engineering supervision. Maintain drainage controls during dismantling.</li> <li>Remove redundant pipelines where feasible or cap and seal services properly. Inspect underground services before closure. Prevent water leakage after shutdown.</li> <li>Regrade disturbed land to promote drainage. Implement rehabilitation and revegetation measures. Monitor rehabilitated areas for settlement or erosion.</li> <li>Undertake final geotechnical sign-off. Record and communicate any land use restrictions. Implement post-closure monitoring where necessary.</li> </ul>

## 8. Specialist Studies

The following assessments were identified and will be assessed as part of the EIA process: Specialist studies being undertaken include:

**Table 6 : Specialist Studies undertaken for EIA Phase**

Specialist Studies Undertaken	
Terrestrial Biodiversity Impact Assessment	Surface water Impact Assessment
Wetland Impact Assessment	Groundwater Impact Assessment
Climate Change risk Assessment	Air Quality Impact Assessment
Heritage and Palaeontological Impact Assessment	Noise Impact Assessment
Social Impact Assessment	Traffic Impact Assessment
Closure and Rehabilitation	Dolomite Impact Assessment

## 9. Overall Conclusions

At this stage, the findings of this DSR indicate that the Proposed Project and its associated infrastructure would pose minimal and short-term negative environmental impacts if adequate and appropriate mitigation measures are implemented, positive long-term environmental impacts when the Proposed Project has been completed. Most importantly, the reclamation project aims to unlock value from the tailings, turning a potential liability into an opportunity for increased production of gold production, while also contributing to the alleviation of major pollution source. Furthermore, this will reduce liability and potentially open up additional space for further tailings deposition in the future, without extensions onto greenfield areas.

According to the Way Forward and the Plan of Study, contained in this report, impacts associated with the Proposed Project need to be considered further during the EIA Phase. It is important to take note of the current conditions of the Proposed Project area and the sensitive environment around it. The Proposed Project is located on the footprint of a historical TSF that was previously used for mining-related deposition.

The Proposed Project will support Ergo in maintaining its ongoing operations and is aligned with the objectives of the Gauteng Mine Residue Area Strategy (2012), the Ekurhuleni Metropolitan Spatial Development Framework (2015), and the Ekurhuleni Environmental Management Framework (2014), which collectively promote the removal and rehabilitation of historical TSFs dispersed across the Gauteng landscape.

## 10. Glossary of Certain Terms

**Environmental Assessment Practitioner (EAP):** An EAP is someone who co-ordinates, manages and integrates the various components of environmental assessment throughout the planning process; has received an appropriate interdisciplinary training covering both the natural and human environment; has experience in environmental management, environmental assessment and related studies; and demonstrates core competencies that are considered essential to the environmental assessment profession.

**Environmental Impact Assessment (EIA):** EIA is a tool used to assess the significant effects of a project or development proposal on the environment. EIAs make sure that project decision makers think about the likely effects on the environment at the earliest possible time and aim to avoid, reduce or offset those effects. This ensures that proposals are understood properly before decisions are made.

**Environmental Management Programme (EMPr):** The EMPr is a detailed plan for the implementation of the mitigation measures to minimise negative environmental impacts during the project life-cycle.

**Scoping Report:** The SR describes the Proposed Project and identifies the possible impacts of the proposed development.

**Tailings Storage Facility (TSF):** A TSF is typically an earth-fill embankment dam used to store byproducts of mining operations after separating the ore from the rock. Tailings can be liquid, solid, or a slurry of fine particles.