

# Environmental Authorisation and an Integrated Water Use Licence Application for the Reclamation of the Tailings Storage Facility 5L23, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

## Background Information Document

DMR reference number: To be confirmed.

October 2021

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### PURPOSE OF THE DOCUMENT

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This Background Information Document (BID) aims to provide you with important information regarding:

- ❖ The proposed reclamation of the tailings storage facility (TSF) 5L23;
- ❖ The Environmental Impact Assessment and the Public Participation Process to be undertaken in support of the proposed project;
- ❖ An Integrated Water Use Licence Application process;
- ❖ How you can register as an Interested and Affected Party (I&APs) and be kept informed about the project developments; and
- ❖ The public review and comment period for the Draft Scoping Report.

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### PROJECT DESCRIPTION

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Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residues from the tailings storage facility (TSF) No. 5L23. This TSF is a historic mineral storage deposit (slimes dam), situated 2 km east of Benoni CBD, in the City of Ekurhuleni Metropolitan Municipality (EMM).

Surface gold retreatment is a largely mechanised process with a risk profile that is significantly lower than that of conventional mining. The TSF will be reclaimed by hydraulic reclamation. During hydraulic reclamation, used process water mixes with the unconsolidated material of the slimes dams, resulting in what is known as a 'slurry'. This slurry will be conveyed to the Ergo Processing Plant for reprocessing using a newly proposed pipeline. Final deposition of processed slurry will be on the existing Brakpan/Withok TSF.

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### RECLAMATION METHOD

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The proposed reclamation method which will be used to remove the slimes dam 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 slimes dam. 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 a penstock will control water flow into the sump. 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. This slurry is then pumped via pipelines to the Ergo Plant. At the Ergo Plant, the slurry is prepared and treated for gold extraction and beneficiation. The reclaimed slurry will then be deposited on the existing Brakpan/Withok TSF.

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## PROPOSED PIPELINE ROUTES

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The proposed project will investigate one pipeline route to convey slurry from the TSF to the Ergo Plant for reprocessing; and return process water to the project site for reclamation. The pipeline route would be 20.38 km long and consists of two separate 500 mm diameter slurry and one return water pipeline pairings that extends from the proposed project site to the Ergo Plant. Additionally, there will be a transfer pump station along the pipeline on the farm Modderfontein 76 IR Portion 3 (RE).

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## LOCALITY

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The spatial extent of the dump is approximately 38.7 Hectares (Ha). In terms of regional locality, the dump is situated approximately 2 km east of the Benoni CBD, in the Ekurhuleni Metropolitan Municipality (EMM), please refer to Table 1 for a list of the directly affected properties Figure 1 for the locality map. The reclamation area is predominantly surrounded by industrial areas, the N12 highway, R29, residential areas, open areas and several water bodies. The proposed pipelines will traverse residential areas, open areas, wetlands, water bodies, and industrial areas. The pipelines will be situated within Surface Right Permits already held by Ergo.

**Table 1: Affected property details**

Farm Name	Farm Portion	Infrastructure
Modderfontein 76 IR	Portion 1 (RE)	5L23 TSF, Pipelines
Modderfontein 76 IR	Portion 16	5L23 TSF

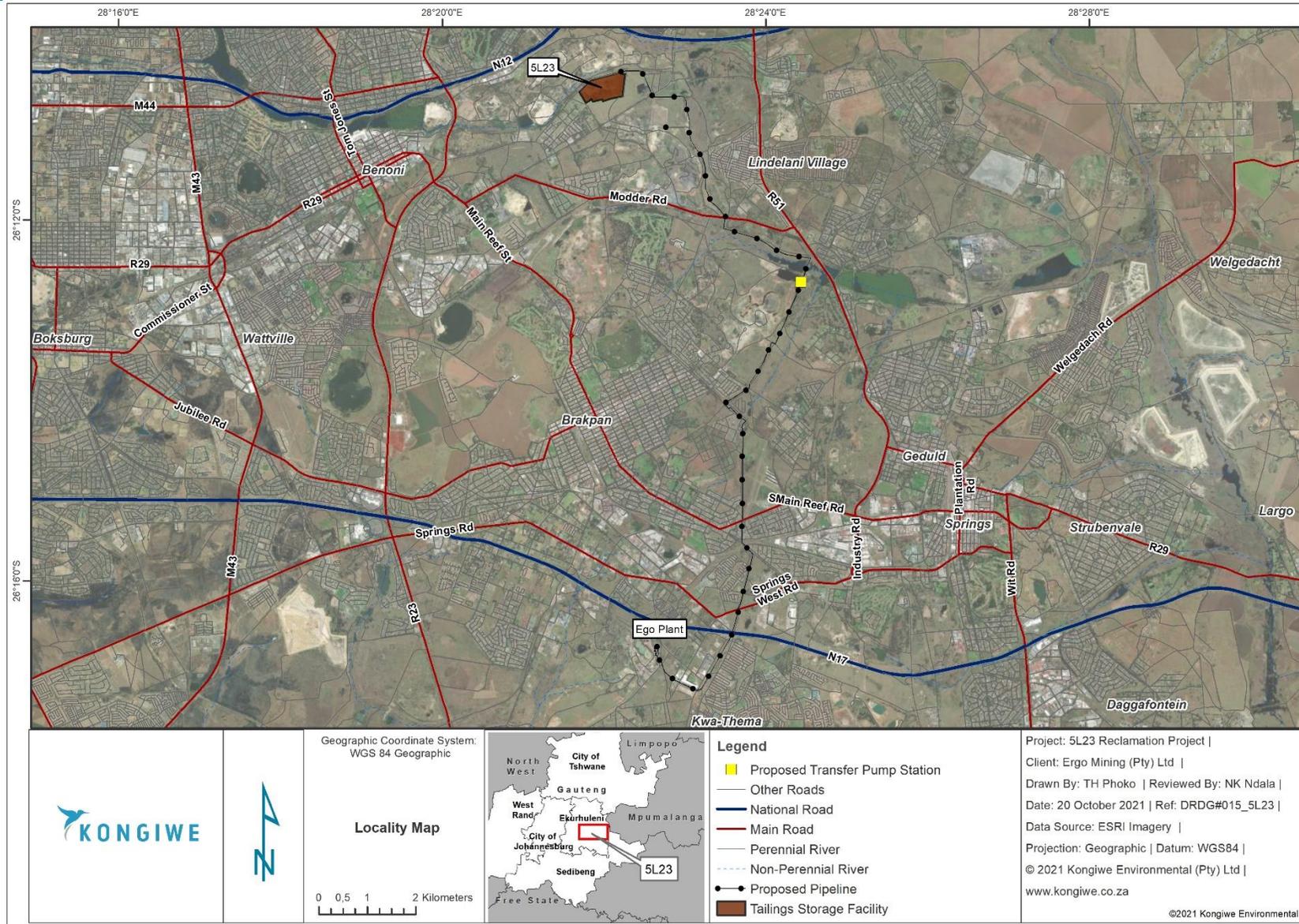


Figure 1: Project Locality Map

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## ACCESS

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Major routes around the mine dump are the N12 which runs to and north of the dump and the R29 which runs adjacent to the dump. As far as possible, existing access roads will be utilised, and where this is not possible, these will be constructed as a two-by-two roadway, operating in both directions. Where access roads are to be constructed, these will be 4m wide gravel road with storm water earth channels and mitre drains to protect the road structure from flood damage. Intersections will be properly designed to provide safe entry and exit in and out of the reclamation area. Approvals from the provincial roads' authorities will be obtained where necessary.

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## POWER AND WATER SUPPLY

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Power will be supplied by Eskom and potable water will be purchased from Rand Water, with a contingency for portable JoJo tanks or connection to existing water pipeline infrastructure. In terms of process water, the water cycle operates as a closed circuit, meaning that limited make-up water will be required for the reclamation of the dump. Water required for the reclamation activities will be sourced from the existing central water storage facility located in Germiston and conveyed through existing and proposed process water pipelines to the project site for reuse in a closed-circuit system.

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## LIFE OF OPERATION

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The life of mine for the Proposed Project is expected to be approximately 10 years. An estimated amount of 200 000 to 300 000 tons/month of slurry is expected to be pumped from the TSF to Ergo Plant for beneficiation.

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## INFRASTRUCTURE PROPOSED FOR THE PROJECT

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The following infrastructure will be utilised on site:

- ❖ Two overland slurry pipelines of 500 mm in diameter;
- ❖ An overland return water pipelines of 500 mm in diameter;
- ❖ A Transfer Pump Station;
- ❖ Reclamation pump stations (one at each dump), which include:
  - Slurry storage tank;
  - Linear screen
  - Water tank;
  - Motor control centre; and
- ❖ Water infrastructure, stormwater systems and spillage handling systems;
- ❖ Electricity reticulation;
- ❖ Administration buildings, including change houses and ablution facilities;
- ❖ Access roads, routed from existing entry points; and
- ❖ Construction contractors' yards (temporary facilities).

## REHABILITATION

Once reclamation is completed, the area will then be assessed for contamination, contaminated soils will be removed, and the land levelled to its original functioning topography levels and revegetated. Following reclamation and rehabilitation, it is anticipated that the land will be made available according to the zoning of the site, and as agreed with the landowner.

## LEGISLATIVE FRAMEWORK

In terms of the environmental legislation, Ergo is required to obtain various licences and an Environmental Authorisation from the relevant Competent Authorities before commencing with the reclamation process. The required licences and the environmental authorisation will be undertaken in accordance with the following legislation:

- ❖ **Application for an Environmental Authorisation for listed activities triggered in Listing Notices 1 (GN R983 as amended by GNR 327: Activity: 9; 10; 12; 13; 19 and 24), 2 (GN R984 as amended by GNR 325: Activity 6) and 3 (GN R985 as amended by GNR 324: Activity 2; 4; 7 and 14), as amended by GNR 517 of 11 June 2021**, in terms of the EIA 2014 Regulations, as promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).
- ❖ **Application for listed waste activities in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), as amended (NEM: WA) for listed activities under GNR 921– B (2).**
- ❖ **An Integrated Water Use Licence Application (IWULA)** will be undertaken in accordance with the National Water Act, 1998 (Act No.36 of 1998) (NWA). The IWUL will be applied for Section 21 (c) and (i) water uses.

Please refer to Table 2 below for a list of activities to be authorised under the NEMA, NEM:WA and NWA.

**Table 2: List of Activities to be authorised in accordance with NEMA, NEM:WA and NWA**

Name of Activity	Applicable Listing Notice	Water Use Licence Authorisation
Access roads routed from existing entry points.	GNR 983 – 24 GNR 985 – 4	-
Temporary Site infrastructure (offices, change house, workshops).		
Reclamation of the TSF		21(c) & (i)
Satellite pump station / Reclamation Station	GNR 984 – 6	21(c) & (i)

Name of Activity	Applicable Listing Notice	Water Use Licence Authorisation
Slurry receiving facility	GNR 983 – 12; 13 GNR 984 – 6 GNR 985 – 2; 14	
Screening facility at the pump station	GNR 984 – 6	
Storage		
Transfer pumps in series		
Power supply (transformers and 11kV powerlines)		
Stormwater systems, including:		21(c) & (i)
Maintaining and operating existing stormwater dams and/or existing paddocks.		
Process water pipeline	GNR 983 – 9; 19	21(c) & (i)
Overland slurry pipeline	GNR 983 – 10; 19 GNR 985 - 7	21(c) & (i)

## SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Kongiwe Environmental (Pty) Ltd ('Kongiwe') has been appointed as the Independent Environmental Service Provider, tasked with conducting the Scoping and Environmental Impact Assessment (S&EIA) process which is aimed at critically evaluating the potential environmental and social impacts of the proposed Project. In accordance with the provisions of the EIA 2014 Regulations (as amended), the EIA process for the proposed project will be carried out in the following phases:

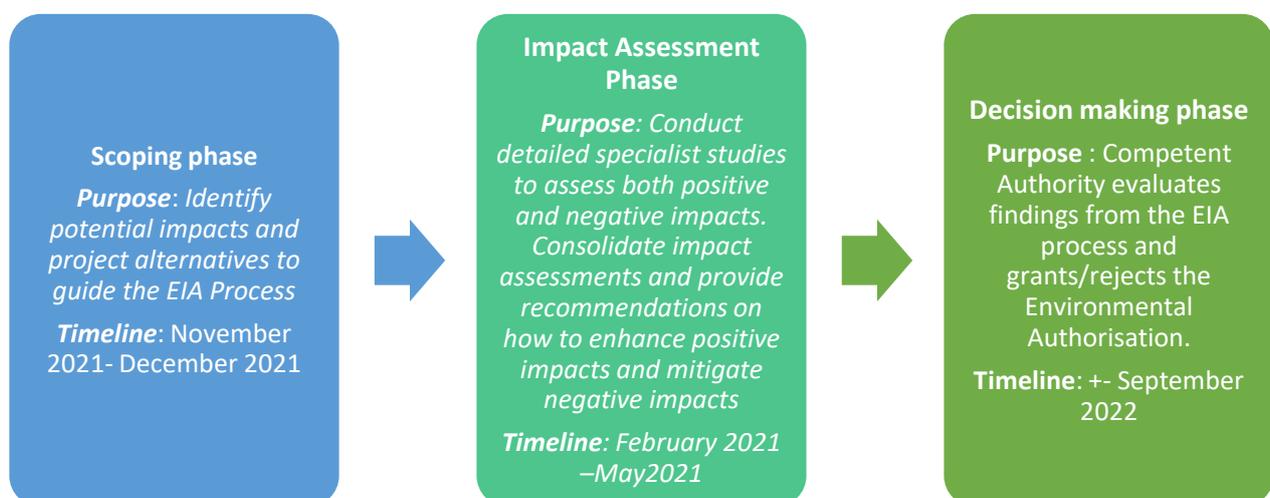


Figure 2: S&EIA process and the associated timeline

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## INTEGRATED WATER USE LICENCE

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An IWULA will be conducted for water uses associated with Section 21 of the NWA. The IWULA process will be undertaken concurrently with the EIA process for the proposed reclamation project.

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## SPECIALIST STUDIES

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Various specialist studies will be undertaken as part of the EIA/IWULA process to assess the potential impacts associated with the proposed project. Specialist studies to be undertaken include:

- ❖ Biodiversity;
- ❖ Surface Water;
- ❖ Groundwater;
- ❖ Air Quality;
- ❖ Social; and
- ❖ Heritage and Archaeology.

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## PUBLIC PARTICIPATION PROCESS

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The public participation process will form part of the Integrated Environmental Authorisation, WML Application and the IWULA process. The public participation process offers stakeholders a fair opportunity to be informed about the proposed project, to raise issues of concern and to make suggestions for enhanced project benefits. The project team will consider relevant issues and suggestions during the EIA/IWULA process.

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## AVAILABILITY OF THE DRAFT SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT

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The Draft Scoping Report for the proposed project will be made available for public review and comment for a period of 30 days, from **Tuesday, 2 November 2021 to Tuesday, 2 December 2021**. The availability of the reports for public review and comment will adhere to strict measures to prevent and avoid the spread of COVID-19. To ensure that the spread of COVID-19 is minimised, the Draft Scoping Report will be made available as follows:

- ❖ Electronic copies of the report will be made please log onto Kongiwe Environmental's website ([www.kongiwe.com](http://www.kongiwe.com));
- ❖ An electronic copy in a form of a CD will be made available on request;
- ❖ No hard copies will be placed at the libraries. Non- technical summaries of the Draft Scoping Report will be distributed to stakeholders upon request.

A technical report in support of the IWULA process will be made available for public review and comment for a period of 60 days. Once the information required for the IWULA has been finalised, the IWULA report will be compiled and will be made available for public review and comment for a period of 60 days. It is anticipated that the IWULA report will be made available during the impact assessment phase.

Information regarding the availability of the IWULA report and how stakeholders can provide their comments will be communicated to all stakeholders. Copies of the non-executive summary of the Draft Scoping Report and the technical report of the IWULA will be distributed to all stakeholders on the database.

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## STAKEHOLDER CONSULTATION MEETINGS

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Stakeholders are invited to participate through virtual and non-virtual engagements. One-on-one consultation meetings will be held on-line such as Microsoft Teams and Telephonic discussions. On-line engagement activities will be available during the public review period. Additionally, an Open Day will be held at the 4<sup>th</sup> Benoni Scout Hall on **Saturday, 20 November 2021**. please see below (Table 3) for the proposed stakeholders' meeting schedule.

**Table 3: Stakeholder Meetings**

Proposed dates	Available time slots	Method of Engagement
<b>Virtual meetings</b>		
Saturday, 13 November 2021	10H00-11H00	Microsoft teams/ scheduled Telephonic discussions
Wednesday, 17 November 2021	10H00- 11H00	Microsoft teams/ scheduled Telephonic discussions
<b>Non-virtual meeting</b>		
Saturday, 20 November 2021	10H00-14H00	Open day – 4 <sup>th</sup> Benoni Scout Hall, 1 Hilliard Ave, Morehill, Benoni.

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## INVITATION TO BE INVOLVED AS AN I&AP

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Kongiwe has put measures in place to ensure that all stakeholders are meaningfully consulted by using a wide range of media, documents and online tools. The proposed methods of engagements for the proposed project are planned as follows:

- ❖ Email correspondence - Stakeholders with access to email are requested to send their comments/queries via email;
- ❖ Telephonic consultations;
- ❖ One-on-One consultation meetings
- ❖ Online Microsoft Teams meetings
- ❖ Open day;
- ❖ Online engagements – Project information (Reports, executive summary of the DSR/DEIA, project update letters) will be timeously uploaded on Kongiwe's website. Stakeholders can send their comments by completing an online comment sheet; and
- ❖ Electronic comment sheets.

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## COMMENTS AND QUERIES

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Any person affected by or who may be interested in the proposed project is asked to register as an Interested and Affected Party (I&AP) by contacting the stakeholder engagement team.

**Contact person: Sibongile Bambisa/Vanessa Viljoen**

**Tel: (012) 003 6627**

**Email: [stakeholders@kongiwe.com](mailto:stakeholders@kongiwe.com)**

Our team welcomes your participation and looks forward to your involvement throughout this process.

Should you have any comments/queries, please contact the stakeholder engagement team.