

# Environmental Authorisation and an Integrated Water Use Licence Application for the Reclamation of the Marievale Tailings Storage Facilities, Ekurhuleni Metropolitan Municipality - Gauteng Province

## Background Information Document

October 2019

### PURPOSE OF THE DOCUMENT

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

- ❖ Ergo Mining Operations Proprietary Limited (Ergo)'s intention to reprocess and reclaim gold residues of the Marievale (7/L/5; 7/L/6 and 7/L/7);
- ❖ 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;
- ❖ The public review and comment period for the Draft Scoping Report; and
- ❖ An invitation to an open day.

### PROJECT BACKGROUND AND CONTEXT

Ergo Mining (Pty) Limited (hereafter Ergo), intends to reclaim and reprocess gold residues from the Marievale tailings storage facilities (TSFs) Nos. 7L5, 7L6 and 7L7, through its subsidiary Ergo. These TSFs are historical mineral deposits (slimes dams), situated 6 km north-east of Nigel and about 10 km south-east of Springs, in the Ekurhuleni Metropolitan Municipality (EMM), and were created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA) and are accordingly not regulated by the MPRDA.

Surface gold retreatment is a largely mechanised process with a risk profile that is significantly lower than that of conventional mining. The slimes dams will be reclaimed by hydraulic mining. During Hydraulic mining, the 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 (hereafter Ergo Plant) for reprocessing using a newly constructed pipeline. Final deposition of reprocessed slurry will be on the licenced Brakpan/Withok TSF.

### LOCALITY

The combined spatial extent of the four dumps is approximately 140 Ha. In terms of regional locality, the dumps are situated approximately 6 km north-east of Nigel and about 10 km south-east of Springs, in the

Ekurhuleni Metropolitan Municipality (EMM). The three dumps are positioned as follows:

- ❖ Site 1: This site consists of two dumps. Dumps 7L5 and 7L6. Dumps 7L5 and 7L6 fall within Ward 88, covering just over 80 Ha.
- ❖ Site 2: Dump 7L7 is located approximately 1 km south of Site 1, also in Ward 88 and covers roughly 60 Ha.

The area is predominantly surrounded by other mine dumps, active mining operations, agricultural lands, scattered settlements, bare ground and several water bodies.

**Table 1: Directly Affected property details**

FARM NAME	FARM ID	FARM PORTION	INFRASTRUCTURE
Vogelstruisbult	127 IR	0 (RE)	Proposed Pipeline to Daggafontein
Vogelstruisbult	127 IR	3	Proposed Pipeline from 7L5 and 7L6 to Daggafontein
Daggafontein	125 IR	1 (RE)	Proposed Pipeline to TCTA
Daggafontein	125 IR	93 (RE)	Proposed Pipeline to TCTA
Daggafontein	125 IR	108	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	112	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	113 (RE)	Proposed Pipeline to TCTA
Daggafontein	125 IR	117 (RE)	Proposed Pipeline to TCTA
Daggafontein	125 IR	122	Proposed Pipeline from 7L5 and 7L6 to Daggafontein
Daggafontein	125 IR	123	Proposed Pipeline to TCTA
Daggafontein	125 IR	125	Proposed Pipeline from 7L5 and 7L6 to Daggafontein
Daggafontein	125 IR	126	Proposed Pipeline to TCTA
Daggafontein	125 IR	127 (RE)	Proposed Pipeline to TCTA

FARM NAME	FARM ID	FARM PORTION	INFRASTRUCTURE
Daggafontein	125 IR	128	Proposed Pipeline to TCTA
Daggafontein	125 IR	146	Proposed Pipeline to TCTA
Daggafontein	125 IR	151 (RE)	Proposed Pipeline to TCTA
Daggafontein	125 IR	154 (RE)	Proposed Pipeline to Daggafontein
Daggafontein	125 IR	159	Proposed Pipeline to TCTA
Daggafontein	125 IR	180	Proposed Pipeline to TCTA
Daggafontein	125 IR	181	Proposed Pipeline to TCTA
Daggafontein	125 IR	182	Proposed Pipeline to TCTA
Daggafontein	125 IR	196	Proposed Pipeline to TCTA
Daggafontein	125 IR	197	Proposed Pipeline to TCTA
Daggafontein	125 IR	199	Proposed Pipeline from 7L5 and 7L6 to Daggafontein
Grootvaly	124 IR	1 (RE)	Proposed Pipeline to TCTA
Marievale	282 IR	282	7L7 and Proposed Pipeline
Vlakfontein	281 IR	0 (RE)	7L7 and Proposed Pipeline
Vlakfontein	281 IR	9	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	0 (RE)	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	10	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	35	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	52 (RE)	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	82	Proposed Pipeline from 7L7 to Ergo Plan

FARM NAME	FARM ID	FARM PORTION	INFRASTRUCTURE
Grootfontein	165 IR	85	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	99	Proposed Pipeline from 7L7 to Ergo Plan

**Table 2: Indirectly Affected property details**

FARM NAME	FARM ID	FARM PORTION	INFRASTRUCTURE
Vogelstruisbult	127 IR	1	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	2	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	5	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	6	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	7	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	8	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	9	Proposed Pipeline from Daggafontein to Ergo Plant
Vogelstruisbult	127 IR	10	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	104	Proposed Pipeline to TCTA
Daggafontein	125 IR	108	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	110	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	114	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	133	Proposed Pipeline to TCTA
Daggafontein	125 IR	137	Proposed Pipeline from Daggafontein to Ergo Plant
Daggafontein	125 IR	184	Proposed Pipeline to TCTA
Daggafontein	125 IR	198	Proposed Pipeline to TCTA

FARM NAME	FARM ID	FARM PORTION	INFRASTRUCTURE
Draaikraal	166 IR	2	Proposed Pipeline
Grootfontein	165 IR	7	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	29	Proposed Pipeline from 7L7 to Ergo Plan
Grootfontein	165 IR	81	Proposed Pipeline from 7L7 to Ergo Plan
Rietfontein	128 IR	0 (RE)	Proposed Pipeline
Rietfontein	128 IR	46	Proposed Pipeline
Rietfontein	128 IR	96 (RE)	Proposed Pipeline
Rietfontein	128 IR	135 (RE)	Proposed Pipeline to Daggafontein
Rietfontein	128 IR	137	Proposed Pipeline
Rietfontein	128 IR	167	Proposed Pipeline
Witpoortje	117 IR	1 (RE)	Proposed Pipeline
Witpoortje	117 IR	91	Proposed Pipeline
Witpoortje	117 IR	92	Proposed Pipeline
Witpoortje	117 IR	108	Proposed Pipeline
Witpoortje	117 IR	155	Proposed Pipeline
Witpoortje	117 IR	442	Proposed Pipeline

## PROJECT DESCRIPTION

Ergo Mining (Pty) Limited (hereafter Ergo), intends to reclaim and reprocess gold residues from the Marievale tailings storage facilities (TSFs) Nos. 7L5, 7L6 and 7L7. These TSFs are historical mineral deposits (slimes dams), situated 6 km north-east of Nigel and about 10 km south-east of Springs, in the Ekurhuleni Metropolitan Municipality (EMM), and were created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA) and are accordingly not regulated by the MPRDA.

Surface gold retreatment is a largely mechanised process with a risk profile that is significantly lower than that of conventional mining. The slimes dams will be reclaimed by hydraulic mining. During Hydraulic mining, the 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 (hereafter Ergo Plant) for reprocessing using a newly constructed pipeline. Final deposition of unprocessed slurry will be on the licenced Brakpan/Withok TSF.

The Proposed Project will investigate two pipeline routes to convey slurry from the TSFs to the Ergo Plant for reprocessing; and return process water to the project site for reclamation.

## PIPELINE ALTERNATIVES

**First alternative:** The pipeline route is approximately 25 km long and consists of two separate 500 mm diameter slurry and return water pipeline pairings. The first pair would be a 7 km extension from the project site to the Daggafontein Plant; while the second pair would be a 17 km extension from the Daggafontein Plant to the Ergo Plant.

**Second alternative:** The pipeline route would be a 19 km, 500 mm diameter slurry and return water pipeline pairing that extends from the proposed project site to the Ergo Plant.

## ACCESS

Major routes around the mine TSFs are the N17 which runs parallel to and north of the TSFs and the R51 which runs west of and perpendicular to the TSFs. 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 mining area. Approvals from the provincial roads' authorities will be obtained where necessary.

## WATER SUPPLY

Potable water will be purchased from Rand Water or the municipality, 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 Marievale TSFs. 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.

## INFRASTRUCTURE

The following infrastructure will be utilised on site:

- ❖ Overland slurry pipelines of 500 mm in diameter;
- ❖ Overland return water pipelines of 500 mm in diameter;
- ❖ Reclamation pump stations, 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)

## LIFE OF MINE

The life of mine for the Proposed Project is expected to be approximately 20 years. An estimated amount of 500 000 tons/month ramping up to 1.2 million tons/month of slurry is expected to be pumped from the Marievale TSFs to the Ergo Plant for beneficiation.

## REHABILITATION

Once reclamation is completed, the area 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 and revegetated. Following reclamation and rehabilitation, it is anticipated that the land will be levelled and vegetated to fit the surrounding environment.

## LEGISLATIVE FRAMEWORK

Prior to proceeding with the reclamation process, the applicant is required to obtain various licences and an Environmental Authorisation from the relevant Competent Authorities. 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 **GN R327, GN R325 and GN R324** in terms of the Environmental Impact Assessment (EIA) Regulations, 2017, 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). ***The Competent Authority responsible for assessing the abovementioned applications is the Department of Mineral Resources and Energy- (DMRE)- Gauteng Region.***

- ❖ 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 Department of Human Settlements, Water and Sanitation will be the Competent Authority to assess the IWULA for the proposed project.***

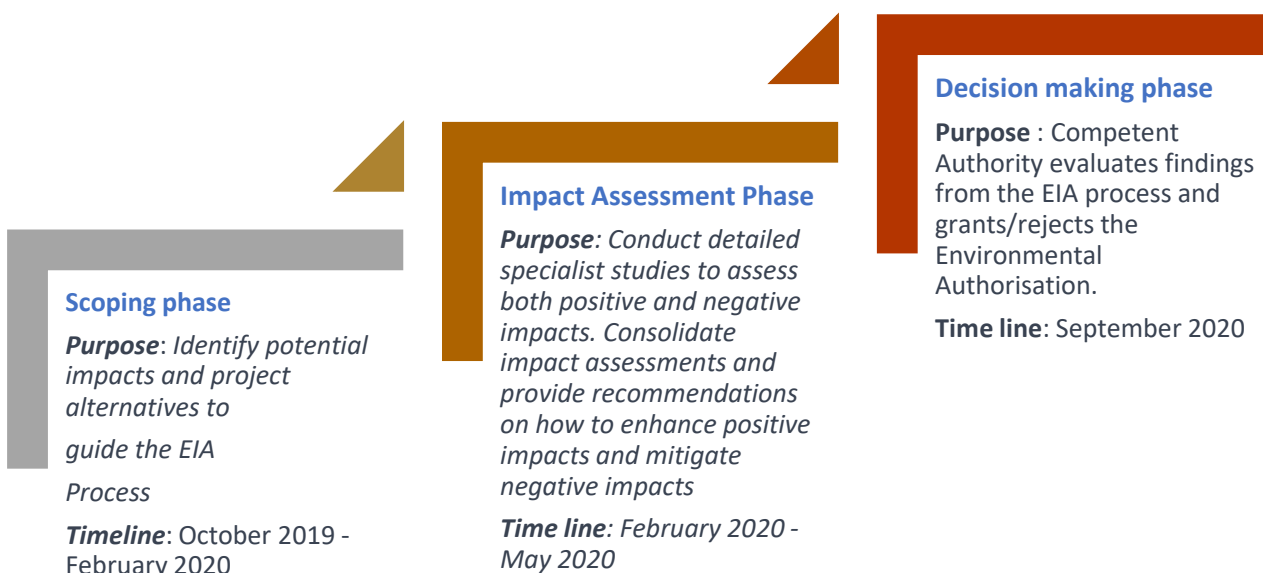
***Please refer to Table 2 below for a list of activities to be authorised under the NEMA, NEM:WA and NWA.***

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

Applicable listing notice in terms of NEMA	Waste management authorisation in terms of NEM:WA	Water Use Licence Authorisation in terms of the NWA
GNR 324: Activity: 2; 4 and 14	GNR 921	21(c) & (i)
GNR 325: Activity 6; and 7	None	None
GNR 327 – 10; 12; 13; 9 and 19	None	

## SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Kongiwe Environmental (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner to conduct the EIA process for 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 1: EIA process and the associated timeline**



## INTEGRATED WATER USE LICENCE

An Integrated Water Use Licence Application 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 Marievale TSFs reclamation project.

## SPECIALIST STUDIES

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

- ❖ Biodiversity and Wetlands;
- ❖ Surface Water;
- ❖ Groundwater;
- ❖ Air quality;
- ❖ Social;
- ❖ Heritage and Archaeology; and
- ❖ Noise.

## PUBLIC PARTICIPATION PROCESS

The public participation process will form part of the Integrated Environmental Authorisation, Waste Management Licence 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 and IWULA (at a later stage) process.

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

The Draft Scoping Report for the Marievale project will be made available for public review and comment for a period of 30 days, from **23 October 2019 – 21 November 2019**. The report can be accessed at the following locations:

Location	Physical Address	Contact person
<b>Hard copies</b>		
Dunnottar Public Library	47 Rhodes Avenue, Dunnottar	Mr Shelton Mmisi (Librarian) (011) 999 9118
Kwa-Thema Public Library	7019 Nkosi Street, Kwa-Themba, Springs	Ms Portia Mosele (Librarian) (011) 999 8494
<b>Electronic copies</b>		
Kongiwe Environmental website	<a href="http://www.kongiwe.co.za/public_documents">www.kongiwe.co.za/public_documents</a>	Sibongile Bambisa / Vanessa Viljoen
For a CD copy please contact the stakeholder engagement team (Sibongile Bambisa/ Vanessa Viljoen), Tel: (012) 003 6627, Email: <a href="mailto:stakeholders@kongiwe.co.za">stakeholders@kongiwe.co.za</a>		

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A technical report in support of the IWULA process will be made available for public review and comment for a period of 60 days. Information regarding the availability of the IWULA report and how stakeholders can provide their comments will be communicated to all stakeholders at a later stage.

## INVITATION TO AN OPEN DAY

Interested and Affected Parties are invited to attend an open day which will be held on **Saturday, 09 November 2019 at the Grootvaly Blesbokspruit Wetland Reserve in Welgadacht Road in Springs from 10H00 - 15H00**. The purpose of the open day is to discuss the proposed project, contents of the Scoping Report and also to provide I&APs with an opportunity to raise their concerns/comments and interact with the project team.

## HOW TO BECOME INVOLVED

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: (010) 140 6508, Email: [stakeholders@kongiwe.co.za](mailto:stakeholders@kongiwe.co.za)**

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

## COMMENTS AND QUERIES:

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

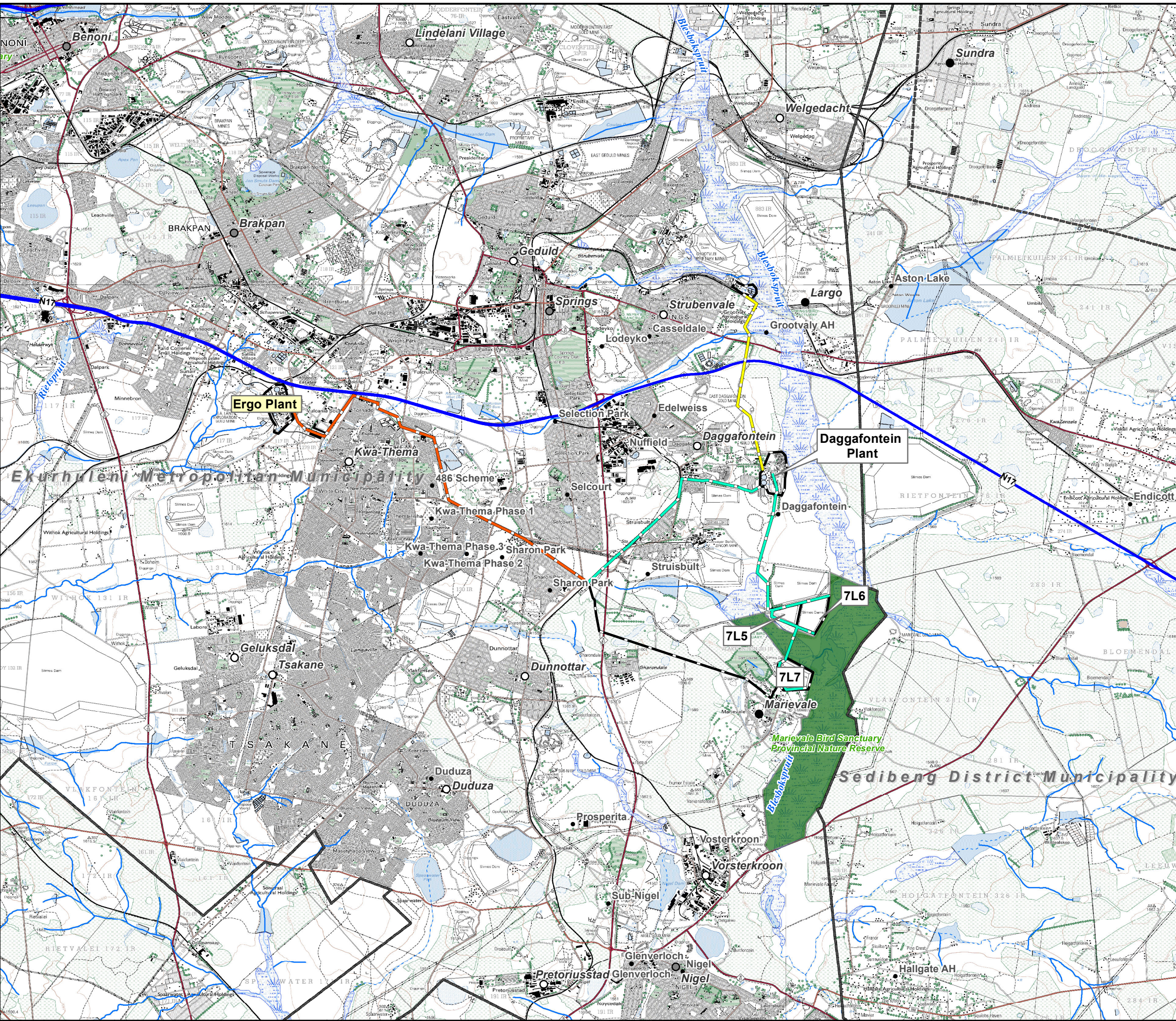
**Contact persons: Sibongile Bambisa/Vanessa Viljoen**

**Tel: 010 140 6508**

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

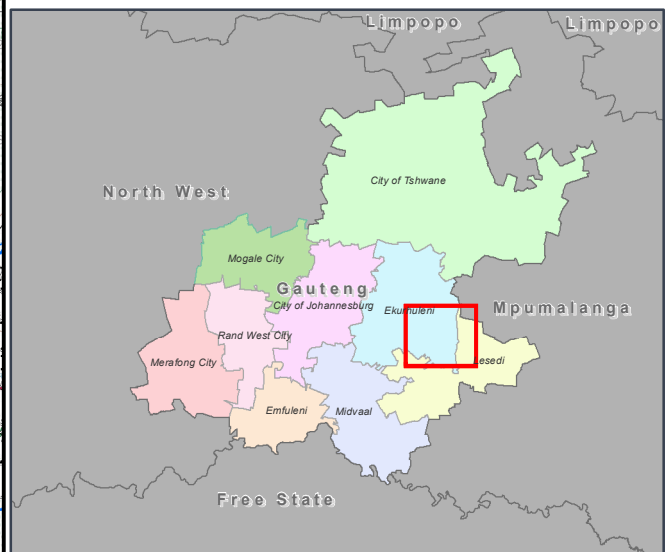
# Reclamation of the Marievale Dumps: Locality Map

1:100 000

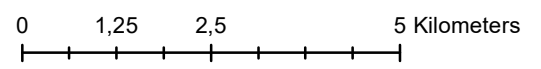


## Legend

- Proposed Infrastructure**
- Proposed Pipeline from Daggafontein to Ergo Plant
  - Proposed Pipeline to TCTA
  - Proposed 7L7 Pipeline to Ergo Plant
  - Proposed Pipeline Route to Marievale
  - District Municipality
  - Formal Protected Areas
  - Mine Dumps Outlines



Project Name : Marievale Reclamation Project  
 CoordinateSystem : WGS84 Decimal Degree  
 Date : 10 October 2019 v3



## Environmental Authorisation and an Integrated Water Use Licence Application for the Reclamation of the Marievale Tailings Storage Facilities, Ekurhuleni Metropolitan Municipality - Gauteng Province Stakeholder Registration and Reply Form

Please return a completed reply form to the Stakeholder Engagement team:

Sibongile Bambisa / Vanessa Viljoen

Phone: 012 003 6627 or E-mail: [stakeholders@kongiwe.co.za](mailto:stakeholders@kongiwe.co.za)

Postal Address: PostNet Suite no 163, Private Bag X21, Bryanston, 2021

**Please provide your complete contact details:**

**If you are a landowner or you are occupying land, please indicate property details**

Landowner	Property								
Land occupier	Property				Property owner				
Title		Mr	Mrs	Ms	Dr	Prof	Other		
First Name									
Surname									
Organisation/Farm/ Business/ Village. Etc.									
Position in organisation									
Contact Numbers	Cell phone				Fax			Tel	
Email address									
Postal address									
Please indicate your preferred method of communication		Email		SMS		Post		Fax	

**I intend attending the Open Day**

<b>Saturday, 09 November, starting at 10:00 and ending at 15:00</b> at Grootvaly Blesbokspruit Wetland Reserve in Welgadacht Road in Springs.	Yes	No
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To assist us with the specialist studies please answer the questions below. Should you require any assistance with filling in the questions please contact the abovementioned persons from the stakeholder engagement team.

<b>1. How do you think the project might affect / impact you?</b>

<b>2. How do you think these effects/impacts can be managed, avoided and / or fixed should they happen?</b>

**3. What is the land currently being used for?**


**4. Where are these land uses taking place?**


**5. Are there any natural environmental/ ecological aspects which we need to be aware of?  
(water, heritage sites, grave sites, special plants or animals)**


**6. Where are these aspects found?**


**7. Do you think the project could affect / impact any structures you might have? (e.g. houses, buildings, roads, dams)**


**8. If so, how can these effects/ impacts be managed, avoided or fixed should they happen?**


**Any other comments**


**Please provide contact details of any other stakeholders we should consult.**

Title	Mr	Mrs	Ms	Dr	Prof	Other	
First name							
Surname							
Organisation/ Property / Business							
Cell phone							
Email							
Title	Mr	Mrs	Ms	Dr	Prof	Other	
First name							
Surname							
Organisation/ Farm / Business							
Cell phone							
Email							

Signature:		Date:	
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