THE RECLAMATION OF THE 4L39 TAILINGS STORAGE FACILITY IN EKURHULENI, GAUTENG PROVINCE

DRAFT SCOPING REPORT

DMRE REFERENCE NUMBER: To be confirmed

23 February 2023

mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DRAFT SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH THE RECLAMATION AND REPROCESSING OF THE 4L39 TAILINGS STORAGE FACILITY SITUATED ON PORTION 1 AND PORTION 137 OF THE FARM DRIEFONTEIN 87 IR, IN EKURHULENI, GAUTENG PROVINCE.

APPLICATION FOR ENVIRONMENTAL AUTHORISATION (EA):

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT MAY BE TRIGGERED.

Name of Applicant: Ergo Mining (Pty) Limited

Tel No: +27 11 743 1003

Postal Address: PO Box 12442, Selcourt, Springs, 1567

Physical Address: Constantia Office Park, Cnr 14th Avenue and Hendrik Potgieter Road,
Cycad House, Building 17, Ground Floor.
Weltevreden Park 1709.

Document prepared by: Kongiwe Environmental (Pty) Ltd

Document Date: 23 February 2023

Draft Scoping Report Information

PROJECT:	THE RECLAMATION OF THE 4L39 TSF
Report Title:	The Reclamation of the 4L39 Tailings Storage Facility in Ekurhuleni, Gauteng Province
DMRE Reference No.	to be confirmed
Client:	Ergo Mining (Pty) Ltd
Project No:	DRDG#018
Compilation Date:	February 2023
Status of Report:	Draft Scoping Report for Public review

VERIFICATION	CAPACITY	NAME	SIGNATURE	DATE
Author:	EAP (*Cand. EAPASA & Pr. Sci.Nat)*	Foord Ceronio		09/02/2023
Reviewed by:	EAP (*Pr.Sci.Nat & EAPASA)*	Gerlinde Wilreker		09/02/2022
Reviewed by:	Legal Director	Michael Hennessy		09 /02/2023
Authorised by:	Chief Executive Officer	Bradly Thornton		14/02/2023

SECTION 1:

SCOPING REPORT OVERVIEW

Important Notice

Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of Regulation 16(3) (b) of the Environmental Impact Assessment Regulations 2014, as amended any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of Regulation 17 (1) (c) the Competent Authority must check whether the application has considered any minimum requirements applicable or instructions or guidance provided by the Competent Authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulations and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner (EAP) must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

Objective of the Scoping Process

1) The objective of the scoping process is to, through a consultative process—

(a) identify the relevant policies and legislation relevant to the activity;
(b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
(c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
(d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
(e) identify the key issues to be addressed in the assessment phase;
(f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
(g) identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

Public Review Period for the Draft Scoping Report

This Draft Scoping Report (DSR) will be made available to stakeholders on the Kongiwe Environmental website and in public places for a 30-day comment period from **Thursday, 23 February to Monday, 27 March 2023**. Notification of the availability of the documentation for review has been distributed on **Friday, 17 March 2023**. The report will be made available at the following locations:

Table 1-1: Where Draft Scoping Report can be accessed

Location	Physical Address	Contact person
Hard Copies		
A non- technical summary of the Draft Scoping Report has been compiled and distributed through community representatives and couriered to stakeholders who send a request to the stakeholder engagement team. The full hard copy can be accessed at the Library below.		
Germiston Public Library	14 Queen St, Germiston, 1400	Ms Edith Kruger, Tel: (011) 999 1737
Electronic copies		
Kongiwe Environmental website	http://www.kongiwe.co.za/publications-view/public-documents/	Phumla Mngwengwe / Vanessa Viljoen
An electronic copy (CD) of the DSR will be made available upon a request directed to the stakeholder engagement team. Stakeholders are encouraged to contact the stakeholder engagement team (Phumla Mngwengwe / Vanessa Viljoen), Tel: (012) 003 6627, Email: stakeholders@kongiwe.com should they require assistance with accessing the DSR/ have queries regarding the Proposed Project.		

Comments received from the public throughout the public review process will be addressed and included in the Final Scoping Report.

Executive Summary:

Kongiwe Environmental (Pty) Ltd has been appointed by Ergo Mining (Pty) Limited (Ergo), as the Independent Environmental Assessment Practitioner (EAP) 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 **Reclamation of the 4L39 Tailings Storage Facility (TSF)** (hereafter the Proposed Project).

The Application for Environmental Authorisation (EA) was submitted to the Department of Mineral Resources and Energy (DMRE), which is the Competent Authority (CA) for the Proposed Project, on **Thursday, 16 February 2023**. The Draft Scoping Report (DSR) will be made available for public review Thursday, 23 February to Monday, 27 March 2023.

Project Introduction and Background

Ergo, a wholly owned subsidiary of DRDGOLD - 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 holds various Mining Rights (MR) in respect of slimes dams and sand dumps extending 65 km from western Johannesburg to eastern Ekurhuleni, with most activities occurring on the central and eastern sections of the Witwatersrand mining belt. Ergo is the owner and operator of the Knights plant and has focused reclamation activities within the proposed project area, this includes 4L2, 4L25 and the Elsburg reclamation project.

Ergo intends to reclaim and reprocess gold residue from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). This TSF is a historical mineral storage deposit, it has been confirmed in various High Court judgements that such a TSF is moveable property. As such, it is accordingly not regulated by the MPRDA. Similarly, it is not a "residue deposit" or "residue stockpile" as contemplated in the Environmental Impact Assessment Regulations, 2014, as amended. As such the reclamation activity does not require a Mining Right, but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) and an integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA).

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, a water monitor blasts the sides of the TSF with process water, the process water mixes with the unconsolidated material, resulting in what is known as a slurry. The slurry reports to a pump station, located at the lowest point of the TSF, from where it will then be conveyed to the Ergo Processing Plant for reprocessing. Existing pipelines along existing pipeline routes within valid pipeline servitudes, wayleave

agreements and Surface Right Permits (SRPs) will be used to convey the generated slurry. Final deposition of the tailings after processing will be on the existing Brakpan/Withok TSF.

Project Description

The Proposed Project will investigate one pipeline route to convey process water from Ergo's Central Water Facility (CWF) to the reclamation station to be used in the proposed activity.

The process water pipeline route will pump process water to the reclamation site (TSF No 4L39) from Ergo's CWF to be used in the reclamation process. This pipeline will be located within existing surface rights held by Ergo and follow existing and operational pipelines. The new process water pipeline from the CWF will be approximately 1,5 km long and 500 mm in width. The pipeline route is secured by SRPs, wayleaves and servitudes.

The reclamation station required for the activity will be connected into an existing and operational pipeline, along which slurry will be transported to the Elsburg pumpstation, and then onward to the Ergo plant for beneficiation.

The proposed reclamation activity will require 3kVA of electricity. This will be transmitted via a new 11 kV powerline from a transformer located at the 4A6 dump. This powerline will follow existing servitudes. This powerline will not require authorisation in terms of NEMA.

The pipelines and the proposed reclamation activity will require authorisation in terms of the National Water Act (Act No. 36 of 1998) (NWA) for Section 21 water uses, the National Environmental Management Act (Act No 107 of 1998) (NEMA) and the National Environmental Management: Waste Act (Act No 59 of 2008) (NEM:WA) for category B activities. An Integrated Water Use Licence Application (IWULA) is being prepared in accordance with the Water Use Licence Application and Appeals Regulations 2017 published in GNR 267 on 24 March 2017 and will be supported by a Technical Report and Integrated Water and Waste Management Plan (IWWMP).

Environmental Impact Process

The Department of Forestry and Fisheries and Environment (DFFE), in consultation with the DMRE identified the need for the alignment of Environmental Authorisations (EAs) and promulgated a single environmental system under the NEMA. This has resulted in simultaneous decisions in terms of NEMA, NEM:WA and other specific environmental management Acts[1].

As from 2 September 2014 the statutory dispensation regarding environmental management on mines changed with the implementation of the One Environmental System and the commencement of the National Environmental Management Laws Amendment Act (Act No. 25 of 2014) (NEMLAA). In line with

[1] NEMA and NEM:WA were amended by the National Environmental Laws Amendment Act, 2022 (Act No 2 of 2022) dated 24 June 2022 but not yet in force.

the One Environmental System the Environmental Impact Assessment Regulations (EIA 2014 Regulations) were promulgated and came into force on 8 December 2014. The EIA 2014 Regulations have subsequently been amended on the 7th of April 2017 and again on 11 June 2021. With reference to the aforementioned, this S&EIA, prepared in support of the EA application, will comply with the requirements of the EIA 2014 Regulations, as amended.[2]

The Proposed Project therefore requires EA in terms of the NEMA and the NEM:WA and will follow a S&EIA process in terms of the EIA 2014 Regulations, as amended. The aforesaid Regulations enforce a strict timeframe and require a decision by the competent authority, the DMRE, within **300 days** from submission of the EA application.

The nature and extent of the Proposed Project, as well as the potential environmental impacts associated with the construction, operation, decommissioning and rehabilitation of a facility of this nature is assessed and presented in this DSR.

Legal Background and Requirements

This DSR has been compiled in terms of the provisions of Appendix 2 of the EIA Regulations 2014, as amended, and the Directive set out in the template prescribed by the DMRE. Table 1-2 cross-references the various sections in this report with these requirements.

Table 1-2: Structure of the Scoping Report in line with the Appendix 2 of the EIA 2014 Regulations, as amended.

No.	Regulation Requirement	Report Section	Page Number
(a)	**Details of -**	1.5	10
(i)	The EAP who prepared the report and;		
(ii)	The expertise of the EAP including a CV		
(b)	**The location of the activity, including –**	2	11-17
(i)	The 21-digit Surveyor General code of each cadastral land parcel		
(ii)	Where available, the physical address and farm name		
(iii)	Where the required information in terms of (i) and (ii) is not available, the coordinates of the boundary of the property or properties	N/A	
I	**A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is –**	2.1	11-17
(i)	A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken		
(ii)	On land where the property has not been defined, the coordinates within which the activity is to be undertaken		
(d)	**A description of the scope of the proposed activity, including –**	2.4	18
(i)	All listed and specified activities triggered	2.5	20-22

[2] The most recent amendment is GN R517 of 11 June 2021. This S&EIA takes these amendments into account.

No.	Regulation Requirement	Report Section	Page Number
(ii)	A description of the activities to be undertaken, including associated structures and infrastructure	2.6	23-29
I	**A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process**	3	30
(f)	**A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location**	4	50
(g)	**Period of environmental authorisation**	5	54
(h)	**A full description of the process followed to reach the proposed preferred activity, site and location within the site, including -**	6	55-60
(i)	Details of the alternatives considered	6.1	56
(ii)	Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs	7	61
(iii)	A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them.	Appendix C	Appendix C
(iv)	**The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects**	8	73-93
(v)	**The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts –** **(aa) can be reversed;** **(bb) may cause irreplaceable loss of resources; and** **(cc) can be avoided, managed or mitigated**	9	94
(vi)	The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives	9.1	94
(vii)	Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	9.2	98
(viii)	The possible mitigation measures that could be applied and level of residual risk	9.4	101
(ix)	The outcome of the selection matrix	9.5	102
(x)	If no alternatives, including alternative locations for the activity were	9.6	102

No.	Regulation Requirement	Report Section	Page Number
	investigated, the motivation for no considering such		
(xi)	A concluding statement indicating the preferred alternatives, including preferred locations of the activity	9.7	102
(i)	**A plan of study for undertaking the environmental impact assessment process to be undertaken, including -**	10	103
(i)	A description of the alternatives to be considered and assessed within the preferred site	10.1	103
(ii)	A description of the aspects to be assessed as part of the environmental impact assessment process	10.2	103
(iii)	Aspects to be assessed by specialists	10.3	104
(iv)	A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists	10.4	114
(v)	A description of the proposed method assessing duration significance	10.4.1	114
(vi)	An indication of the stages at which the competent authority will be consulted	10.4.2	114
(vii)	Particulars of the public participation process that will be conducted during the environmental impact assessment process	10.4.3	115
(viii)	A description of the tasks that will be undertaken as part of the environmental impact assessment process	10.4.4	115
(ix)	Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored	10.4.5	116
(j)	**An undertaking under oath or affirmation by the EAP in relation to –** (i) The correctness of the information provided in the report; (ii) The inclusion of comments and inputs from stakeholders and interested and affected parties; (iii) Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties	11.1	128
(k)	**An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment**	11	128
(l)	**Where applicable, any specific information required by the competent authority**	N/A	N/A
(m)	**Any other matter required in terms of section 24(4)(a) and (b) of the Act**	N/A	N/A

Environmental Considerations

The Proposed Project will adopt the standards as set out in the Ergo's Environmental Policy. The Policy states that Ergo is committed to the responsible management of the environment in which it operates, adopting and implementing environmental practice as outlined in the NEMA. Recognising that the environment is held in trust for the people, the policy commits to:

- Complying with relevant environmental legislation as a minimum, and adopting and applying the best practicable environmental option with respect to current activities as well as prospective projects;
- Evaluating, through a process of monitoring, auditing and reviewing by management, the success of the management and mitigation measures applied; and
- Ensuring that environmental risks and potential emergencies are identified and managed through effective controls and procedures as identified in the applicable Environmental Management Programmes.

Key Findings of the Scoping Report

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 baseline environmental information provided in this DSR was compiled as a high-level desktop investigation, and the project information is sourced from existing background information, relevant to the Proposed Project. The preliminary environmental impacts identified in Table 1-3 will be further refined, calculated and assessed for all the feasible alternatives identified. Mitigation and management measures will also be suggested by the specialists for all impacts identified. The potential positive and negative impacts which may arise because of the Proposed Project have also been summarised in the Table 1-3 overleaf.

Table 1-3: Potential identified impact as a result of the Proposed Project

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Physical Environment (non-living)	Hydrology (including wetlands, surface water and ground water)	❖ 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; ❖ Water and ground contamination due to pipeline leaks/spillages if inadequate preventative measures are not implemented; ❖ Improved surface and ground water quality around the project area due to the removal of the TSF; ❖ Changes in natural surface water flow parameters as a result of the removal of the TSF; ❖ Potential impact on drainage lines from access runoff during the operational phase of the project; ❖ Improved visual aesthetics of the area after the removal of the TSF.	Surface Water Impact Assessment Groundwater Impact Assessment Wetland Impact Assessment
Biological Environment (living)	Ecology and Biodiversity	❖ Displacement of animal habitat by removing the TSF; ❖ Removal of invasive species from the TSF; ❖ Long-term improvement of ecosystem health and functioning of the project area following rehabilitation.	Biodiversity Impact Assessment
Cultural Environment	Heritage Resources	❖ Should heritage resources be present in the area, they could potentially be impacted by the reclamation project; ❖ Destruction of a heritage resource, if the TSF is older than 60 years, by reclaiming the TSF. The significance of the TSF will be assessed.	Heritage Impact Assessment
	Employment	❖ Continued employment and job security;	Social Impact Assessment

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Social and Economic Environment		❖ Continued investment in local economy;	
	Land-use	❖ Land use will change to an active reclamation site; ❖ Restoration and unlocking of land for future land uses; ❖ Better management and control of the area against illegal/informal mining.	Social Impact Assessment
	Air Quality	❖ Possible increase in dust levels in some areas during operations; ❖ Overall removal of an air pollution source after the removal of the TSF;	Air Quality Impact Assessment

Overall Conclusions

At this stage, the findings of this DSR indicate that the Proposed Project and its associated infrastructure would pose minimal and/or short-term negative environmental impacts if adequate and appropriate mitigation measures are implemented; and positive long-term environmental and social impacts when the project has been completed. Most importantly, the removal of the TSF would assist with the alleviation of a major pollution source.

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 environment around it. The TSF is a source of pollution and causes other direct and indirect nuisances to the surrounding environment.

The Proposed Project is also in line with the Gauteng Mine Residue Area Strategy (2012), Ekurhuleni Metropolitan Spatial Development Framework (2011) and the Ekurhuleni Environmental Management Framework's (2014) objectives to remove TSFs scattered throughout the Gauteng landscape.

Way Forward

This DSR has been undertaken with the aim of identifying potential positive and negative impacts on the environment and gathering comments and queries from stakeholders. It documents the process followed, the findings and recommendations of the Scoping Phase study, and the proposed Plan of Study for the EIA Phase to follow. The overarching objectives of the EIA process will be to:

- Prepare integrated sensitivity maps for the study area based on the findings of specialist assessments as input into the project design process;
- Identify and assess the significance of potential impacts associated with the project activities; and
- Recommend mitigation and enhancement measures to ensure that the development is undertaken in such a way as to promote the positive impacts and to minimise the negative impacts.

The future procedure for this study is as follows:

- Submit the finalised Scoping Report to the CA for permission to undertake the EIA Phase of the project;
- Upon the decision to approve or refuse the final Scoping Report, all stakeholders will be notified. If approved, stakeholders will also be notified of the conditions of the CA (the DMRE) for proceeding with the EIA Phase of the project;
- In the case of approval of the final scoping, execute the Plan of Study for the Impact Assessment during the EIA Phase of the project;
- Incorporate and address comments and issues raised during the consultation period on the Scoping Report into the EIA, and make changes to the report where relevant;
- Make the EIA Report and Environmental Management Programme report (EMPr) available to the

public, stakeholders and authorities;

- Finalise the EIA Report and submit the final EIA Report to the CA; and
- Authority review period and decision-making for 107 calendar days.

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Appendix C: Public Participation Information

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- **Appendix C2** – Land Claims Letters
- **Appendix C3** – Background Information Document
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- **Appendix C6** – Announcement Notification
- **Appendix C7** – Application Acknowledgement Letter
- **Appendix C8** – Stakeholder Correspondence
- **Appendix C9** – Comments & Response Report

Appendix D – Site Photographs

Appendix E – Environmental Screening Tool

Abbreviations

Abbreviation/ Symbol	Description
AMD	Acid Mine Drainage
BID	Background Information Document
BRP	Bio Regional Plan
CA	Competent Authority/Authorities
CARA	Conservation of Agricultural Resources Act, 1983 (Act No 43 of 1983)
CBA	Critical Biodiversity Area
CoE	City of Ekurhuleni Metropolitan Municipality
CRG	Central Rand Group
CRR	Comments and Response Report
DALRRD	Department of Agriculture, Land Reform and Rural Development
DEFF	Department of Environment, Forestry and Fisheries
DWS	Department of Water and Sanitation
DMRE	Department of Mineral Resources and Energy
DoH	Department of Health
DPWI	Department of Public Works and Infrastructure
DSR	Draft Scoping Report
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIP	Environmental Implementation Plan
EMF	Environmental Management Framework
EMPr	Environmental Management Programme Report
ESA	Ecologically Sensitive Areas
FSR	Final Scoping Report
GCP	Gauteng Conservation Plan
GDARD	Gauteng Department of Agriculture and Rural Development
GPEMF	Gauteng Province Environmental Management Framework
GDP	Growth Domestic Product
GSDF	Gauteng Spatial Development Framework 2030
Ha	Hectare
IDP	Integrated Development Plan
IWULA	Integrated Water Use Licence Application
Km	Kilometre
kg	kilogram
m	Metre
MPRDA	Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)

Abbreviation/ Symbol	Description
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No.10 of 2004)
NEM:PAA	National Environmental Management: Protected Areas Act, 2003 (Act No 57 of 2003)
NEM:WA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
NEMLAA	National Environmental Laws Amendment Act, 2014 (Act No. 25 of 2014)
NEPAD	New Partnership for Africa's Development
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NNR	National Nuclear Regulator
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PA	Protected Area
PAIA	Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)
PPP	Public Participation Process
RCAM	Road Classification and Access Management
RoD	Record of Decision
SANBI	South African National Biodiversity Institute
S&EIA	Scoping and Environmental Impact Assessment
SAHRA	South African Heritage Resources Agency
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SPLUMA	Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013)
SRP	Surface Right Permit
TSF	Tailings Storage Facility
WRG	West Rand Group
WMA	Water Management Area
WML	Waste Management Licence

SECTION 2:

THE RECLAMATION OF THE 4L39 TAILINGS STORAGE FACILITIES

1 Introduction and Background

1.1 The History of Gold Mining in South Africa

The first official gold prospector of the Transvaal Republic was Mr Pieter Jacob Marias who discovered alluvial gold in 1853 in the Jukskei and Crocodile Rivers in the Western Transvaal. This gave rise to an influx of prospectors looking for gold. Following this, Australian prospector Henry Lewis discovered gold-bearing rock at Blaauwbank in the western parts of the Transvaal Republic in 1874 (now known as the North West Province) (Durand, 2012). Thereafter, Mr George Harrison discovered a gold-bearing conglomerate on the farm Langlaagte in 1886. This conglomerate turned out to be the richest and most extensive gold deposit in the world.

Durant (2012) further explains that in September 1886, nine farms were proclaimed as public diggings. These public digging sites formed the main focus of the initial gold development which would later become known as the Central Rand. The development of the Central Rand and the outlying goldfields along the Witwatersrand were instrumental in the formation of today's City of Johannesburg and the surrounding areas (Harrison and Zack, 2012).

Figure 1-1: Historical mining activities within the Johannesburg area.

After the discovery of the Main Reef, by George Harrison in February 1886, the Gold Rush ensued in the Transvaal and several gold mining endeavours began in the Central Rand (Viljoen and Reimold, 2002). The Central Rand extends approximately 46 km, east to west, from the Roodepoort Fault in the west, through Johannesburg, to Boksburg in the east. From west to east, the outcrop of auriferous conglomerates was located on the farms Witpoortje 245 in Krugersdorp; Roodepoort 237, Vogelstruisfontein 231 and Paardekraal 226, in Roodepoort; Langlaagte 224, Turffontein 96, and Doornfontein 92 in Johannesburg; Elandsfontein 90 and Driefontein 87 in Germiston; Driefontein 85, Vogelfontein 84 and Leewpoort 113 in Boksburg (Pretorius, 1963).

In Ekurhuleni, then called the East Rand, the major gold mines that were still in operation in the 1960s included: Simmer and Jack Mines Ltd, located on the farms Doornfontein 92, Elandsfontein 90, Elandsfontein 107 and Elandsfontein 108; Rose Deep Ltd, located on the farms Elandsfontein 90 and Driefontein 87; and East Rand Proprietary Mines Ltd, located on the farms Driefontein 87, Driefontein 85, Vogelfontein 84, Klippoortje 110 and Leeuwpoort 113 (Pretorius, 1963). In addition to the major producers mentioned above, there were several small mines working along the outcrop, reopening, and reclaiming old mines which had previously ceased production. See Figure 1-2 for an example of some of the gold mines in the East Rand area in the 1900s.

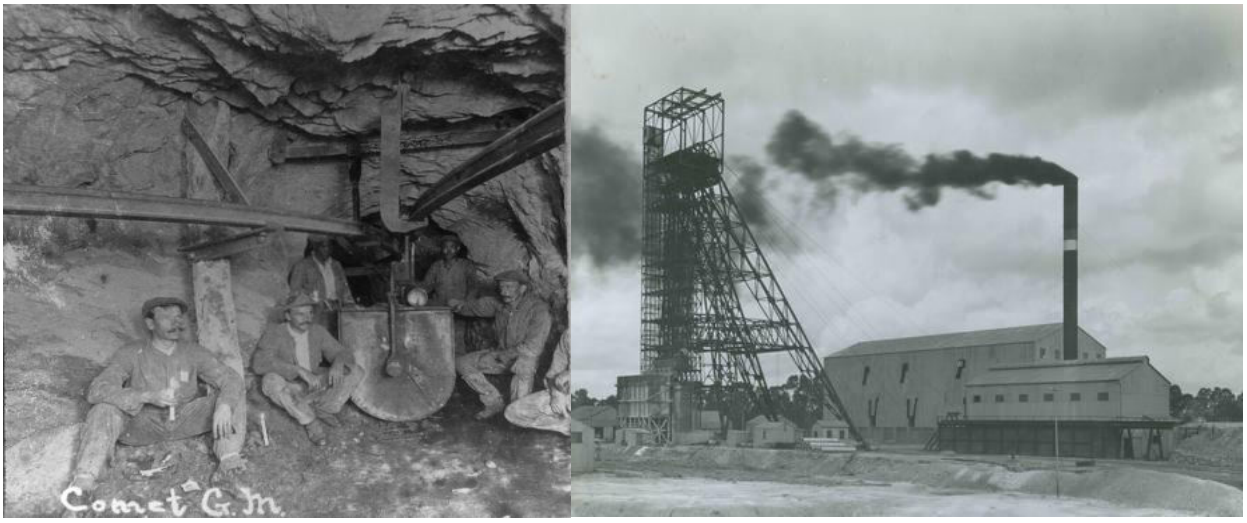


Figure 1-2: Mine workers at Comet Gold Mine 1903 (left) and Simmer and Jack Mine 1939 (right)

1.2 The Origin of Mine Dumps in the Proposed Project area.

The Gauteng landscape is littered with mine dumps bearing testament to South Africa's rich mining heritage. The rising demand for minerals, and the need to exploit larger and lower-grade deposits to help satisfy demand, led to mining operations increasing in scale and size. The East Rand Gold Basin which extended for approximately 770 km2 was historically mined and produced an estimated 10 000 tones of gold, resulting in numerous tailing storage facilities. These remaining historical facilities contain low concentrations of gold and other minerals, due to the inefficiencies of the historical mining processes.

During this time, mining and gold recovery were left largely unregulated. A number of mine dumps began to define the landscape, a result of mining operations where large volumes of ore were mined and brought to the surface where it was crushed and gold extracted.

In laymen's terms the phrase *'mine dump'* refers to an area where excess material, containing forms of mineral(s) that are either valuable or not, is left by the person who has won the minerals from the earth in accordance with his/her right or entitlement to mine. Prior to the enacting of legislative controls such as the Mines and Works Act, 1956 and its Regulations and later still the Minerals Act, 1991 and finally, the Mineral and Petroleum Resources Development Act, 2002 (No. 28 of 2002) ("the MPRDA"), which came into effect on 1 May 2004, mine dumps were placed in convenient positions adjacent to mining operations. This was often along fault lines, or within wetland areas. It is the legacy of these mine dumps within sensitive areas that has caused the environmental and health effects that are still felt today.

After the discovery of the Main Reef at Witwatersrand in 1886, various mines were established. The mining method during these early years was labour intensive, while only the surface areas of the goldbearing reefs were exploited. Lionel Phillips was one of the first mining entrepreneurs to realise the potential of deep-level mining. As part of the company of Hermann Eckstein, Phillips managed to acquire large numbers of claims which were considered of low value as they were located some distance away from the Main Reef. As a result he bought these claims for very reasonable prices, and started implementing the concept of deep level mining on some of these claims (PGS, 2018). These steps resulted in the proclamation of various deep-level mines, including Nourse Deep, Jumpers Deep, Glen Deep, Crown Deep, Rose Deep, Village Deep, Geldenhuis Deep as well as Ferreira Deep. In 1893 the company of H. Eckstein formed the company Rand Mines Ltd, which took over the administration of these and other mines (Cartwright, 1965). Russell (n.d.) indicates that Rand Mines was established with start-up capital of £400,000 and was one of the earliest companies formed specifically for mining deep levels. The company quickly acquired 1,729 deep level claims. Lionel Phillips' foresightedness earned him the respect of his peers, as well as the position of chairman for Rand Mines, a company that soon became the "…biggest mining finance company in the world." (Cartwright, 1965; PGS, 2018).

As the mines in the Witwatersrand area began to close during the 1970's, technological advances enabled the extraction of valuable gold resources and other minerals from the dumps. In 1978 the East Rand Gold and Uranium Company (Ergo), then a subsidiary of Anglo American Limited, began to reclaim some of these dumps to gain access to the residues of gold, uranium and pyrite. Over the last two decades there have been further advances in mining and metallurgical technologies and an evolution in the country's environmental policy and legislation. This, as well as increasing gold prices, has further incentivised the reclamation of TSFs. Today, Gauteng's physical landscape is once again in a state of transition due to the demand for the reclamation of historical mine dumps.

Through the process of reclamation, gold recovered from historical mine dumps is made available for domestic and international markets. This means that the continual reclamation of mine residue material (from historical mine dumps) results in additional gold supply onto the gold market – which has been

experiencing a downward trend over the last few years in South Africa. The removal of these dumps also leads to the increased availability of useable land after the required rehabilitation has been conducted and clearance certificates are awarded. The aim of rehabilitation would be to return the land to a functional topography and clear of any pollution sources. Typically, end-use of the land would be aligned to the zoning of the area where the dumps were situated i.e. urban, industrial and agricultural. The farms of Driefontein and Elandsfontein were declared as public diggings on 20 September 1886 (Lang, 1986), this eventually became the area where Germiston was established in 1905. The rise in mining activities and the need for a railway yard that served as a junction centre for railway lines from Capetown to Pretoria, via Kimberley, and to Lourenço Marques (modern day Maputo) led to the further development of the town of Germiston. The TSF no 4L39 is estimated to be 70 years old. The TSF is indicated on aerial photographs of the region dated to 1952, and is evident to be in its current location prior to the development of the local suburbs of Delmore Park and Delmore.

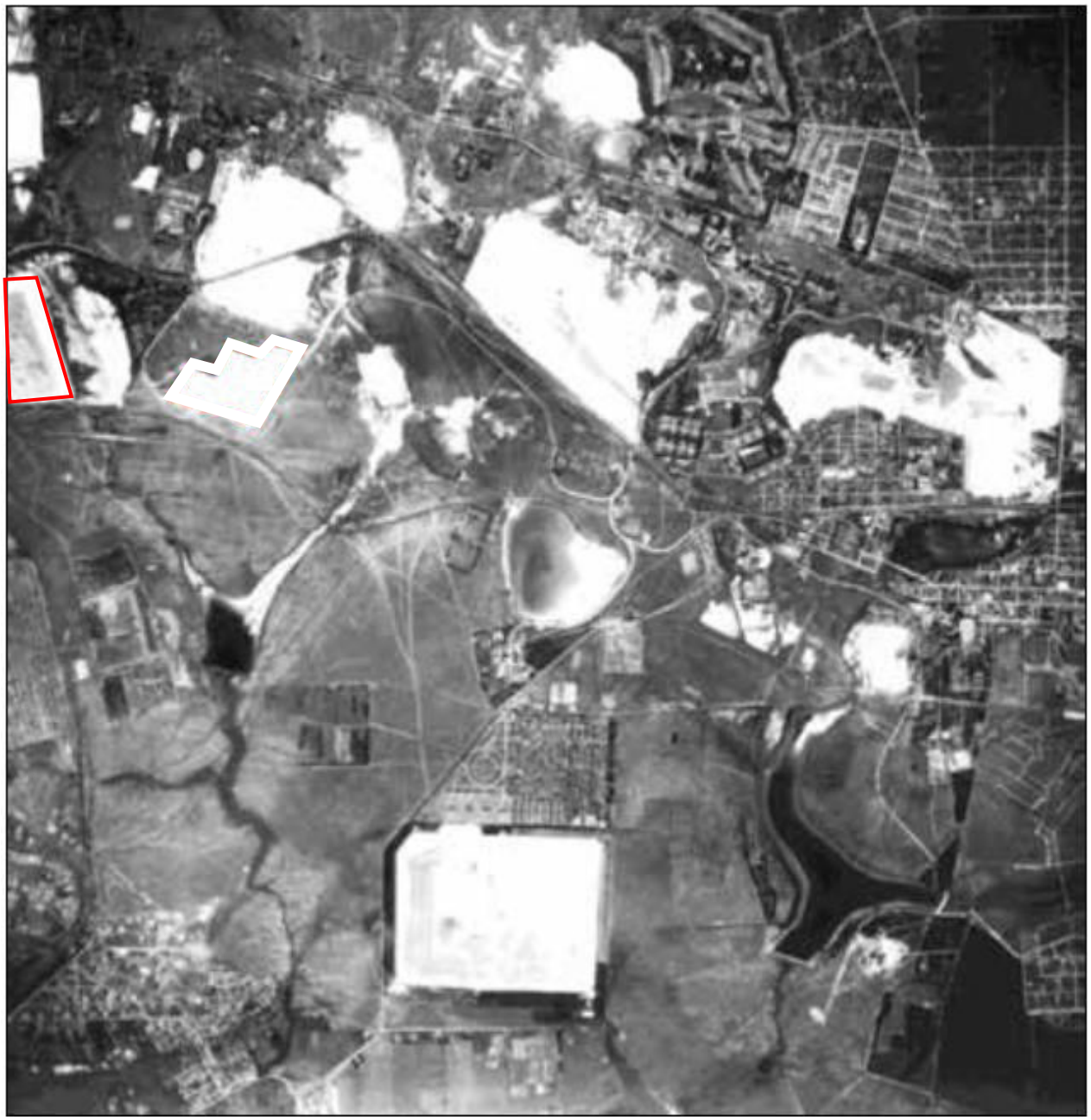


Figure 1-3: 1952 Aerial Image of Slimes Dam 4L39 (red polygon).

1.3 Trends in The Current Gold Industry

Total world production of gold was estimated to be about 3.4 billion troy ounces, of which more than two-thirds have been mined in the past 50 years. The Witwatersrand reef was responsible for about 45% of the world's total gold production (USGS, 2001). Up until 2014, the Republic of South Africa remained one of the world's leading mining and mineral-processing countries and contributed to 9% of the world's refined gold and 5% of the mined gold.

The country has however been undergoing a long-term decline in gold output, the share of South Africa's world gold production decreased from 14% to about 5% and this decrease in gold mine production continued in South Africa in 2018 (USGS, 2019). Today, South Africa is no longer even the largest gold producer in Africa, having lost that position to Ghana. South African gold production decreased by 20.42% to around 84 tonnes in 2022 (Minerals Council of SA, 2023).

The price of gold per ounce underwent a steady increase from 2011 until it reached the high point in 2020 (R36 000/ounce). Figure 1-4 below indicates how, from August 2011, the price of gold per ounce continually fluctuated in an increasing trend reaching its peak in 2020. This indicates that although the gold price remains a volatile market with an ever-fluctuating commodity price, it is at present very lucrative. The current gold price as of February 2023 is $1,869.18 per ounce.

Figure 1-4: Price of Gold per ounce 2000-2022 (Macrotrends.net, 2023)

1.4 Scoping and Environmental Impact Assessment

1.4.1 Applications Relevant to the S&EIA Process

Kongiwe has been appointed by **Ergo Mining (Pty) Limited** (hereafter Ergo) 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 in support of the applications for the required approvals. The following applications are being made to the DMRE for the Proposed Project:

1. **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985[3] 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
2. **Application for a waste management licence (WML)** authorising waste management activities 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 applications are being made to the relevant Competent Authority:

3. **An Integrated Water Use Licence Application (IWULA)** in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) to be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project.

The period of EA being applied for is **5 years for the reclamation period.**

The EIA findings, including specialist findings, are used by the applicant and authorities to obtain an objective view of the potential environmental, social and cultural impacts that could arise during the reclamation of the proposed area. Measures for the avoidance or mitigation of negative impacts will be proposed and positive impacts will be enhanced.

1.4.2 Methodology applied to conducting the Scoping Process

The outcome of the first phase of the S&EIA is the Scoping Report, which provides the terms of reference for undertaking the EIA Phase of the project. The figure below indicates the methodology that is applied in conducting the S&EIA process.

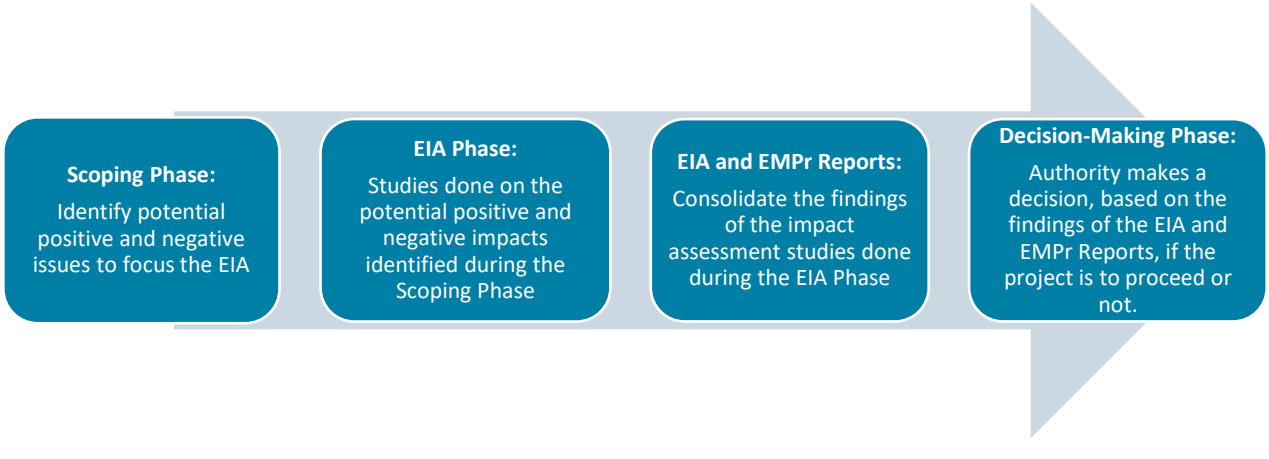


Figure 1-5: Different phases of S&EIA

[3] These Listing Notices have been amended by GN R327, GN R325 and GN R324 of 7 April 2017 and GN R 517 of 11 June 2021

1.4.3 S&EIA Timeframes

The Draft Scoping Report (DSR) will be submitted and made available for a **30-day** public review period. The comments received during this period will be captured in a Comments and Responses Report (CRR) that will be submitted with the Final Scoping Report.

Once the Final Scoping Report (FSR) has been submitted to the DMRE as CA, the Department must either accept or reject the Scoping Report within **43 days**. Once confirmation of acceptance has been received from the DMRE, the EIA Phase commences and will run for a period of **106 days**, in which time stakeholders will be afforded a **30-day** period in which to review and comment on the S&EIR documentation.

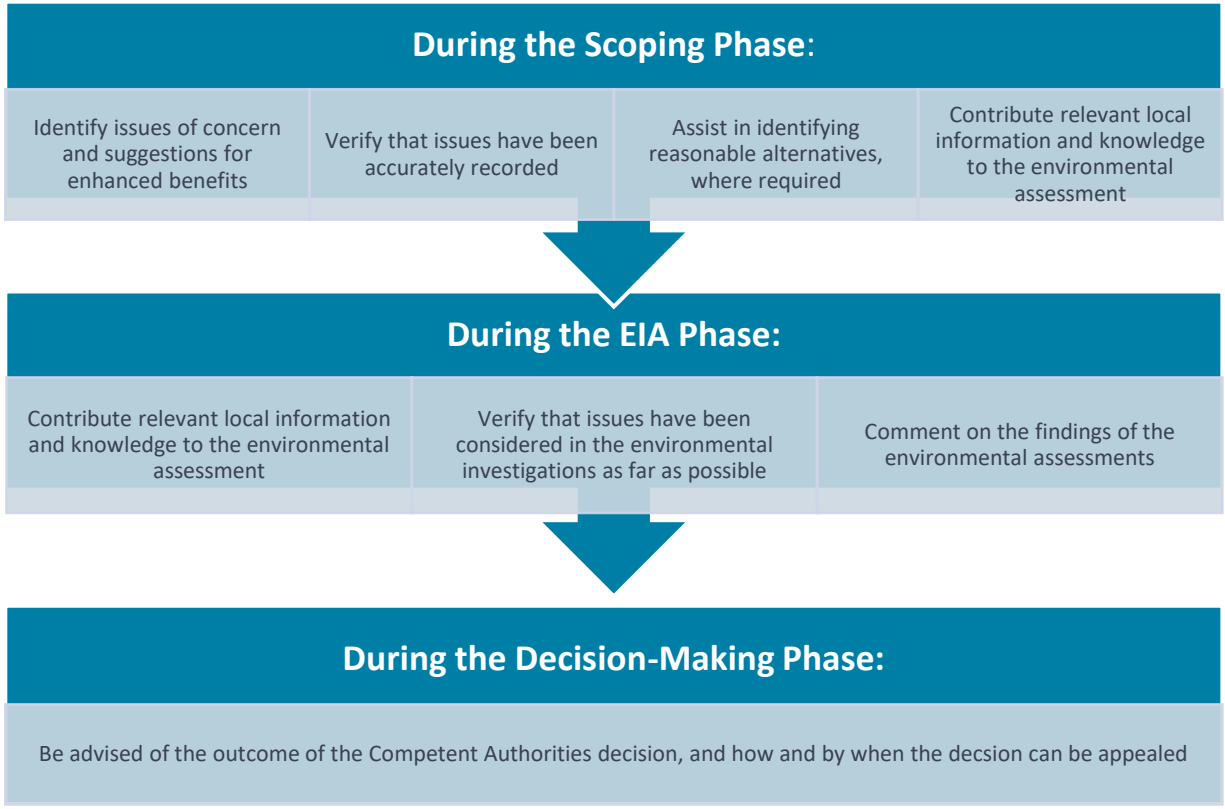
Upon submission of the Environmental Impact Assessment / Environmental Management Programme (EIA/EMPr) document the CA will have **107 days** to reach a decision on the project (Record of Decision (RoD)). The RoD is otherwise referred to as the EA which authorises the activities to proceed. The decision to grant the EA may be appealed (within **20 days**) by any party, including the Applicant, following the process outlined in the National Appeal Regulations (GNR 993 of 8 December 2014) published in terms of the NEMA.

If significant changes to the EIA/EMPr are required, which were not consulted on during the initial public participation process, a notice may be submitted to the DMRE stating that the EIA/EMPr will be submitted within **156 days** from date of acceptance of the Scoping Report. During the aforesaid 156-day period, stakeholders will be afforded a further **30-day** period in which to review the amended EIA/EMPr documentation.

1.4.4 Public Participation Process

The Public Participation Process (PPP) has been designed to comply with the regulatory requirements set out in the EIA Regulations of 2014 (as amended). The PPP provides the opportunity for communication between agencies making decisions and the public. This communication can be an early warning system for public concerns, a means through which accurate and timely information can be disseminated, and can contribute to sustainable decision-making (IAP2, 2006).

Kongiwe encourages stakeholders to provide input into the S&EIA. The sharing of information forms the basis of PPP, with an aim to encourage the public to have meaningful input into the decision-making process from the onset of the project. Stakeholders can become involved in the project in the following ways:



The Draft Scoping Report (DSR) will be made available for public comment from **Thursday, 23 February to Monday, 27 March 2023.** The project team will conduct an Open Day with stakeholders at the **Institute Status Acres Combined School, Quarry Road, Georgetown, Germiston** on **Saturday 18 March 2023 from 10:00 to 14:00**. During the open day, the DSR content will be presented and discussed. Comments received during the DSR commenting period will be captured in the CRR and made available in the FSR.

1.5 Details of the Environmental Consultant

Kongiwe is a contemporary, problem-solving consultancy specialising in solving real-world environmental challenges. We pride ourselves in using the latest technology available to realise pragmatic solutions for our clients. The company was created with the essential intent: *'To solve environmental challenges for a world driven towards a sustainable future.'*

With offices in Johannesburg, South Africa, our team of professional Environmental Scientists are highly trained in various environmental disciplines and have significant, hands-on experience in an array of projects across numerous industries. The company has extensive environmental and project management experience in multiple sectors, with significant experience in South Africa, as well as internationally. **Kongiwe** focuses on the integration of environmental studies and processes into larger projects. **Kongiwe** provides clients with strategic environmental assessments and compliance advice, the identification of environmental management solutions and mitigation / risk minimising measures throughout the project lifecycle.

1.5.1 Contact Person and Corresponding Address

The report was compiled by Foord Ceronio, details in Table 1-1.

Table 1-1: Details of EAP

Name of Practitioner	Foord Ceronio
EAP registration No.	Cand. EAP 2020/2580
Tel No	+27 (10) 140 6508
Cell No	072 984 8574
e-mail address	fceronio@kongiwe.com

Foord Ceronio is an Environmental Consultant at Kongiwe Environmental. He has completed an M.Sc. in Environmental Management from the University of Johannesburg. Foord is a candidate Environmental Assessment Practitioner (EAP) (2020/2580) and a Professional Natural Scientist (Environmental Management) (Registration No: 124117). Qualifications in Appendix A.

Foord has experience in the mining industry. His responsibilities range from environmental impact reporting, report writing, air quality monitoring, surface water quality monitoring, procedure generation, environmental auditing, due diligence, legal permitting and licensing and public participation.

The Report was Peer Reviewed and approved by Gerlinde Wilreker.

Table 1-2:Details of the Reviewer

Name of Practitioner	Gerlinde Wilreker, Kongiwe Environmental (Pty) Ltd
EAP registration No.	2019/1589
Tel No	+27 (10) 140 6508
Cell No	074 173 0023
e-mail address	gwilreker@kongiwe.com

Gerlinde Wilreker has a M.Sc. in Environmental Management degree from the previous Rand Afrikaans University (RAU), now the University of Johannesburg, and is a registered Environmental Assessment Practitioner (EAP) (2019-1589) and Professional Natural Scientist (Environmental Management) (Registration No:400261/09). Qualifications in Appendix A.

Gerlinde Wilreker has over 17 years' work experience as an Environmental Consultant, predominantly in the mining industry. Her practical experience in the mining and construction industry has given her a depth of knowledge regarding project processes from pre-feasibility phase through to implementation. She is adept at working in different contexts, and problem-solving with her team to meet client needs. She has particular expertise in relation to Environmental Authorisation Processes in terms of the South African legal regime.

2 Project Description

2.1 Description and Location of the Property

Ergo intends to reclaim and reprocess gold residue from the tailings storage facility (TSF) No 4L39. This TSF is a historical mineral deposit (slimes dam), situated 3 km northeast of the Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE).

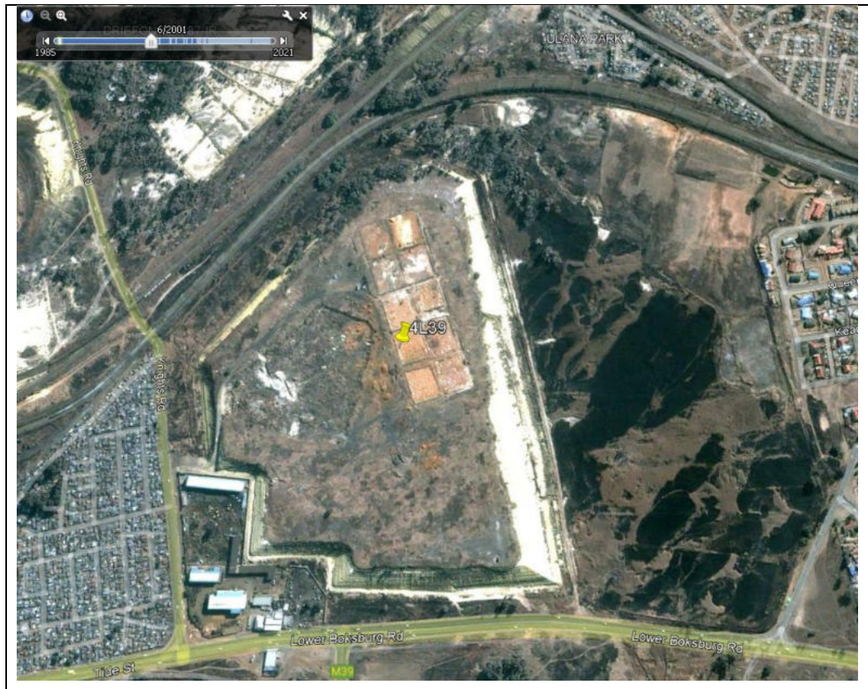
The area is predominantly surrounded by other mine dumps, light industrial areas, residential areas and bare ground. Refer to **Appendix D** for more images of the Proposed Project site.

The area to the east of 4L39 has been modified multiple times. The area has been used in the past for slimes deposition, but the area was rehabilitated. Around November 2009 a river diversion was constructed (Figure 2-2); a PCD was in existence between October 2012 and January 2019. These activities were not performed by the applicant.

The following infrastructure is currently encountered in the surrounding area:

- National and provincial roads (Lower Boksburg Road);
- Residential properties;
- Industrial areas;
- Power lines;
- Railway lines;
- Slurry and water pipelines; and
- Other mine dumps.

Figure 2-1: Locality map of the Proposed Project



June 2001: Disturbance east of 4L39

May 2002

May 2007

July 2009

November 2009: Rehabilitation of eastern area and start of river diversion construction

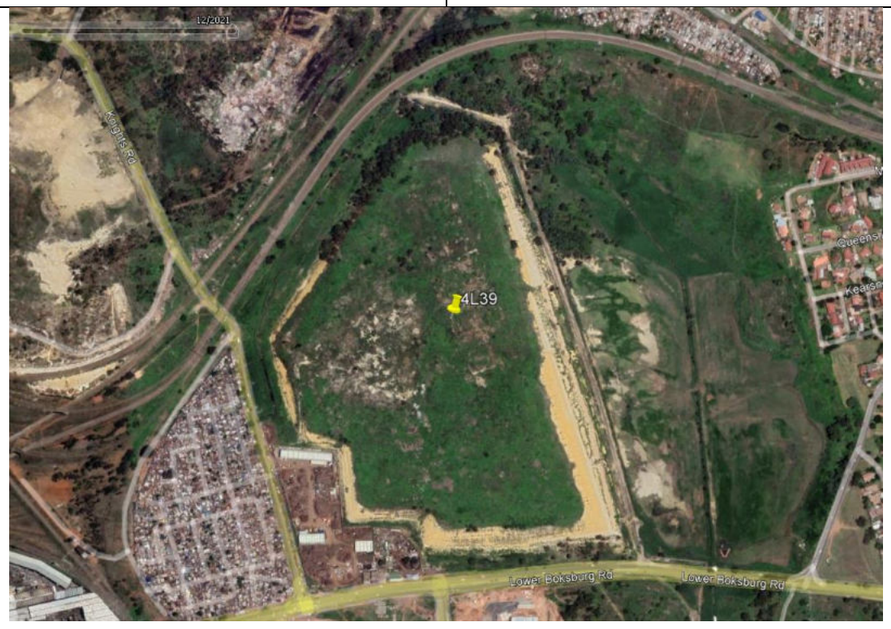
November 2010: Ongoing rehabilitation and established river diversion

October 2012: Pollution control dam construction

October 2013

January 2016

January 2019: Removal of PCD



December 2021

Figure 2-2: Historical status of the area east of 4L39.

2.1.1. Description of the Properties affected by the Project

This S&EIA process is being conducted for an EA to reclaim the TSF and will be confined to the extent of the TSF No. 4L39, located on the Farm Driefontein 87 IR Portion 137 and Portion 1, as well as all farms and farm portions to be affected by the proposed and existing pipeline route.

This is a “Brownfield Project" as it is the reclamation of a historical mineral storage deposits with partly existing infrastructure. The potential negative and positive impacts of the Proposed Project on the environmental and social aspects will be objectively considered though studies undertaken by specialist professionals during the EIA phase.

Refer to Table 2-2 for the directly affected properties.

Table 2-1: Property Details

Application Area (ha)	The Proposed Project site covers an area **32 Ha**.
Municipality	Ward 93 of City of Ekurhuleni Metropolitan Municipality (CoE).
Distance and Direction from Nearest Town	The site is located approximately 3 km east from the Germiston CBD and falls within the Ekurhuleni Metropolitan Municipality district.

Table 2-2: Description of the Directly and Indirectly Affected Properties

Farm Name	Farm ID	Farm Portion	SG Code	Farm owner
Directly Affected Properties				
Driefontein	87 IR	137	T0IR00000000008700137	Delmore Park Shopping Centre (Pty) Ltd
Driefontein	87 IR	1	T0IR00000000008700001	Witwatersrand Gold Mining Realisation Trust
Indirectly Affected Properties				
Driefontein	85 IR	504	T0IR00000000008500504	Jabeam Prop Valuations CC
Driefontein	85 IR	270 (Portion of Portion 266)	T0IR00000000008500270	
Driefontein	87 IR	122	T0IR00000000008700122	African Steel Centre (Pty) Ltd
Driefontein	87 IR	Erf 1744	T0IR00000000008700133	Midnight Feast Prop 11 (Pty) Ltd
Driefontein	87 IR	134	T0IR00000000008700134	City of Ekurhuleni Metropolitan Municipality
Driefontein	87 IR	32	T0IR00000000008700032	National Housing Board
Driefontein	87 IR	138	T0IR00000000008700138	National Housing Board
Driefontein	87 IR	153	T0IR00000000008700153	Transnet Ltd
Driefontein	87 IR	74	T0IR00000000008700074	Transnet Ltd
Driefontein	87 IR	192	T0IR00000000008700192	Transnet Ltd
Driefontein	87 IR	53	T0IR00000000008700053	Transnet Ltd
Driefontein	87 IR	155	T0IR00000000008700155	Transnet Ltd
Driefontein	87 IR	164 (An Unregistered portion of 134)	T0IR00000000008700134	City of Ekurhuleni Metropolitan Municipality
Driefontein	87 IR	184	T0IR00000000008700184	South African Rail Commuter Corp Ltd
Driefontein	87 IR	200 (Not registered, part of South Germiston Township)		
Driefontein	87 IR	279 (An unregistered portion of portion 1)	T0IR00000000008700001	Mr Mia Ismal Asmal Mr Yousuf Asmal)
Driefontein	87 IR	232	T0IR00000000008700232	Crown Gold Recoveries (Pty) Ltd
Driefontein	87 IR	178	T0IR00000000008700178	South African Rail Commuter Corp Ltd
Driefontein	87 IR	127	T0IR00000000008700127	South African Rail Commuter Corp Ltd
Driefontein	87 IR	271 (An unregistered portion of portion 1)	T0IR00000000008700001	Mr Mia Ismal Asmal Mr Yousuf Asmal
Driefontein	724 IR	0	T0IR00000000072400000	Azufon (Pty) Ltd
Driefontein	682 IR	8	T0IR00000000068200008	Shanike In No 55 (Pty) Ltd
Driefontein	682 IR	0 (RE)	T0IR00000000068200000	Kiron Developments (Pty) Ltd
Driefontein	682 IR	6 (Unregistered, now part of Reiger Park Ext 8)	-	

Any outstanding landowner information is being actively sourced through one-on-one consultations and the Deeds Office. This information should be available during the EIA phase.

2.2 Description of the Current Land Uses Applicable

According to the Gauteng Provincial Environmental Management Framework (2018), the Proposed Project area is in an Urban Development Zone (Zone1) and Industrial and Large Commercial Focus Zone (Zone 5). The current land uses of the surrounding areas are typified by mining, industrial and agricultural activities; dispersed settlements; and other mine dumps. The project area is located within region A of the CoE, this is one of the city's six regions. This central western region is largely built-up and contains several land uses ranging from mining and industrial to residential.

2.3 Known Mining Rights held in the Area

The assessment of cumulative impacts is required under the EIA Regulations 2014, as amended, promulgated in accordance with Section 44 of the NEMA. In support of the above, Kongiwe will assess the impact of the Proposed Project in context of other similar activities in the local area. This will be undertaken during the EIA Phase of the project.

The Proposed Project area is encircled by several other historical mining activities and active reclamation activities. Other mining rights held in the area other than for reclamation projects will be defined during the EIA phase.

2.4 Description of the Activities to be Undertaken and the Infrastructure Plan

Ergo intends to reclaim and reprocess gold residue from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). This TSF is a historical mineral storage deposit and it has been confirmed in various High Court judgements that such a TSF is moveable property. As such, it is accordingly not regulated by the MPRDA. Similarly, it is not a "residue deposit" or "residue stockpile" as contemplated in the Environmental Impact Assessment Regulations, 2014, as amended (most recently by GN R517 of 11 June 2021). As such the reclamation activity does not require a Mining Right, but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) and an integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA).

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, a water monitor blasts the sides of the TSF with process water, the process water mixes with the unconsolidated material, resulting in what is known as a slurry. The slurry reports to a pump station, located at the lowest point of the TSF, where it will then be conveyed to the Ergo Processing Plant for reprocessing. Existing pipelines along existing pipeline routes within existing pipeline servitudes, wayleaves and Surface Right Permits (SRPs) will be used to convey the generated slurry. Final deposition of the processed slurry will be on the existing Brakpan/Withok TSF.

The proposed project will investigate one pipeline route from the Central Water Facility (CWF) to provide process water to the reclamation station at the TSF, to be used in the reclamation activities. The pipeline, about 1.8 km long and 500 mm in diameter, is secured by SRPs, wayleaves and servitudes.

The reclamation station required for the activity will be connected into an existing and operational pipeline, along which slurry will be transported to the Elsburg pumpstation and then onward to the Ergo plant for beneficiation.

The pipelines and the proposed reclamation activity will require authorisation in terms of the NWA for Section 21 water uses, NEMA and the NEM:WA, Category B Activities. An Integrated Water Use Licence Application (IWULA) is being prepared and will be submitted in accordance with the Water Use Licence Application and Appeals Regulations 2017 published in GNR 267 on 24 March 2017 and will be supported by a Technical Report (Integrated Water and Waste Management Plan (IWWMP)).

In terms of regional locality, the dump is situated approximately 3 km east of the Germiston CBD, in the CoE (Figure 2-1). The reclamation area is predominantly surrounded by open areas to the east and the southeast, historical mining areas to the north, industrial development to the south west and the Good Hope informal settlement the west. The lower Bokburg road is located to the south of the TSF and the railway is located to the north of the TSF. A disturbed wetland is located to the east of the TSF. The pipelines will be situated within existing pipeline rights (Surface Right Permits (SRPs), servitudes or wayleave agreements) owned by Ergo.

The extent of the TSF is 32 Ha and is positioned on Portion 137 and Portion 1 of Driefontein 87IR.

The reclamation area is surrounded by open areas to the east and the south-east, historical mining areas to the north, industrial development to the southwest and the Good Hope informal settlement to the west. The lower Bokburg road is located to the south of the TSF and the railway is located to the north of the TSF. A disturbed wetland is located to the east of the TSF. The pipelines will be situated within existing pipeline rights (Surface Right Permits (SRPs), servitudes and wayleave agreements) held by Ergo. Where Ergo does not possess surface rights these will be acquired.

The main access route is off Lower Boksburg Road which runs parallel to and south of the reclamation site. Main Reef Road is situated past the railway to the North of the TSF, and runs parallel to the reclamation site. Knights Road is situated directly to the west of the TSF and runs north where it reaches the Ezekiel pumpstation. As far as possible, existing access roads will be utilised, and where this is not possible, these will be constructed. Where access roads are to be constructed, these will be 4m wide gravel roads with 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.

The proposed reclamation activity will require 3kVA of electricity. This will be transmitted via a new 11 kV powerline from a transformer located at the 4A6 dump. This powerline will follow existing servitudes. No authorisation will be required for this powerline in terms of the NEMA.

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.

The Proposed Project is expected to take approximately 5 years. An estimated amount of 270 000 tons/month ramping up to 350 000 tons/month of slurry per site is expected to be pumped from the TSF to the Ergo Plant for beneficiation.

Table 2-3: Project technical details.

Group	Specific	Details
Reclamation	Target Mineral	Gold, nickel, silver, copper, pyrites and all associated minerals in mine tailings.
	Reclaimed Area	The Proposed Project site covers a total area of **32 Ha**.
	Depth of minerals	Only surface reclamation will be taking place.
	Extent of area for infrastructure	0.5 Ha x 2
	Product	Gold will be the primary product during the reclamation of the dams, although nickel, silver and associated metals are present in the tailings.
Resource use	Water source	Process water in a closed circuit for hydraulic reclamation and reclamation activities. Potable water from Rand Water.
	Power source	Eskom
Employment	Staff allocation: construction	Existing Ergo staff and contractors..
	Operating Times	7 days a week - 24 hours a day

2.5 Listed and Specified Activities

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 Competent Authority (CA). An EA is required for any listed activity and is subject to the completion of an environmental process, either a Basic Assessment (BA) or a S&EIA.

Table 2-4 below contains all the listed activities identified in terms of NEMA, NEM:WA Category B activities, and the EIA Regulations of 2014 (GN R982 of December 2014, as amended by GNR 326 of April 2017 and GNR 517 of 11 June 2021) and Listing Notices 1, 2 and 3 (GN R983, GN R984 and GN R985 of December 2014, as amended by GNR 327, GNR 325 and GNR 324 of April 2017, respectively, as well as GN R517 of

11 June 2021) which may be triggered by the Proposed Project, and for which an application for EA has been submitted. The table also includes a description of those project activities which relate to the applicable listed activities.

The **DMRE** will act as the CA on the project.

The Commenting Authorities for the Proposed Project are:

- Gauteng Department of Agriculture and Rural Development (GDARD);
- Department of Water and Sanitation (DWS);
- Department of Forestry and Fisheries and Environment (DFFE);
- Department of Public Works and Infrastructure (DPWI);
- National Nuclear Regulator (NNR);
- Department of Health (DoH);
- South African Heritage Resource Agency (SAHRA), and;
- City of Ekurhuleni Metropolitan Municipality (CoE).

Table 2-4: Listed Activities Triggered by the Proposed Project.

Name of Activity	Aerial Extent of the Activity (ha)[4]	Listed Activity	Applicable Listing Notice as Amended	Waste Management Authorisation	Water Use Licence Authorisation[5]
Dust suppression on access roads					**21 (g)**
Reclamation of the TSF No 4L39 as well as the construction and operation of the associated reclamation and stormwater management infrastructure within 500 m of a wetland and its associated tributaries.	32ha	X	**GNR 984 – 6**	**GNR 921: Category B (1)**	**21(c) & (i)** **21 (g)**
Process water pipelines	1800 m	X	**GNR 983 - 10** **GNR 984 – 6** **GNR 984 – 7**		**21(c) & (i)**

[4] The total area of the reclamation and associated areas is approximately 32 hectares.

[5] Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities. The necessary application will be submitted to the DWS

2.6 Environmental Authorisation Application: Activities and Infrastructure

2.6.1 Infrastructure intended for the Project

The following infrastructure will be utilised on site:

- A connecting pipeline of 500mm in diameter and less than 100 m in length (from the new reclamation station to the existing pipeline leading to the Elsburg pumpstation);
- One overland process water pipeline of 500 mm in diameter (from the Central Water Facility (CWF) to the reclamation station at the TSF);
- An 11 kV overhead powerline capable of transmitting 3 kVA of electricity (from 4A6 to the reclamation station);
- Reclamation infrastructure consisting of:
    - Pump stations which include:
        - Slurry sump;
        - Penstock;
        - Vibrating Screen;
        - Water tank;
        - Motor control centre;
        - Lined Catchment paddock;
        - Pump;
- Stormwater management infrastructure including:
    - Water infrastructure and stormwater systems; and
    - Existing catchment paddocks on the TSF footprint
- Electricity reticulation;
- Administration buildings, including change houses and ablution facilities;
- Access roads, routed from existing entry points; and
- Construction contractors' yards (temporary facilities).

Figure 2-3 below indicates the infrastructure to be used on site.

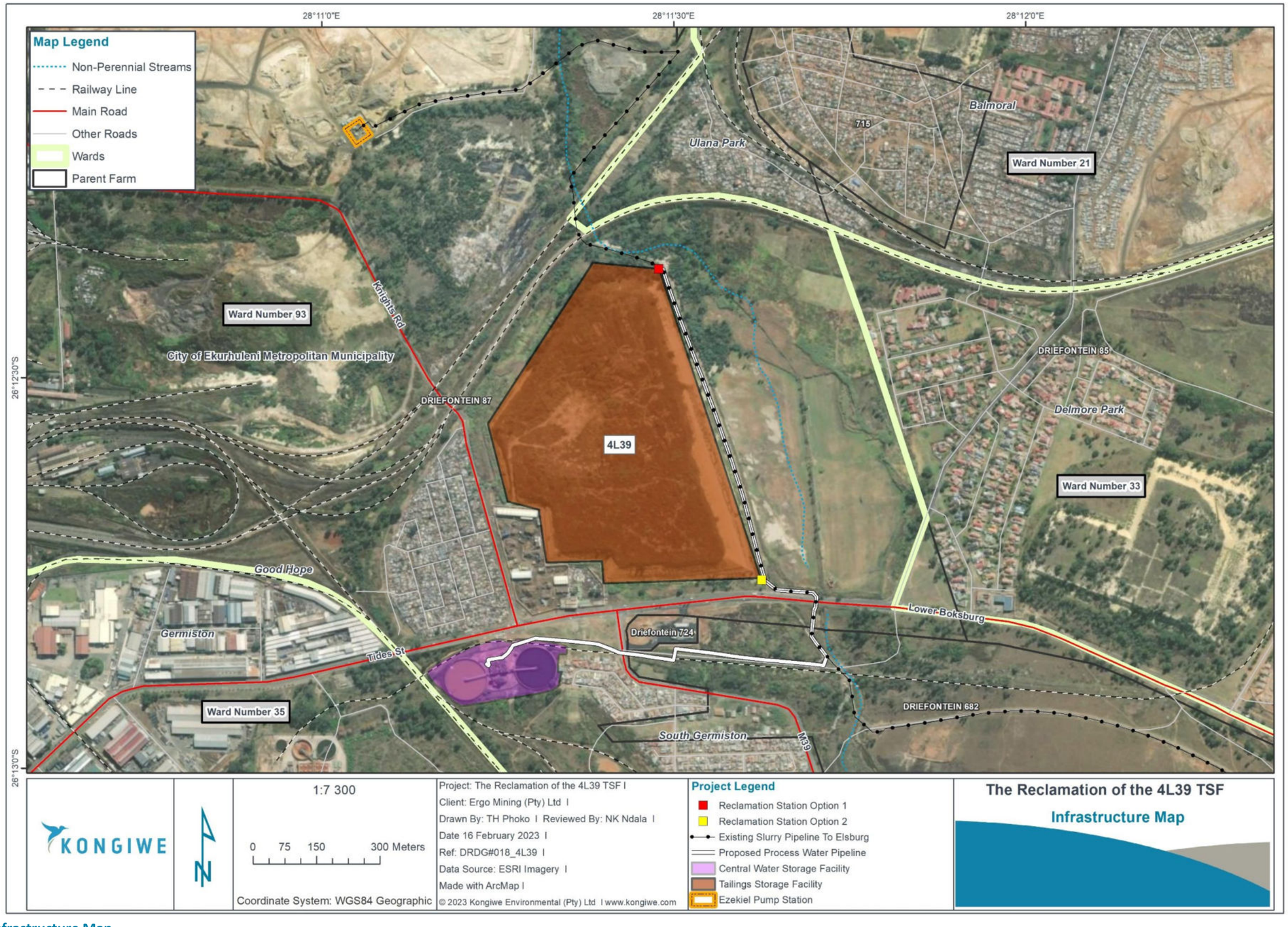


Figure 2-3: Infrastructure Map

Figure 2-4: Pictures of the current status on site

2.6.2 Method of Reclamation

The proposed method which will be used to remove the TSF is referred to as top-down **hydraulic reclamation**. This technique uses 30 bar high-pressure water monitor guns (or mobile tracked hydraulic monitors) 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 reclaimed.

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 existing pipelines to a stock tank at the Elsburg pumpstation before it is pumped to the Ergo Plant. At the Ergo Plant, the slurry is prepared and treated for gold extraction and beneficiation. The beneficiation process involves thickening, milling, a leach section, an acid wash, elution, electro winning and regeneration. The mechanically agitated residue is then pumped to the Brakpan/Withok dump for disposal.

Figure 2-5: Mobile tracked hydraulic monitor on a tailing's facility in South Africa

Reclamation will take place in predetermined benches (or 'cuts') and will move unidirectionally until the entire TSF has been reclaimed. Generally, 15-30 m cuts are made for reclamation. Figure 2-6 below is a graphical representation of the proposed activity.

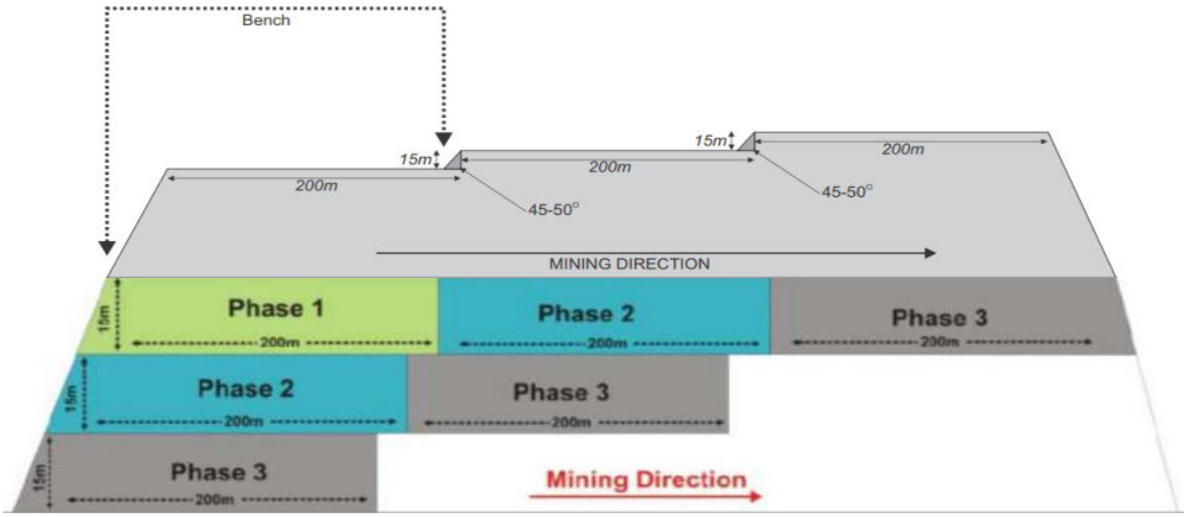


Figure 2-6: Typical bench widths proposed for a gold reclamation project (Source: www.drdgold.com/investors-and-media/circulars/cpr-samrec-wrtrp-26022018.pdf).

2.1.2. Rehabilitation

Once the TSF has been reclaimed, rehabilitated and cleared of radiation, the land will be shaped and revegetated to match the surrounding environment. The land will then be made available for development.

2.1.3. The Period required for Environmental Authorisation:

The anticipated period required for EA is **5 years.** An estimated amount of 270 000 tons/month ramping up to 350 000 tons/month of slurry per site is expected to be pumped from the TSF to the Ergo Plant for beneficiation.

2.1.4. Works Schedule

The anticipated life span of the project is approximately 5 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 3 year Life of Operation where active hydraulic reclamation would take place, and a 1 year ramp-down and rehabilitation period for the reclaimed site.

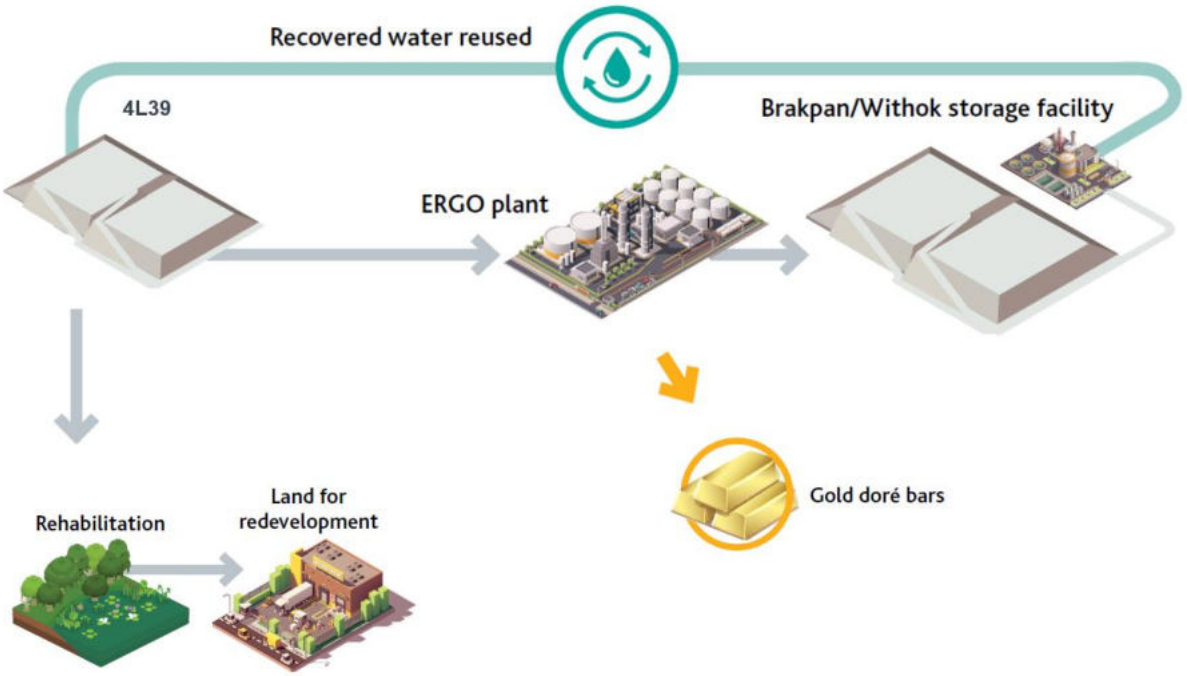


Figure 2-7: TSF 4L39 proposed process diagram

3 Policy and Legislative Context

This chapter provides an overview of the policy and legislative context relevant to the reclamation of the 4L39 TSF. It identifies all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to the planned activities and are to be considered in the assessment process which may be applicable or have relevance to the Proposed Project.

The foundation for Environmental Preservation is entrenched in the **Constitution of South Africa, 1996.** Following the birth of democracy in South Africa, legislative and environmental policies and regulations have undergone a large transformation, and various laws and policies were promulgated with a strong emphasis on environmental concerns and the need for sustainable development. The Constitution provides environmental rights (contained in the Bill of Rights, Chapter 2 (Section 24)) and includes implications for environmental management. The environmental rights are guaranteed in Section 24 of the Constitution, and state that:

"*Everyone has the right –*

- *To an environment that is not harmful to their health or well-being and*
- *To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
    - *Prevent pollution and ecological degradation;*
    - *Promote conservation and*
    - *Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development*."

To ensure that the various spheres of the social and natural environmental resources are not overlooked, other legislation and regulations have been promulgated in addition to those contained within the Constitution. The additional legislature and regulations ensure that there remains a key focus on various industries or components of the environment, and to ensure that the objectives of the Constitution are effectively implemented and upheld on an on-going basis. In terms of Section 7, a positive obligation is placed on the State to give effect to the environmental rights.

Table 3-1: Applicable National Legislation and Guidelines

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
The Constitution of South Africa, 1996 Section 24 of the Constitution states that everyone has the right to an environment that is not harmful to their health or well-being; to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecological sustainable development and use of natural resources while promoting justifiable economic and social development. Section 32 of the Constitution states that every person has a right to information held by the State and to information held by other people that is required in the exercise or protection of a right. Section 33 of the Constitution states that everyone has a right to just and procedurally fair administrative action.	As per the Requirements of NEMA and the NEMA EIA Regulations, alternative activities that are less taxing on the environment and resources must be investigated where possible. The DSR & Draft EIA Report will be made available for public review (as per the PPP section of this report). The Appeal Process will be described to all stakeholders through the EA notification described in the PPP section of this report. The TSF have been identified as a pollution source. The Proposed Project is in line with the Constitution of South Africa in removing a pollution source that will result in an improved environment for present and future generations.
The One Environmental System In terms of the One Environmental System established by the NEMLAA, an EA in respect of a reclamation operation must be issued within 300 days of the application being submitted. This system aims to streamline the licensing processes for environmental authorisations and water use.	Ergo proposes to reclaim the TSF and submit the required documents within the prescribed timeframes.
Mine Health and Safety Act (MHSA), Act 29 of 1996 (as amended): Although the Mineral and Petroleum Resources Development Act, 2002, does not apply to this project, Ergo operates in accordance to the MHSA and associated regulations. This includes creating a safe and healthy work	Although not strictly addressed in the Scoping Report or EMPr, protecting the environment contributes to a safe working environment. MHSA regulations will be worked into the

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
environment and providing the necessary protection and training to staff to ensure their health and safety is not compromised. Hazardous substances will be adequately stored and labelled. All regulations pertaining to safe use, handling, processing, storage, transport and disposal of hazardous substances; protection of equipment, structures and water sources and the surface of land; dumps and structures connected to reclamation operations; the monitoring and control of those environmental aspects which may affect the health and safety of persons will be applied on site. Regulations pertaining to provision of water, ablution facilities and staff health and safety will be applied on site.	operations's Code of Practice (COP) and Standard Operating Procedures (SOPs).
National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) The overarching principle of the NEMA is sustainable development. It defines sustainability as meaning the integration of social, economic and environmental factors into planning, implementation and decision making to ensure the development serves present and future generations. Section 2 of NEMA provides for the NEMA principle which apply throughout the Republic to the actions of all organs of state that may significantly affect the environment and in conjunction with other appropriate and relevant considerations. The NEMA principles serve as the general framework within which environmental management and implementation plans must be formulated and serve as a guideline by reference to which any organ of state must exercise any function when taking any decision in terms of the NEMA or any statutory provision concerning the protection of the environment. NEMA authorises the Minister of the DEFF to issue Regulations relating to the administration of the Act[6], which has been done with the publication of the EIA 2014 Regulations, as amended. Section 24(2) allows the Minister to identify activities which may not commence without environmental authorisation from the competent authority. This identification has been done in accordance with listing notices referred to as Listing Notice 1, Listing Notice 2	It is the objective of this application to align to NEMA. The NEMA is the overarching Act governing sustainable development and the NEMA principles apply to all prospecting and mining operations (which included reclamation activities) and any matter or activity relating to such operation. Listed activities as per the EIA 2014 Regulations, as amended, have been identified (refer to Chapter 2, subsection 2.5).

6 Sections 24(5) and Section 44

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
and Listing Notice 3. The NEMA also allows the Minister to determine which authority will be the competent authority to receive and evaluate applications for EAs. Listing Notice 1 identifies activities of limited scale and effect, which need to be assessed by a fairly simple process referred to as a BA, where after a Basic Assessment Report (BAR) is submitted to the competent authority. Listing Notice 2 identifies activities of significantly greater magnitude, which require evaluation through an initial Scoping Phase followed by an EIA and an EMPr. This process is generally referred to as the S&EIR process. Listing Notice 3 relates to activities limited to specified geographical areas and matters of concern to the various provinces which require a BAR process to be dealt with by the provincial authority concerned. Regulation 16 (1) prescribes the general application requirements and states that an application for an EA must be made on the official application form obtainable from the CA and must, amongst others, include proof of payment of the prescribed application fee. Regulation 21 provides for the submission of the Scoping Report to the CA for consideration and states that the scoping report must contain all the information set out in Appendix 2 to the EIA 2014 Regulations, as amended. In terms of regulation 22, the CA must, after considering the Scoping Report, either accept the report, with or without conditions and advise the applicant to proceed with the plan of study for EIA or refuse the EA. Once the Scoping Report is accepted by the CA, the applicant must submit the EIA Report inclusive of specialist reports and an EMPr which have been subjected to a PPP. The timeframes for submission of the Scoping Report and the EIA Report inclusive of the timeframes within which the CA must consider the reports and approve the EA are prescribed in regulations 21 to 24 of the EIA 2014 Regulations. Once a decision on the EA application has been reached, the CA must notify the applicant in writing of the decision and give reasons for the decision.	

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) As part of the waste management matters dealt with in the NEM: WA, waste activities have been identified in GN 921 of 29 November 20134F4F[1]: List of Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment. GN R921 provides that the waste management activities listed in Category A and B thereof may not commence, be undertaken, or conducted without a Waste Management Licence (WML). Activities listed in Category C of GN 921 may only be commenced with, undertaken, or conducted in accordance with the National Norms and Standards published in terms of the NEM: WA. Category A activities require a BAR process while Category B Activities require a S&EIR process. It should be noted that although previously residue deposits and residue stockpiles were regulated in terms of the MPRDA Regulations and in particular Regulation 73, the National Environmental Laws Amendments Act 25 of 2014 (NEMLAA) deleted section 4(b) from the NEM: WA and residue stockpiles and residue deposits therefore fall within the ambit of the NEM: WA and its various regulations. Activity B 4(11) of GN 921, as amended by GN 633 of 24 July 2015 now refers to "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)". Since the TSF is a historical mineral storage deposit, the MPRDA does not apply and Activity B4(11) will likewise not apply. NEM:WA and NEMA have been amended by the National Environmental Laws Amendment Act, 2022 Act No 1 of 2022)[7] so that residue stockpiles and residue deposits will no longer be regulated under NEM:WA but under NEMA itself.	Listed activities as per the NEM:WA regulations have been identified (refer to Chapter 2, subsection 2.5).

[7] Not yet in force

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
In addition to the requirement for a WML for the TSF (historical mineral deposits), the operation is likely to trigger the following waste activities, all of which require a Category B WML: 1. The storage of hazardous waste in lagoons excluding storage of effluent, wastewater, or sewage. The EA and WML are being dealt with as an integrated application.	
National Water Act, 1998 (Act No. 36 of 1998) (NWA) In terms of the NWA, the national government, acting through the Minister of Water and Sanitation, is the public trustee of South Africa's water resources, and must ensure that water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner for the benefit of all persons (section 3(1)). In terms of the NWA a person may only use water without a licence if such water use is permissible under Schedule 1 (generally domestic type use), if that water use constitutes a continuation of an existing lawful water use (water uses being undertaken prior to the commencement of the NWA, generally in terms of the Water Act of 1956), or if that water use is permissible in terms of a general authorisation issued under section 39 (general authorisations allow for the use of certain section 21 uses provided that the criteria and thresholds described in the general authorisation is met). Permissible water use furthermore includes water use authorised by a license issued in terms of the NWA. Section 21 of the NWA defines water uses which are governed in terms of the Act and for which a WUL is required. In terms of section 40 (1) of the NWA "a person who is required or wishes to obtain a licence to use water must apply to the relevant responsible authority for a licence." These water uses, in terms of Section 21, are as follows: (a) taking water from a water resource; (b) storing water; **(c) impeding or diverting the flow of water in a watercourse;**	An IWULA will be required for the reclamation of the TSF and will be submitted to the DWS. The required specialist studies are also being undertaken as part of the impact identification and mitigation phase.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
(d) engaging in a stream flow reduction activity contemplated in Section 36; (e) engaging in a controlled activity identified as such in Section 37(1) or declared under Section 38(1); (f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; **(g) disposing of waste in a manner which may detrimentally impact on a water resource;** (h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process; **(i) altering the bed, banks, course or characteristic of a watercourse;** (j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and (k) using water for recreational purposes. It is not likely that sub-sections **(a), (b), (d), (e), (f), (h), (j) or (k)** will apply to the Proposed Project. Water uses associated with the reclamation activities, **will** include the actual reclamation of the 4L39 TSF within 500m of a wetland and the construction and operation of pipelines within 100 m of a river bank. These water uses will require an IWULA and will be reassessed once final placement and conceptual designs have been completed. As well as the dust suppression implemented on roads on site. The IWULA must be prepared and submitted in accordance with the Water Use Licence Application and Appeals Regulations 2017 published in GNR 267 on 24 March 2017 and must generally be supported by a Technical Report, as well as conceptual design drawings of all water related infrastructure.	
National Environmental Management: Biodiversity Act, 2004 (Act No.10 of 2004) (NEM:BA) The NEM:BA provides for the management and conservation of South Africa's biodiversity within the framework of NEMA, as well as the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources. The South African National Biodiversity Institute (SANBI) website and GIS	NEM:BA was used to inform whether activities triggered Listing Notice 3 (refer to Chapter 2, subsection 2.5). The required specialist studies are also being undertaken as part of the impact identification and mitigation

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
tools were utilised to determine whether any nationally protected and threatened ecosystems occur on site. The Proposed Project falls within the Gauteng Province, which has a provincial Biodiversity Assessment Protected Area Expansion Strategy. This strategy has been incorporated and considered throughout the compilation of this report.	identification phase.
National Environmental Management: Protected Areas Act (NEM:PAA), Act 57 of 2003 as amended The National Environmental Management Protected Areas Act (Act No. 57 of 2003) (NEM:PAA) concerns the protection and conservation of ecologically viable areas representative of South Africa's diversity and its natural landscapes and seascapes, and includes *inter alia*: ❖ The establishment of a national register of all national, provincial and local protected areas; ❖ The management of those areas in accordance with national standards; and ❖ Inter-governmental co-operation and public consultation in matters concerning protected areas. Sections 48 to 53 of the NEM:PAA lists restricted activities that may not be conducted in a protected area. Section 48 states that no person may conduct commercial prospecting or mining activities in a: ❖ Special nature reserve or nature reserve; ❖ Protected environment without the written permission of the Minister and the Cabinet member responsible for minerals and energy affairs; and Protected area referred to in Section 9: ❖ (b) world heritage sites; and ❖ specially protected forest areas, forest nature reserves and forest wilderness areas declared in terms of the	SANBI website and GIS tools are utilised to determine if the project area overlaps with CBAs. The Regulations will be utilised to determine the need for any additional listed scheduled activities under GNR 985.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
National Forests Act (No. 84 of 1998);	
National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) The NHRA aims to promote good management of cultural heritage resources and encourages the nurturing and conservation of cultural legacy so that it may be bestowed to future generations. The Act requires all developers (including mines) to undertake cultural heritage studies for any development exceeding 0.5 ha. It also provides guidelines for impact assessment studies to be undertaken where cultural resources may be disturbed by development activities. ❖ The South African Heritage Resources Agency (SAHRA) will need to approve the heritage assessment undertaken as part of the impact assessment process. The 4L39 TSF may represent 'Historical Settlements and Townscapes' as per the NHRA if it was established more than 60 years ago. The dump and other associated mining infrastructure are integral components of the historical mining townscapes and settlements of the East Rand. This will be verified during the EIA phase of the project and if needed, appropriate authorisations will be sought via the NHRA.	A Heritage Impact Assessment is being undertaken as part of the EIA Phase and the assessment will be uploaded on the SAHRA website along with the EIA Report.
Conservation of Agricultural Resources Act (No. 43 of 1983) The Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA) includes the use and protection of land, soil, wetlands and vegetation and the control of weeds and invader plants. This is the only legislation that is directly aimed at conservation of wetlands in agriculture. The Act contains a comprehensive list of species that are declared weeds and invader plants dividing them into three categories. These categories are as follows: ❖ Category 1: Declared weeds that are prohibited on any land or water surface in South Africa. These species	The protection of land, soil, wetlands and vegetation and the control of weeds and invader plants will be contained within the EIA Report.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
must be controlled, or eradicated where possible; ❖ Category 2: Declared invader species that are only allowed in demarcated areas under controlled conditions and prohibited within 30m of the 1:50 year floodline of any watercourse or wetland; and ❖ Category 3: Declared invader species that may remain but must be prevented from spreading. No further planting of these species is allowed. In terms of the Act, landowners are legally responsible for the control of alien species on their properties. Failure to comply with the Act may result in various infringement consequences and in some instances imprisonment and other penalties for contravening the law.	
The South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998) The National Road Traffic Regulations, 2000 places specific duties on the consignor and consignee of dangerous goods. A consignor means the person who offers dangerous goods for transport (i.e. hazardous waste) and a consignee is the person who accepts dangerous goods, which have been transported in a vehicle. Both consignor and consignee must comply with the requirements of several SANS standard specifications and codes of practice relevant to dangerous goods which have been incorporated into the regulations. The mine owner is responsible for: ❖ Offloading of the dangerous goods; ❖ Providing the dangerous goods offloading supervisor; and ❖ Ensuring that the loading and offloading are carried out by qualified employees trained in the relevant procedures. Ergo must, in line with Section 54 of the Act and GN R225, provide evidence that the company has appointed responsible personnel to oversee the off-loading of dangerous goods at its operations. A driver of a vehicle transporting dangerous goods is required to undergo training at an approved training body.	The requirements of the Act and Regulations will be considered when assessing the project impacts and developing the associated mitigation measures in the EIA Phase. The required traffic impact assessment will be conducted during the impact assessment and mitigation identification phase.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA) The SPLUMA was promulgated in May 2015. SPLUMA is a framework act for all spatial planning and land use management legislation in South Africa. It seeks to promote consistency and uniformity in procedures and decision-making in this field. SPLUMA will also assist municipalities to address historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments.	The TSF is already in existence and falls within an Urban Development Zone (Zone 1) and Industrial and Large Commercial Focus Zone (Zone 5).
Hazardous Substances Act, 1973 (Act No. 15 of 1973) The Regulations for Hazardous Chemical Substances apply to an employer or a self-employed person who carries out work at a workplace which may expose any person to the intake of hazardous chemical substances at that workplace. Regulations 14 and 15 provide for the labelling, packaging, transportation and storage and the disposal of hazardous chemical substances respectively. These regulations set out specific requirements which form part of an employer's duty to provide and maintain, as far as reasonably practicable, a working environment that is safe and without risk to the health of his or her employees.	The requirements of the Act and Regulations will be considered when assessing the project impacts and developing the associated mitigation measures in the EIA Phase.
National Development Plan, 2030 The National Development Plan (NDP) offers a long-term perspective. It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal. As a long-term strategic plan, it serves four broad objectives: 1. Providing overarching goals for what we want to achieve by 2030. 2. Building consensus on the key obstacles to us achieving these goals and what needs to be done to overcome those obstacles. 3. Providing a shared long-term strategic framework within which more detailed planning can take place to advance the long-term goals set out in the NDP.	The requirements of this Plan will be considered when assessing the project impacts and developing the associated mitigation measures in the EIA Phase. The proposed project is in line with the NDP and will address its requirements by removing a pollution source and availing land for the land owner to use.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
4. Creating a basis for making choices about how best to use limited resources. The Plan aims to ensure that all South Africans attain a decent standard of living through the elimination of poverty and reduction of inequality. The core elements of a decent standard of living identified in the Plan are: ❖ Housing, water, electricity and sanitation; ❖ Safe and reliable public transport; ❖ Quality education and skills development; ❖ Safety and security; ❖ Quality health care; ❖ Social protection; ❖ Employment; ❖ Recreation and leisure; ❖ **Clean environment**; and ❖ Adequate nutrition The Proposed Project falls in line with the goals of the NDP in creating a decent standard of living for all South Africans by removing a pollution source to the surrounding conservation and protected areas adjacent to the project site.	
Action Plan of the Environmental Initiative of the New Partnership of Africa's Development, 2003. This Action Plan was established with the aim of encouraging sustainable development, conservation and acceptable use of biodiversity in Africa. It has been recognised that a healthy and productive environment is a prerequisite for the success of New Partnership of Africa's Development (NEPAD), together with the need to systematically address and sustain ecosystems, biodiversity and wildlife. Six areas have been identified: ❖ Combating land degradation, drought and desertification;	As the Proposed Project may result in the decrease of pollution, the objectives of the NEPAD to systematically address and sustain ecosystems, biodiversity and wildlife will be considered during the EIA Phase of the project.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
❖ **Conserving Africa's wetlands**; ❖ **Preventing and controlling invasive alien species;** ❖ Conservation and sustainable use of coastal and marine resources; ❖ Combating climate change in Africa; and ❖ Cross-border conservation and management of natural resources.	
South Africa's National Biodiversity Strategy and Action Plan The National Biodiversity Strategy and Action Plan (NBSAP) sets out a framework and a plan of action for the conservation and sustainable use of South Africa's biological diversity and the equitable sharing of benefits derived from this use. The NBSAP was prepared by the former Department of Environmental Affairs and Tourism (DEAT), during the period May 2003 to May 2005. The goal of the NBSAP is to conserve and manage terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to the people of South Africa, now and in the future. This document was revised and updated for the period of 2015-2025. In support of this goal, six key strategic objectives (SOs) have been identified, each with a number of outcomes and activities. The table below illustrates the objectives in achieving the NBSAP "Goal", although the project is related to reclamation, the following would still apply:	The Proposed Project is cognisant of the obligation to protect and preserve the integrity of the environment as well as its biodiversity. Principles of this plan will be taken into consideration during the EIA Phase. The required biological specialist studies will be undertaken during the impact identification and mitigation phase. This will help identify the current environment and help determine and mitigate any possible impacts that might arise due to the proposed project.

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
Vision of the NBSAP: Conserve, manage and sustainably use biodiversity to ensure equitable benefits to the people of South Africa, now and in the future. **Strategic objectives:** 1. Management of biodiversity assets and their contribution to the economy, rural development, job creation and social wellbeing is enhanced. 2. Investments in ecological infrastructure enhance resilience and ensure benefits to society 3. Biodiversity considerations are mainstreamed into policies, strategies and practices of a range of sectors. 4. People are mobilized to adopt practices that sustain the long-term benefits of biodiversity. 5. Conservation and management of biodiversity is improved through the development of an equitable and suitably skilled workforce. 6. Effective knowledge foundations, including indigenous knowledge and citizen science, support the management, conservation and sustainable use of biodiversity. Through the NSBA, it is recognised that biodiversity cannot be conserved through protected area networks only. All stakeholders, from private landowners and communities to business and industry must get involved in biodiversity management. The Proposed Project would need to incorporate operational systems that minimise the impacts of threatening processes on biodiversity during the operational phase of the project, and by streamlining specialist recommendations during the implementation of all phases of this project.	
<u>Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)</u> The PAIA gives effect to the constitutional right of access to any information held by the state and any information	The requirements of the Act will be considered when assessing and involving the public and registered interested and affected

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
that is held by another person and that is required for the exercise or protection of any rights; and to provide for matters connected therewith.	parties.
National Environmental Management Act; National Appeal Regulations, 2014 The purpose of these regulations is to regulate the procedure contemplated in section 43(4) of the National environmental management act relating to the submission, processing and consideration of a decision on an appeal. This Act is used to help guide and understand the appeal process and the procedures may follow.	The requirements of the Act will be considered if an appeal may need to be or is lodged for the project.
Nuclear Energy Act 1999, (Act 46 of 1999) (NEA), the National Nuclear Regulator Act 1999, (Act No. 47 of 1999) (NNRA) and the Regulations on Safety Standards and Regulatory Practices (SSRP) (GN R388 of 28 April 2006). The NEA established a framework for the management of nuclear material and the NNRA was enacted to provide for the establishment of the National Nuclear Regulator to regulate nuclear activities and safety standards. These Acts and the SSRP will be considered and their requirements implemented where applicable	The requirements of the Act and Regulations have been considered when assessing the project impacts and developing the associated mitigation measures in this EIA Phase.

Table 3-2: Applicable Provincial and Local Policies, Guidelines and By-Laws

Policies, Guidelines and By-Laws	
Gauteng Mine Residue Areas Strategy, 2012 The aim of the project as a whole is to make more land available from the mine dumps in Gauteng to be used for other purposes, in line with government priorities. The objectives for the project are as follows: ❖ To evaluate current pollution problems caused by mining activities and suggest how they should be addressed; ❖ To quantify the amount of land under mining activities and classify them in terms of impacts and potential for reclamation; ❖ To investigate which mining areas could be made available to be used for other purposes; and ❖ To provide preliminary and conceptual recommendations on the short-term priorities for the reclamation of the mining site which could be economically sustainable.	The Proposed Project is in line with the objectives of the Strategy. The guidelines of the Strategy will be considered throughout the S&EIA process and reporting.

Policies, Guidelines and By-Laws	
Gauteng Nature Conservation Bill, 2014 The Bill was established in 2014, and contains the following objectives: ❖ To provide for the sustainable utilization and protection of biodiversity within Gauteng; ❖ to provide for the protection of wild and the management of alien animals; protected plants; aquatic biota and aquatic systems; ❖ To provide for the protection of invertebrates and the management of alien invertebrates; ❖ To provide for professional hunters, hunting outfitters and trainers; ❖ To provide for the preservation of caves, cave formations, cave biota and karst systems; ❖ To provide for the establishment of zoos ❖ To provide for the powers and establishment of Nature Conservators; ❖ To provide for administrative matters and general powers; and to provide for matters connected therewith.	Aspects of this Bill are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the reporting documents.
Gauteng Conservation Plan Version 3.3 The main purposes of C-Plan 3.3 are: ❖ To serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process; ❖ To inform protected area expansion and biodiversity stewardship programmes in the province; ❖ To serve as a basis for development of Bioregional Plans in municipalities within the province. C-Plan 3.3 is a valuable tool to ensure adequate, timely and fair service delivery to clients of GDARD, and is critical in ensuring adequate protection of biodiversity and the environment in Gauteng Province.	Aspects of this Plan are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the reporting documents.

Policies, Guidelines and By-Laws	
Gauteng Environmental Implementation Plan, 2016 The purpose of the EIP is to: ❖ Coordinate and harmonise environmental policies, plans and programmes and decisions to (i) minimise the duplication of procedures and functions; and (ii) promote consistency in the exercise of functions that may affect the environment; ❖ Give effect to the principle of cooperative governance in Chapter 3 of the Constitution; ❖ Secure the protection of the environment across the country as a whole; ❖ Prevent unreasonable actions in respect of the environment that is prejudicial to the economic or health interests of other provinces or the country as a whole; and ❖ Enable monitoring of the achievement, promotion and protection of a sustainable environment.	Aspects of this Plan are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the reporting documents.
Gauteng Growth and Development Agency Strategic Plan 2014-2019 The main purpose of the GGDA Strategic Plan is: ❖ Addressing the persistent racial imbalances regarding ownership and general configuration of Gauteng's economy; ❖ Addressing the spatially distorted economic development legacy of apartheid rule; ❖ Broadening the base of economic development beyond the Province's dominant metropolitan municipal areas; ❖ The socio-economic transformation envisaged for the second phase of transition to a national democratic society; and ❖ Achieving the outcomes of creating decent work, economic inclusion and equality.	The Proposed Project will contribute towards employment creation within the Province and will also contribute positively towards economic growth within the region through both its development and operation.
Ekurhuleni Regional Spatial Development Framework,2015 The Ekurhuleni Spatial Development Framework (SDF) provides a framework for making resource-effective decisions	Aspects of this SDF are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the

Policies, Guidelines and By-Laws	
that can help mitigate the following identified issues in the municipal zone: ❖ Increasing pressure on the natural environment and green infrastructure; ❖ Urban sprawl and fragmentation; ❖ Spatial inequalities and the job-housing mismatch; ❖ Exclusion and disconnection emanating from high potential underused areas; ❖ Lack of securitisation and gated developments, and disconnected street networks (high cul-de-sac ratios and low intersection densities); ❖ Inefficient residential densities and land use diversity. The Proposed Project is anticipated to contribute in decreasing the pressure on the natural environment by removing a pollution source to conservation and protected areas.	reporting documents.
Ekurhuleni Environmental Management Framework (EMF), 2007 The aim of the EMF for the CoE is to provide a framework that identifies and illustrates the general environmental characteristics of the municipality: The critical issues within the EMF are the identification of constraint zones and geographical areas. The development constraint zones within the EMF refer to the environmental suitability of land parcels for various types of land uses or activities. The types of development constraint zones identified in the EMF include: ❖ low to no constraint zone; ❖ agricultural constraint zone; ❖ geotechnical constraint zone; ❖ hydrological constraint zone; and ❖ ecological constraint zone.	Aspects of this EMF are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the reporting documents.

Policies, Guidelines and By-Laws	
Ekurhuleni Bioregional Plan (BRP), 2014 Subsequent to the approval of the Ekurhuleni BRP, the Guidelines for the compilation of the bioregional plans were set in terms of the National Environmental Management: Biodiversity Act. CoE, together with the South African Biodiversity Institute (SANBI) and the Gauteng Department of Agriculture and Rural Development (GDARD), developed the CoE Bioregional Plan. The purpose of the bioregional plan is to inform land-use planning, environmental assessment and authorisations, and natural resource management, by a range of sectors whose policies and decisions impact on biodiversity. This is done by providing biodiversity priority areas, referred to as 'critical biodiversity areas and ecological support areas', with accompanying land use planning and decision-making guidelines. Critical biodiversity areas within the bioregion are the portfolio of sites that are required to meet the region's biodiversity targets and need to be maintained in the appropriate condition for their category. The Ekurhuleni Metropolitan Municipality Bioregional Plan identified the following categories: ❖ Critical Biodiversity Area One; ❖ Critical Biodiversity Area Two; ❖ Ecological Support Area One; ❖ Ecological Support Area Two; ❖ Protected areas; ❖ Important areas ❖ Other natural areas	Aspects of this EMF are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be included within the reporting documents.
The Gauteng Province Environmental Management Framework, 2018 The GDARD decided to produce an Environmental Management Framework for the whole of Gauteng. The objective of the GPEMF is to guide sustainable land use management within the Gauteng Province. The GPEMF, inter alia,	Aspects of this management framework are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&EIA process and will be

Policies, Guidelines and By-Laws	
serves the following purposes: ❖ To provide a strategic and overall framework for environmental management in Gauteng; ❖ Align sustainable development initiatives with the environmental resources, developmental pressures, as well as the growth imperatives of Gauteng; ❖ Determine geographical areas where certain activities can be excluded from an EIA process; and ❖ Identify appropriate, inappropriate and conditionally compatible activities in various Environmental Management Zones in a manner that promotes proactive decision-making.	included within the reporting documents.
The Public Participation Guidelines in terms of the National Environmental Management Act, 1998 Environmental Impact Assessment Regulations, 2017 This document aims to assist with the participation process of all interested and affected parties regarding any Proposed Project. This guideline provides information and guidance for proponents or applicants, interested and affected parties, competent authorities and environmental assessment practitioners on the public participation requirements of the act, as well as provides information on the characteristics of a vigorous and inclusive public participation process.	This guideline was used to ensure that all of the required steps are followed to ensure that a complete and successful public participation process is conducted.
Integrated Environmental Management Guideline on Need and Desirability, 2017 This document assists Environmental assessment practitioners on the best practice as well as how to meet the peremptory requirements prescribed by the legislation as well as sets out both the strategic and statutory context for the consideration of the need and desirability of a development involving any one of the NEMA listed activities. This document further sets out a list of questions which should be addressed when considering need and desirability of a proposed development.	This guideline was used to ensure that the need and desirability of the project was correctly considered and that the need and desirability of the project was thoroughly considered.

4 The Need and Desirability of the Project

Historical underground mining operations on the Witwatersrand have left the area littered with TSFs such as slimes dams, sand stockpiles and other accumulations of residues. These TSFs are pollution sources, safety risks to surrounding communities and a limitation to spatial development.

4.1 Environmental Pollution

TSFs are known to cause air and water pollution, as well as soil contamination. The impacts on soil are typically localised to the confines of the TSF. However, the particulate matter associated with these areas can travel for kilometres, and pollution caused by decant can also be far reaching.

Dust is a human and animal health risk for a number of reasons. The dust usually contains fine particulate matter, which can be inhaled, causing damage to lung tissues. The dust also potentially contains a number of hazardous substances that can result in chemical toxicity. Tailings may have high levels of radioactive material which can cause radiological pollution. Collectively, the dust problem poses a significant health risk and reduces the quality of life for a large number of citizens. Furthermore, this undermines the credibility of the mining industry as a responsible corporate citizen (GDARD, 2012, p16). The approval of this project would eliminate the TSF as a source of pollution to the surrounding areas.

According to the GDARD (GDARD, 2011), water pollution from abandoned mines is commonly associated with the problem of Acid Mine Drainage (AMD), which usually refers to the 'point source' of pollution produced by the decant of contaminated water from shafts or inclines connecting the mine void to the surface. Some TSFs, especially slimes dams, are closely associated with these underground mine voids, so the issue of water ingress into those voids, via fissures arising from the geotechnically unstable surface, is of great importance. Unfortunately, many older TSFs were placed in riverbeds or over dolomites which allowed seepage directly into groundwater. The decanting of AMD is a high-profile issue, which is now driving investment decisions by a range of local and international investors and which has been raised to the level of a national priority. Possibly more important, however, is the broader issue of 'diffuse sources' of pollution represented by the TSFs and their possible interactions with precipitation, seepage, surface-water runoff and shallow groundwater. A long-term sustainable solution is needed for both the AMD and TSF problems. This project would contribute towards finding a solution to these problems.

Soil contamination, including the mere presence of TSFs in the surface environment, constitutes a pollution hazard through the direct access pathway. This occurs where people are contaminated by, or externally exposed to elevated levels of pollution after unauthorized entry to a mine site, by living in settlements directly adjacent to mines or in some cases, living in settlements on the contaminated TSFs of abandoned mines. Direct access to mine sites may also expose the public to risk due to direct external gamma radiation, radon exposure, inhalation and ingestion of radionuclides and chemotoxic metals, as well as the physical dangers inherent to mining sites (GDARD, 2012, pg16).

The Proposed Project would play a significant role in eliminating some of these suspected pollution sources and reducing the extent of exposure to surrounding communities.

4.2 Safety and Security

According to GDARD (2011), most TSFs have an element of lawlessness to them and should be considered as uncertain terrain where state penetration is minimal. The absence of security results in theft of equipment and the damage of infrastructure required to mitigate the negative impacts of TSFs. Dust control equipment such as sprayers and pumps are often stolen, which reverts back to environmental issues; while copper theft in the TSFs has also been known to create, amongst other outcomes, the surge of voltage across the electric reticulation system, causing substantial damage to refrigerators, air conditioners, microwave ovens, TV sets, computers and other electronic equipment to surrounding communities.

Apart from theft, other issues that are commonly associated with TSFs include illegal mining and illegal settlements near the unsupervised properties. These issues pose safety risks for law enforcement, affected landowners and adjacent communities.

4.3 The Limitation of Spatial Development

Gauteng is South Africa's smallest but most densely populated province, housing 24% of the country's population. 97% of the province's population is urbanised, which has resulted in an increased requirement for land in urban spaces (GSDF, 2016).

Significant areas of land in Gauteng are devoted to and/or impacted upon by current and historical mining activities. The main 'gold mining belt' stretches from east to west across the centre of the province. However, gold mining has declined over the past few decades, leaving behind a legacy of TSFs. According to the Gauteng Strategic Development Framework (GSDF) (2016), one of the solutions to an ever-growing demand for space in the province is by unlocking the mining belt and using these areas for their development potential.

The Proposed Project is situated in Zone 1 and 5 of the Gauteng Provincial Environmental Management Framework (GPEMF) (2018). It is anticipated that the land will be levelled and revegetated to match the surrounding environment after it has been rehabilitated.

4.4 The Gold Industry of South Africa

South Africa has undergone a long-term decline in gold output and the share of South Africa's world gold production decreased from 14% to about 5%. This trend continued in 2018, 2019 and 2020. South Africa's Gold Production was reported to be 100 000 kg in December of 2021, this is a slight increase from the previous year's production of 96 000 kg (CEIC, 2022), however In October 2022 gold production in South Africa declined by 6.3% when comparing it to 2021 amounts (Trading Economics, 2022). South African gold

production decreased by 20.42% to around 84 000 kg in 2022 (Minerals Council of SA, 2023). The overall decrease of gold production may be because of unreliable electricity-supply constraints, rising administered prices, labour issues, policy uncertainty as well as waning productivity rates impeding its operational performance. The Minerals Council of SA (2023) estimate that gold sales has decreased by 13.11% in 2022.

Employment in the gold sector has been declining since the 1980s with around 93 998 workers currently employed. This trend has been ongoing in recent years, this is illustrated by the decrease from 2011 (144 799) to the current number of employees (93 841) (Statista, 2022 and Minerals Council of SA, 2023). Overall, the industry has seen employment steadily decrease over the past decade. At the same time, productivity has declined and wages have risen. Despite this, gold mining activities remain a mainstay of employment in many communities around the country, and every employee in the gold sector supports between five and 10 other dependants. On the upside, every direct job in the mining sector results in two indirect jobs being created elsewhere (Minerals Council of South Africa, 2021). The proposed project will help cement job security within the gold industry in South Africa.

It must however be noted that mining in South Africa contributed a value of production of R1 trillion during 2022 which was a 12% real improvement on 2021 (Minerals Council of SA, 2023). The continued contribution of mining continues to provide capital into the economy. The mining industry also contributed significantly to the national fiscus during the COVID-19 pandemic.

The reprocessing and reclamation of the TSF will help retrieve gold from the TSF. The revival of gold processing and recovery will add valuable tonnages to a declining South African market supply.

4.5 Conclusion: Need and Desirability

The overall objective of this project is to recover residual gold from tailings within the existing project area. The resultant residue from the reprocessing plant will be deposited at the Brakpan/Withok facility. This will allow for the rehabilitation and clearance of land currently occupied by the TSF. The only way to alleviate any possible negative impact related to the TSF will be to remove the TSF.

The land being cleared could be seen as a secondary or consequential product. The clearing of land is an extremely important and positive benefit, as the removal of the TSF would result in the removal of a water, land and dust pollution source to the surrounding environment, as well as costs associated with tailings dam maintenance. The land would be cleared to ground level and thereafter be available for a different land use. By removing the TSF any of the related security and safety concerns will also be alleviated.

The Proposed Project would also directly and indirectly contribute to the country's Gross Domestic Product (GDP), as well as provide continued employment to current employees of Ergo.

Overall, the Proposed Project is in line with the objectives of the Gauteng Mine Residue Area Strategy (2011), 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. See Figure 4-1 below for the GDARD TSFs Decision Tree.

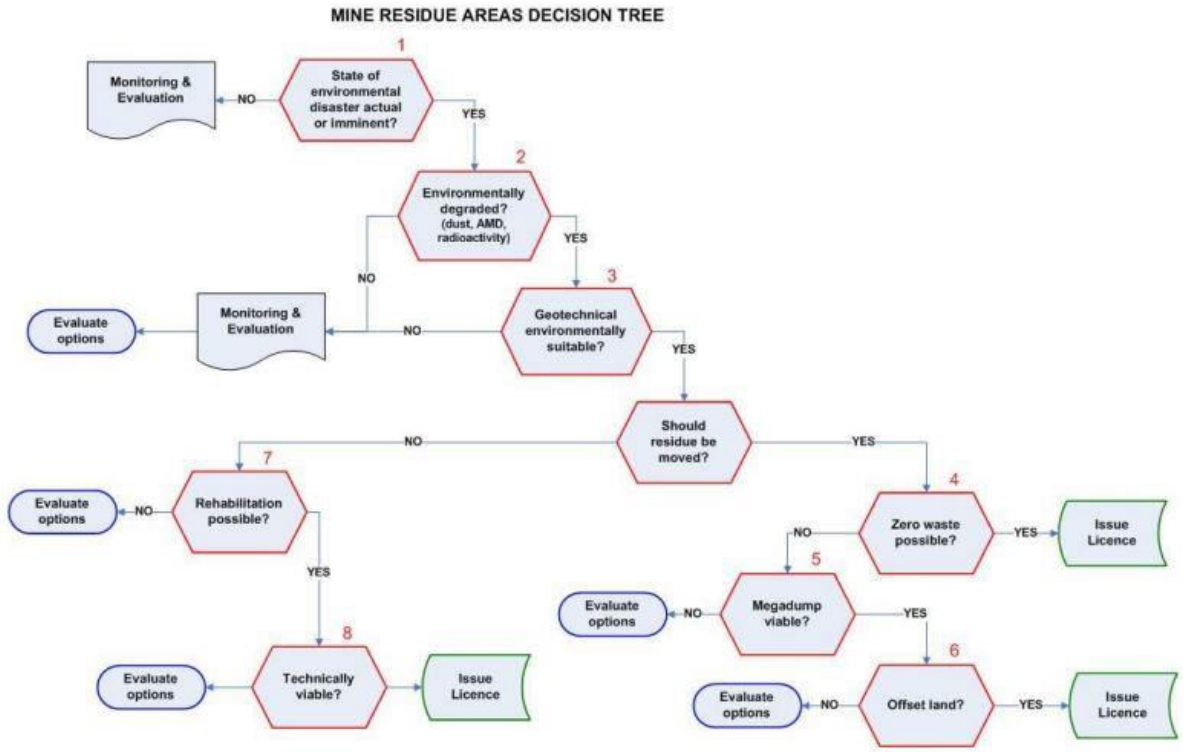


Figure 4-1: GDARD's TSFs decision making tree as illustrated in the Gauteng Mine Areas Strategy (Source: GDARD, 2012).

5 Period for which the Environmental Authorisation is Required

The Environmental Authorisation (EA) is required for **5 years**. Subsequent amendments can be lodged as the operational structures change accordingly.

6 Description of the Process Followed to Reach the Proposed Preferred Site

The TSF is an existing facility. For the proposed pipelines, the route will follow existing pipeline routes secured by SRPs, Servitudes and wayleaves. The assessment will be conducted using desktop and mapping data to ensure that the reclamation area can be suitably positioned within the site boundary and servitude areas, and that areas of environmental sensitivity are avoided as far as practically possible. Environmental sensitivities which might be identified and mapped for the project may include the following:

- **Low Sensitivities**: Low sensitivity areas are likely to be transformed with the risk of significant ecological impact being very low.
  - Grazing areas and pastures
  - Areas of historically cultivated land
  - Areas that are already heavily modified
- **Medium Sensitivities**: Medium sensitivity areas are likely to contain natural vegetation without any known highly sensitive features.
  - Areas of natural vegetation
  - Protected environments that have been modified
- **High Sensitivities**: High sensitivity areas are likely to contain some sensitive ecological features or processes that need to be addressed before development can be considered.
  - Sensitive areas that are species specific
  - Non-perennial and perennial pans and watercourses identified under the National Freshwater Ecosystem Priority Area (NFEPA)
  - Farm dams
  - Sensitive areas with landscape and local corridors
- **Very High Sensitivities:** Very high sensitivity areas are potentially unsuited for development owing to their high ecological importance.
  - Areas identified under the Gauteng Conservation Plan (GCP) as “Optimal” or “Irreplaceable” Critical Biodiversity Areas (CBA).
  - Areas identified under the GCP as “Species Specific” Ecologically Sensitive Areas (ESA).
  - Areas identified under the Gauteng Biodiversity Sector Plan as “National Park/Nature Reserve” and a “Protected Environment: Natural” Protected Areas (PA).

Following the completion of the specialist studies during the EIA Phase of the project, the infrastructure Plans and the pipeline route may be amended, where practical and feasible, based on specialist recommendations to have the least possible negative environmental impacts.

6.1 The Consideration of Alternatives

In accordance with the requirements outlined in Appendix 2 of the EIA 2014 Regulations, as amended, a consideration of reasonable and feasible alternatives, including site and technology alternatives and the "do-nothing" alternative must be undertaken. Each alternative is to be accompanied by a description and comparative assessment of the advantages and disadvantages that such development and activities will pose on the environment and socio-economy. When no feasible and/or reasonable alternatives can be identified and investigated in terms of a comparative assessment during the Scoping Phase, the EIA Report will then not contain a section with alternatives.

The EIA 2014 Regulations, as amended, define alternatives as the different means of meeting the general purpose and requirements of the activity, which may include alternatives to:

- The property on which or location where it is proposed to undertake the activity;
- The type of activity to be undertaken;
- The design or layout of the activity;
- The technology to be used in the activity;
- The operational aspects of the activity; and
- The option of not implementing the activity.

Although a collection of alternatives may exist for the Proposed Project, only feasible alternatives have been considered for this DSR and are discussed in greater detail below. Kongiwe strives to seek alternatives that maximise efficient and sustainable resource utilisation and minimise environmental impacts.

6.1.1 The Property on which or Location where it is Proposed to Undertake the Activity

The Proposed Project is the reclamation of an already existing TSF. Therefore, there can be **no alternative sites**.

Currently the TSF has no other land use or development associated with them. The goal of reclamation will be to return the site to a condition that most resembles the pre-mining condition. When the TSF has been reclaimed, rehabilitated and cleared of radiation the land will be levelled and revegetated to match the surrounding environment. The land will then be returned to the landowner to use at their discretion.

6.1.2 The Type of 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. According to DRDGOLD (2018), the retreatment business is high-volume and low-risk. Vast quantities of material are processed monthly through its plants to recover gold from old TSFs at a recovery rate that varies depending on the material being treated.

The depleting quantity and quality of gold recovered from underground mining operations in the province versus the extensive safety and environmental risks, as well as the labour and electricity costs associated with the activity has seen an underlining increase in the attractiveness of gold tailings reclamation. This, together with the incentive to find a solution to Gauteng's TSF-related issues, has led to the 'Preferred Activity'.

Table 6-1: The advantages and disadvantages of reclaiming and reprocessing of the TSF – Preferred Activity

Option	Advantage	Disadvantage
Reclaiming and reprocessing of the TSF (Preferred)	❖ Low-technical-risk nature of tailings retreatment projects sets them apart from traditional underground operations. ❖ Minimal safety issues. ❖ Easy access to surface tailings, as well as lower labour and operating costs. ❖ Contribution to local economy. ❖ Removal of pollution source after rehabilitation and cessation of project.	❖ Potential profits rely on substantial volumes of material. ❖ Potential negative environmental effects during construction and operational phase of the project. ❖ Not very labour intensive, thus new employment opportunities are limited.

6.1.3 The Design and Layout of the Activity

The current layout plan alternatives for the Proposed Project are considered as the preferred layout plan. The layout plan is dictated by the existing location of the TSF, associated infrastructure and the routes of the proposed pipeline. The routes of these pipelines are limited to existing servitude routes, SRPs or wayleave that is in favour of Ergo, where not existing, a new servitude, usufruct or wayleave will be sought.

Existing paddocks surrounding the TSF will need to be desilted and/or reinstated. The paddocks are provided to capture storm water flow from the side slopes of the TSF in the event of a rain event. A catchment paddock will be constructed as part of the reclamation station to capture material in the case of an electricity trip out or flooding of the pumpstation due to storm water. The catchment paddock below the pump station will be fitted with a slurry pump to pump material back into the reticulation circuit and thus keep this catchment paddock empty so that it can contain unforeseen events. This infrastructure will be lined to prevent any contamination of the surrounding environment.

Two possible locations for the reclamation station are being investigated. It is envisioned that the northern site is the preferred site.

Any alternative layout plans for all other ancillary infrastructure will be assessed by specialist studies and will be addressed in the EIA phase.

6.1.4 The Technology to be Used in the Activity

The reclamation of the TSF is the "Preferred Activity" and there are no alternatives. The TSF will be reclaimed using **Hydraulic reclamation**. Other technology options which will be considered by Ergo for the reclamation of the TSF is recycling initiatives, water conservation and electricity alternatives. These technology alternatives are discussed in greater detail below.

Hydraulic Reclamation

Hydraulic reclamation is a method which uses a mobile, high-pressure water monitor to erode the slime dams in sections, washing the unconsolidated tailings material downstream (slurry) which is collected in a sump. Once the required slurry density is obtained in the sump, and screening has prevented large objects from passing, the slurry is then pumped to thickeners and the underflow is reprocessed in a licenced processing plant. Waste material, after processing is then deposited onto a licenced TSF. A typical flow sheet for the reprocessing of a slimes dam is shown in Figure 6-1 below:

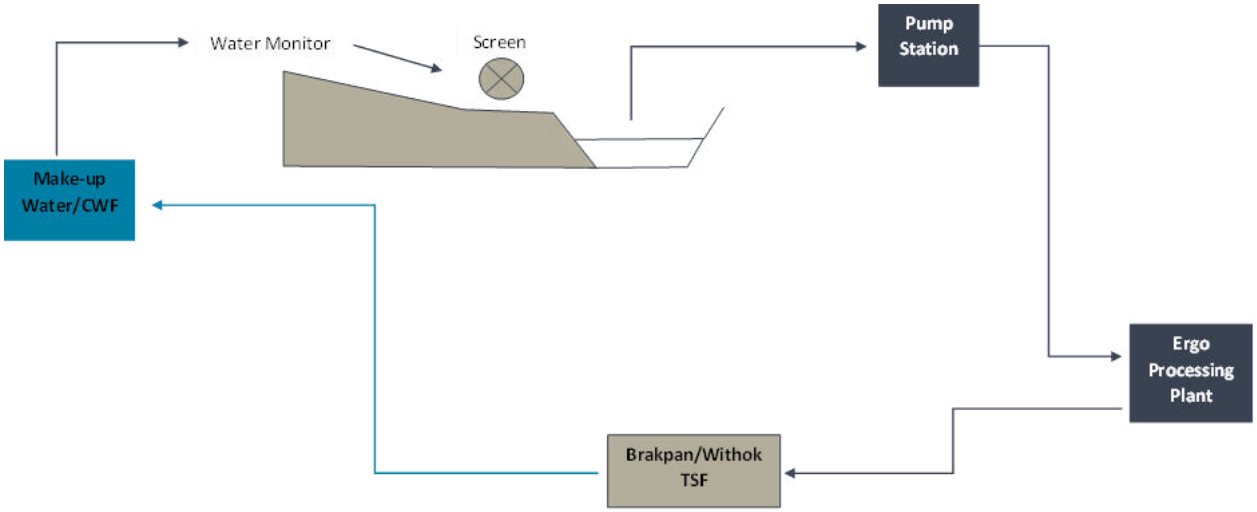


Figure 6-1: A typical flow sheet for the reprocessing of a slimes dam

Ergo believes that it will implement the best available technology in the best possible combination, in a way which is cost effective for this specific project. Best practices (as utilised in the industry) have been selected and, where applicable, SANS standards and legislative requirements will be followed in design, construction and management of infrastructure and activities on site.

Table 6-2: The advantages and disadvantages of hydraulic reclamation

Option	Advantage	Disadvantage
Hydraulic Reclamation	❖ Cost effective. ❖ Easier to transport slurry for processing.	❖ Dust emissions which can be mitigated.

Option	Advantage	Disadvantage
	❖ Compatible with existing infrastructure. ❖ Lowered risks when compared to other methods of reclamation	❖ Not very labour intensive, thus new employment opportunities are limited. ❖ May cause environmental impacts if not done responsibly.

Recycling, Water and Electricity

The reclamation of the TSF will, in its operational phase, implement recycling policies and measures for optimal utilisation of resources and minimisation of waste generation. 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 reticulation, the water cycle operates as a closed circuit, meaning that limited make-up water will be required for the reclamation of the TSF. Water required for the reclamation activities will be sourced from the existing Ergo CWF located in Germiston and conveyed through a proposed process water pipeline to the project site for reuse in the closed-circuit system. This pipeline will follow existing pipeline routes.

Process alternatives imply the investigation of alternative processes or technologies that can be used to achieve the same goal. This includes using environmentally friendly designs or materials and re-using scarce resources like water and non-renewable energy sources. The preferred options, in terms of recycling, water and energy have been described below for the Proposed Project.

6.1.5 The Operational Aspects of the Activity

The proposed project will convey the reclaimed slurry from the TSF to the Elsburg pumpstation via existing and operational pipelines. From this pumpstation the slurry will be transported to the Ergo processing plant via existing and authorised pipelines, see Figure 2-1.

The proposed reclamation activities will require 3kVA of electricity, to power the reclamation activities. This will be transmitted via a new 11 kV powerline from a transformer located at the 4A6 dump. This powerline will follow existing servitudes.

Table 6-3: The advantages and disadvantages of the operational alternative considered

Option	Advantage	Disadvantage
Pipelines to/from Ergo Plant, Brakpan/Withok Tailings Storage Facility and associated slurry and water pipeline (s)	❖ The plant and deposition facility are existing. ❖ The pipelines will run along existing slurry and return-water pipelines. ❖ The pipeline route is within SRPs owned by Ergo.	❖ Potential for tampering with infrastructure which could lead to mechanical failures and spillages. ❖ Security could be an issue during the construction of the above-ground pipeline.

Option	Advantage	Disadvantage
	❖ Welded, HDPE lined steel pipelines. ❖ The Brakpan/Withok TSF is currently used as the preferred deposition facility for most reclamation clean-up projects. ❖ The Plant has the capacity to recovery the intended quantities of gold. ❖ The proposed route traverses few residential areas. ❖ A majority of the pipelines leading to the Ergo plant are existing and operational.	❖ The route traverses through watercourses. ❖ The proposed pipeline route is quite extensive.

6.1.6 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. This implies that both negative and positive impacts would not take place. As such, the short-term negative impacts on the environment would not transpire; equally so, the long-term positive impacts such as environmental pollution source removal, economic development, skills development, and the availability of land for re-development would not occur. The only alternative land use is to leave the TSF as it stands; there is no other potential use of the space as the project area is a polluting historical mine dump that impacts upon the surrounding biophysical and social environment.

The "No-Go" Option also assumes the continuation of the current land use, implying the absence of any reclamation activities and associated infrastructures. The means that the attraction of the gold reserves located within the dumps could potentially enhance illegal mining, and if left as is, population settlement on or around the dumps could occur.

The 'No Project' alternative is not preferred due to the anticipated benefits of the proposed reclamation project. The expected indirect benefits resulting from the reclamation of the TSF include:

- Removal of a source of pollution and potential radiation in the area.
- The potential to unlock land for redevelopment, as read in the Metropolitan Spatial Development Vision.
- Continued supply of gold to the local and national markets, and therefore contribution to local, provincial and international economy.

7 Public Participation

The Public Participation Process (PPP) offers stakeholders an opportunity to be informed about the Proposed Project, to raise comments and to make suggestions for enhanced project benefits. The PPP will be undertaken to ensure compliance with the relevant legal framework applicable to the proposed 4L39 TSF reclamation project.

7.1 Applicable Legislation

The PPP as required by the environmental laws and regulations specified therein will be followed as best practice. The PPP will be undertaken in line with the statutory requirements for public participation. The following legislation will be considered when developing and implementing the PPP:

- National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA);
- The Environmental Impact Assessment Regulations, 2014 (as amended) (EIA 2014 Regulations);
- Public Participation guideline in terms of NEMA;
- The National Water Act, 1998 (Act No. 36 of 1998) (NWA);
- National Environmental Management: Waste Act 59 of 2008 (NEMWA): List of Waste Management Activities;
- The Constitution of the Republic of South Africa, 1996;
- Protection of Personal Information Act, 2013 (Act No. 4 of 2013) (POPIA);
- Promotion of Access to Information Act, 2000 (Act No. 2 of 2000) (PAIA); and
- International good-practice guidelines for public participation and the Core Values of the International Association for Public Participation.

POPIA Disclaimer: Safeguarding registered person's personal information

In terms of section 19 of POPIA, a responsible party must, subject to Sections 9 and 11 of the Act, ensure the integrity and confidentiality of personal information in its possession or under its control by taking appropriate, reasonable technical and organisational measures to prevent loss of, damage to or unauthorised destruction of personal information, unlawful access to or processing of personal information. POPIA requires that personal information should be adequately protected to avoid unauthorised access. Therefore, Kongiwe continuously reviews security controls and procedures to ensure that personal information is secured. It should be noted that in terms of Section 11, personal information may be processed to the extent that this is necessary for pursuing the legitimate interests of the responsible party to whom the information is supplied.

7.2 Objectives of the Public Participation Process

The PPP objectives for this project are to:

- Ensure that stakeholders are informed about the proposed 4L39 Project.

- Provide stakeholders with the opportunity to participate in the environmental regulatory processes and provide comment.
- Involve stakeholders in identifying ways in which comments can be addressed.
- Work directly with stakeholders throughout the environmental regulatory processes to ensure that stakeholder comments are consistently understood and considered.
- Verify that stakeholder comments have been recorded and addressed.

The stakeholder engagement process will be undertaken in four phases as presented in Table 7-1 below:

Table 7-1: Stakeholder Engagement activities

Project Phase	Activities to be Undertaken
Pre-scoping Phase	❖ Stakeholder identification (WinDeed searches, compilation of stakeholder database); ❖ Landowner/ occupier consultation meetings; ❖ Consultation with the relevant Authorities (including ward councillors) (Microsoft teams/One-on-one consultation meetings); ❖ Compilation of announcement documents (BID, Registration Sheet, Advert, site notice and DSR notification letter) and providing project information to stakeholders; ❖ Obtaining initial comments and suggestions from stakeholders; and ❖ Land Claims enquiry.
Scoping Phase	❖ Consultations with Directly Affected Landowners (Microsoft teams / One-on-one consultation meetings); ❖ Distribution and placement of project announcement materials (site notices, newspaper advertisements); ❖ Updating of the stakeholder database; ❖ Availability of the Scoping Report for public review and comment; ❖ Providing stakeholders with further details of the proposed project and associated specialist studies; ❖ Consultations with stakeholders (Virtual meetings and Live Meetings); ❖ Obtaining further comments and suggestions from stakeholders; and ❖ Informing specialists and the applicant about comments received from stakeholders.
EIA Phase	❖ Provide feedback about the specialist studies conducted and mitigation measures proposed by means of consultation with stakeholders; ❖ Provide opportunity for I&APs to comment on specialist findings, impacts assessments and recommendations; ❖ Make the relevant environmental reports available for public review and comment; ❖ Consultations with stakeholders (Virtual meetings and Live Meetings); ❖ Verify that comments raised by I&APs have been accurately recorded; and ❖ Inform specialists and the proponent of stakeholders' comments.

Project Phase	Activities to be Undertaken
Decision Making Phase	❖ Once the competent authorities have come to a decision regarding the authorisation of the project, all registered stakeholders will be notified of the decision made and the appeal process will be explained.

7.3 Summary of Issues raised by Stakeholders

Comments raised by stakeholders during the scoping phase will be included in the Comments and Responses Report (CRR) (Appendix C9) of the Final Scoping Report.

7.4 Public Participation Approach

7.4.1 Landowner consent

As part of the IWULA procedure, an applicant is required to attain consent from the property owners whose property will be affected by the proposed water uses. Landowner consent discussions will be held with the relevant landowners in February and March 2023. The main purpose of these discussions will be to request the affected stakeholders to provide consent for Kongiwe to submit the IWULA. Thereafter, the applicant will negotiate the necessary servitudes and right of ways with the affected landowners where applicable.

7.4.2 Submission of the Environmental Authorisation Application Form

An application for an Environmental Authorisation for the proposed reclamation of the 4L39 Project was submitted to the Department of Mineral Resources and Energy (DMRE) on Thursday, 16 February 2023.

A Water Use Licence Application (WULA), via the electronic - Water Use Licence Application and Authorisation System (e-WULAAS), will be submitted once complete. The project has been registered (WU25681). The e-WULAAS process has commenced and is ongoing.

7.4.3 Stakeholder Identification and Analysis

Project stakeholders are defined as individuals/ groups/ entities who:

- ❖ Are impacted or likely to be impacted directly or indirectly (positively/negatively) by the proposed project; and
- ❖ May have an interest in the proposed 4L39 Project; these include individuals/groups/entities whose interest may be affected by the proposed project and who have the potential to influence the project outcomes.

To ensure a proper representation of all stakeholders, the following identification methods were used as part of the stakeholder identification and analysis process:

- WinDeed searches for the directly affected and adjacent farms;
- Desktop and online research;
- Identifying the relevant ward councillors for the affected wards;
    - Mr Ashley Hoods (Ward 33) (Delmore Park)
    - Mr Geoffrey Mthembu (Ward 93) (Good Hope Informal Settlement & Germiston South)
    - Ms Marta Mudau (Ward 21) (Ulana Park)
    - Mr Ntuthuzelo Mpambani (Ward 35) (Germiston)
- Consulting landowners and land occupiers;
- Consulting with the Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD), Office of the Regional Land Claims Commissioner: Gauteng Province;
- Consulting government departments on a National, Provincial and Local level relevant to the project;
- Stakeholders who respond to the publication of newspaper advertisements;
- Stakeholders who respond to the distribution of project documentation;
- Updating the stakeholder database from attendance registers from a broad range of stakeholder meetings that will be held throughout the process; and
- Site visits will be conducted in the effort to identify any additional stakeholders.

Identified stakeholders who are affected by or interested in the proposed project area are grouped into the following broad categories:

- **Government:** National, Provincial, and Local Authorities (including ward councillors and ward committee members);
- **Parastatals:** Various semi-Government entities, Organs of State;
- **Landowners and Occupiers:** Directly and indirectly affected;
    - **Directly Affected:** these are landowners / occupiers that reside within an application boundary area or who reside on a property(s) that will contain proposed project infrastructure;
    - **Adjacent (Indirectly Affected):** these landowners / occupiers are directly adjacent to an application boundary or property(s) that contains infrastructure; and
    - **Other Affected:** these landowners / occupiers who have registered formally as an I&AP.
- **Communities:** Surrounding communities (Community Leaders);
- **Agriculture and Water:** Associations, entities responsible for water management and/or regulation;
- **Environmental Forums**;
- **Non-Governmental Organisations (NGOs):** Environmental organisations, community-based organisations; and

- **Business and industry:** Small, Medium and Micro Enterprises (SMMEs), mines, industrial and large business organisations

A stakeholder database has been compiled and will be updated throughout the environmental regulatory process **(Appendix C1**).

7.4.4 Land Claims Enquiry

A formal Letter of enquiry was compiled and sent to the Land Claims Commisioner, Mr Solomon Maruma from the Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD), Office of the Regional Land Claims Commissioner: Gauteng Province on **Thursday, 16 February 2023**. The letter contained a list of all the directly affected properties for the project. Should DALRRD confirm that there are land claims on the affected project areas, our project team will consult with the relevant parties **(Appendix C2**).

7.4.5 Communication and Engagement

7.4.5.1 Public Participation Materials

Considering the legislative requirements and good practice, the following documents were developed and distributed to stakeholders. The various PPP information materials will be used as part of the Scoping and Environmental Impact Assessment (EIA) and IWULA process**.**

Background Information Document (BID): The BID **(Appendix C3)** provided important information regarding the following:

- A project description of the proposed 4L39 project.
- The Scoping and EIA and the PPP to be undertaken in support of the relevant environmental authorisations/permits and the contact details of the Environmental Assessment Practitioner (EAP) and the stakeholder engagement consultants.
- Details about how stakeholders can register as an Interested and Affected Party (I&AP) and be kept informed about the project developments.
- The public review and comment period for environmental reports; and
- Invitation to attend an open day.
- The BIDs were emailed on **Thursday, 23 February 2023**, to the stakeholder database **(Appendix C6)**. The BID is available on the following website:
    - Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/

Comment and Registration Form: An I&AP registration form was sent out to stakeholders to register formally and/or to submit comments **(Appendix C3).**

Newspaper advertisements: A newspaper advert (**Appendix C4**) was placed in ***The Ekurhuleni News, on Thursday, 23 February 2023***. The advert included the following details:

- Brief project description.
- Legal framework, the competent authorities.
- How stakeholders can access the Draft Scoping report for public review and comment.
- The details of the open day.
- Registration as stakeholders.
- The contact details of the EAP and the stakeholder engagement consultants.

Site notice: The site notice provides an overview of the project and highlights the applicable legislation, environmental authorisation/permits applicable to the project. It also outlined the stakeholder engagement process to be followed and where relevant information could be obtained from. A locality map of the project site was included in the site notice. Details of the open day and how stakeholders can register as I&APS were included in the Site Notice. Pictures and co-ordinates of where the site notices were placed will be recorded in the site notice report and a site notice map will be developed **(Appendix C5).**

Notification Letter with a Comment and Registration Form: An email was sent to stakeholders to inform them about the proposed 4L39 project. The email also shared details of the open day and invited the greater public to formally register as I&APs. A Comment and Registration Form was also provided for stakeholders to use for formal registration and to submit their comments (**Appendix C3**).

Telephonic discussions: Stakeholders are also consulted by means of telephonic discussions. These discussions facilitate the process of inviting stakeholders to stakeholder meetings and provide stakeholders with a platform to raise comments and suggestions regarding the proposed 4L39 Project. Comments raised through telephonic discussions are recorded and addressed by the project team (EAP and the relevant specialists).

7.4.5.2 Scoping Phase Consultation

Pre-application meeting: Pre-application meetings will be aimed at engaging with key stakeholders regarding the Proposed Project to obtain initial comments which will inform specialist studies and project planning. The project team will present an overview of the proposed 4L39 project, locality, infrastructure and land tenure maps will be distributed as part of the meetings. Furthermore, meetings will also be held with directly affected landowners on a one-on-one basis. Subsequent to these meetings, minutes will be developed, and the stakeholder database will be updated.

Authority Meetings: Authority meetings will be held with various Organs of State, the purpose of the meetings is to discuss the 4L39 project and obtain initial comments which will inform specialist studies and project planning. The project team presented an overview of the proposed 4L39 project, locality, infrastructure and land tenure maps will be distributed as part of the meeting. Refer to **(Appendix C8)** for a list of meetings and consultations that will be undertaken.

Landowner Consultation Meetings: Consultation meetings will be held with directly affected landowners on a one-on-one basis. An overview of the Proposed Project, land tenure and locality plans will be

presented. Landowners will be provided with an opportunity to raise comments regarding the Proposed Project. Refer to **(Appendix C8)** for a list of meetings and consultations that will be undertaken. Minutes of these meetings and the presentations will be compiled and be distributed to all stakeholders who attended (**Appendix C8).**

All comments raised by stakeholders during these meetings will be captured into the Comment and Response Report (CRR). Responses to comments will be provided in line with the overall project scope and available information **(Appendix C9).**

Stakeholder engagement meetings: Consultation during the scoping phase will be aimed at providing stakeholders with an overview of the proposed project and to obtain comments which informed specialist studies and project planning. Stakeholders will be invited to participate through virtual and live engagements. One-on-one consultation meetings will be held via on-line forums such as Microsoft Teams, or telephonically. On-line engagement activities will be available during the public review period. Please see below (Table 7-2) for the stakeholders' meeting schedule. Minutes of these meetings and the presentations will be compiled and be distributed to all stakeholders who attended (**Appendix C8).**

Table 7-2: Stakeholder Meetings

Meeting dates	Time slots	Method of Engagement
Virtual Meeting		
Thursday, 16 March 2023	10H00-11H00	Microsoft teams/scheduled Telephonic discussions
Live Meeting		
Saturday, 18 March 2023	10H00-14H00	Open day: Institute Status Acres Combined School Hall, Quarry Road, Georgetown, Germiston.

Focused efforts will be made to engage with directly impacted stakeholders (those residents in the Proposed Project area), including vulnerable groups at local level. These individuals will be consulted directly and via their representatives and other influential people within communities. Meetings will be held in a culturally appropriate manner, allowing stakeholders to voice their opinions openly. Stakeholders will also be given the option to raise issues in the language of their choice and where translation will be required, it will be provided.

Mobilisation of stakeholders will be done for Authorities, NGOs, landowners / land occupiers and community members to promote attendance, by means of telephonic consultation and distribution of emails and SMS.

All comments raised by stakeholders during these meetings will be captured into the Comment and Response Report (CRR). Responses to comments will be provided in line with the overall project scope and available information.

7.4.5.3 Availability of Reports for Public Review and Comment

Copies of the Draft Scoping Report (DSR) summaries will be made available for public review and comment from **Thursday, 23 February 2023 - Monday, 27 March 2023.** The Draft Scoping Report will be made available as follows:

- Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/
- A hard copy of the DSR will be made available at the following public place:
  - Location: Germiston Public Library
  - Physical Address: 14 Queen St, Germiston, 1400

Copies of the Draft IWWMP will be made available for review once the required phase of the e-WULAAS process has been reached. The report will be made available for a period of 60 days. This is an ongoing process that is occurring simultaneously with the Environmental Authorisation process.

A non-technical summary of the report will be compiled and distributed to stakeholders. A non-technical summary of the report will be compiled and distributed to stakeholders with no access to the internet. Hard copies of the non-technical summary will be distributed through the relevant community representatives and at the open day that will be held. If required, an electronic copy (CD) of the reports can be made available upon a request directed to the stakeholder engagement team.

The DSR and appendices will be delivered to the DMRE on **Thursday, 23 March 2023**, which is the CA for the EA application. Key Commenting Authorities will receive an email with a website link to where they can download the DSR **(Appendix C6).** Please see list of Authorities who received the DSR:

- Department of Water and Sanitation (DWS);
- National Nuclear Regulator (NNR);
- Department of Forestry, Fisheries and the Environment (DFFE);
- Gauteng Department of Agriculture and Rural Development (GDARD);
- National Department of Health (DoH);
- South African Heritage Resources Agency (SAHRA);
- Department of Public Works and Infrastructure (DPWI);
- Department of Cooperative Governance and Traditional Affairs;
- City of Ekurhuleni Metropolitan Municipality.

Table 7-3 below provides a summary of the stakeholder engagement activities that formed part of the Draft Scoping Phase.

Table 7-3: Summary of activities undertaken as part of the Scoping Phase

Activity	Details	Reference in Draft Scoping Report
Stakeholder identification and analysis	Stakeholders were identified by means of WinDeed searches, stakeholder networking and research for the compilation of a stakeholder database. The database will be updated with new I&APs who formally registered and attended stakeholder meetings or submitted comments.	**Appendix C1** Stakeholder database
Identification of land claims	A formal Letter of enquiry was compiled and sent to the Land Claims Commission, Mr Solomon Maruma from the Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD), Office of the Regional Land Claims Commissioner: Gauteng Province on **Thursday, 16 February 2023**. The letter contained a list of all the directly affected properties for the project. Should DALRRD confirm that there are land claims on the affected project areas, our project team will consult with the relevant parties.	**Appendix C2** Land claims enquiry letter and correspondence from the DALRRD.
Development of the Background Information Document	The BIDs were developed and distributed to stakeholders. The BID is available on the following website: ❖ Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/	**Appendix C3** BIDs
Placement of newspaper advertisements	A newspaper advert was placed in The Ekurhuleni News, on Thursday, 23 February 2023.	**Appendix C4** Newspaper advertisements
Placement of site notices	Site notices will be placed at publicly accessible places within proximity of the project area **from Thursday, 23 February 2023.** Copies of the Site Notices will also be placed at the following public places: ❖ Germiston Public Library Pictures and co-ordinates of where the site notices were placed will be recorded in the site notice report and a site notice map will be developed.	**Appendix C5** Site notice report and placement map

Activity	Details	Reference in Draft Scoping Report
Announcement of the project and the availability of the Draft Scoping Report	The announcement letter was distributed to stakeholders on **Friday, 17 February 2023** to: ❖ Announce availability of the Draft Scoping Report; ❖ Invite stakeholders to the open day; ❖ Indicate where the Scoping Report will be available for public review and comment. The Draft Scoping Report will be made available on the following website: ❖ Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/ A copy of the DSR and non-technical summaries will also be placed in the following public place: ❖ Germiston Public Library	**Appendix C6** Announcement Correspondence **Appendix C3** BID
Stakeholder meetings: **Pre-Application**	Stakeholders will be invited to participate through virtual and live engagements. One-on-one meetings and focus group meetings will be held with Authorities and Directly Affected landowners. Subsequent to these meetings, minutes will be developed, and the stakeholder database will be updated with additional stakeholder information. A high-level overview of the proposed 4L39 project, locality, infrastructure and land tenure maps will be distributed as part of the meetings.	**Appendix C8** List of meetings & 83Meeting Minutes **Appendix C9** Comment and Response Report
Stakeholder Meetings: **Scoping Phase**	Stakeholders will be invited to participate through virtual and live engagements. The purpose of these meetings will be to discuss the proposed project, contents of the DSR, to provide stakeholders with an opportunity to raise their comments and to interact with the project team members. The following meetings will be held: **Live Meeting:**	**Appendix C8** List of meetings & Meeting Minutes **Appendix C9** Comment and Response Report

Activity	Details	Reference in Draft Scoping Report
	❖ An open day was held at the Institute Status Acres Combined School Hall (Quarry Road, Georgetown, Germiston), 18 March 2023 from 10H00-14H00. **Virtual Meeting:** ❖ Thursday, 16 March 2023 from 10H00-11H00 on Microsoft teams/scheduled Telephonic discussions. Minutes of these meetings will be compiled and distributed to everyone who attended these meetings. Comments raised from the meeting will be included into the CRR.	

7.4.5.4 Consultation Undertaken as part of the Final Scoping Phase

The aim of consultation during the Final Scoping Phase will be to focus on the formal EIA process, specialist impact studies, Terms of Reference and addressing comments from stakeholders. Once the Final Scoping Report is submitted to the DMRE, stakeholders will have the opportunity to verify that their comments were captured during the draft Scoping phase, and to review responses provided by the project team. The table below is a summary of the anticipated activities during the Final Scoping phase.

Table 7-4: PPP activities to be undertaken during the Final Scoping Phase

Activity	Details
Update of stakeholder information	The stakeholder database will be updated with new I&APs who formally registered, participated in stakeholder meetings or submitted comments.
Placement of Final Scoping Reports	The Final Scoping Report will be made available following websites: ❖ Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/.
Announcement of the Final Scoping Report	Notification letter notifying stakeholders about the availability of the Final Scoping Report for comment will be emailed to the full stakeholder database. An SMS will be sent to stakeholders who have no access to the internet, arrangements will be made to ensure that all stakeholders have full access to the reports - arrangements and requests will be accessed on a case-by case basis.

7.4.5.5 Consultation with Stakeholders during the Impact Assessment Phase

Consultation with stakeholders during the Environmental Impact Assessment phase entails providing stakeholders with comments on specialist study findings, recommendations and mitigation measures proposed. These studies and recommendations will be included as part of the Environmental Impact Assessment Report and the Environmental Management Programme (EIA/EMPr). Stakeholder meetings will also be held to present the findings of the specialist studies and to get comments from stakeholders. The format of stakeholder meetings will be similar to the Scoping phase, these will be determined on a case-by-case depending on stakeholders' preference.

7.4.5.6 Consultation during the Decision-Making Phase

Once the competent authority has come to a decision regarding the authorisation of the project, all registered stakeholders will be notified of the decision made and the appeal process to be followed. The decision from the Competent Authority (CA) will be communicated to stakeholders by means of a notification letter (electronic), SMS, local newspaper advertisement, and on Kongiwe's website.

8 The Baseline Environment

At this stage of the scoping phase, only high-level desktop baseline studies have been conducted; however, specialist studies are on-going, and findings will be included in the EIA stage.

8.1 Climate

The TSF is situated within the Highveld climatic zone. The Highveld is characterised by warm, rainy summers; while winters are typified by mild to warm days and cold, frosty nights. According to a study conducted by Hydrospatial in 2022 near to the Proposed Project the area, the mean Annual Precipitation in the area is approximately 716mm (Hydrospatial, 2022). The estimated mean annual evaporation rate in the area is approximately 1,625 mm (Groundwater Abstract, 2022). The wettest months occurring from October through to March and the driest month occurring over the period of April to September. Rainfall generally occurs in the form of brief intense convective thunderstorms (Hydrospatial, 2022).

Mean maximum temperatures range from 21 to 24°C, and mean minimums range from 3 to 6° C, with temperatures sometimes reaching 38° C in the summer and -11°C in the winter (WWF, 2018). The area experiences strong winds during the month of August. The warmest months occur from September through to March; whereas the coolest months occur over the period of April to August (Hydrospatial, 2022). See Figure 8-1 below.

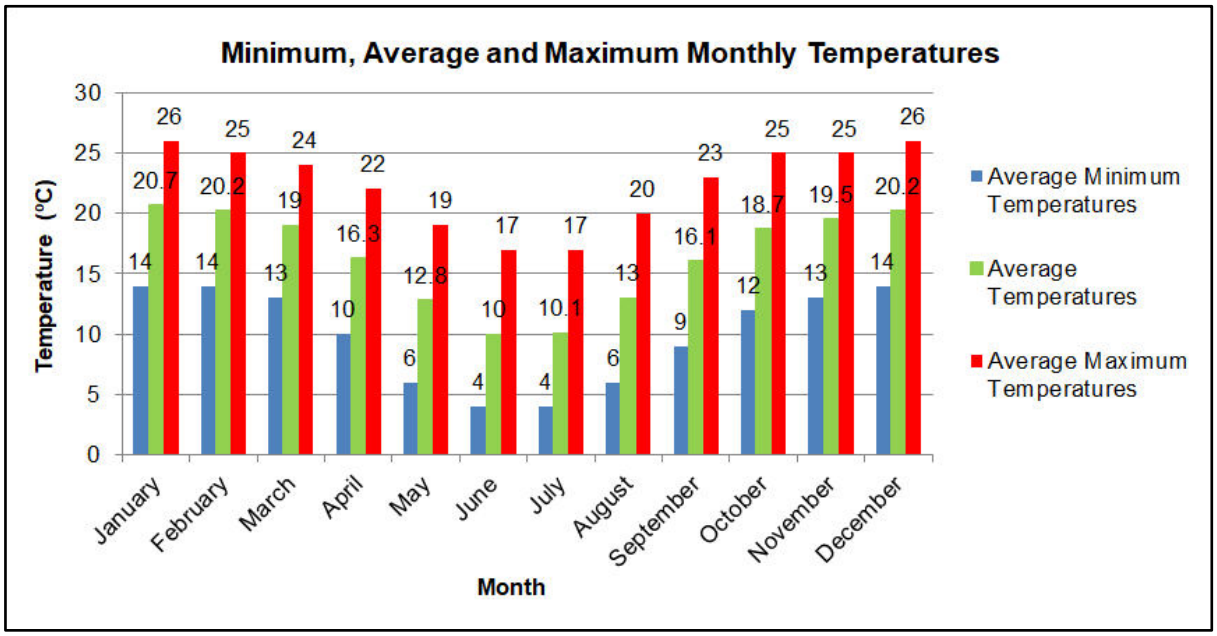


Figure 8-1: Minimum, average and maximum monthly temperatures for the Project

8.2 Topography

The Highveld inland plateau has elevations varying from 1 400 m to 1 800 m (Johannesburg 1 757 m) and prominent morphological features in the area include historical mine dumps which rise to about 50 - 60 m above ground. The local terrain morphology has been classified as undulating plains (GPEMF, 2014). The topography is mainly flat and rolling but includes the escarpment itself (The Biodiversity Company, 2018).

8.3 Geology

The Proposed Project area is located within the Central Rand Goldfields of the Witwatersrand Supergroup. The Central Rand Goldfield's are geologically one of the most interesting and economically significant areas in South Africa's history (Figure 8-2) (number 3). Having yielded 45% of all the gold ever produced on the planet, the Witwatersrand Basin held the world's largest gold reserves (Tucker et al., 2016).

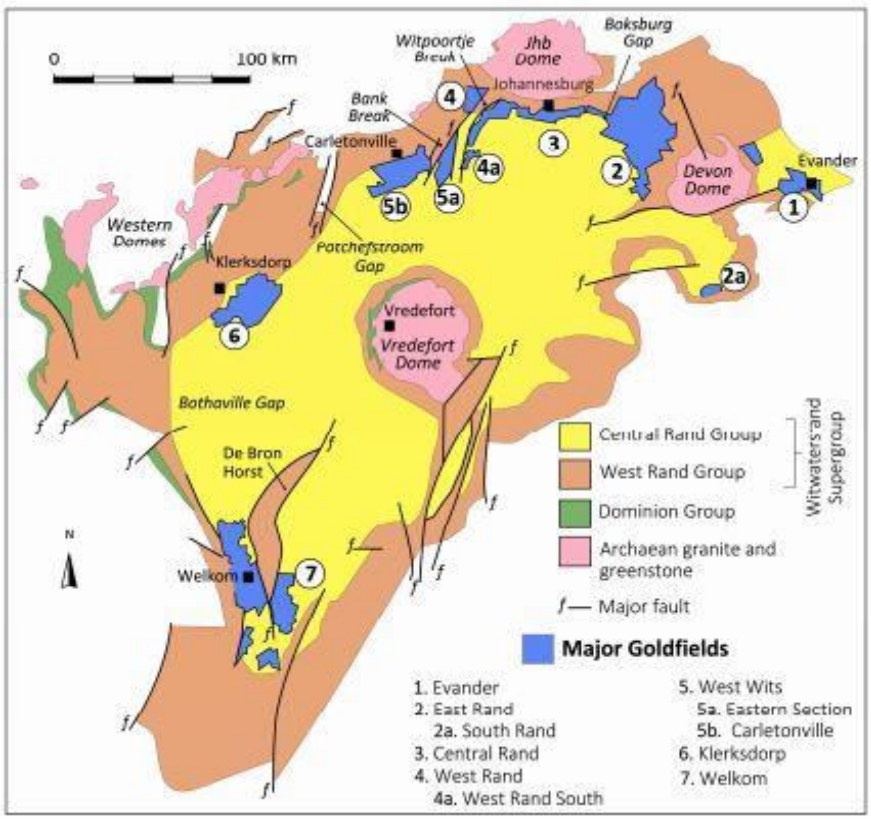


Figure 8-2: The geology of the Witwatersrand Basin stripped of younger cover and showing the position of the seven major goldfields (Source: Tucker *et al.*, 2016).

Gold in the Witwatersrand Supergroup occurs in quartz-pebble conglomerate reefs, the most significant being the Main Reef, Main Reef Leader and the South Reef located at the base of the Central Rand Group (Groundwater Abstract, 2018).

The Witwatersrand Supergroup is a sequence of conglomerate, shale and quartzite, ranging in age, and is comprised of a lower "West Rand Group" (WRG) and an upper "Central Rand Group" (CRG) (SACS, 1980). The continuity of the major geological units, marker horizons and individual conglomerate reef horizons around the auriferous northern and western basin edges, are features of the Witwatersrand as exemplified by the major stratigraphic units of the CRG. The lower Witwatersrand is comprised mainly of argillaceous clays and shale, with occasional banded ironstone, tillite and intercalated lava flow (Groundwater Abstract, 2018). The Upper Witwatersrand consist almost entirely of quartzite and conglomerate (Groundwater Abstract, 2018). Sedimentation of the CRG occurred predominantly under alluvial braid-plain conditions, and structurally it is relatively undisturbed (Groundwater Abstract, 2018).

The WRG comprises of the lower Hospital Hill Subgroup; middle Government Subgroup and upper Jeppestown Subgroup. The shales of the WRG are characterised by the presence of magnetite bearing interlayers. These layers played a significant role during deep basin exploration, as they were used as magnetic markers.

The CRG contains by far the bulk of the gold mineralisation. It is divided into a lower Johannesburg Subgroup and an upper Turffontein Subgroup. These Subgroups are separated by the Booysens Shale Formation, often called the "Upper Shale marker" in the Welkom Goldfield. The CRG comprises several formations which, although varying in thickness, can be traced and correlated, with a few exceptions, in all the goldfields. The gold-bearing conglomerate reefs tend to occur in clusters which are informally referred to as "reef groups". All the important gold reefs lie on prominent unconformity surfaces, many of which can be traced around the entire basin.

According to Tucker et al. (2016), another characteristic of the Witwatersrand mining area is a series of cross-cutting lineaments representing faults and dykes. The dykes are not 100% impermeable and fault appearance varies from a hairline width to large breccia filled widths and faults are commonly filled with intrusive material. The geology underlying the project area consist of the Turffontein and Johannesburg Subgroups of the CRG.

8.4 Soils, Land Capability and Land Use

8.4.1 Soils

The dominant soils in the Soweto Highveld Grassland biome (most of the project site) tend to be deep, reddish on flat plains and are typically Ba and Bb land types. These Letters symbolise the master horizons: where B represents a horizon of soil which is characterised by a concentration of silicate clay, sesquioxides or organic matter, alone or in combination. The a indicates that these are transitional layers from the previous master horizon (Macvicar, et al., 1977).

The project area is in majority covered by soil type Ba36. The Ba36 soil type is classified by the Plinthic Catena as: Upland Duplex and Margalitic Soils Rare; Dystrophic and/or mesotrophic; red soils are widespread.

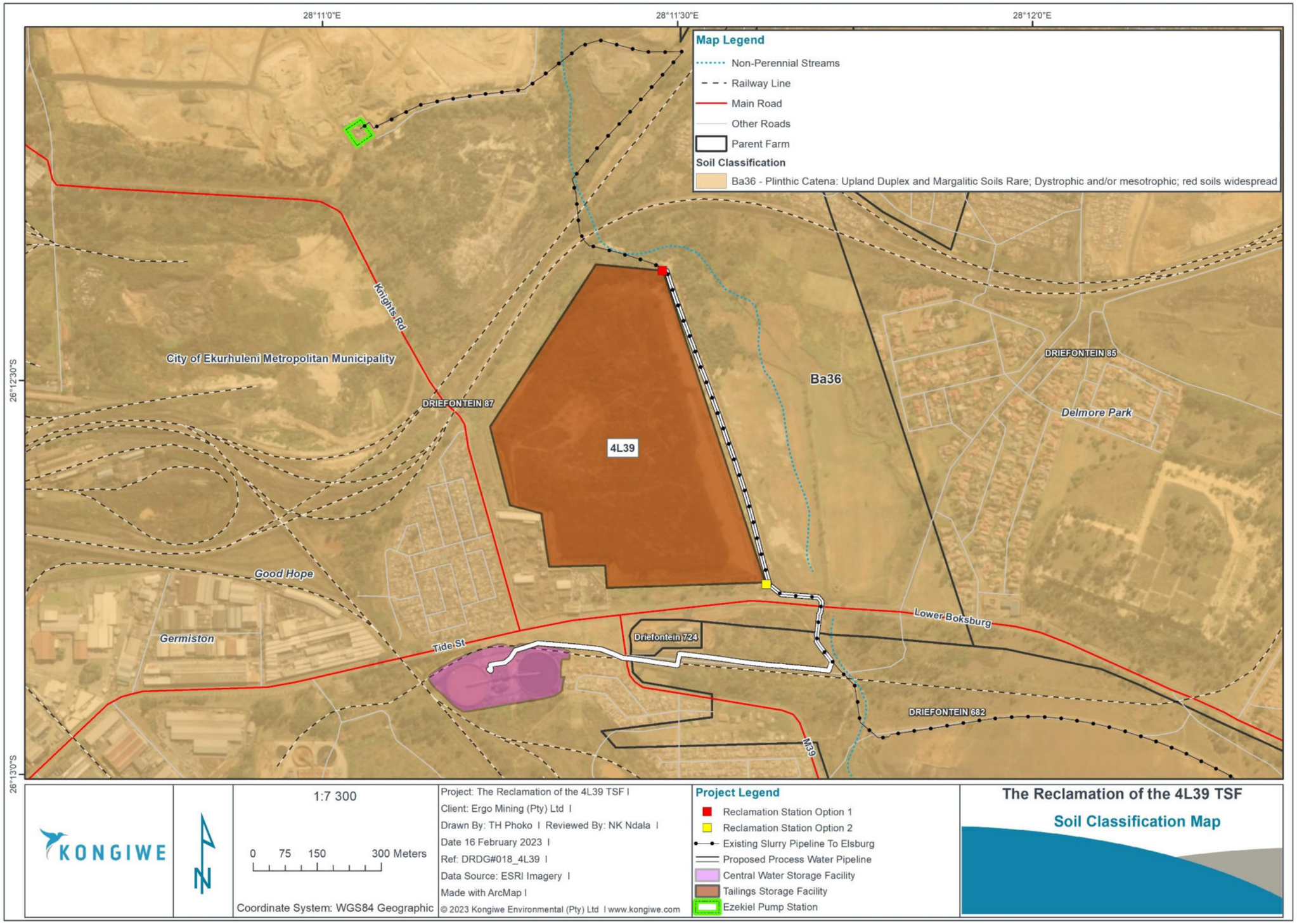


Figure 8-3: Soil map of the project area

8.4.2 Land Capability

The screening report (2022) conducted for the project area indicated that the project area has a medium agriculture theme sensitivity. This however is not representative to the historical impacts suffered by the area. The mining history of the area combined with the residential and industrial development of the area has resulted in the land being largely modified and degraded. The proposed site for reclamation is also an historical tailing storage facility, these mineral deposits have no agricultural potential.

8.4.3 Land Use

According to the Gauteng Provincial Environmental Management Framework (2018), the Proposed Project area is in an Urban Development Zone (Zone 1) and Industrial and Large commercial focus Zone (Zone 5).

The current land uses of the surrounding areas are typified by mining, dispersed settlements, residential areas, sensitive areas (wetlands) and additional historical TSF. See Figure 8-4 below the data is sources from ESRI Imagery.

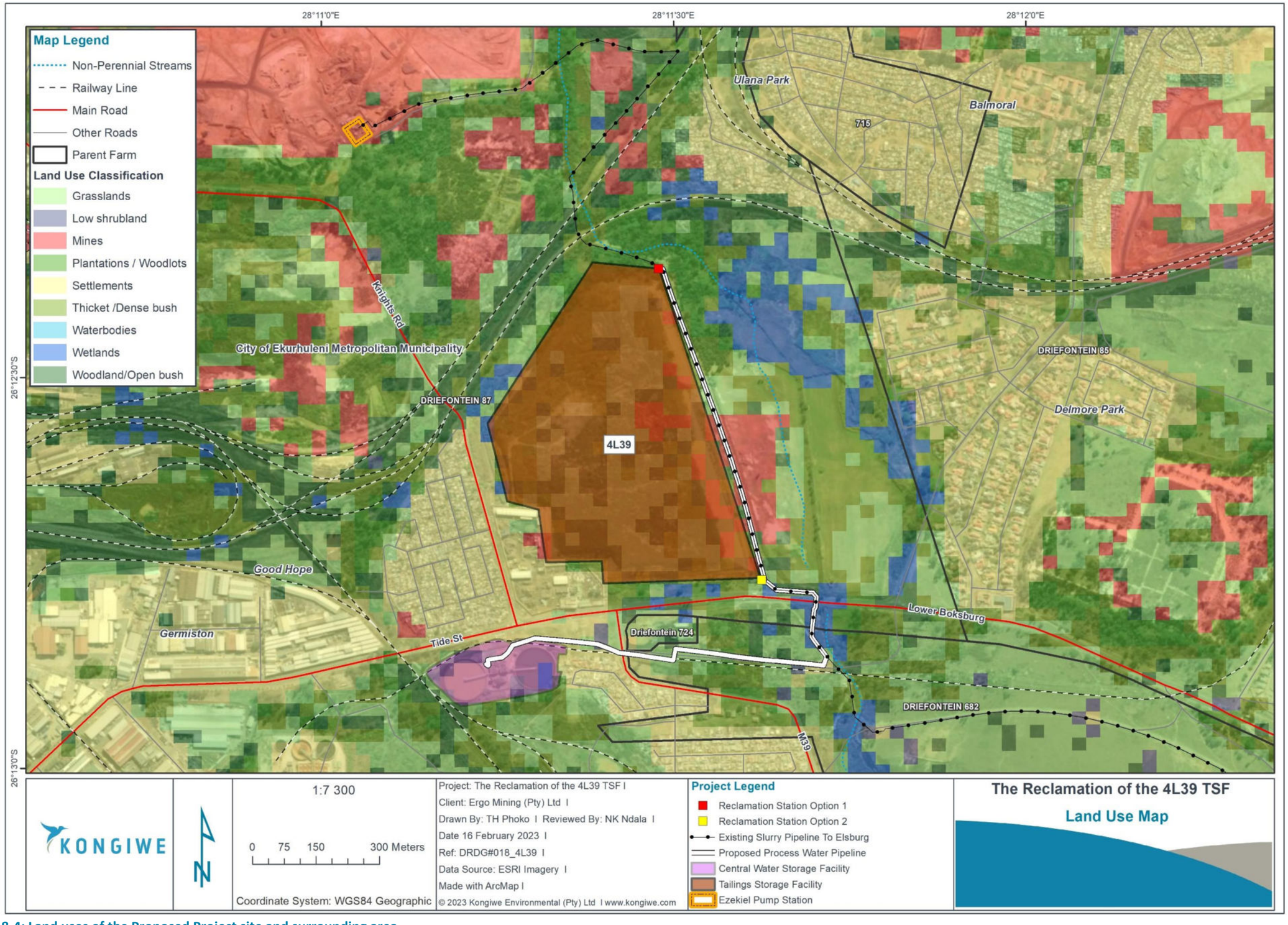


Figure 8-4: Land uses of the Proposed Project site and surrounding area

8.5 Surface Water

The water sources of South Africa are vital to the health and prosperity of its people, the sustenance of its natural heritage and to its economic development. The Orange/Vaal River Basin extends over four countries, covering an area of 964 000km^2. The Proposed Project area is in the Upper Vaal Management Area, which is one of the 19 Water Management Areas (WMAs) included into Orange/Vaal River Basin. The Upper Vaal WMA is the most developed, industrialised and populous of the Orange/Vaal WMAs (DWAF, 2002). Large quantities of water are transferred into this WMA from the Usutu to Mhlathuze and the Thukela WMAs as well as from the Senqu River in Lesotho. This WMA releases similar quantities of water into the Vaal River which leads to the Middle Vaal and Lower Vaal WMAs. Water is also transferred from here to the Crocodile West, Marico and Olifants WMAs (DWAF, 2002).

The Proposed Project is located within the C22B Quaternary catchment. The Elsburg spruit, a tributary of the Natalspruit, flows in a southerly direction and eventually flows to the Vaal River.

8.6 Ground Water

8.6.1 Regional Geohydrology

Groundwater occurrence in the Witwatersrand rock are 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 (Groundwater Abstract, 2018). 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. Additionally, the Turffontein Subgroup and Black Reef quartzite are hard rock aquifers where water is stored and moves through fractures, fissures and joints (Groundwater Abstract, 2018).

8.6.2 Groundwater Quality

The following contaminates of concern are typically present at gold tailings storage facility: Low pH, TDS higher than 1,200 mg/L, SO4 higher than 600mg/L, and High metal concentrations (Groundwater Abstract, 2018). Groundwater in the Proposed Project area is usually dominated by sulphate, calcium and magnesium, this could indicate mining activities however due to the industrial nature of the area multiple sources of pollution can contribute to groundwater quality (Groundwater Abstract, 2018). Gold TSFs potentially add sulphate, chloride, calcium, magnesium, manganese, and aluminium to local groundwater systems if the water management of contaminated water on site is not managed effectively. Metals like cobalt, copper, nickel and zinc can also be elevated (Groundwater Abstract, 2018).

Ground water quality in the CoE is generally acceptable for any use. In some areas, contamination with chlorides, sulphates and nitrates has been recorded and care should be taken with groundwater used for human consumption. Groundwater from the Dwyka Group is generally suitable for any use. Groundwater yield from aquifers in this formation is, however, low. (EMM, 2007).

Detailed groundwater quality monitoring data will be obtained from groundwater specialist studies and assessed in detail during the EIA phase of the project.

8.7 Fauna and Flora

Gauteng is the smallest of South Africa's nine provinces, but despite this, Gauteng is rich in biodiversity. The province is situated in two biomes (both the Savanna and the Grassland biome). Approximately 80% of the province's area is designated as Highveld Grassland, this is one of the richest primary grasslands in the world. The Proposed Project falls primarily within the Soweto Highveld Grassland biome. This grassland is also particularly poorly conserved (less than 2% protected) (Pfab et al., 2017). The province has an estimated 2183 plant taxa, 125 mammal species, 488 bird species, 21 Amphibians and 92 reptile species. At least 11 taxa are endemic to the province.

The Gauteng Conservation Plan (Version 3.3) (Gauteng C-Plan) (GDARD, 2014) classified areas within the province based on its contribution to reach the conservation targets within the province. The Gauteng C-Plan uses the following terms to categorise the various land use types according to their biodiversity and environmental importance:

- Critical Biodiversity Area (CBA);
- Ecological Support Area (ESA);
- Important Area (IA);
- Irreplaceable Area (IA);
- Other Natural Area (ONA);
- Protected Area (PA); and
- Moderately or Heavily Modified Areas (MMA's or HMA's).

This means that the Proposed Project falls within an ESA and IA. See Figure 8-5 below. Some parts of the proposed pipeline routes fall within ESAs, and IAs. The data used for this analysis is often captured remotely, thus an important aspect of this study will be to ground-truth the boundaries of these areas through appropriate specialist studies.

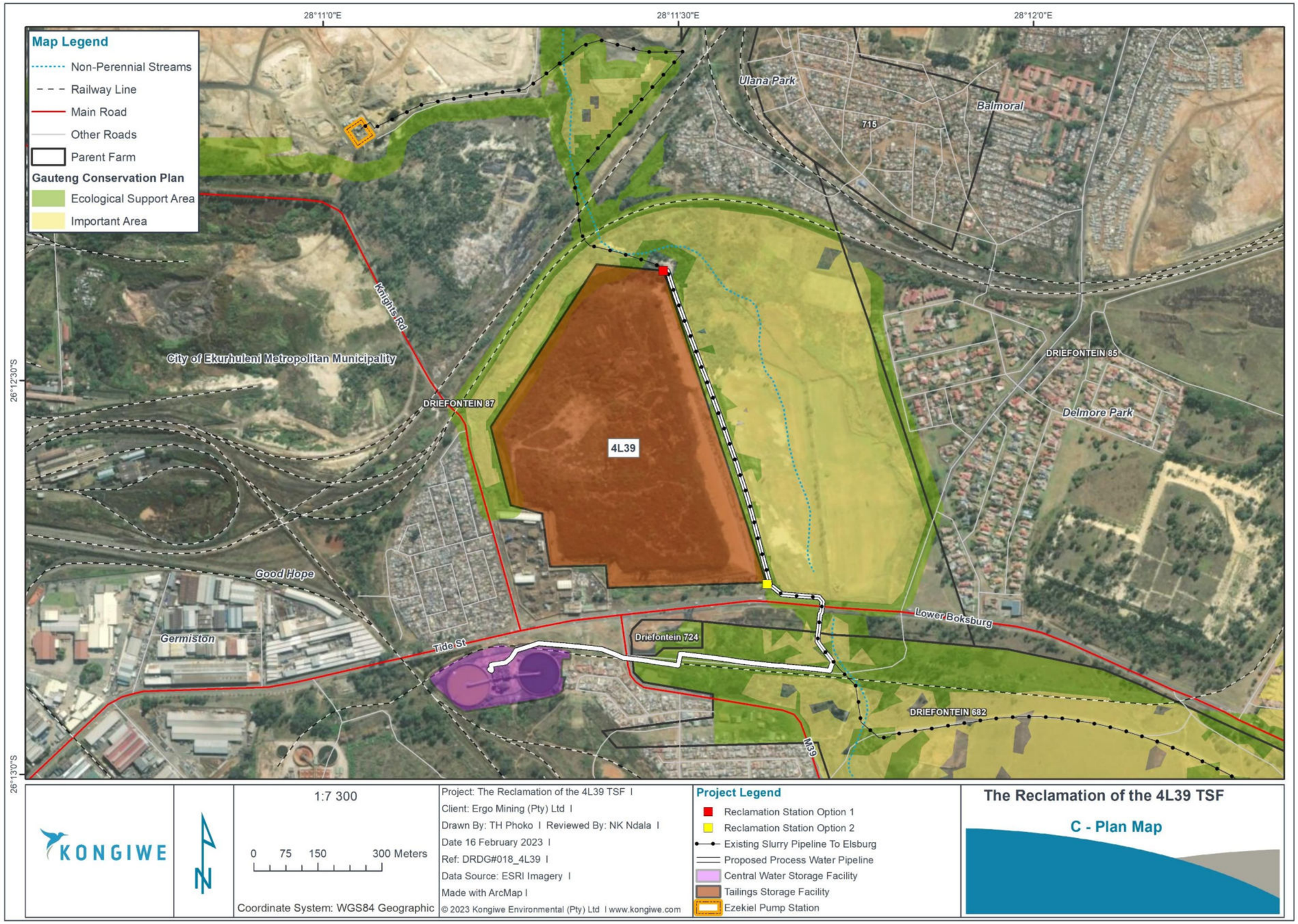


Figure 8-5: C-Plan of the Proposed Project

8.7.1 Flora

The project area falls within the grassland biome. The grassland biome is centrally located in southern Africa, and adjoins all biomes except the desert, fynbos and succulent Karoo biomes (Mucina & Rutherford, 2006). Major macroclimatic traits that characterise the grassland biome include seasonal precipitation and low temperatures in winter (Mucina & Rutherford, 2006). The project area is considerably impacted upon by the historical impacts of mining and the industrial and built-up nature of its surroundings. This is characterised by infestations of invasive vegetations, which is common on TSFs and other disturbed sites.

The project area falls within the Soweto Highveld Grassland vegetation type (Mucina & Rutherford, 2018) (Figure 8-6) and this type if grassland is considered endangered.

Red grass *Themeda triandra* exclusively dominates areas which are not severely degraded. Characteristic species are Three-awn Rolling Grass (*Aristida bipartite)*, Blackseed Fingergrass (*Digitaria ternate)*, Largeseed Setaria (*Setaria nigrirostris)*, *S. incrassat*a and *Panicum coloratum*. Other important species are Weeping Lovegrass (*Eragrostis curvula)*, Speargrass (*Heteropogon contortus)*, Golden Setaria (*Setaria sphacelate)*, *Elionurus muticus*, *Microchloa caffra*, *Brachiaria serrata*, *Eragrostis plana* with Feathered Chloris (*Chloris virgata)*, Couchgrass (*Cynodon dactylon)* and Tassel Bristlegrass (*Aristida congesta)* prominent at degraded sites. Dicotyledonous forbs are prominent and include *Berkheya pinnatifida*, Flower-in-a-cage (*Crabbea acaulis)*, Hairflower (*Chaetacanthus costatus)*, *Salvia repens*, *Pseudognaphalium luteo-album*, *Abildgaardia ovata*, *Anthospermum pumilum*, *Bulbostylis contexta* and *Evolvulus alsinoides*.

The screening report (2022) conducted indicates that the proposed area has a medium and low relative plant species theme sensitivity. This is however not representative of the reality on site. The flora present on site will be investigated further during the EIA phase.

8.7.2 Fauna

As mentioned above, Gauteng is relatively prosperous in biodiversity but this resource tends to be poorly conserved. The province has a vast range of mammal, bird, amphibian and reptile species.

The prevalence of all these species occurring at the specific project site is slim due to the availability of habitats suitable for survival, and anthropogenic influences which have led to the current altered state of the immediate project area.

The specific Proposed Project area has an extremely altered and degraded habitat due to the historical mining activities that have occurred there. As a result, the possibility of many species being supported by the remaining immediate habitat is quite low. The anticipated fauna of the Proposed Project area is likely to be limited and associated with grasslands and cultivated lands on site. It is expected that any naturally occurring fauna in the area might have moved away from the Proposed Project site due to the high

presence of human activity and the loss of suitable habitats (Digby Wells, 2015). The expected mammal species to be found on site are primarily small rodents and other small mammals (Digby Wells, 2015).

A similar sentiment is shared when the prevalence of both Reptiles and Amphibians are discussed. The presence of avifaunal biodiversity is expected to be higher than other faunal species. This is due to the mobility of birds as well as bird supporting habitats surrounding the proposed site. An in depth biological assessment will be conducted during the EIA phase to determine the prevalence of any Faunal species present at the proposed project site.

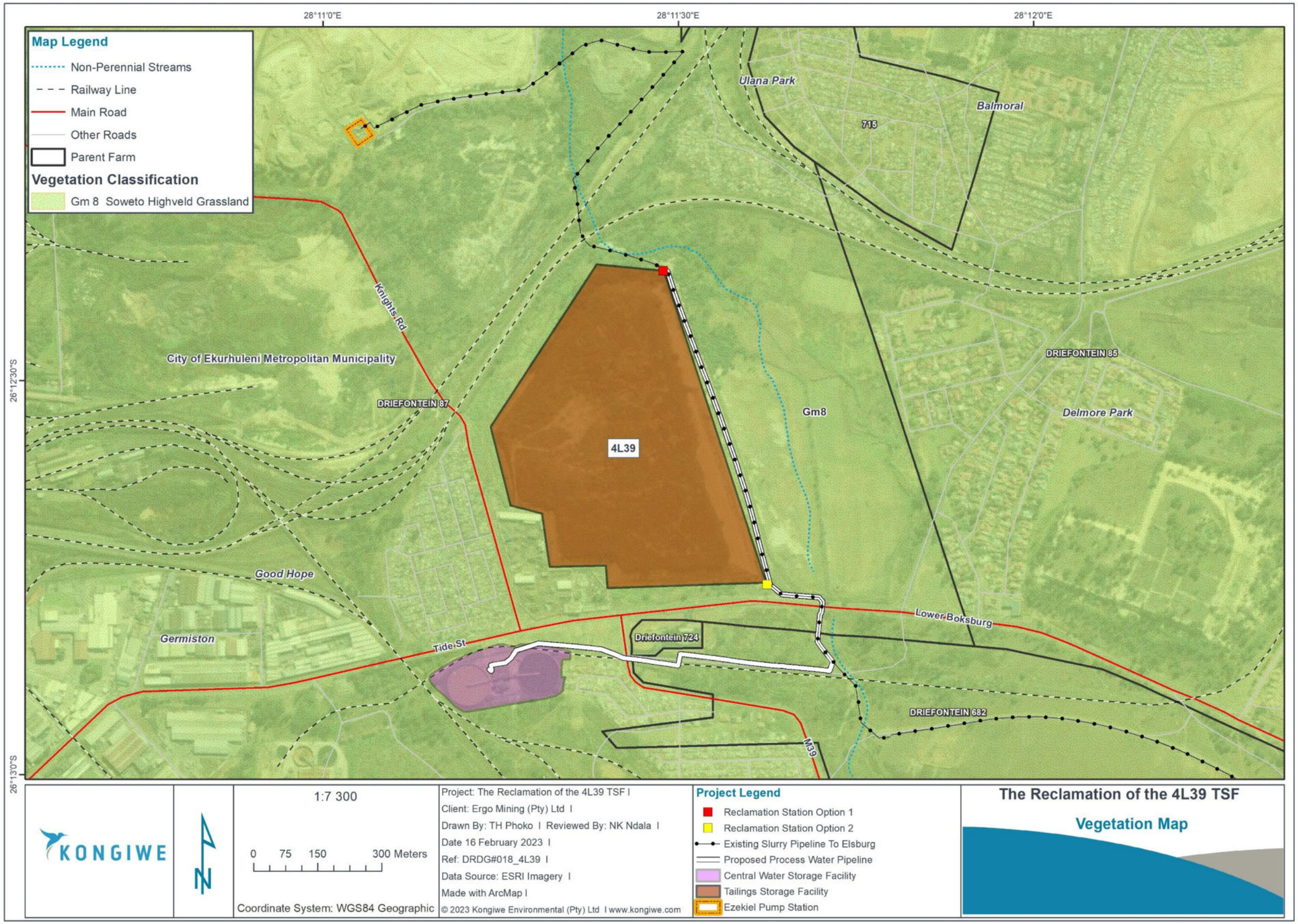


Figure 8-6: Vegetation type in and around the Proposed Project area

8.8 Wetlands

Wetlands are often biodiversity hotspots and provide ecosystem services such as flood control and aquifer recharge (Haukos and Smith, 1994; Keddy et al., 2009). Thus, if biodiversity is to be conserved, the maintenance of wetlands is essential. Unfortunately, a large number of wetlands have been degraded or lost worldwide in recent years due to land use conversions, water pollution and soil salinization amongst other reasons.

The Proposed Project is situated in close proximity to some wetlands and these must be protected. It is however presumed that these wetlands have been heavily impacted by historical activities in the area. These wetlands will be assessed during the EIA Phase. This study will help identify the current status of any wetlands in the Proposed Project area and aid with the identification of the required mitigation and protection measures required by the proposed operation.

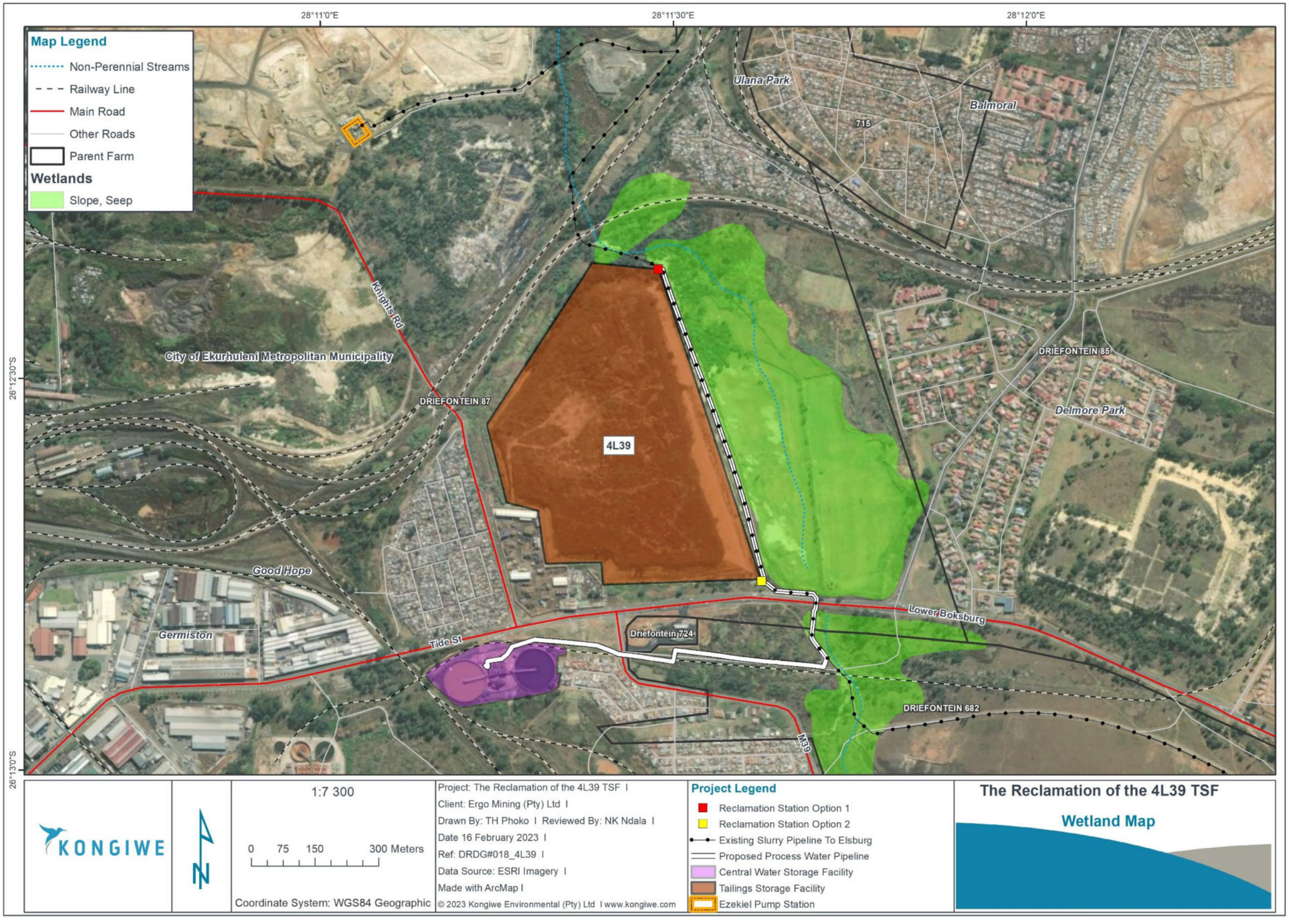


Figure 8-7: NFEPA wetlands around the Proposed Project Area

8.9 Air Quality

Numerous studies have found that air pollution in cities have a major negative impact on the health of both the environment and the surrounding communities. Repeated exposure to air pollutants over long periods of time may potentially cause several respiratory, cardiovascular, reproductive and gastrointestinal health problems (Mayer, 1999).

Particulate Matter (PM) exists in the atmosphere as either solid or liquid particles varying in chemical composition and size, these particles can be considered as either primary or secondary pollutants. Particles can be classified by their aerodynamic properties into coarse particles, PM_{10} and fine particles, $PM_{2.5}$ (Harrison and Van Grieken, 1998). The fine particles contain the secondarily formed aerosols such as sulphates and nitrates, combustion particles and re-condensed organic and metal vapours. The coarse particles contain earth crust materials and fugitive dust from roads and industries (Fenger, 2002). It is the amount of fine dust and the chemical and mineralogical composition of the dust which will dictate the potential for health impacts (Schwegler, 2006).

The Proposed Project falls within the Highveld Priority Area (HPA). This area of South Africa is associated with poor air quality, and elevated concentrations of criteria pollutants occurring due to the concentration of industrial and nonindustrial activities. The priority area covers 31,106 km^2, including parts of Mpumalanga Province (Highveld Priority Area Air Quality Management Plan, 2011). The CoE has both a high population density and a high-density industrial sector (DEA, 2015).

The cumulative air pollution associated with the HPA means that it is imperative for the Proposed Project to formulate and implement a sustainable and effective air quality management plan, if one is found to be a requirement by the Air Quality Impact Assessment conducted during the EIA phase, to comply with $PM_{2.5}$ and PM_{10} national ambient air quality standards (NAAQS).

The most significant pollutant that is expected to be generated from the construction activities and associated reclamation activities is the possible generation of particulate matter (PM). PM with an aerodynamic diameter of less than 2.5 micrometres (µm) ($PM_{2.5}$) and particulate matter with an aerodynamic diameter of less than 10 µm (PM_{10}) are criteria pollutants and are therefore subject to legislated control.

8.10 Noise

Natural sounds are a part of the environmental noise surrounding humans. Ambient sound levels are significantly affected by the area where the sound measurement location is situated. When the sound measurement location is situated within an urban area, close to industrial plants or areas with a constant sound source (ocean, rivers, etc.), seasons and even increased wind speeds have an insignificant to massive impact on ambient sound levels.

The Proposed Project site is in an area with a mixed-use development character, with 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.

8.10.1 Construction Phase

The level and character of the construction noise will be highly variable as different activities with different equipment taking place at different times, for different periods of time (operating cycles), in different combinations/sequences and on different parts of the construction site. The main construction related noises that are expected are listed below:

- Transport of workers, components & equipment to site;
- Digging of foundations for infrastructure and pipeline support – TLB;
- Development of stormwater infrastructure – TLB;
- Civil work to install the substation / transformer, screens, tanks and pump station – cement truck, flatbed trucks (with mobile crane); and
- Civil construction activities.

8.10.2 Operational Phase

The level and character of the noise during this phase is generally constant as it does not involve mobile equipment movement around the site. The noises expected during this phase are listed below:

- General operational noises;
- JCB/TLB backhoe loader being operated;
- The slurry pumps;
- Vibrating screens; and
- Water Dozers and site equipment.

Noise can be defined as "unwanted sound", and an audible acoustic energy that adversely affects the physiological and/or psychological well-being of people, or which disturbs or impairs the convenience or peace of any person. Figure 8-8 illustrates the acceptable zone sound levels as set out by SANS.

1	2	3	4	5	6	7
Type of district	Equivalent continuous rating level ($L_{Req,T}$) for noise dBA					
	Outdoors			Indoors, with open windows		
	Day/night $L_{R,dn}$[a]	Daytime $L_{Req,d}$[b]	Night-time $L_{Req,n}$[b]	Day/night $L_{R,dn}$[a]	Daytime $L_{Req,d}$[b]	Night-time $L_{Req,n}$[b]
a) Rural districts	45	45	35	35	35	25
b) Suburban districts with little road traffic	50	50	40	40	40	30
c) Urban districts	55	55	45	45	45	35
d) Urban districts with one or more of the following: workshops; business premises; and main roads	60	60	50	50	50	40
e) Central business districts	65	65	55	55	55	45
f) Industrial districts	70	70	60	60	60	50

Figure 8-8: Acceptable Zone Sound Levels for noise in districts (from SANS 10103:2008)

A previous Environmental Screening study for a reclamation project in a similar environmental setting concluded that during the construction phase there will be a low potential for a noise impact, and that due to the short duration of the construction activities the proposed noise impact will be less than the noise level rating for urban areas (EAR, 2018). The specialist stated that the noise impact for a similar project would be of low significance (EAR, 2018). During the operation phase the specialist found for a similar project where no potential noise-sensitive receptors are within 200m from the area where hydraulic mining takes place, that there will be a low potential for noise impacts (EAR, 2018). The specialist states that the project has a low significance of noise impact (EAR, 2018). It must be noted that this was for a different project with a similar Proposed Project scope but in a different environment and geographical setting. Due to different environmental settings and different surrounding communities, these findings cannot be definitively used to represent the proposed new activities and project. It must however be noted that the required noise prevention and mitigation measures will be investigated during the EIA and EMPr phase.

8.11 Traffic

The Proposed Project Site is located in an area with an existing road network. The site is surrounded by the Lower Boksburg Road to the south, the R29 (Main Reef Rd) to the north and street level routes surrounding the proposed reclamation site. No major road construction is planned for the project but where required on site roads might be constructed, as mentioned in the project description above. Roads will mainly be utilised during the construction and decommissioning and rehabilitation phase of the Proposed Project.

Road Classification

The Road Classification and Access Management (RCAM) guideline 2010 provides for roads classification into the following six class systems:

- Class 1 Principal arterial

- Class 2 Major arterial
- Class 3 Minor arterial
- Class 4 Collector
- Class 5 Local street
- Class 6 Walkway

The first three classes (the arterials) are mobility roads, the second three classes are activity/access streets. Regarding the Proposed Project, mobility roads will include the N12 and R29.

8.12 Visual

The Proposed Project site has been disturbed by the legacy of historical mining in the area. This then means that the Proposed Project will result in the removal of a visual disturbance source. The surrounding area around the TSF is lacking in natural vegetation that would help to screen off the proposed operation. The proposed site is also visible from the nearby residential and industrial areas as well as from the major and minor road routes surrounding the proposed site. It is also anticipated that the project would result in a positive visual impact after the removal of the TSF in relation to the surrounding environment of the site.

8.13 Heritage and Palaeontology

8.13.1 Heritage Sensitivity

As a historical mining site, several areas containing historical mining and residential structures are likely to be impacted by the Proposed Project. The TSF may also represent 'Historical Settlements and Townscapes' as per the NHRA if they were established more than 60 years ago. The TSF and other associated mining infrastructure are integral components of the historical mining townscapes and settlements of the East Rand.

Additionally, a few areas containing graves and burial grounds could also be impacted by the Proposed Project. Heritage sensitivity will be further assessed during the EIA phase.

8.13.2 Palaeontological Sensitivity

The CoE area is underlain by the Malmani Subgroup, (Chuniespoort Group, Transvaal Supergroup), Dwyka Group, Vryheid Formation (Ecca Group) and Karoo Dolerite Suite. According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Vryheid Formation is Very High, the Dwyka Group has a Moderate Palaeontological Sensitivity, Malmani Subgroup a High Palaeontological Sensitivity and Karoo Dolerite Suite has a Zero Palaeontological Sensitivity (Almond and Pether 2008, SAHRIS website). Groenewald and Groenewald (2014) allocated a high Sensitivity to the Malmani Subgroup. Noting that in addition to stromatolites, potentially fossiliferous Late Caenozoic Cave breccias (within the "Transvaal dolomite" outcrop area) could be present on site.

The Screening report (2022) for the project however indicates that the proposed area is located primarily

in an area with a low relative palaeontology sensitivity.

8.14 Socio-Economic

The Proposed Project has the potential to result in both positive and negative social impacts. As such, it is important that the socio-economic baseline conditions are understood to ensure accurate identification and assessment of potential impacts associated with the Proposed Project.

Gauteng is the largest urban economy if Africa, with a population estimated to be 13.3 million, (Gauteng Spatial Development Framework 2030) (GSDF). In terms of land area, Gauteng is the smallest province in South Africa but also densely populated. Gauteng accounts for only 1.5% of the land area. Table 8-1 below provides an overview of the socio-economic baseline information for Gauteng province.

Table 8-1: Socio-economic baseline information: Gauteng at a glance

Description	Statistics
Demographics	
Population size	15 888 000
Population by size	Majority of the population (54.5%) is made up of the population group between the ages of 16-60.
Language	Isizulu is the most spoken language, approximately 19.8%
Migration	Approximately 93.9% of the population is born in South Africa (slightly less than the rate in South Africa)
Households	
Number of households	5 384 000, with 19.1% of the population reside in informal dwellings
Service Delivery	
Access to water services	98.4% are getting water from a regional or local service provider.
Access to electricity	82.7% have access to electricity.
Toilet facilities	88.7% have access to flush or chemical toilets.
Education	
Educational level	80.2% of individuals aged 5-24 are attending some form of schooling.
Employment	
Employment status	67% stated that they receive salaries as their main form of income
Unemployment status	37%
Economics	
Economic sectors	Manufacturing sector providing 14% of the total provincial output, followed by construction at 3%, mining at 2% and agriculture at under 0.5%.

Description	Statistics
Average annual income	R57 500 nearly double the amount on South Africa

Information extracted from Stats SA: Census 2011, the Community Survey: 2016, the General Household Survey:2021

Ekurhuleni Metropolitan Municipality - Overview

The City of Ekurhuleni comprises of communities such as Tembisa, Katlehong, Vosloorus, Duduza, Daveyton and Thokoza that collectively house over 68% of the City's total population.

Ekurhuleni has a total surface area of 1975km² that accommodates a population of about 3 379 104 people, about one quarter of the figure in Gauteng (City of Ekurhuleni IDP, 2018). This population is living in an estimated 1 299 490 households, with 18.7% of those being informal dwellings (shacks). The city has a median age of 30 and 66% of the population is between the ages of 18-64, 18% is below the age of 18 and 6% is above the age of 65.

Black Africans make up 82% of the population. In 2015, the unemployment rate in Ekurhuleni (based on the official definition of unemployment) was approximately 29%. About half of the population have completed matric or higher, which is about 20% higher compared to the national statistic and approximately 4% of the population have post graduate qualification (IDP, 2018, 37).

Access to basic services (in terms of water supply) is relatively high, majority (98.5%) of the population get water from a regional or local service provider. 90% of the city has access to electricity; while only 89% of the population has flushing toilet facilities (Community Survey, 2016).

Key Challenges with Ekurhuleni

According to the Integrated Development Plan (IDP) 2018/2019 review, the municipality is currently faced with the following challenges:

- Service delivery failure;
- Rapid population growth spurred by in-migration;
- Mushrooming of informal settlements which contributes to service delivery challenges;
- Ageing sanitation infrastructure and an increasing backlog for infrastructure in new developments;
- Illegal mining;
- Unemployment.

The abovementioned issues have a bearing on how the Proposed Project may bring about social change within the affected local area.

As mentioned previously, the proposed project is likely to pose both negative and positive impacts and these are listed as follows:

Table 8-2: The expected positive and negative impacts of the Proposed Project

Positive impacts	Negative impacts
Job security and career development for existing personnel	Increase in ambient noise levels during the construction phase.
Potential benefits for local communities arising from Ergo's Corporate Social Responsibility (CSR)	Possible increase in dust levels in some areas during operations
Decreased dust levels - Eliminate the TSF's as a source of pollution to the surrounding areas.	Exposure to increased dust levels and the rise in associated health impacts- construction and operational phases.
Availability of alternative post-project land uses.	

9 Potential Impacts Identified during the Scoping Phase

9.1 Methodology for determining the Significance of Environmental Impacts

This part of the document focuses on the identification of the major potential impacts the activities, processes and actions may have on the surrounding environment. Table 9-1 will be inserted into the EIA report once all specialist studies have been completed. The table represents compliance with the EIA Regulations of 2014 in terms of assessing the significance of direct, indirect, cumulative and residual impacts. Each specialist has been requested to include Table 9-2 whilst compiling their reports to streamline the coherence of the EIA Report.

Potential environmental impacts (physical, biological, social and economic) associated with the Proposed Project are listed in Table 9-2. The significance of these impacts will be systematically assessed and rated, using the assessment mythology described in Section 9.1, once the results of the various specialist studies are available. The EIA will include a full risk assessment of all environmental impacts. The EIA/EMPr Report will set out mitigation measures to be implemented during the Construction, Operational, Decommissioning and Closure, as well as Post-Closure Phases in accordance with NEMA requirements.

Table 9-1: Typical tables used to identify and classify the significance of identified impacts

Nature of The Impact: ***Describe the Impact in Respect to The Activity to be Undertaken***		
	Impact Rating Without Mitigation	**Impact Rating With Mitigation**
Impact Status: (*positive or negative*)		
Extent *(Local, Regional, International)*		
Duration *(Short term, Medium term, Long term)*		
Magnitude *(Major, Moderate, Minor)*		
Probability *(Definite, Possible, Unlikely)*		
Calculated Significance Rating (Low, Medium, High)		
Reversibility: (Reversible or Irreversible)		
Irreplaceable loss of resources: (Yes or No)		
Residual impacts ❖ (List these below)		
Cumulative Impacts ❖ (List these below)		
Mitigation measures ❖ (List these below)		

Table 9-2 below will be used during the EIA Phase to describe the identified impacts of the Proposed Project, as well as the relevant mitigation measures proposed by specialist studies.

Table 9-2: Potential Impacts Identified for the Project

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Physical Environment (non-living)	Hydrology (including wetlands, surface water and ground water)	❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface and groundwater if runoff from operations is not adequately managed through efficient storm water management structures; ❖ Improved surface and ground water quality around the project area due to the removal of the TSF; ❖ Water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented; ❖ Changes in natural surface water flow parameters due to the removal of the TSF; ❖ Potential impact on drainage lines from access runoff during the operational phase of the project; ❖ Improved visual aesthetics of the area after the removal of the TSF.	Surface Water Impact Assessment Groundwater Impact Assessment Wetland Impact Assessment
Biological Environment (living)	Ecology and Biodiversity (including fauna and flora)	❖ Disturbance of site and species of ecological importance; ❖ Loss of migration corridors, and access to nesting and refuge areas, watering points, food supplies for faunal species by removing the TSF; ❖ Displacement of animal habitat by removing the TSF; ❖ Removal of invasive species from the TSF; ❖ Long-term improvement of ecosystem health and functioning of the project area following rehabilitation.	Biodiversity Impact Assessment

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
Cultural Environment	Heritage Resources	❖ Should heritage resources be present in the area, the reclamation project could potentially impact these; ❖ Destruction of a heritage resource, if the TSF is older than 60 years, by reclaiming the TSF. The significance of the TSF will be assessed.	Heritage Impact Assessment
Social and Economic Environment	Employment	❖ Continued employment and job security; ❖ Continued investment in local economy; ❖ Removal of the TSF could eliminate the attraction of illegal/informal miners who seek gold.	Social Impact Assessment
	Land-use	❖ Land use will change to an active reclamation site; ❖ Restoration and unlocking of land for future land uses; ❖ Better management and control of the area against illegal/informal mining.	Social Impact Assessment
	Air Quality	❖ Possible increase in dust levels in some areas during operations; ❖ Overall removal of an air pollution source after the removal of the TSF; ❖ Health impacts on livestock and people in proximity to the project site due to fine particulate emissions during operational phase.	Air Quality Impact Assessment

The impact significance rating process serves two purposes: firstly, it helps to highlight the critical impacts requiring consideration in the management and approval process; secondly, it shows the primary impact characteristics, as defined above, used to evaluate impact significance.

The impact significance rating system is presented in Table 9-3, Table 9-4, as well as Table 9-5 and it involves three parts:

- **Part A**: Define impact consequence using the three primary impact characteristics of magnitude, spatial scale/ population and duration;
- **Part B**: Use the matrix to determine a rating for impact consequence based on the definitions identified in Part A; and
- **Part C**: Use the matrix to determine the impact significance rating, which is a function of the impact consequence rating (from **Part B**) and the probability of occurrence.

9.1.1 Part A: Defining Consequence in Terms of Magnitude, Duration and Spatial Scale

Use these definitions illustrated in the table below to define the consequence in Part B.

Table 9-3: Consequence Rating Methodology

Impact Characteristics	Definition	Criteria
Magnitude	Major -	Substantial deterioration or harm to receptors; receiving environment has an inherent value to stakeholders; receptors of impact are of conservation importance; or identified threshold often exceeded
	Moderate -	Moderate/measurable deterioration or harm to receptors; receiving environment moderately sensitive; or identified threshold occasionally exceeded
	Minor -	Minor deterioration (nuisance or minor deterioration) or harm to receptors; change to receiving environment not measurable; or identified threshold never exceeded
	Minor +	Minor improvement; change not measurable; or threshold never exceeded
	Moderate +	Moderate improvement; within or better than the threshold; or no observed reaction
	Major +	Substantial improvement; within or better than the threshold; or favourable publicity
Spatial scale or population	Site or local	Site specific or confined to the immediate project area
	Regional	May be defined in various ways, e.g. cadastral, catchment, topographic
	National/ International	Nationally or beyond
Duration	Short term	Up to 18 months.
	Medium term	18 months to 5 years
	Long term	Longer than 5 years

9.1.2 Part B: Determining Consequence Rating

Rate consequence based on definition of magnitude, spatial extent and duration.

Table 9-4: Consequence Rating Methodology

			Spatial Scale/ Population		
			Site or Local	Regional	National/ international
MAGNITUDE					
Minor	**Duration**	**Long term**	Medium	Medium	High
		Medium term	Low	Low	Medium
		Short term	Low	Low	Medium
Moderate	**Duration**	**Long term**	Medium	High	High
		Medium term	Medium	Medium	High
		Short term	Low	Medium	Medium
Major	**Duration**	**Long term**	High	High	High
		Medium term	Medium	Medium	High
		Short term	Medium	Medium	High

9.1.3 Part C: Determining Significance Rating

Rate significance based on consequence and probability.

Table 9-5: Significance Rating Methodology

Probability (of exposure to impacts)	Consequence Negative			Consequence Positive		
	Low	Medium	High	Low	Medium	High
Definite	Medium	Medium	High	Medium	Medium	High
Possible	Low	Medium	High	Low	Medium	High
Unlikely	Low	Low	Medium	Low	Low	Medium

9.2 Possible Positive and Negative Impacts identified

The table below identifies the positive and negative impacts associated with each alternative identified for the Proposed Project:

Table 9-6: Positive and negative impacts regarding project alternatives for the Project

Option	Positive impacts	Negative impacts
The property on which or location where it is proposed to undertake the activity		
The Proposed Project is the reclamation and reprocessing of already existing dump. Therefore, there can be no alternative site.		
The Type of Activity to be undertaken		
1. Alternatives to reclaiming and treating existing gold dumps.		
The Reclamation and Processing of the TSF (Preferred Option)	❖ Low-technical-risk nature of tailings retreatment projects sets them apart from traditional underground operations. ❖ Minimal safety issues. ❖ Easy access to surface tailings, as well as lower labour and operating costs. ❖ Contribution to local economy. ❖ Removal of pollution source after rehabilitation and cessation of project.	❖ Potential profits rely on substantial volumes of material. ❖ Potential negative environmental effects during construction and operational phase of the project. ❖ Not very labour intensive, thus new employment opportunities are limited.
The Design and Layout of the Activity		
Two possible locations for the reclamation station are being investigated. Only operational impacts are expected to differ at these locations. There are no different environmental impacts expected from these different options.		
Technology to be used in the Activity		
The reclamation of the TSF is the "Preferred Activity" and there are no alternatives. The TSF will be reclaimed using **Hydraulic reclamation**. Other technology options which will be considered by Ergo for the reclamation of the TSF is: Recycling initiatives, water conservation and electricity alternatives. These technology alternatives are discussed in greater detail below. **Recycling, Water and Electricity** The reclamation of the TSF will, in its operational phase, implement recycling policies and measures for optimal utilisation of resources and minimisation of waste generation. 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 reticulation, the water cycle operates as a closed circuit, meaning that limited make-up water will be required for the reclamation of the TSF. 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. Fuel types will be investigated and energy conserving measures will be implemented where necessary. Ergo is building phase 1 of its solar farm in the last quarter of 2023. This will be able to provide an alternative source of electricity to Ergo's operation once it has		

Option	Positive impacts	Negative impacts
been completed and is operational.		
1. Technological Alternatives Considered		
Hydraulic reclamation	❖ Cost effective. ❖ Easier to transport slurry for processing. ❖ Compatible with existing infrastructure. ❖ Lowered risks when compared to other methods of reclamation.	❖ Dust emissions which are to be mitigated ❖ Not very labour intensive, thus new employment opportunities are limited. ❖ May cause environmental impacts if not done responsibly.
The operational aspects of the activity		
None – No reasonable and feasible alternatives exist for the Proposed Project.		
1. Operational Alternative Considered		
Water pipeline (s) from the CWF.	❖ The plant and deposition facility are existing. ❖ Welded, HDPE lined steel pipelines. ❖ The Brakpan/Withok TSF is currently used as the preferred deposition facility for most reclamation clean-up projects. ❖ The Plant has the capacity to recovery the intended quantities of gold. ❖ The proposed pipeline to be constructed will be slightly shorter. ❖ The proposed route traverses few residential/industrial areas	❖ Potential for tampering with infrastructure which could lead to mechanical failures and spillages. ❖ Security could be an issue during the construction of the above-ground pipeline. ❖ The route traverses through watercourses. ❖ The proposed pipeline route is quite extensive. ❖ The pipeline is within Surface Right Permits and other rights held by Ergo and its subsidiaries.
No-Go Option		
The Option of the project not proceeding would mean that the environmental and social status would remain the same as current. This implies that both negative and positive impacts would not take place. As such, the short-term negative impacts on the environment would not transpire; equally so, the long-term positive impacts such as environmental pollution source removal, economic development, skills development, and the availability of land for re-development would not occur. The only alternative land use is to leave the TSF as it currently stands; there is no other potential use of the space as the project area is a historical mine TSF that impacts upon the surrounding biophysical and social environment.		

Option	Positive impacts	Negative impacts
The "No-Go" Option also assumes the continuation of the current land use, implying the absence of any reclamation activities and associated infrastructures. The means that the attraction of the gold reserves located within the TSF could potentially enhance Illegal mining, and if left as is, illegal settlements on or around the TSF could occur. The 'No Go' alternative is not preferred due to the anticipated benefits of the proposed reclamation project. The expected indirect benefits resulting from the reclamation of the TSF include: ❖ Removal of a source of pollution and radiation in the area. ❖ The potential to unlock land for a different land use, as per GDARD's (2012) Gauteng Mine Areas Strategy. ❖ Continued supply of gold to the local and national markets, and therefore contribution to local, provincial and national economy.		

9.3 Cumulative Impacts

Due to the existence of other TSF and mining operations in the region, cumulative impacts and their assessment are of great importance. The identification and assessment of cumulative impacts will be undertaken, and mitigation measures suggested during the detailed EIA level investigation. The impact identification and calculation methodology employed by all specialists incorporates cumulative impacts in a quantitative manner to determine the final impact score and corresponding rating.

9.4 Application of Possible Mitigation Measure

Mitigation measures are implemented to ensure that the identified impacts from the Proposed Project activities are reduced as far as possible. Mitigation measures will be provided in the specialist reports to be undertaken in the EIA Phase of the project. Specialist will be informed to be cognisant of the following mitigation measure objectives:

- To find more environmentally sound ways of undertaking specific activities;
- To enhance any environmental and social benefits of a proposed activity;
- To avoid, minimise or remedy negative environmental impacts; and
- To ensure that any residual negative environmental impacts are environmentally acceptable.

The identification of appropriate mitigation measures will be conducted in a hierarchal manner:

1. Preventative measures will be identified to avoid, where possible, negative impacts that may arise as a result of the proposed activity;
2. Measures will be identified to minimise and/or reduce the negative impacts to "as low as practicable" levels; and
3. Measures will be identified to compensate or remedy residual negative impacts that are unavoidable and cannot be minimised or reduced any further (Department of Environmental Affairs, 2006).

Proposed mitigation measures will be communicated to the applicant for review as part of draft EMPr. The applicant will comment on the feasibility and practicality of implementing the mitigation measures. The mitigation measures may be adjusted based on the applicant's comments.

9.5 **Outcome of the Site Selection Matrix: The Final Site Layout Plan**

The finalisation of specialist studies and recommendations made within the specialist reports will help to inform a final site layout plan. At the time of compiling the DSR, preliminary site layout plans were included in **Appendix B** and these maps were presented as part of the pre-application process with stakeholders.

9.6 Motivation where no Alternative Sites were considered

Alternatives were considered during the DSR, as per Chapter 6 above, and the site selected was chosen based on economic and environmental criteria.

9.7 **Statement motivating the Preferred Site**

The preferred site was chosen as per Chapter 6.

10 Plan of Study for the Environmental Impacts Assessment

10.1 Alternatives to be considered, including the "No-Go" Option

Alternatives to be considered during the EIA phased will be informed by the Alternatives described in Chapter 6 above.

10.2 Aspects to be assessed as part of the Environmental Impact Process

The following aspects will be assessed as part of the EIA process:

- Biodiversity
- Wetlands;
- Surface Water;
- Groundwater;
- Air Quality;
- Heritage;
- Traffic; and
- Social Impact.

10.3 Terms of Reference for Specialist Studies

Table 10-1 outlines the studies proposed during the EIA Phase of the project and the proposed scope of work to be undertaken as part of the S&EIA process:

Table 10-1: Terms of Reference for Specialist Studies.

Study	Terms of Reference
Terrestrial Ecology	**Impact Assessment** 1. The terrestrial biodiversity impact assessment report will consist of the following: ❖ Assess impacts of ongoing and proposed activities on biodiversity of the project area; ❖ Assess whether proposed activities are likely to have significant impacts on biodiversity and specifically species of conservation concern; ❖ Identify practically implementable mitigation measures to reduce the significance of proposed activities on biodiversity; ❖ Assess residual and cumulative impacts after implementation of mitigation measures; and ❖ Compilation of biodiversity management and monitoring plan. The outcome of the impact assessment phase will be an integrated biodiversity impact assessment report detailing the findings of each of the various sub-specialist studies. The impact assessment report will provide an integrated assessment of the significance of the potential impacts on the biodiversity of the project area with specific emphasis on observed red data species. The report will identify suitable mitigation measures and assess the revised significance of potential impacts on biodiversity post-implementation of mitigation measures. The integrated biodiversity impact assessment report will also include a biodiversity monitoring programme.
Wetland Study	**Impact Assessment** The water resource impact assessment will consist of the following: ❖ Assess impacts of ongoing and proposed activities on the local water resources; ❖ Assess whether proposed activities are likely to have significant impacts on the water resources; ❖ Identify practically implementable mitigation measures to reduce the significance of proposed activities on the water resources; and ❖ Assess residual and cumulative impacts after implementation of mitigation measures.

Study	Terms of Reference
Surface Water	A full, detailed hydrological assessment will be undertaken for the EIA Phase of the project. 1. Flood Lines The flood peaks for the 1:50- and 1:100-year return intervals will be calculated for the contributing catchment area associated with each river. Flood peak determination will factor in regional rainfall and relevant catchment characteristics influences. Based on the provided elevations, and utilising the calculated flood peaks, the flood lines for current conditions will be generated using the HEC-RAS one dimensional backwater flow model. The model can simulate the effects of various control points/obstructions located within the watercourse. It assumed that topographical data at an acceptable resolution of the site will be provided. 2. Conceptual Stormwater Management Plan Based on the information gathered during the desktop review and the site walkover, a conceptual stormwater management plan will be developed for the Project. 'Dirty' and 'clean' contributing catchments will be discretised based on topographical fall, associated activities. Furthermore, the discretisation of the catchments will factor in existing stormwater infrastructure and the overall functionality and the most practical and feasible implementation of the final stormwater management plan. Based on the discretised catchments, the required stormwater management drainage elements (including channels, pipes, berms, and pollution control dams) will be defined to ensure appropriate stormwater management according to the management principles outlined in the GN704 and BPGs. 3. Water and Salt Balance An annual average static water balance associated with the mine will be developed using Excel, based on a Process Flow Diagram (PFD) developed in conjunction with Ergo. The PFD will indicate sources and movement of water within the mine and projected volumes. A final project site plan is required to finalise the water balance. The salt balance calculations will be based

Study	Terms of Reference
	on the volumes calculated within the water balance and water quality data provided. If available, Total Dissolved Solids (TDS) data will be used to calculate the salt balance. 4. Water Quality Analysis and Monitoring Data A surface water quality analysis will be undertaken, and a monitoring programme will be developed for the mine to allow for the appraisal of impacts to surface water because of onsite activities and to allow for the formulation of various management actions associated with the protection of water resources. Sampling locations, methodology, sampling frequency and an analytical programme (i.e. analytes) will be rationalised as part of the assessment. Water quality data obtained from the site will be compared against the relevant DWS water quality standard limits. A water quality monitoring plan will be developed to determine key water quality monitoring points, chemical monitoring suites and the frequency of water quality sampling and analysis.
Groundwater Assessment	**Impact Assessment:** The Impact Assessment phase will involve several tasks, as explained below. The results will help characterise the underlying aquifer systems and define potential impacts on the local aquifers, but also groundwater users and sensitive receptors in the Project area. 1. Data Review During this task all available data for the project area will be collated and reviewed. This includes geological, hydrogeological, groundwater monitoring, meteorological data and National Groundwater Archive data. A review will be conducted, and interpretations performed to establish a conceptual idea of the hydrogeological nature of the area and what risks currently exists. 2. Hydrocensus

Study	Terms of Reference
	During the hydrocensus important data pertaining to the current groundwater conditions and use will be collected. This will include localities of current groundwater abstraction points (boreholes, hand dug wells or springs), ownership, current usage volumes and types, equipment and groundwater levels. Groundwater samples (5 samples) will be taken from selected boreholes. The hydrocensus will include: ❖ A groundwater use assessment within a 1-kilometre radius of the TSF; and ❖ Sampling of accessible boreholes and springs. A spectrum of determinants will be analysed. The samples will be sent to a SANAS accredited laboratory for inorganic analyses. ❖ This data together with its spatial distribution will determine the current water resource and environmental status and serve as reference to the proposed reclamation. ❖ Data from the Department of Water and Sanitation will be sourced to help define water use and borehole localities in the area. 3. <u>Reporting</u> An impact assessment report will present the results and interpretations of the groundwater desktop and hydrocensus assessments, with an indication of potential current impacts. The impact assessment report will include the following: ❖ Characteristics of the local groundwater environment, including current groundwater use and groundwater qualities; ❖ Definition of the local geology and potential roles the structural geology and depth of weathering may play in surface water-groundwater interactions; ❖ Identification of potential hydrogeological impacts and sensitive receptors associated with the reclamation activities; and ❖ A groundwater monitoring network that will effectively monitor the groundwater quality and level changes during the reclamation phase and after closure.

Study	Terms of Reference
Air Quality	**Baseline Assessment** The baseline assessment will consist of a desktop assessment. The objective will be to inform the subsequent Air Quality Impact Assessment Study and will include the following: ❖ Literature review of air pollutant emissions from Tailing Facilities. ❖ Literature review of potential health effects associated with these emissions. ❖ Outlining of relevant air quality legislation and ambient air quality standards. ❖ Description of the site location, topography, general surroundings of the site, as well as the relevant site-specific ❖ environment. ❖ Establishment of the baseline air quality from Air Quality Management Plans and Air Quality Monitoring Reports in the area. ❖ Description of the nature of other major sources of air pollution in the study area. ❖ Sourcing and evaluation of local meteorological data to determine the prevailing meteorological conditions. ❖ Sourcing and evaluation of Weather and Research Forecasting Model (WRF) meteorological data to facilitate modelling. The baseline assessment will include: ❖ Site Location and Topography ❖ Air Quality Legislation and Standards ❖ Health Effects of Particulate Pollutants ❖ Regional Meteorological Overview ❖ Ambient Air Quality ❖ Local Meteorology

Study	Terms of Reference
	Impact Assessment Preparation of the Air Quality Impact Assessment will include and be based on the information from the scoping/baseline assessment and will also include: ❖ Compilation of an emissions inventory – a list of activities which are sources of air pollution in the project. ❖ Characterisation of the emission sources and the pollutants emitted from them. ❖ Calculations of emission rates from the sources identified in the emissions inventory. ❖ Preparation of Met data for modelling. Determining and preparing the input parameters for modelling: ❖ Source type. ❖ Source dimensions: lateral, vertical. ❖ Source location and orientation. ❖ Emission rate. ❖ Receptor grid. ❖ Dispersion modelling of the emissions, using the AERMOD model, to predict maximum ground level concentrations of particulate pollutants resulting from the activities and to determine the zones of influence around the emission sources accordingly. ❖ Presentation of model outputs/results in the form of contour plots and a summary of the results. ❖ Evaluation of the results of the air dispersion modelling against NAAQS as set out by the Department of Environment, Forestry and Fisheries (DEFF). ❖ Assessment of any potential cumulative impacts in terms of the NAAQS. ❖ Provision of practical and implementable mitigation measures by which to manage and reduce the identified impacts where necessary. ❖ A recommendation in terms of an air quality monitoring programme if necessary.

Study	Terms of Reference
Heritage & Palaeontology	**Impact Assessment:** The Heritage Scoping Report will be compiled in compliance with NHRA and the NEMA. The HIA process consists of three steps: 1. Literature Review and initial site analysis: The background information to the field survey relies greatly on the Heritage Background Research which was undertaken through archival research and evaluation of aerial photography and topographical maps of the study area. 2. Physical Survey: A physical survey is subsequently conducted on foot through the Proposed Project area by a qualified heritage specialist/s (e.g. an archaeologist and a palaeontologist)) and is aimed at locating and documenting sites falling within and adjacent to the proposed development footprint. 3. The final step involves the recording and documentation of relevant heritage resources identified in the physical survey, the assessment of resources in terms of the HIA criteria and report writing, as well as mapping and constructive recommendations. The significance of heritage sites is based on four main criteria in accordance with site integrity (i.e. primary vs. secondary context), amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures), and density of scatter (dispersed scatter): ❖ Low - <10/50m^2 ❖ Medium - 10-50/50m^2 ❖ High - >50/50m^2 ❖ Uniqueness.

Study	Terms of Reference

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A - No further action necessary;
- B - Mapping of the site and controlled sampling required;
- C - No-go or relocate development activity position;
- D - Preserve site, or extensive data collection and mapping of the site; and
- E - Preserve site.

Impacts on these sites by the development will be evaluated as follows:

Site significance classification standards prescribed by the SAHRA (2006) and approved by the ASAPA for the Southern African Development Community (SADC) region, were used for the purpose of this report.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	**Conservation; National Site nomination**
Provincial Significance (PS)	Grade 2	-	**Conservation; Provincial Site nomination**
Local Significance (LS)	Grade 3A	High Significance	**Conservation; Mitigation not advised**
Local Significance (LS)	Grade 3B	High Significance	**Mitigation (Part of site should be retained)**
Generally Protected A (GP. A)	-	High / Medium Significance	**Mitigation before destruction**
Generally Protected B (GP. B)	-	Medium Significance	**Recording before destruction**
Generally Protected C (GP. A)	**-**	**Low Significance**	**Destruction**

Study	Terms of Reference
Social Impact Assessment	The objective of the Social Impact Assessment (SIA) is to is to: ❖ Assess the social impacts of the Proposed Project including any impacts on local infrastructure and services; ❖ Recommend mitigation measures to minimise adverse impacts and maximise benefits of the Project; and ❖ Facilitate the consideration of alternatives. The SIA will use both quantitative and qualitative data collection techniques. In terms of the quantitative data, data from Statistics SA was used to understand the local social circumstances of the Proposed Project area. This method was used to gather baseline information for the purposes of the Scoping report. The qualitative method includes focus group meetings and in-depth interviews will be conducted to understand the affected communities' perceptions, how they view themselves and the environment around them. Qualitative date will be collected as the project progresses. The SIA will use the following sets of data to inform the study: ❖ An investigative site visit; ❖ Interviews with Ward Councillors, municipal officials, directly affected land owners/occupiers ❖ Statistics South Africa data; ❖ A literature review of the Integrated Development Plan and the Spatial Development Framework; and ❖ Scan and analysis of the Comments and Responses Report and various specialist studies (Compiled by Kongiwe Environmental)
Traffic Impact Assessment	The Impact Assessment Methodology assists in evaluating the overall effect of a proposed activity on the environment. The environmental impact is determined through a systematic analysis of the various components of the impact. This is undertaken using information that is available to the environmental practitioner through the process of the environmental impact assessment. The impact evaluation of predicted impacts is undertaken through an assessment of the significance of the impacts. Significance is determined through a synthesis of impact characteristics which include context and intensity of an impact. Context refers to the geographical scale i.e. site, local, national, or global whereas intensity is defined by the severity of the impact e.g. the magnitude of deviation from background conditions, the size of the area affected, the duration of the impact,

Study	Terms of Reference
	and the overall probability of occurrence. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact. Significance is calculated using the Ratings Table which will be used in the Impact Assessment. Impact assessment takes account of the nature, scale, and duration of the effects on the environment whether such effects are positive (beneficial) or negative (detrimental). Each issue/impact is also assessed according to the project stages: ❖ Planning ❖ Construction ❖ Operation ❖ Decommissioning ❖ Rehabilitation Where necessary, the proposal for mitigation or optimisation of an impact is detailed. A brief discussion of the impact and the rationale behind the assessment of its significance is included. A rating system is used to classify the impacts. The rating system is applied to the potential impact on the receiving environment and includes an objective evaluation of the mitigation of the impact.

10.4 Methodology Proposed

The EIA will be undertaken according to the method detailed below. This methodology is compliant with the NEMA 2014 EIA Regulations, as amended in 2017 and 2021.

Generally, the impact assessment is divided into three parts:

- **Issue identification** – each specialist will be asked to evaluate the 'aspects' arising from the project description and ensure that all issues in their area of expertise have been identified;
- **Impact definition** – positive and negative impacts associated with these issues (and any others not included) then need to be defined – the definition statement should include the activity (source of impact), aspect and receptor as well as whether the impact is direct, indirect or cumulative. Fatal flaws should also be identified at this stage; and
- **Impact evaluation** – this is not a purely objective and quantitative exercise. It has a subjective element, often using judgement and values as much as science-based criteria and standards. The need therefore exists to clearly explain how impacts have been interpreted so that others can see the weight attached to different factors and can understand the rationale of the assessment.

To understand the impact evaluation, the sensitivity of the receiving environment, the effect on the receiving environment and the significance of the impacts, these three points above need to be clearly described. The impact assessment methodology that will be used during the EIA Phase is described in Chapter 9.

10.4.1 Assessment of the Duration of significance

Duration of significance of impacts will be assessed using the following criteria, where the duration of time relates to how long that impact will occur for during that phase of the project. Specific durations will be allocated to each project phase in the EIA document where the detailed impact assessment rating will be undertaken. For example, for the operational phase:

- Short term: Up to 18 months;
- Medium term: 18 months to 5 years; and
- Long term: Longer than 5 years.

10.4.2 Stages at which the Competent Authority will be consulted

The DMRE and Commenting Authorities will be consulted at various stages during the EIA process. This includes:

- Pre-application meetings;
- Announcement and Scoping Phase; and
- EIA Phase.

10.4.3 Public Participation to be undertaken during the EIA Phase

Stakeholder engagement during the EIA Phase involves a review of the findings of the impact assessment presented in the EIA Report for public comment which will be made available. Stakeholders will be notified using the following:

- Media advertisements in the same newspapers used during the Scoping Phase to announce the availability of the EIA Report for public comment;
- Registered stakeholders will be informed by way of personal letters/ SMS distributed by mail and e-mail in advance of the report being available; and
- Stakeholders will be invited to attend one of two public open days where the contents of the EIA Report will be presented, and stakeholders will have an opportunity to comment. Details of the meetings will be confirmed closer to the time of the meetings.

Following the availability of the EIA Report, meetings with relevant stakeholders will be undertaken. During the EIA Phase, stakeholders will be invited to comment on the EIA Report in any of the following ways:

- By raising comments during key stakeholder/ public meetings where the content of the EIA Report will be presented;
- By completing comments sheets available with the report at public places, and by submitting additional written comments, by email, fax or by telephone, to Kongiwe;
- The EIA Report will be available for comment for a period of 30 days at public places in the project area, sent to stakeholders who request a copy, and placed on the Kongiwe website.

All comments and issues raised during the 30-day public comment period will be incorporated into the final EIA Report to be submitted to the competent and commenting authorities. Description of the information to be provided to stakeholders includes:

- The project description (final site layout, all alternatives investigated) and the surrounding baseline environment;
- Findings from the specialist studies undertaken;
- Potential biophysical and socio-economic impacts during construction, operations, closure and decommissioning phases of the project;
- Management/ mitigation measures developed to address the potential impacts;
- The closure objectives, plan and financial provision; and
- Details on how stakeholders can comment on the EIA Report.

10.4.4 Tasks to be undertaken during the Environmental Impact Phase

The plan of study for the EIA Report is set out below for review by the authorities and stakeholders. The rationale for the different levels of study for the various environmental components will be taken from the issues raised by stakeholders, the expected severity of impacts and the level of confidence required in

their prediction. The level of information required to develop adequate, practical management and mitigation measures was also a consideration in determining the terms of reference of studies.

Within the EIA Phase, the EIA Report, IWUL and stakeholder engagement activities will run concurrently. During the EIA Phase, the following will be undertaken:

- Specialists will conduct and complete specialist impact assessments. Workshops will be held with specialists to workshop all potential impacts and integrate specialist studies;
- Stakeholder engagement materials will be prepared (advertisements, notification letters, site notices), and public open days, focused group meetings and consultation with affected landowners will be undertaken;
- An EIA Report will be compiled, and management measures and commitments workshopped with Ergo;
- The EIA Report will be made available for public review and comment; and
- The revised EIA Report, including public comments and responses, will be submitted to authorities for decision-making.

10.4.5 Mitigation, Management and Monitoring of Identified Impacts

The summary of potential issues identified during the Scoping Phase of the project have been indicated in Section 9.4.5. These impacts require further investigation during the EIA Phase. Section 9 provides an indication of the independent specialist studies, field surveys and assessments that are required to form part of the EIA Phase. The specialist studies will consider the footprint proposed for the TSF Reclamation project, including all associated infrastructure. With this information, the Proposed Project will be able to fully assess and investigate the feasible and reasonable alternatives proposed in Chapter 6.

The possible mitigation measures that could be applied and the level of risk is depicted as follows:

The potential impacts identified for the reclamation of the Proposed Project have been described below. It is important to note that these impacts have not been ground-truthed or rated for significance. The impacts have been described based on the current status of the site, as well as existing information assessed at a desktop level. The below impacts, and other identified impacts, will be fully described during the Environmental Impact Assessment (EIA) phase.

Table 10-2: High Level Mitigation Measures for Potential Impacts Identified for the Project.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
Construction			
Construction of infrastructure, temporary infrastructure, pipelines and potential roads. All necessary activities involved with site preparation including site clearing.	**Socio-economic:** ❖ Potential for further contractor opportunities; ❖ Disruption of movement patterns and other displacement impacts; ❖ Project-induced population influx ; ❖ Local & regional economic development; and ❖ Increase in the availability of land **The removal of the TSF will result in certain short-term impacts, however, it is envisaged that the long term impact will be positive.**		❖ Attempt to extend goods and services from local businesses who are BBBEE compliant and currently contracted by Ergo's subsidiaries. ❖ If jobs are available, Ergo should ensure that local communities are made aware of the employment opportunities by means of a structured stakeholder engagement programme. ❖ Develop skills development and training targets for local procurement and include these in contractor management plans; ❖ Successfully complete the removal of the TSF and the rehabilitation of the remaining footprint to prevent the creation of new/more contaminated areas; and ❖ Assess end-land uses for each individual rehabilitated site. Rehabilitation must be consistent with the relevant end land-use objectives of closure plans
	Air quality: Short-term air quality impacts could arise from: ❖ Increased particulate matter (PM_{10} and $PM_{2.5}$) load in the atmosphere leading to deteriorated air quality. **The removal/reclamation of the TSF will result in the reduction of current air quality**		❖ Regular, light watering of unpaved roads; ❖ Strict speed control on unpaved roads; ❖ Wet suppression wherever possible, ❖ Wind-speed reduction barriers around construction sites.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	issues. There is a long-term positive impact envisaged.		
	Noise: Construction activities will result in a short-term increase in noise levels. **Noise impacts are anticipated to only contribute to the surrounding ambient sound levels for a short period of time.**		❖ Undertake construction operations during working hours only. ❖ Construction equipment should be properly maintained and switched off when not operational. ❖ Regular planned vehicle services are considered best practise. ❖ Comply with the Gauteng Noise Control Regulations
	Surface Water: Potential pollution from: ❖ Increase sedimentation on downstream watercourses due to exposed surfaces resulting in siltation of surface water resources. ❖ Mixing of upstream clean water runoff with dirty water runoff from cleared site areas. ❖ Potential for flooding of pipeline structures at river crossings. ❖ Seepages/spillages of excess rainfall stored on the TSF and the existing paddocks. **The removal/reclamation of the TSF will result in the removal of a source of**		❖ The runoff from the upstream clean water catchment is to be diverted away from the proposed infrastructure. ❖ Infrastructure to be established should be outside any modelled flood lines. ❖ Surface water quality monitoring must be implemented according to a detailed plan. ❖ Dirty water runoff should be captured and contained within the dedicated storage facility such as the existing paddocks. ❖ 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.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	environmental pollution.		
	Groundwater: Decrease in surface and groundwater quality as a result of water. **The removal/reclamation of the TSF will result in the removal of a source of environmental pollution.**		❖ Surface water management measures must ensure that runoff and dirty water spills are contained; ❖ Implement a detailed groundwater monitoring plan for the project as described in the ground water impact report.
	Wetland: Potential loss and disturbance of wetland and aquatic habitat due to site preparation and clearing of vegetation. There could also be alien plant infestation due to the disturbance. **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.**		❖ Adhere to any prescribed buffers should any be recommended; ❖ Adhere to the recommendations proposed in the surface water and groundwater reports; ❖ Minimise the footprint of any areas disturbed during construction; ❖ 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). ❖ Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities; ❖ A rehabilitation Plan for disturbed wetland must be in place as prescribed by the wetland specialist study.
	Heritage:		❖ Conduct heritage impact assessment to identify heritage sites within the project area.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	❖ Construction activities could cause damage to or destroy any physical heritage resources that may be present in the development footprint areas; ❖ The installation of pipelines and power lines outside of existing servitudes will cause damage to or destroy any physical heritage resources that may be present within the development footprint.		❖ If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken.
	Traffic: ❖ Increase in traffic volumes on existing traffic network. ❖ Cumulative impact on the road surface condition. **This impact is expected to be localised and short-term**.		❖ Traffic signage at site access points ❖ 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.
	Fauna and Flora: ❖ Direct loss of floral species/vegetation types and biodiversity. ❖ Direct habitat loss for species that has established on the TSF. ❖ Alien vegetation recruitment.		❖ Minimise disturbance and destruction of areas that are not going to be directly reclaimed. ❖ In the case of plants, if this is not possible relocation permits may be required. ❖ 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.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
			❖ The risk of habitat fragmentation must be reduced through preservation of natural corridors. ❖ Rehabilitation plans must be initiated during construction to minimise disturbed areas. ❖ Follow any local and national policies and plans regulating and protecting biodiversity in the project area.
OPERATION			
Reclamation of the TSF by Hydraulic Reclamation.	**Socio-economic:** These are anticipated to be the same as those impacts predicted during the construction phase.		❖ These should be read with what is proposed as mitigation measures for the Construction Phase.
	Air quality: These are anticipated to be the same as those impacts predicted during the construction phase. As the TSF will be hydraulically mined, this could create dust fall out.		❖ Regular, light watering of unpaved roads; ❖ Strict speed control on unpaved roads; ❖ 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);
	Noise: Potential impacts include: ❖ Potential for noise disturbance from the operation of the reclamation station and pipelines.		❖ Comply with the Gauteng Noise Control Regulations; ❖ 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. ❖ Regular service maintenance on the pumps and pipelines to mitigate water hammer noise as well as maintaining a constant flow rate during pumping of

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
			water and slurry. ❖ Machines and vehicles used during reclamation must be serviced to ensure noise suppression mechanisms are effective. ❖ Machines and vehicles should be switched off when not in use.
	Surface Water: Potential impacts include: ❖ Overflow of the collection sumps to the downstream surface water resources. ❖ Overflow of the dirty water collected on the TSF during a severe weather event. ❖ Decrease of salt loads reporting to the waterbodies/watercourse in the area due to reduction in discharges		❖ The pumps located at each of the sumps should be installed within closed off/bunded areas to contain material spillages. ❖ In times of power failure, manual monitoring of the sump associated with the reclamation station should be carried out. ❖ Overflow channels should be constructed so as to contain any spillages that do occur into the pollution control area.
	Groundwater: Seepage from the TSF and existing Paddocks could negatively influence the groundwater quality in the underlying aquifers during the operational phase.		❖ These are expected to be the same as the mitigation measures proposed for the Construction phase. Mitigation would thus include: ○ Continuous monitoring of groundwater quality.
	Wetlands and Aquatics: Potential impacts include: ❖ Continued loss of water input into		❖ Adhere to any prescribed buffers, should any be recommended; ❖ Adhere to the recommendations proposed in the surface water and groundwater reports;

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	surrounding watercourses ❖ Pipeline could pollute the watercourse if failure of the pipeline occurs; ❖ Potential for sedimentation and salt loading in the watercourse ❖ Potential to discharge treated water, if required. The pipelines are designed to minimise spillages and failure as far as possible.		❖ Minimise the footprint of any areas disturbed during construction; ❖ 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). ❖ Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities; ❖ A rehabilitation plan for disturbed wetland must be in place as prescribed by the wetland specialist study. ❖ 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.
	Heritage: During operation, the sources of risk to heritage resources are primarily restricted to the processes associated with the hydraulic reclamation of the historical TSF. This will be confirmed by a Heritage Impact Assessment.		❖ Conduct heritage impact assessment to identify heritage sites within the project area ❖ If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken
	Traffic: These are expected to be the same as		❖ Mitigation measures for the construction phase

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	for construction.		apply here
	Fauna and Flora: The major impacts are expected during construction. During operation, the following impact could occur: ❖ Disturbance of local biodiversity during operation and routine maintenance. ❖ Potential for windblown particulates to pollute habitat quality.		❖ Minimise disturbance and destruction of areas that are not going to be directly reclaimed. ❖ Create awareness regarding environmental preservation amongst all personnel involved in the TSF reclamation project. ❖ Monitor surrounding vegetation to assess the affect the reclamation activities on the said vegetation.
DECOMMISSIONING			
Completed Reclamation of the TSF.	**Socio-economic:** Potential impacts include: ❖ Improved Quality of life. ❖ Increased access to land. ❖ Potential for dependency on the Project for sustaining the local economy.		❖ Appointment of workforce and investment in the local economywhere applicable during rehabilitation.
Rehabilitation to Red Earth and the removal of infrastructure.	**Air quality:** The final rehabilitation of the TSF 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.		❖ Monitoring dust levels on site, at upwind and downwind locations preferably at discrete receptors (if identified).

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	Noise: 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 similar.		❖ Refer to the construction phase mitigation measures.
	Surface Water: Potential impacts include: ❖ Water pollution from accidental spillages of decommissioned infrastructure. ❖ Residual water pollution from rehabilitated infrastructure footprint post closure.		❖ Ensure that the pipelines are emptied of all residual material before decommissioning. ❖ 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. ❖ It should be ensured that the potential future impacts from the reclamation of the TSF has been identified. ❖ The final topography should be planned, as far as possible, to be free-draining.
	Groundwater: If Seepage continues, this could negatively influence the groundwater quality in the underlying aquifers.		❖ These are expected to be the same as the mitigation measures proposed for the Construction and operation phase.
	Wetlands and Aquatics: Potential impacts include those associated with removing site infrastructure, including pipelines.		❖ Rehabilitation of the footprint must be done according to the Rehabilitation Plan. ❖ Pipelines must be flushed clean and rendered safe for decommissioning and removal.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
			❖ Decommissioning and rehabilitation should be done in the dry season. However, it is recommended that seeding be done with the first rains.
	Heritage: No sources of risk to heritage resources are envisaged for the decommissioning phase of the project at this stage. However, if structures older than 60 or 100 years at the time of decommissioning exists, these may be impacted upon by decommissioning.		❖ Conduct heritage impact assessment to identify heritage sites within the project area. ❖ If any heritage sites are identified, appropriate steps as per the Heritage Resources Act will be undertaken.
	Traffic: These are expected to be the same as for construction.		❖ Mitigation measures for the construction phase apply here.
	Fauna and Flora: No impacts are envisioned during this stage.		❖ Follow a detailed rehabilitation plan. ❖ Minimise disturbed areas. ❖ Follow any local and national policies and plans regulating and protecting biodiversity in the project area.

10.5 Other Information Requirements

10.5.1 Impact on the Socio-economic Conditions of any Directly Affected Parties

A Social Impact Assessment will be undertaken and will be finalised during the EIA Phase. Potential Social impacts have been included in Table 10-2.

10.5.2 Impact on any National Estate referred to in Section 3(2) of the National Heritage Resources Act

Heritage Sensitivity

As a historical mining site, several areas containing historical mining and residential structures are likely to be impacted by the Proposed Project. The TSF may also represent 'Historical Settlements and Townscapes' as per the NHRA if it was established more than 60 years ago. The TSF and other associated mining infrastructure are integral components of the historical mining townscapes and settlements of the East Rand.

Additionally, a few areas containing graves and burial grounds could also be impacted by the Proposed Project. Heritage sensitivity will be further assessed during the EIA phase.

11 Declaration of Independence

11.1 Undertaking Regarding Correctness of Information

I, **Gerlinde Wilreker**, herewith undertake that the information provided in the foregoing report is correct.

Signature of EAP

DATE: 09 February 2023

11.2 Undertaking Regarding Level of Agreement

I, **Gerlinde Wilreker**, herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with interested and Affected Parties and stakeholders has been correctly recorded and reported herein.

Signature of EAP

DATE:09 February 2023

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APPENDIX A:
Project Team CV's

Curriculum Vitae – Bradly Thornton

Chief Executive Officer

Qualifications
- Management Development Program, University of Stellenbosch Business School Executive Development, 2012
- B.SC. Hons Environmental Management, RAU, 2004
- B.Sc. Geography & Geology, RAU, 2003

Languages
- English – Fluent
- Afrikaans – Average

Countries Worked in
- South Africa
- Botswana
- Namibia
- Malawi
- Ghana
- Mozambique
- Zimbabwe

Bradly is the CEO of Kongiwe Environmental (Pty) Ltd. He has 18 years' work experience in Environmental Management and Geographic Information Systems (GIS). His roles include the executive management responsibilities of Kongiwe Environmental, project management of client projects, client and business development, marketing and quality assurance and corporate compliance.

His skills include:

- Proven track record in project management of environmental projects to required quality standards, timeframes and budgets.
- Executive experience in business management and business development.
- Exceptional client relationship and managerial skills.
- Proactive leader and team player, flexible and versatile.
- 18 Years work experience in Environmental Management and Geographic Information Systems (GIS).

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Environmental Authorisations						
Ergo Mining: Reclamation and Reprocessing of the 5L23 Dump	2022	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Ergo Mining: Reclamation and Reprocessing of 7L3 dump	2021-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Sibanye Kloof EMP and IWUL Amendments	2020-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of the existing EMP and IWUL	Project Director	Project Management
Sibanye Driefontein EMP and IWUL Amendments	2020-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of the existing EMP and IWUL	Project Director	Project Management
Ergo Mining: Reclamation and Reprocessing of the Valley Silts	2019-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Ergo Mining: Reclamation and Reprocessing of the Soweto Cluster	2019-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2019-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-current	Gauteng, South Africa	DRDGOLD Ltd	Environmental Authorisations and IWULA	Project Manager	Project management of EIA process
Leslie 1 Coal Project	2017-current	Mpumalanga Province, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Project Manager	Project management of EIA process
Umsimbithi eMakhazeni Mining Project	2017- current	Mpumalanga, South Africa	Umsimbithi Mining (Pty) Ltd	Environmental Authorisations for the proposed Umsimbithi eMakhazeni Project	Project Director	Project management of EIA process
Lephalale Coal and Power Project	2017- current	Limpopo, South Africa	Dedicoal (Pty) Ltd	Environmental Authorisations for the proposed Lephalale Coal & Power Project	Project Director	Project management of EIA process
EIA for Road Re-Alignment at Tweefontein Phase 2	2015	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	EIA for Road Re-Alignment at Tweefontein Phase 2	Project Director	Project management of EIA process
Songwe Hill Rare Earth Project	2014 - 2022	Malawi	Mkango Resources Ltd.	Songwe Hill Rare Earth Project ESHIA	Project Manager	Project management of ESIA processes

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Klipspruit Mine Extensions: Environmental Authorisations	2014	Mpumalanga, South Africa	BHP Billiton Energy Coal South Africa	Klipspruit Mine Extensions: Environmental Authorisations	Project Manager	Project management of EIA process
EIA for proposed Solar Power Plants	2012	Wes tern & Northern Cape, South Africa	BSG Resources Ltd / Orlight SA (Pty) Ltd.	EIA for proposed Solar Power Plants	Consultant	Supervision of Visual Impact Assessments as specialist study component of the EIA, Input into EIA and GIS
ERGO EMPR upgrade	2008	Gauteng, South Africa	DRDGOLD Ltd	ERGO EMPR upgrade	Project Manager	Project management of EMPR upgrade for Ergo gold processing plant
EMPR amendment for Mimosa Colliery	2008	Mpumalanga, South Africa	Northern Coal	EMPR amendment for Mimosa Colliery	Project Manager	Project Management of EMPR amendment
Closure Costing						
Annual Closure Cost Assessment	2013	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	Annual Closure Cost Assessment	Project Director	
Auditing						
Glencore 2022 Audits	2022	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor
Glencore 2021 Audits	2021	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Sibanye External Audits	2019 - 2020	Gauteng, Mpumalanga and Free State Provinces South Africa	Sibanye-Stillwater (Pty) Ltd	External audits of EMPr's for the operations in Gauteng, Mpumalanga and Free State Provinces	Project Director	Technical review, Auditor
Glencore 2020 Audits	2020	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor
Glencore 2019 Audits	2019	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor
Glencore 2018 Audits	2018	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor
Glencore 2017 Audits	2017	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Project Director	Project Director and Lead Auditor
Environmental Audit	2015	Mpumalanga, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental Audit	Project Director	Project Director and Lead Auditor
Due Diligence & ESG						
Mkango Resources ESG reporting	2020 - current	Malawi	Mkango Resources Ltd.	ESG reporting	Project Manager	Project management

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Woestalleen Due Diligence	2020-2021	Mpumalanga Province South Africa	Woestalleen Colliery	Due Diligence	Project Manager	Project management
RAUBEX Beitbridge border upgrade	2019 – present	Zimbabwe	Raubex Building (Pty) Ltd	Environmental authorisations, due diligence and ESG assistance	Project Director	Project Director
Zonnebloem Complex	2018	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	Gap Analysis	Environmental Consultant	Environmental Legal Gap Analysis
Environmental Liability	2014	Mpumalanga, South Africa	Xstract Mining Consultants	Environmental liability statement for Mineral Experts Report in support of demerger of an international mining company.	Project Manager	Project Manager
GIS						
Acid Mine Drainage project - Witwatersrand	2012	Gauteng, Johannesburg	TCTA	Acid Mine Drainage project - Witwatersrand	GIS Consultant	Supervision of GIS
Environmental services for Ivanplats mine.	2011	Limpopo, South Africa	Ivanplats	Environmental work for Ivanplats mine.	GIS Consultant	Supervision of GIS on various projects
Nzoro Hydropower Stations	2011	Democratic Republic of Congo	Randgold Resources	Nzoro Hydropower Stations	GIS Consultant	Supervision of GIS.
Hyperspectral Remote Sensing	2011	Limpopo, South Africa	Xstrata Coal South Africa	Hyperspectral Remote Sensing	Project Manager	Project management of remote sensing project to identify alien vegetation, hydrocarbon spillages and assessment of vegetation health.

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Site Selection: Matla Coal	2010	Mpumalanga, South Africa	Exxaro Resources	Site Selection: Matla Coal	GIS Consultant	GIS: Site selection of suitable location for new brine ponds
Koidu Mine Expansion	2010	Sierra Leone	Koidu Holdings	EIA for Koidu mine expansion	GIS Consultant	GIS support
Kibali Mining Project	2010	Democratic Republic of Congo	Randgold Resources	EIA for Kibali Mining Project	GIS Consultant	GIS support
Biodiversity Land Management Plans	2010	Mpumalanga, South Africa	Xstrata Coal South Africa	Biodiversity Land Management Plans	GIS Consultant	GIS supervision in development of GIS based biodiversity management plans
Thermal Remote Sensing	2010	Mpumalanga, South Africa	Xstrata Coal South Africa	Thermal Remote Sensing	Project Manager	Project management, thermal remote sensing for detection of spontaneous combustion on coal discard dumps
Khutala Lightning strike risk analysis	2009	Mpumalanga, South Africa	BHP Billiton Energy Coal South Africa	Khutala Lightning strike risk analysis	GIS Consultant	GIS based lightning risk analysis
Mmamabula Energy Projects	2009	Botswana	CIC Resources	Mmamabula Energy Projects	GIS Consultant	Supervision of GIS and technical inputs
EIA for Valencia Mine	2008	Namibia	Valencia Uranium	EIA for Valencia Mine	GIS Consultant	GIS and Visual Impact Assessment

Curriculum Vitae – Michael Hennessy

Legal Director

Qualifications
- B.A. (English Literature and Philosophy), University of Natal, 1973
- LL.B., University of Natal, 1975
- B.Com. (Hons.), University of South Africa, 1984

Languages
- English – Fluent
- Afrikaans - Fluent
- Spanish – Conversational

Countries Worked in
- South Africa
- UK (4 years)
- Work experience in Russia, China, Colombia, Japan, South Korea and various European countries

Michael is the Legal Director at Kongiwe Environmental (Pty) Ltd. He has some 40 years' experience in the Resources industry, including coal and oil. He has run his own consultancy focussed on mining title and project development. His particular expertise lies in Mining and Environmental Law, in particular, the application of mining and environmental legislation to new prospecting and mining projects.

His skills include:

- Applications for Prospecting and Mining Rights;
- Environmental Authorisations;
- Legal Opinions on Mining and associated Projects; and
- Gap analyses and Due Diligences.

PROJECT EXPERIENCE (Since 2011)

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Prospecting Rights						
Gold tailings retreatment	Various applications between 2011 - 2015	Gauteng Province, South Africa	DRDGold	Applications for prospecting rights on tailings dams	Project Manager	Compilation of all documentation, submission of applications
Agnes Gold Mine	2011	Mpumalanga Province, South Africa	Galaxy Mining Resources	Application for two prospecting rights on greenfields areas	Project Manager	Compilation of all documentation, submission of applications
Temo Coal	2013	Limpopo Province, South Africa	Namane Resources	Application for two prospecting rights on greenfields areas	Project Manager	Compilation of all documentation, submission of applications
Platinum	2015	Limpopo Province, South Africa	Anglo Platinum	Application for renewal of three prospecting rights	Project Manager	Compilation of all documentation, submission of applications
Gold	2014	Gauteng Province, South Africa	DRDGold	Renewal of Prospecting Right	Project support	Submission of renewal application
Mining Rights						
Platinum project	2011 - 2013	Limpopo Province, South Africa	Plat Reef Resources	Application for mining rights on greenfields area	Project support	Compilation of all documentation, submission of applications
Coal mine development	2011	Limpopo Province, South Africa	Namane Resources	Application for mining rights on Greenfields area	Project Support	Compilation of all documentation, submission of applications
Coal mine development	2011	Limpopo Province, South Africa	Coal of Africa	Mining work programme	Project support	

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Gold mine project	2015	Mpumalanga Province, South Africa	Galaxy Gold	Application for mining rights to re-develop historic gold mine	Project support	Compilation of all documentation, submission of applications
Coal mine development	2011	Limpopo Province, South Africa	Resgen Resources	Application for mining rights on Greenfields area	Project Support	Compilation of all documentation, submission of applications
Sand mine	2014	Free State Province, South Africa	Copper Sunset Sand	Application for mining right	Project Manager	Compilation of all documentation, submission of applications
Chrome and Platinum Project	2015	Limpopo Province, South Africa	VMIC	Application for mining rights on Greenfields area	Project Support	Compilation of all documentation, submission of applications
Coal mine	2016	Gauteng Province, South Africa	Oakleaf	Application for mining rights on Greenfields area	Project Support	Compilation of all documentation, submission of applications
Environmental Authorisations						
Sibanye Driefontein Operation EMPr & WUL Amendment	2020-current	Gauteng, South Africa	Sibanye-Stillwater (Pty) Ltd	EMPr & WUL Amendment	Project support	Review of Specialist reports and final EIA/EMP
Makeean Polymers cc: Atmospheric Emissions Licencing.	2020-2021	Gauteng South Africa	Makeean Polymers cc	Environmental Authorisation	Project support	Review of Specialist reports and final EIA/EMP
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Project support	Review of Specialist reports and final EIA/EMP
Ergo Mining: Reclamation and	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Project support	Review of Specialist reports and final EIA/EMP

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Reprocessing of the City Deep Dumps						
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Project support	Review of Specialist reports and final EIA/EMP
Leslie 1 Project	2017-current	Mpumalanga Province, South Africa	Glencore Operation (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Project support	Review of Specialist reports and final EIA/EMP
Umsimbithi eMakhazeni Mining Project	2017-current	Mpumalanga Province, South Africa	Umsimbithi Mininng (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Project support	Review of Specialist reports and final EIA/EMP
Lephalale Coal and Power Project	2017-current	Limpopo Province, South Africa	Dedicoal (Pty) Ltd	Environmental authorisation process for the Lephalale Coal and Power Project	Project support	Review of Specialist reports and final EIA/EMP
Agnes Gold mine	2016	Mpumalanga Province, South Africa	Galaxy Gold	Amended EIA/EMP for existing gold mine	Project support	Review of Specialist reports and final EIA/EMP
Lead/zinc mine	2015	Northern Cape Province, South Africa	Vedanta	Full EIA/EMP for new mine	Project support	Review of Specialist reports and final EIA/EMP
Mawetse Gold project	2016	Limpopo Province, South Africa	Mawetse Mining	Full EIA/EMP for new mine	Project Manager	Co-ordinate specialist reports, Review final EMP
Sand mine	2016	Free State Province, South Africa	Copper Sunset Sand	Full EIA/EMP for extension to mining right area	Project support	Review final EMP

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Legal Opinions						
Waste licence	2016	Free State Province, South Africa	Muva Group	Opinion on application of NEMA and Listed Activities	Project Manager	Draft and submit Legal Opinion on application of NEMA
Mining claims	2016	Limpopo Province, South Africa	Triangle City	Opinion on application of MPRDA to historic claims and tailings	Project Manager	Draft and submit Legal Opinion
Application of NEMA Regulations to a powerline	2015	Gauteng Province	TCTA	Opinion on whether NEMA Regulations apply to particular power line	Project Manager	Draft and submit Legal Opinion
Variation of mining right	2015	Limpopo Province South Africa	Resgen Resources	Advice on application of Section 102 of MPRDA	Project Manager	Draft and submit Legal Opinion
NEMA amendments	2014	Gauteng Province	Digby Wells	Analysis of 2014 NEMA Regulations	Project Manager	Draft and submit Legal Opinion
Rooikat	2013	Northern Cape Province, South Africa	Advisian	Opinion on application of MPRDA for mineral extraction	Project Manager	Draft and submit Legal Opinion on application of MPRDA for mineral extraction
Auditing						
GOSA Audits	2017 -2022	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 63 Environmental Authorisations for the Coal operations in Mpumalanga	Project support	Report review
Power line	2016	Mpumalanga Province South Africa	Eskom	Audit compliance with EIA and water use licence	Project support	Compile EIA Report, review consolidated report
Coal mines	2015, 2016	Mpumalanga Province South Africa	Exxaro	Audit of compliance with permits and licences	Project support	Report review

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Coal mines	2014, 2015	Mpumalanga Province South Africa	Total Coal	Audit of compliance with permits and licences	Project support	Report review
Coal mines	2014, 2015	Mpumalanga Province South Africa	Glencore	Audit of compliance with permits and licences	Project support	Report review
Due Diligence						
Woestalleen 2020 Due Diligence	2020	Mpumalanga Province, South Africa	Woestalleen Colliery (Pty) Ltd	Due Diligence	Legal Adviser	Undertake legislative and regulatory review
Raubex JV: Expansion of the Beitbridge Border post	2020	Matabeleland South Province, Zimbabwe	Raubex Zimborders JV	Procedure writing	Legal Adviser	Undertake legislative and regulatory review
Mining and environmental authorisations	2017	International project	Advisian	International project	Legal Adviser	Undertake legislative and regulatory review
Mining and environmental authorisations	2017	International project	Advsian	International project	Legal Adviser	Undertake legislative and regulatory review
Coal	2014	Limpopo Province, South Africa	Dedicoal	Verification of prospecting rights	Legal Adviser on mining title	Undertake review on validity of prospecting rights

Curriculum Vitae – Gerlinde Wilreker

Technical Director

Professional Registration
- South African Council for Natural Science Professionals (SACNASP) – 2009
- Environmental Assessment Practitioners Association of South Africa (EAPASA) – 2019
- International Association of Impact Assessment South Africa

Qualifications
- Management Development Programme, University of Stellenbosch Business School, 2021
- Diploma Environmental Law, University of Johannesburg, 2005
- M.Sc. Environmental Management, RAU, 2004
- B.SC. Hons Environmental Management, RAU, 2002
- B.Sc. Earth Sciences, RAU, 2001

Languages
- English – Fluent
- French – Fluent
- German – Fluent
- Afrikaans – Average

Countries Worked in
- South Africa
- Democratic Republic of Congo
- Mauritania
- Mali
- Senegal
- Zambia

Gerlinde is an Environmental Consultant with over sixteen years' work experience, predominantly in the mining industry. Her practical experience in the mining and construction industry has given her a depth of knowledge regarding project processes from pre-feasibility phases through to implementation. She is adept at working in different contexts, and problem-solving with her team to meet client needs. She has particular expertise in relation to Environmental Authorisation Processes in terms of the South African legal regime.

Her skills include:

- Project Management;
- Environmental Authorisations;
- Environmental Auditing;
- Environmental Control Officer; and
- Gap analyses and Due Diligences.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Environmental Authorisations / Water Use Licences						
Harmony Free State Operations IWULA	2022-2023	Free State Province, South Africa	Harmony Gold	IWULA	Technical Director	Technical review IWWP
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Technical Director	Project Management, Technical review Scoping Report
Ergo Mining: Reclamation and Reprocessing of the 5L23 Dump	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Technical Director	Project Management, Technical review IWWMP
Ubuntu Colliery 2022 RSIP Update	2022	Mpumalanga Province, South Africa	Universal Coal	Updating of the Ubuntu Colliery RSIP	Technical Director	Project Management, Technical review
Wonderfontein Colliery	2020 - 2022	Mpumalanga Province, South Africa	Wonderfontein Cilliery	Assisting with improvements of the Wonderfontein water management systems and IWULA	Technical Director	Project Management, Technical review
Umsimbithi eMakhazeni Mining Project	2019-curent	Mpumalanga Province, South Africa	Umsimbithi Mining (Pty) Ltd	Amendment of Environmental authorisation process for a coal mining project near Belfast	Technical Director	Project Management, Technical review
Sibanye Kloof EMP and IWUL Amendments	2019-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of the existing EMP and IWUL	Technical Director	Project Management, Technical review
Sibanye Driefontein EMP and IWUL Amendments	2019-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of the existing EMP and IWUL	Technical Director	Project Management, Technical review

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2019-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Technical Director	Project Management, Technical review
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018-2020	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Principal Environmental Consultant	Project Management Technical review EAP, IWULA
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-2020	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Principal Environmental Consultant	Project Management Technical review EAP, IWULA
Leslie 1 Project	2017-current	Mpumalanga Province, South Africa	Glencore Operation (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Principal Environmental Consultant	EAP, Project Manager. Managing specialists undertaking the specialist studies for the Environmental Impact Assessment
Umsimbithi eMakhazeni Mining Project	2017-current	Mpumalanga Province, South Africa	Umsimbithi Mining (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Principal Environmental Consultant	EAP, Project Manager. Managing specialists undertaking the specialist studies for the Environmental Impact Assessment
Lephalale Coal and Power Project	2017-2020	Limpopo Province, South Africa	Dedicoal (Pty) Ltd	Environmental authorisation process for the Lephalale Coal and Power Project	Principal Environmental Consultant	EAP, Project Manager. Managing specialists undertaking the specialist studies for the Environmental Impact Assessment

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Exxaro Coal Underground Coal Gasification Project	October 2015 – May 2016:	Limpopo Province, South Africa	Exxaro Coal	Environmental Impact Assessment process for an underground coal gasification project	Environmental Consultant	Project Manager. Managing specialists undertaking the specialist studies for the Environmental Impact Assessment
Fumani Gold Mine	2013 -2015	Limpopo Province, South Africa	Corridor Mining Resources	Environmental Impact Assessment process for the proposed Fumani gold mine	Environmental Consultant	Managing consultants undertaking the EIA for the proposed Fumani gold mine
Kambove Copper Processing Plant	2013	Democratic Republic of Congo	Gécamines	Environmental, Social and Health Impact study (ESHIA) for the processing plant and tailings facilities	Environmental Consultant	Managing consultants undertaking the Environmental, Social and Health Impact study (ESHIA)
PV Pant Authorisation	2012	KwaZulu Natal Province, South Africa	GX Energie	Basic assessment process for a PV plant.	Environmental Consulting	Assisting with BA compilation and public participation
Pering Mine	2009 - 2011	Northern Cape Province, South Africa	Minéro	Environmental Impact Assessment process for the proposed Reivilo lead and Zinc mine	Environmental Consultant	Compiling Scoping and EIA reports, public participation
Exxaro Coal Belfast Project	2008 -2011	Mpumalanga Province, South Africa	Exxaro Coal	Environmental authorisation process for the proposed Belfast Coal Mine	Environmental Consultant	Compiling Scoping and EIA reports, public participation
Closure Costing						
Beeshoek Closure Assessment	2020	Northern Cape, South Africa	Assmang (Pty) Ltd	Mine closure Assessment	Technical Director	Mine Closure requirement assessment

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Principal Environmental Consultant	Closure and Rehabilitation costing
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Principal Environmental Consultant	Closure and Rehabilitation costing
Total Coal Mine Closure Application	July 2015 – June 2016	KwaZulu-Natal, South Africa	Total Coal	Mine closure application and Basic Assessment for the closure of the Steincoalspruit Coal Mine	Environmental Consultant	Project Manager, review of mine closure application document and Basic Assessment, client and authority liaison
Diesel Storage Facilities	2011	South Africa	Basil Read	EMP and closure costings for the installations of various diesel storage facilities throughout South Africa.	Environmental Consultant	EMP and closure costing
Environmental Control Officer						
Black Rock Expansion Project - Environmental Control Officer	2013 – 2015	Northern Cape Province, South Africa	Assmang Black Rock	Black Rock Expansion Project	Environmental Control Officer	Environmental Officer duties which include environmental compliance site visits, managing of contractors and their procedures as per client's EMS
Sishen Ramp-Up Projects – Bucket & Bowl, Life of Mine and	2011 – 2013	Northern Cape Province, South Africa	Kumba Iron Ore	Bucket & Bowl, Life of Mine and various Housing Projects	Environmental Control Officer	Environmental Officer duties which include environmental

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
various Housing Projects						compliance site visits, managing of contractors and their procedures as per client's EMS
Sishen Ramp-Up Projects – Diesel Tanks 5 & 6, Aldag 1 extension, Lakutshona and Sesheng Housing Projects	2011 – 2013	Northern Cape Province, South Africa	Kumba Iron Ore	Diesel Tanks 5 & 6, Aldag 1 extension, Lakutshona and Sesheng Housing Projects	Environmental Control Officer	Environmental Officer duties which include environmental compliance site visits, managing of contractors and their procedures as per client's EMS
Auditing						
GOSA 2022 Audits	2022	Mpumalanga and Kwa-Zulu Natal Provinces South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
GOSA 2021 Audits	2021	Mpumalanga and Kwa-Zulu Natal Provinces South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
GOSA 2020 Audits	2020	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
Sibanye External Audits	2019 - 2020	Gauteng, Mpumalanga and Free State Provinces South Africa	Sibanye-Stillwater (Pty) Ltd	External audits of EMPr's for the operations in Gauteng,	Technical Director	Project Management, client liaison, technical review, Auditor

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
				Mpumalanga and Free State Provinces		
GOSA 2019 Audits	2019	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
GOSA 2018 Audits	2018	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
GOSA 2017	2017	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
Cronimet Legal Compliance	2012-2013	Limpopo Province, South Africa	Cronimet	Legal compliance auditing of Cronimet mine	Environmental auditor	Monthly environmental auditing of chrome mine facilities
PPC Legal Compliance	2005 - 2008	South Africa	PPC	Legal compliance auditing of various quarries across South Africa	Environmental auditor	Monthly environmental auditing of chrome mine facilities
Due Diligence						
Glencore Gap Analysis	2022	Mpumalanga Province South Africa	Glencore Operation (Pty) Ltd	Gap Analysis	Technical Director	Environmental Legal Gap Analysis
Zonnebloem Complex	2018	Mpumalanga Province South Africa	Glencore Operation (Pty) Ltd	Gap Analysis	Principal Environmental Consultant	Environmental Legal Gap Analysis

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Eastplats Due Diligence	2014	North West Province, South Africa	Eastplats	An environmental legislative overview with an associated environmental site assessment, which in turn assessed the availability and status of the various environmental authorizations, permits and licenses required for legislative compliance at the Eastern Plat Asset.	Environmental Consultant	Compiling environmental due diligence
PTM Waterberg Project Concept Study	2013	Limpopo Province, South Africa	Platinum Group Metals	Concept study for Platinum mine in the Waterberg.	Environmental Consultant	Environmental input into the Preliminary Economic Assessment
Facilitation						
AEH (MEH/TEH) Management Systems compilation	2019-2020	Mali Senegal Zambia	EBS Advisory (Pty) Ltd	Compilation of an Environmental Management System for AEH operations in Uganda, Zambia, Mali and Senegal	Support function to the Project Manager at EBS Advisory in the Johannesburg office, primarily with respect to understanding the French ESMS requirements.	Project Management and Client Meetings. Research and Preparation Gap Analysis and ESMS Mapping Report Writing and ESMS complication.
SNIM Iron Ore Project	2014 - 2015	Mauritania	SNIM	Feasibility Study for Iron Ore Plant upgrade	Environmental Consultant	Assisting with the liaison between the client and the engineering team, interpretation services, translation of technical documents

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Gerlinde Isabelle Wilreker

Registration Number: 400261/09

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **11 November 2009** Expires **31 March 2023**

Botha

Chairperson

Chief Executive Officer

To verify this certificate scan this code

Environmental Assessment Practitioners Association of South Africa

Registration No. 2019/1589

Herewith certifies that

Gerlinde Wilreker

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2022

Expires: 28 February 2023

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

Curriculum Vitae – Nokuthula Ndala

Audit & Compliance Director

Professional Registration
-South African Geomatics Council (SAGC) - 2016

Qualifications

- New Managers Development Programme,2022
- BSc (Hons) Environmental Management, UNISA, 2022
- BSc Geoinformatics, University of Pretoria,2013

Languages
- English – Fluent
- IsiNdebele – Fluent
- Setswana– Fluent

Countries Worked in
- South Africa
- Zimbabwe
- Madagascar
- Ivory Coast
- Namibia

Nokuthula is the Audit & Compliance Director at Kongiwe. She is a SAGC registered environmental and GIS consultant with over 8 years' experience in the consulting industry. She graduated with a BSc Hons degree in Environmental Management from Unisa in 2022. Her portfolio covers Auditing and Compliance, while also providing specialist GIS consulting services that have been primarily for the mining and exploration industries, specifically for environmental management, engineering, locational planning and management objectives.

Her skills include:

- Project Management;
- Environmental Compliance Auditing;
- Visual Impact Assessments;
- Creating and managing GIS databases;
- Map Production of IWULA, EIAs, Geophysics studies, specialist reports and assessments;
- Liaising with data suppliers (locally and other African Countries); and
- Data broking- sourcing of geological and satellite imagery remotely.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Environmental Auditing						
GOSA 2022 Audits	2022	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental and GIS Consultant	Project Manager, technical review, auditing
GOSA 2021 Audits	2021	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental and GIS Consultant	Project Manager, technical review, auditing
Sibanye 2020 Audits	2020	Gauteng, South Africa	Sibanye Stillwater (Pty) Ltd	External audits Records of decision	Environmental and GIS Consultant	Project Manager, technical review, auditing
Woestalleen 2020 Due Dilligence	2020	Mpumalanga Province, South Africa	Woestalleen Colliery (Pty) Ltd	Due Diligence	Environmental Consultant	External Audit
GOSA 2020 Audits	2020	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental and GIS Consultant	Project Manager, technical review, auditing
GOSA 2019 Audits	2019	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental and GIS Consultant	Project Manager, technical review, auditing
GOSA 2018 Audits	2018	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the	Environmental auditor	External Audit

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
				Coal operations in Mpumalanga		
GOSA 2017 Glencore	2017	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
ECO						
Raubex 2020 Beitbridge Border Expansion	2020-current	Zimbabwe	Raubex Construction	ECO work for the border expansion project.	ECO and project manager	Pre- construction inspection, Surface water sampling, Dust bucket installation
Visual Impact Assessments						
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	GIS Consultant	Visual Impact Assessment
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	GIS Consultant	Visual Impact Assessment
Leslie 1 Coal Project	March 2018 – September 2018	Mpumalanga Province, South Africa	Anglo Operations South Africa (Pty) Ltd	Visual Impact Assessment	GIS Consultant	Visual Impact Assessment
Umsimbithi eMakhazeni Coal Mining Project	September 2017 – May 2018	Mpumalanga Province, South Africa	Umsimbithi Mining (Pty) Ltd	Visual Impact Assessment	GIS Consultant	Visual Impact Assessment
Eloff Coal Mine	April 2015 – May 2016:	Mpumalanga Province, South Africa	Eloff Mining Company (Pty) Ltd	Environmental Impact Assessment for the extension of the Eloff mine	GIS Technologist	Site visit and visual impact analysis of the proposed extension.

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Reitkuil Mine	2013 -2015	Mpumalanga Province, South Africa	Reitkuil Mine	Environmental Impact Assessment process for the proposed extension of the Reitkuil Mine	GIS Technologist	Receptor identification using Google Earth pro within 10km buffer of the site, identify landscape characteristics of the site, Site visit to validate desktop study results (in-situ data collection)
Exxaro Coal Belfast Project	2014 -2016	Mpumalanga Province, South Africa	Exxaro Coal	Environmental authorisation process for the proposed Belfast Coal Mine	GIS Technologist	Compiling Scoping and EIA reports, public participation maps
Closure Costing						
Total Coal Mine Closure Application	July 2015 – June 2016	KwaZulu-Natal, South Africa	Total Coal	Mine closure application and Basic Assessment for the closure of the Steincoalspruit Coal Mine	GIS Technologist	Closure cost infrastructure mapping and calculations.
Scropion Zinc Financial Provision	2013	South Africa	Scorpion Zinc	Closure cost calculations of existing mine in South Africa.	GIS Technologist	EMP and closure costing mapping and infrastructure calculations
Groundwater and Surface Water Investigations						
Oumjarane Dewatering	2014 – 2016	Morocco, North Africa	Oumjarane	Groundwater hydrology investigation	GIS Technologist	Mapping Hydrocensus Boreholes. Hydrology map which includes DEM, Maider Basement Catchment delineation. Mapping

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
						temperature and conductivity points for the Hydrocenus points of the site
Exxaro Leeuwpan Groundwater and Surface water Study	2013 – 2016	Mpumalanga Province, South Africa	Exxaro Mine	Groundwater and surface water investigation for the proposed Exxaro Mine expansion	GIS Technologist	Floodline Mapping and sub-catchment mapping
Site Selection						
Molo Granite	2014-2015	Madagascar, southeast coast of Africa	DRA	Site selection for proposed Granite Mine	GIS Technician	Site selection analysis and specialist mapping
HCV and HCS Project	Current	Ivory Coast	Montrose Environmental	HCV and HCS Screening of 3 sites	GIS technologist	Aerial Imagery sourcing, Mapping of HCV and HCS assessment results
Contamination Assessments						
Transnet Pipelines - Geohydrological and a contaminated land assessment - mapping for 30 Transnet Facilities	2014-2016	South Africa	Transnet	Geohydrological and a contaminated land assessment	GIS Technologist	Created Buffers zones around contaminated sites and mapping the sensitive maps. Database design and maintenance of depot metadata captured for all 30 sites. Merging old version Boreholes with updated borehole data into one database.

SOUTH AFRICAN
GEOMATICS COUNCIL

CERTIFICATE OF REGISTRATION

This is to certify that

NOKUTHULA KHUTHAZILE NDALA

was registered as a

GEOMATICS TECHNOLOGIST

(Geographical Information Science)

On the 15th day of February in the year 2017

in accordance with the provision of the Geomatics Profession act, 2013 Act No. 19 of 2013 and is entitled to carry on his/her profession or calling in any part of the Republic of South Africa in terms of the said Act and rules framed thereunder.

Issued under the Seal of the Council

Chairman

Registrar

Registration Number: **GTg GISc 0959**

Curriculum Vitae – Vanessa Viljoen

Stakeholder Engagement Consultant

Professional Registration
- International Association for Public Participation Practitioners, Southern Africa (IAP2- Southern Africa)

Qualifications
- Matriculated in 1988
- Completed the International Association of Public Participation IAP2 course (all 3 modules) for Public Participation Practitioners

Languages
- English – Fluent
- Afrikaans – Fluent

Countries Worked in
- South Africa
- Democratic Republic of Congo
- Nigeria
- Botswana
- Swaziland

Vanessa Viljoen has 25 years' experience in process management/project co-ordination of Public Participation Projects (now called Stakeholder Engagement Processes). Her expertise involves the planning and the execution of the public participation processes for Environmental Impact Assessment projects and other applications.

As a Stakeholder Engagement Consultant, her duties include identifying and consulting with Interested and Affected Parties, liaising with organs, dissemination of project information to stakeholders to obtain their comments. Development of stakeholder databases through networking and referral is also a key focus area. Responsible to coordinate logistics and ensure that group meetings such as Public Meetings, Landowner Meetings and Focus Group Meetings. She has worked both locally in South Africa and internationally in the Democratic Republic of Congo, Nigeria, Botswana and Swaziland.

Her skills include:

- Stakeholder engagement;
- Project/logistical co-ordination;
- Database development;
- Facilitation of landowner activities.

PROJECT EXPERIENCE

Project	Dates	Locations	Client	Project Description	Positions Held	Activities Performed
Environmental Authorisations Stakeholder Engagement						
Harmony Free State Operations IWULA	2022-2023	Free State Province, South Africa	Harmony Gold	IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Ergo Mining: Reclamation and Reprocessing of the 5L23 Dump	2022 - current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Theta Projects Stakeholder Engagement Plan	2021- 2022	Mpumalanga, South Africa	Transvaal Gold Mining Estates Limited	Stakeholder Engagement Plan	Stakeholder Engagement Consultant	Stakeholder Engagement for the Theta Projects
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and

Project	Dates	Locations	Client	Project Description	Positions Held	Activities Performed
						referral is also a key focus area. Coordinate logistics.
Ergo Mining: Reclamation and Reprocessing of the 7L3& 7L4 Dumps	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Sibanye Driefontein EMPr & WUL Amendment	2020- current	Gauteng, South Africa	Sibanye-Stillwater (Pty) Ltd	EMPR and IWUL Amendment	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Sibanye Kloof EMPr & WUL Amendment	2020- current	Gauteng, South Africa	Sibanye-Stillwater (Pty) Ltd	EMPR and IWUL Amendment	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Makeean Polymers cc: Atmospheric Emissions Licencing.	2020-2021	Gauteng South Africa	Makeean Polymers cc	Environmental Authorisation	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings;

Project	Dates	Locations	Client	Project Description	Positions Held	Activities Performed
						Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Crown Gold Recoveries (Pty) Ltd: Reclamation of the Soweto Cluster Dumps	2019 - current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	All Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports, information materials i.e. (Background, media advert, site notices and notification letters)
Ergo Mining (Pty) Ltd: The Valley Silts Project	2019 - 2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	All Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports, information materials i.e. (Background, media advert, site notices and notification letters)
Ergo Mining: Reclamation and	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and

Project	Dates	Locations	Client	Project Description	Positions Held	Activities Performed
Reprocessing of the City Deep Dumps						the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Leslie 1 Project	2017-current	Mpumalanga Province, South Africa	Glencore Operation (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Umsimbithi eMakhazeni Mining Project	2017-current	Mpumalanga Province, South Africa	Umsimbithi Mininng (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and

Project	Dates	Locations	Client	Project Description	Positions Held	Activities Performed
						referral is also a key focus area. Coordinate logistics.

Curriculum Vitae – Siphesihle Dambuza

Environmental Consultant

Professional Registration

- Professional South African Council for Natural Science Professionals (SACNASP), 2022
- Candidate Environmental Assessment Practitioners Association of South Africa (EAPASA), 2020

Qualifications

- M.Sc. Environmental Management University of Johannesburg, 2021;
- B.Sc. Hons Geography and Environmental Science, University of Pretoria, 2017; and
- B.Sc. Geography, University of Pretoria, 2016

Languages

- IsiXhosa – Fluent
- English – Fluent
- IsiZulu – Fluent
- Sesotho – Fluent
- Setswana – Basic
- Afrikaans - Basic

Countries Worked in

- South Africa
- Zimbabwe

Siphesihle is an Environmental Consultant at Kongiwe Environmental. He has an M.Sc. in Environmental Management from the University of Johannesburg. With over four years of experience, predominantly in the mining sector, he is involved in all projects with duties ranging from water use licensing to environmental auditing.

His skills include:

- Environmental Compliance Auditing;
- Environmental Impact Reporting;
- Environmental Policy Creation;
- Environmental Monitoring;
- Water Use Licensing; and
- Project Management.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Environmental Authorisations / Water Use Licences						
Harmony Gold Free State Operation WULA & Specialist Studies	2022 - Current	Free State, South Africa	Harmony Gold Mining (Pty) Ltd	IWULA	Environmental Consultant	Project management, Integrated Water Use Licence Application, Technical Reports and Stakeholder Liaison
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	IWULA process management, technical documentation
Ergo Mining: Reclamation and Reprocessing of the 5L23 Dump	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	IWULA process management, technical documentation
Ubuntu Colliery 2022 RSIP Update	2022	Mpumalanga Province, South Africa	Universal Coal	Updating of the Ubuntu Colliery RSIP	Environmental Consultant	RSIP
Ergo Mining (Pty) Ltd: The Reclamation of the No. 7L3 and 7L4 Tailing Storage Facilities Project	2021 - Current	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	All Environmental Authorisations and IWULA	Environmental Consultant	Project management, Integrated Water Use Licence Application, Technical Reports and Stakeholder Liaison
Sibanye Kloof Operations IWUL Amendment	2021 - Current	Gauteng Province, South Africa	Sibanye Stillwater (Pty) Ltd	Amendment of the existing IWUL	Environmental Consultant	IWULA process management, technical documentation
Sibanye Driefontein Operations IWUL Amendment	2020 - 2022	Gauteng Province, South Africa	Sibanye Stillwater (Pty) Ltd	Amendment of the existing IWUL	Environmental Consultant	IWULA process management, technical documentation

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2019	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Scoping Report and Stakeholder Liaison IWULA process
Crown Gold Recoveries (Pty) Ltd: Reclamation of the Soweto Cluster Dumps	2019 - Current	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	All Environmental Authorisations and IWULA	Environmental Consultant	Integrated Water Use Licence Application management, Technical Reports and Stakeholder Liaison
Ergo Mining (Pty) Ltd: The Valley Silts Project	2019 - 2022	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	All Environmental Authorisations and IWULA	Environmental Consultant	Integrated Water Use Licence Application management, Technical Reports and Stakeholder Liaison
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Scoping Report IWULA process & project management
Leslie 1 Project	2018 - 2019	Mpumalanga Province, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Environmental Consultant	Assisting with Public Participation, GIS
Umsimbithi eMakhazeni Mining Project	2018 - 2019	Mpumalanga Province, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Environmental Consultant	Assisting with Public Participation, GIS Integrated Water Use Licence Application, Technical Reports and Stakeholder Liaison
Lephalale Coal and Power Project	2018	Limpopo Province, South Africa	Dedicoal (Pty) Ltd	Environmental authorisation process for the Lephalale Coal and Power Project	Environmental Consultant	Assisting with Public Participation and GIS

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Raubex: Beitbridge Border Expansion Project	2019 - Current	Beitbridge, Matabeleland South, Zimbabwe	The Raubex Beitbridge JV (Raubex)	Environmental Authorisation and Policy Creation for the Beitbridge Border Expansion Project	Environmental Consultant	Raubex: Beitbridge Border Expansion Project
Ergo Mining: Reclamation of the 5L23 Tailings Storage Facility	2021- Current	Gauteng Province, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Environmental Impact Assessment Report
Auditing						
GOSA 2022 External Environmental Audits	2022	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of EA's, EMPr's and WUL for Glencore's the Coal operations in Mpumalanga	Environmental Auditor	External Audit
GOSA 2021 External Environmental Audits	2021	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of EA's, EMPr's and WUL for Glencore's the Coal operations in Mpumalanga	Environmental Auditor	External Audit
GOSA 2020 External Environmental Audits	2020	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of EA's, EMPr's and WUL for Glencore's the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Sibanye Stillwater 2019 External Environmental Auditing	2019	Gauteng Province South Africa	Sibanye Stillwater (Pty) Ltd	External Audits for 2 EA's, 11 EMPr's for Sibanye Gold operations in Gauteng.	Environmental Auditor	External Audit
GOSA 2019 External Environmental Audits	2019	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of EA's, EMPr's and WUL for Glencore's the Coal	Environmental Auditor	External Audit

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
				operations in Mpumalanga		
GOSA 2018 External Environmental Audits	2018	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 47 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Risk Assessments						
Matlwang Agric Cooperative Fish Farm	2018	North-West Province South Africa	Matlwang Agric Cooperative	Risk Assessment as part of a permit for Tilapia farming.	Environmental Consultant	Risk Assessment and Client Liaison
Environmental Monitoring						
Leslie 1 Project	2018-2019	Mpumalanga Province, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental authorisation process for a coal mining project near Leandra	Environmental Consultant	Dust monitoring and Reporting
Umsimbithi eMakhazeni Mining Project	2018-2019	Mpumalanga Province, South Africa	Glencore Operations South Africa (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Environmental Consultant	Dust monitoring and Reporting

Environmental Assessment Practitioners Association of South Africa

Registration No. 2020/2581

Herewith certifies that

Siphesihle Unam
Dambuza

is registered as an

Candidate Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2022 Expires: 28 February 2023

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Siphesihle Unam Dambuza

Registration Number: 119264

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **6 June 2018** Expires **31 March 2023**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

Curriculum Vitae – Foord Ceronio

Environmental Consultant

Professional Registration
- South African Council for Natural Science Professionals (SACNASP) Professional Natural Scientist – 2022
- Candidate Environmental Assessment Practitioners Association of South Africa (EAPASA) - 2020

Qualifications
- M.Sc. Environmental Management, University of Johannesburg, 2018
- B.Sc. Hons Geography, University of Johannesburg, 2016
- B.Sc. Life and Environmental Science, University of Johannesburg, 2015

Languages
- English – Fluent
- Afrikaans – Fluent

Countries Worked in
- South Africa
- Zimbabwe

Foord is an Environmental Consultant at Kongiwe Environmental. He has completed an M.Sc. in Environmental Management. Foord has experience in the mining industry. His responsibilities range from environmental impact reporting, report writing, air quality monitoring, surface water quality monitoring, procedure generation, environmental auditing, due diligence, legal permitting and licensing and public participation.

His skills include:

- Environmental Compliance auditing;
- Environmental impact reporting and authorisation;
- Due Diligence and ESG Reporting;
- ECO field work and reporting;
- Report writing; and
- Closure costing.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Environmental Authorisations (EA's)						
Ergo Mining: Reclamation of 4L39 Dump	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant	Project Management Scoping report
Crown Gold Recoveries (Pty) Ltd: Reclamation of the Soweto Cluster Dump	2019-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant	Scoping report
Ergo Mining: Reclamation of Valley Silts	2019-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant	Scoping report
Makeean Polymers cc: Atmospheric Emissions Licencing.	2020	Gauteng South Africa	Makeean Polymers cc	Environmental Authorisation	Environmental Consultant	Scoping report, Environmental Impact Assessment and Environmental Management Plan
Ergo Mining: Reclamation of Tailing Storage Facilities 7L4	2021- Current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant	Scoping report Environmental Impact Assessment and Environmental Management Plan
Ergo Mining: Reclamation of Tailing Storage Facilities 5L23	2021- Current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Project Manager	Scoping report Project Manager
Visual Impact Assessment						
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2018	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Visual Impact Assessment

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Visual Impact Assessment
Ergo Mining: Reclamation and Reprocessing of the Rooikraal Tailings Storage Facility	2018	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Visual Impact Assessment
Environmental Auditing						
Glencore 2022 External Audits	2022	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of Environmental Authorisations, EMPr's and WULs for the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Glencore 2021 External Audits	2021	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of Environmental Authorisations, EMPr's and WULs for the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Woestalleen 2020 Due Diligence	2020	Mpumalanga Province, South Africa	Woestalleen Colliery (Pty) Ltd	Due Diligence	Environmental Auditor	External Audit
Glencore 2020 External Audits	2020	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of Environmental Authorisations, EMPr's and WULs for the Coal operations in Mpumalanga	Environmental Auditor	External Audit

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Sibanye 2019 External Audits	2019	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	External audits of EMPr's for the operations in Gauteng	Environmental Auditor	External Audit
Glencore 2019 External Audits	2019	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of Environmental Authorisations, EMPr's and WULs for the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Glencore 2018 External Audits	2018	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of Environmental Authorisations for the Coal operations in Mpumalanga	Environmental Auditor	External Audit
Environmental Control Officer						
Raubex JV: Expansion of the Beitbridge Border post	2020-current	Matabeleland South Province, Zimbabwe	Raubex Zimborders JV	Environmental monitoring and Environmental Control officers at the expansion of the Beitbridge Border post	Environmental Control Officer	Environmental Officer duties which include environmental compliance site visits and reporting.
Environmental Monitoring						
Raubex JV: Expansion of the Beitbridge Border post	2020-current	Matabeleland South Province, Zimbabwe	Raubex Zimborders JV	Environmental monitoring and Environmental Control officers at the expansion of the Beitbridge Border post	Environmental Consultant	Dust monitoring and Surface Water quality monitoring
Leslie 1 Project	2017-2019	Mpumalanga Province, South Africa	Glencore Operation (Pty) Ltd	Environmental authorisation process	Environmental Consultant	Dust monitoring and reporting

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
				for a coal mining project near Leandra		
Umsimbithi eMakhazeni Mining Project	2017-2019	Mpumalanga Province, South Africa	Umsimbithi Mininng (Pty) Ltd	Environmental authorisation process for a coal mining project near Belfast	Environmental Consultant	Dust monitoring and reporting
Closure Costing						
Ergo Mining: Reclamation of Valley Silts	2019	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant	Financial Provision and Rehabilitation Plan
Ergo Mining: Reclamation and Reprocessing of the Rooikraal TSF	2018	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Financial Provision and Rehabilitation Plan
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2018	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Environmental Consultant	Financial Provision and Rehabilitation Plan
Environmental, Social and Governance Reporting						
Mkango Resources Limited: Songwe Hill, Environmental, Social and Governance (ESG) Report	2020-current	Phalombe District, Malawi	Mkango Resources Limited	ESG Reporting	Environmental Consultant	ESG reporting
Procedure, Plan Generation and Due Diligence						
Ergo Mining: Reclamation and	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	IWUL: Existing Lawful Water Use	Environmental Consultant	Existing Lawful Water Use determination and due diligence

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Reprocessing of the Rooikraal TSF				determination and due diligence		
Ergo Mining: Reclamation and Reprocessing of the City Deep Dumps	2022	Gauteng, South Africa	DRDGOLD (Pty) Ltd	IWUL: Existing Lawful Water Use determination and due diligence	Environmental Consultant	Existing Lawful Water Use determination and due diligence
Mkango Resources Limited: Songwe Hill, General procedures	2020	Phalombe District, Malawi	Mkango Resources Limited	ESG Reporting	Environmental Consultant	Procedure Generation
Raubex JV: Expansion of the Beitbridge Border post	2020	Matabeleland South Province, Zimbabwe	Raubex Zimborders JV	Procedure writing	Environmental Consultant	Erosion Control Plan Fauna and Flora Relocation Plan Raubex Induction Plan
Woestalleen 2020 Due Diligence	2020	Mpumalanga Province, South Africa	Woestalleen Colliery (Pty) Ltd	Due Diligence	Environmental Consultant	Site Visit Report, Legal Aspect report, Summary report and Action Plan.

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Foord Ceronio

Registration Number: 124117

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **11 September 2019** Expires **31 March 2023**

Botha

Chairperson

Chief Executive Officer

To verify this certificate scan this code

Environmental Assessment Practitioners Association of South Africa

Registration No. 2020/2580

Herewith certifies that

Foord Ceronio

is registered as an

Candidate Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2022

Expires: 28 February 2023

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

Curriculum Vitae – Henry Phoko

Environmental Consultant (GIS)

Qualifications
- BSc (Hons) Geography and Environmental Science, University of Pretoria, 2018
- BSc Geography, University of Pretoria, 2017

Languages
- English – Fluent

Countries Worked in
- South Africa

Henry is an Environmental Consultant at Kongiwe Environmental. He has graduated with a BSc Hons in Geography and Environmental Science from University of Pretoria in 2018. His main focus is providing specialist GIS consulting services and auditing.

His skills include:

- Auditing;
- GIS (ArcGIS, QGIS, MapInfo Professional and CorelDraw);
- Creating and managing GIS databases;
- Map Production of IWULA and EIAs; and
- Data analysis and Data management.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
GIS Mapping						
Harmony Free State Operations IWULA	2022-2023	Free State Province, South Africa	Harmony Gold	IWULA	Environmental Consultant (GIS)	Mapping
Theta Projects Stakeholder Engagement Plan	2021- 2022	Mpumalanga, South Africa	Transvaal Gold Mining Estates (Pty) Ltd	Stakeholder Engagement Plan	Environmental Consultant (GIS)	Mapping
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2021 - current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant (GIS)	Mapping
Ergo Mining: Reclamation and Reprocessing of the 7L3 & 7L4 Dumps	2021 - current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant (GIS)	Mapping
Umsimbithi eMakhazeni Mining Project	2019-curent	Mpumalanga Province, South Africa	Umsimbithi Mining (Pty) Ltd	Amendment of Environmental authorisation process for a coal mining project near Belfast	Environmental Consultant (GIS)	Mapping
Sibanye Kloof EMP and IWUL Amendments	2019-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of eth existing EMP and IWUL	Environmental Consultant (GIS)	Mapping
Sibanye Driefontein EMP and IWUL Amendments	2019-current	Gauteng Province South Africa	Sibanye-Stillwater (Pty) Ltd	Amendment of eth existing EMP and IWUL	Environmental Consultant (GIS)	Mapping
Beitbridge Border Expansion Project: Environmental Management Services	2019 – 2022	Beit Bridge Border, South Africa & Zimbabwe	RAUBEX JV	Desktop Study and Site Inspection for the Repositioning of the proposed Reservoir Site for the Beitbridge Border Expansion Project	Environmental Consultant (GIS)	Mapping

Project	Dates	Location	Client	Project Description	Position Held	Activities Performed
Crown Gold Recoveries (Pty) Ltd: Reclamation of the Soweto Cluster Dump	2019-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant (GIS)	Mapping
Ergo Mining: Reclamation and Reprocessing of the Marievale Dumps	2019 - current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant (GIS)	Mapping
Ergo Mining: Reclamation of Valley Silts	2019-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisation and IWULA	Environmental Consultant (GIS)	Mapping
Auditing						
GOSA 2022 Audits	2022	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
GOSA 2021 Audits	2021	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit
Sibanye 2020 External Audits	2020	Gauteng, South Africa	Sibanye-Stillwater (Pty) Ltd	External audits of RoDs for the operations in Gauteng	Environmental auditor	External Audit
GOSA 2020 Audits	2020	Mpumalanga Province South Africa	Glencore Operations South Africa (Pty) Ltd	External audits of 60 Environmental Authorisations for the Coal operations in Mpumalanga	Environmental auditor	External Audit

Curriculum Vitae – Phumla Mngwengwe

Stakeholder Engagement Consultant

Qualifications
- BSc (Hons): Geography and Environmental Science, University of Pretoria , 2017
- BSc: Geography, University of Pretoria , 2016

Languages
- English – Fluent
- IsiZulu – Fluent

Countries Worked in
- South Africa
- Zimbabwe

Phumla Mngwengwe holds a BSC (Hons) in Geography and Environmental Management. She has 3 years' experience in the consulting industry, primarily in stakeholder engagement.

As a Stakeholder Engagement / Social Consultant, her duties include identifying and consulting with Interested and Affected Parties, liaising with organs, dissemination of project information to stakeholders to obtain their comments and conducting Social Impact Assessments.

Her skills include:

- Stakeholder engagement;
- Water Use Licencing;
- GIS.

PROJECT EXPERIENCE

Project	Dates	Location	Client	Project Description	Positions Held	Activities Performed
Environmental Authorisations Stakeholder Engagement						
Harmony Free State Operations IWULA	2022-2023	Free State Province, South Africa	Harmony Gold	IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Theta Projects Stakeholder Engagement Plan	2021- 2022	Mpumalanga, South Africa	Transvaal Gold Mining Estates (Pty) Ltd	Stakeholder Engagement Plan	Stakeholder Engagement Consultant	Stakeholder Engagement for the Theta Projects
Ergo Mining: Reclamation and Reprocessing of the 4L39 Dump	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Ergo Mining: Reclamation and Reprocessing of the 7L3& 7L4 Dumps	2021-current	Gauteng, South Africa	DRDGOLD (Pty) Ltd	Environmental Authorisations and IWULA	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.

Project	Dates	Location	Client	Project Description	Positions Held	Activities Performed
Sibanye Kloof EMPr & WUL Amendment	2021- current	Gauteng, South Africa	Sibanye-Stillwater (Pty) Ltd	EMPR and IWUL Amendment	Stakeholder Engagement Consultant	Consulting with Interested and Affected Parties, liaising with Organs of State and the co-ordination of public and authority meetings; Compilation of Public Participation reports. Development of stakeholder databases through networking and referral is also a key focus area. Coordinate logistics.
Raubex JV: Expansion of the Beitbridge Border post	2020-2022	Matabeleland South Province, Zimbabwe	Raubex Zimborders JV	Environmental monitoring and Environmental Control officers at the expansion of the Beitbridge Border post	Stakeholder Engagement Consultant	Environmental Officer duties which include ensuring stakeholder consultation is undertaken during construction activities

APPENDIX B:

A3 Maps

- Locality Map
- Project Infrastructure Map
- Project Land Use Map
- Gauteng C-Plan

KONGIWE

1:27 000

0 0,25 0,5 1 Kilometers

Coordinate System: WGS84 Geographic

Project: The Reclamation of the 4L39 TSF I
Client: Ergo Mining (Pty) Ltd I
Drawn By: TH Phoko I Reviewed By: NK Ndala I
Date 16 February 2023 I
Ref: DRDG#018_4L39 I
Data Source: ESRI Imagery I
Made with ArcMap I

Project Legend

- Reclamation Station Option 1
- Reclamation Station Option 2
- Existing Slurry Pipeline To Elsburg
- Proposed Process Water Pipeline
- Central Water Storage Facility
- Tailings Storage Facility
- Ezekiel Pump Station

The Reclamation of the 4L39 TSF

Locality Map

28°11'0"E
28°11'30"E
28°12'0"E
26°12'30"S
26°13'0"S

Map Legend

- Non-Perennial Streams
- Railway Line
- Main Road
- Other Roads
- Wards
- Parent Farm

Ward Number 93
City of Ekurhuleni Metropolitan Municipality
Knights Rd
DRIEFONTEIN 87
4L39
715
Balmoral
Ulana Park
Ward Number 21
DRIEFONTEIN 85
Delmore Park
Ward Number 33
Good Hope
Germiston
Tides St
Ward Number 35
Driefontein 724
Lower Boksburg
DRIEFONTEIN 682
South Germiston
M39

KONGIWE

1:7 300

0 75 150 300 Meters

Coordinate System: WGS84 Geographic

Project: The Reclamation of the 4L39 TSF I
Client: Ergo Mining (Pty) Ltd I
Drawn By: TH Phoko I Reviewed By: NK Ndala I
Date 16 February 2023 I
Ref: DRDG#018_4L39 I
Data Source: ESRI Imagery I
Made with ArcMap I

Project Legend

- Reclamation Station Option 1
- Reclamation Station Option 2
- Existing Slurry Pipeline To Elsburg
- Proposed Process Water Pipeline
- Central Water Storage Facility
- Tailings Storage Facility
- Ezekiel Pump Station

The Reclamation of the 4L39 TSF

Infrastructure Map

28°11'0"E
28°11'30"E
28°12'0"E
26°12'30"S
26°13'0"S

Map Legend

- Non-Perennial Streams
- Railway Line
- Main Road
- Other Roads
- Parent Farm

Land Use Classification

- Grasslands
- Low shrubland
- Mines
- Plantations / Woodlots
- Settlements
- Thicket /Dense bush
- Waterbodies
- Wetlands
- Woodland/Open bush

Ulana Park
Balmoral
715
Knights Rd
City of Ekurhuleni Metropolitan Municipality
DRIEFONTEIN 87
4L39
DRIEFONTEIN 85
Delmore Park
Good Hope
Germiston
Tide St
Driefontein 724
Lower Boksburg
DRIEFONTEIN 682
M39

KONGIWE

1:7 300

0 75 150 300 Meters

Coordinate System: WGS84 Geographic

Project: The Reclamation of the 4L39 TSF l
Client: Ergo Mining (Pty) Ltd l
Drawn By: TH Phoko l Reviewed By: NK Ndala l
Date 16 February 2023 l
Ref: DRDG#018_4L39 l
Data Source: ESRI Imagery l
Made with ArcMap l

Project Legend

- Reclamation Station Option 1
- Reclamation Station Option 2
- Existing Slurry Pipeline To Elsburg
- Proposed Process Water Pipeline
- Central Water Storage Facility
- Tailings Storage Facility
- Ezekiel Pump Station

The Reclamation of the 4L39 TSF

Land Use Map

28°11'0"E
28°11'30"E
28°12'0"E
26°1'30"S
26°1'0"S

Map Legend

- Non-Perennial Streams
- Railway Line
- Main Road
- Other Roads
- Parent Farm

Gauteng Conservation Plan

- Ecological Support Area
- Important Area

Ulana Park
Balmoral
715
Knights Rd
City of Ekurhuleni Metropolitan Municipality
DRIEFONTEIN 87
DRIEFONTEIN 85
Delmore Park
4L39
Good Hope
Germiston
Tide St
Driefontein 724
Lower Boksburg
DRIEFONTEIN 682
M39

KONGIWE

1:7 300

0 75 150 300 Meters

Coordinate System: WGS84 Geographic

Project: The Reclamation of the 4L39 TSF I
Client: Ergo Mining (Pty) Ltd I
Drawn By: TH Phoko I Reviewed By: NK Ndala I
Date 16 February 2023 I
Ref: DRDG#018_4L39 I
Data Source: ESRI Imagery I
Made with ArcMap I

Project Legend

- Reclamation Station Option 1
- Reclamation Station Option 2
- Existing Slurry Pipeline To Elsburg
- Proposed Process Water Pipeline
- Central Water Storage Facility
- Tailings Storage Facility
- Ezekiel Pump Station

The Reclamation of the 4L39 TSF

C - Plan Map

APPENDIX C:

Public Participation Information

- Appendix C1 – Stakeholder Database
- Appendix C2 – Land Claims Letters
- Appendix C3 – Background Information Document
- Appendix C4 – Newspaper Advert
- Appendix C5 – Site Notice Report and Map
- Appendix C6 – Announcement Notifications
- Appendix C7 – Application Acknowledgement Letter
- Appendix C8 – Stakeholder Correspondence
- Appendix C9 – Comments and Responses Report

APPENDIX C:

Public Participation Information

- ❖ Appendix C1 – Stakeholder Database

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

Stakeholder Database

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Agricultural Union	AFGRI SA	Mr	Botha	Ernst	Afgri-Attorney	Gauteng Province
Agricultural Union	AFGRI SA	Ms	Nadia	Hetzel	Legal Representative (Afgri)	Gauteng Province
Agricultural Union	Agri South Africa (National)	Mr	Janse	Rabie	Head of Natural Resources	Gauteng Province
Agricultural Union	TAU SA Central Region	Mrs	Lynette	Du Plessis	TAU SA Central Region	Gauteng Province
Agricultural Union	TAU SA Northern Region	Ms	Wilma	Prinsloo	Regional Secretary	Gauteng Province
Agricultural Union	Transvaal Agricultural Union of South Africa (TAUSA)	Mr	Louis	Meintjies	President	Gauteng Province
Business & commerce	Andrew Barker Development Consultant	Mr	Andrew	Barker	Development Consultant	Gauteng Province
Business & commerce	Eskom	Mr	Ariseelan	Moodley	LD & E Manager Gauteng	Gauteng Province
Business & commerce	Eskom	Mr	Wikus	Snyman		Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Business & commerce	Eskom Transmission Land and Rights (National)	Mr	John	Geeringh	Senior Consultant Environmental Management Group Capital Division: Land Development and Management	Gauteng Province
Business & commerce	Johannesburg Chamber of Commerce & Industry	Ms	Joan	Warburton-McBride	Chief Executive	Gauteng Province
Business & commerce	Klip River Water Stewardship (KlipWas)	Mr	Dennis	Jane		Gauteng Province
Business & commerce	Minerals Council South Africa	Ms	Mpho	Thobye	Health	Gauteng Province
Business & commerce	Minerals Council South Africa	Mr	Babalwa	Matiwane	Environment Department	Gauteng Province
Business & commerce	Passenger Rail Agency of South African (PRASA)	Mr	Tiro	Holele	General Manager: Corporate Services	Gauteng Province
Business & commerce	South African National Roads Agency Limited (SANRAL)	Ms	Victoria	Bota	Environmentalist	Gauteng Province
Business & commerce	South African National Roads Agency Limited (SANRAL)	Ms	Ria	Barkhuizen	Environmentalist (NR)	Gauteng Province
Business & commerce	Transnet Ltd	Ms	Pumelela	Ndyawe	Gauteng Environmental Manager	Gauteng Province
Directly Affected Landowner	Delmore Park Shopping Centre (Pty) Ltd - Driefontein 87 IR Ptn 137					Gauteng Province
Directly Affected Landowner	Witwatersrand Gold Mining Realisation Trust - Driefontein 87 IR Ptn 1	Mr	Ismal Asmal	Mia	Landowner (Dad)	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Directly Affected Landowner	Witwatersrand Gold Mining Realisation Trust - Driefontein 87 IR Ptn 1	Mr	Yousuf Asmal	Mia	Landowner (Son)	Gauteng Province
Directly Affected Landowner	Witwatersrand Gold Mining Realisation Trust - Driefontein 87 IR Ptn 1	Mr	John	Webber	Director	Gauteng Province
Environmental NGO's	African Wattle Crane Programme	Ms	Kerryn	Morrison	Manager	Gauteng Province
Environmental NGO's	Benchmarks Foundation	Mr	David	van Wyk	Member	Gauteng Province
Environmental NGO's	Benchmarks Foundation (BMF)	Dr	Johan	Capel		Gauteng Province
Environmental NGO's	Birdlife South Africa	Mr	Jonathan	Booth	Advocacy Officer Policy & Advocacy Programme	Gauteng Province
Environmental NGO's	Birdlife South Africa (BLSA)	Mr	Simon	Gear	Policy & Advocacy Manager	Gauteng Province
Environmental NGO's	Centre for Environmental Rights (CER)	Ms	Nicole	Loser	Programme Head: Pollution & Climate Change	Gauteng Province
Environmental NGO's	Council for Geosciences	Mr	Henk	Coetzee		Gauteng Province
Environmental NGO's	Earthlife Africa Johannesurg	Ms	Makoma	Lekalakala	Director	Gauteng Province
Environmental NGO's	Eastern Gauteng CPF	Mr	Mike	Du Toit	President	Gauteng Province
Environmental NGO's	Ekurhuleni Environmental Organisation	Mr	Sabelo	Mnguni	Secretary	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Ian	Little	Head of Conservation and Science	Gauteng Province
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Oliver	Cowen	Conservation Science Officer	Gauteng Province
Environmental NGO's	Federation for Sustainable Environment (FSE)	Ms	Mariette	Liefferink	Chief Executive Officer	Gauteng Province
Environmental NGO's	Groundwork	Mr	Bobby	Peek		Gauteng Province
Environmental NGO's	Klip River Catchment Forum	Mr	Mogale	Matseba	Chairperson	Gauteng Province
Environmental NGO's	Mining Affected Communities United in Action (MACUA) Ekurhuleni	Mr	Meshack	Mbangula		Gauteng Province
Environmental NGO's	Save the Vaal Environment	Mr	Malcolm	Plant	Chairman	Gauteng Province
Environmental NGO's	Save the Vaal Environment	Mr	Michael	Gaade	Committee Member	Gauteng Province
Environmental NGO's	South African Human Rights Commission	Ms	Chantal	Kisoon	CEO PA	Gauteng Province
Environmental NGO's	South African Human Rights Commission	Mr	Wisani	Baloyi	Communications Co-Ordinator	Gauteng Province
Environmental NGO's	South African National Biodiversity Institute (SANBI)	Ms	Zama	Nzeru		Gauteng Province
Environmental NGO's	Vaal Environmental Justice Alliance	Mr	Samson	Mokoena	Coordinator	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Wildlife and Environmental Society of South Africa (WESSA)	Mr	John	Wesson	Manager: Conservation Specialist	Gauteng Province
Environmental NGO's		Mr	Alan	Madden		Gauteng Province
Environmental NGO's		Mr	Stan	Madden		Gauteng Province
Farmers Association	African Farmers' Association of South Africa (AFASA)				The Manager	Gauteng Province
Indireclty Affected Landowner	Jabeam Prop Valuations CC (Driefontein 85 IR Ptn 504)					Gauteng Province
Indirectly Affected Landowners	Azufon (Pty) Ltd (Driefontein 724 IR Ptn 0)	Mr	Faizal Ahmed	Salajee		Gauteng Province
Indirectly Affected Landowners	Crown Gold Recoveries (Pty) Ltd (Driefontein 87 IR Ptn 232					Gauteng Province
Indirectly Affected Landowners	Kiron Developments (Pty) Ltd (Driefontein 682 IR Ptn 0 (RE))	Ms	Jana	Odendaal	Project Assistant	Gauteng Province
Indirectly Affected Landowners	Midnight Feast Prop 11 (Pty) Ltd (Driefontein 87 IR Erf 1744	Mr	Daniel	Barnett	Landowner	Gauteng Province
Indirectly Affected Landowners	Shanike In No 55 (Pty) Ltd (Driefontein 682 IR Ptn 8)	Mr	John	Webber	Director	Gauteng Province
Labour Union	Congress of South Africa Trade Union (COSATU)	Mr	Sizwe	Pamla	National Spokesman	Gauteng Province
Labour Union	National Union of Metal Workers of South Africa (NUMSA)				The Manager	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Labour Union	National Union of Mine Workers (NUM)	Ms	Thenji	Phoko	NUM National	Gauteng Province
Library	Germiston Public Library	Ms	Edith	Kruger	Librarian	Gauteng Province
Local Business	Gauteng Metal Recyclers (GMR) scrap	Ms	Monique	de Jager	Managing Director	Gauteng Province
Local Business	Sasol Simon Bekker	Mr	Ziyaad	Karolia	Manager	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Regina	Gosebo	Senior Admin	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Refiloe	Selahle	Gender Officer	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Dr	Imogen	Mashazi	Municipal Manager	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mrs	Adri	Venter	Municipal Managers PA	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Rebotile	Motau	CRM Germiston / Delmore	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Dudu	Twala	Area Manager: City Planning - Germiston / Delmore	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Pheta P.	Mokoena	Waste Manager: EMM	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Crafford	City Planning: Chief Building Inspector	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Moses	Gafane	Health & Social Department - Germiston / Delmore	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mzwandile	Masina	Mayor	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Katlego	Mokwena	IDP Manager	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Sthembiso	Garane	LED Manager: (HOD: Economic Development)	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Gerhard	Mac Carron	Ekurhuleni Spatial Planning	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Martin	Bekker	Ekurhuleni Spatial Planning, City Planning Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Maggy	Hadebe	Ekurhuleni Spatial Planning	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Bafana	Mazibuko	Disaster & Emergency Services Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Hennie	Croucamp	Emergency Services Codes	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Makhudu	Molepo	Snr Environmental Health Practitioner	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Koekemoer	Manager Environmental Health	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Scelo	Ndima	Environmental Resource and Waste Management Department	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Lilian	Kwakwa	Environmental Resource and Waste Management Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Bongeka	Mtyana	Environmental Resource and Waste Management Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Kwanele	Mdletshe	Environmental Resource and Waste Management Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Thabang	Mokoena	Division Head: Legislative Governance and Compliance, Environmental Resource and Waste Management Department	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Marta Mashudu	Mudau	Ward Councillor: Ward 21	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Ashley	Hoods	Ward Councillor: Ward 33	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Ntuthuzelo	Mpambani	Ward Councillor: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Geoffrey Isaac	Mthembu	Ward Councillor: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Lorrain	Ramashala	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mzamo	Mtetwa	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Nkululeko	Wayise	Ward Committee Member: Ward 35	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Seapati	Mashiyani	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Free John	Boshego	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nthabiseng	Olyn	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Moffat	Mpashi	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Winny	Serakalala	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Paul	Sabisa	Ward Committee Member: Ward 35	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Thabo	Ramohlale	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Petrus	Nkosi	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Debora	Mkhosana	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	John	Mokoena	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Julia	Rigali	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Shadrack	Lushaba	Ward Committee Member: Ward 93	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nomawethu	Mbetha	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Neo	Nyathi	Ward Committee Member: Ward 93	Gauteng Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Zoliswa	Sikuku	Ward Committee Member: Ward 93	Gauteng Province
Mining & Industry	Impala Platinum Limited – Springs	Ms	Carina	Burger	Safety & Environmental Manager	Gauteng Province
Municipality	City of Johannesburg Metropolitan Municipality	Ms	Nokuthla	Thusi	Land Use Development Planning	Gauteng Province
National Governement	Department of Water and Sanitation (DWS)	Mr	Adriaan	Claasen	Civil Engineer	Gauteng Province
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Mr	Solomon	Maruma	Commission on Restitution of Land Rights- Gauteng Regional Officer	Gauteng Province
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Amukelani	Shiburi	Commission on Restitution of Land Rights- Gauteng Regional Officer	Gauteng Province
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Fundiswa	Ndaba	Commission on Restitution of Land Rights- Gauteng Regional Officer	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Pumeza	Nodada	Deputy Director-General Forestry Management	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mashudu	Mukwevho	Dir: Land Use & Soil Management	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mulalo	Sundani	National Office: Directorate: Forestry Regulation and Oversight: Environmental Impact Management	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Portia	Khumalo	ROC - Environmental	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mashudu	Marubini	Deputy Director	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Themba	Dlamini	Gauteng Regional Office	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Obed	Baloyi	Environmental Impact Evaluation	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Lucas	Mahlangu	Control Environmental Officer: Waste Licensing	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Pumeza	Skepe	Deputy Director	Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Santie	Janse van Rensburg		Gauteng Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Dr	Mpho	Tshitangoni	Chief Director	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Adv	Thabo	Mokoena	Director General	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Tseliso	Maqubela	Minerals and Petroleum Regulation	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	David	Msiza	Mine Health and Safety Inspectorate	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Musa	Mangobe	Assistant Director	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Sunday	Mabaso	Gauteng Regional Manager	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Rudzani	Mabogo	Head of Environment: Assistant Director	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Ms	Buyisiwe Ntokozo	Ngcwabe	DDG- Mineral Policy & Promotions	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Adv	Mmadikeledi Suzan	Malebe	Deputy Director General: Mineral Regulation	Gauteng Province
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Siyabonga	Vezi	Acting Regional Director	Gauteng Province
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Jeanette	Monare	Regional Manager	Gauteng Province
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Malusi	Ganiso	Town Planning Services (HO)	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Ms	Mogadi	Machaba	Case Officer	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Ms	Nosie	Mazwi	Acting Provincial Head	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Victor	Nkuna	Environmental Officer	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Water and Sanitation (DWS)	Mr	Londolani	Mutshekwa	National	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Divan	Van Niekerk	National	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Ms	Candace	Enoch	Environmental Officer	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Ayanda	Mtetwa	National	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Desmond	Mutshaine	Geochemistry	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Kevin Koketso	Aphane	GT	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Ms	Malalo	Sidogi	Environmental Officer	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Andrew	Mbedzi	Instream	Gauteng Province
National Government	Department of Water and Sanitation (DWS)	Mr	Phillimon	Khwinana	Control Environmental Officer and Blesbokspruit to Forum Chairman	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Loyiso	Mkwana	Chief Director	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Jacob	Legadima	Director - Air Quality Management	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Eric	Mulibana	Air Quality	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Dan	Motaung	Deputy Director: EIA	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Joshua	Quinton	PSG B	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Anga	Yaphi	PS	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Albertina	Setsiba	PS	Gauteng Province
National Government	Gauteng: Department of Economic Development	Mr	Blake	Mosley-Lefatola		Gauteng Province
National Government	National Department of Health (DOH)	Ms	Belinda	Makhafola	Directorate: Environmental Health Services	Gauteng Province
National Government	National Nuclear Regulator (NNR)	Mr	Patle	Mohajane	Programme Manager: NORM	Gauteng Province
National Government	Department of Forestry, Fsheries and the Environment (DFFE)	Ms	Pamela	Nodada	Assistant DDG: Forestry	Gauteng Province
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Nhlanhla	Makhathini	Assistant Director	Gauteng Province
Provincial Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Mr	Harry	Maphutha	Regional Land Claims Commissioner	Gauteng Province
Provincial Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Shumani	Dzivhani	Deputy Director: Forestry Regulation	Gauteng Province
Provincial Government	Department of Health: Gauteng	Ms	Londiwe	Mkhize	Environmental Health Practitioner- Ekurhuleni District	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Provincial Government	Department of Health: Gauteng	Ms	Christina	Mnisi	Ekurhuleni District	Gauteng Province
Provincial Government	Department of Health: Gauteng	Ms	Sentle	Mofokeng		Gauteng Province
Provincial Government	Department of Water and Sanitation (DWS)	Ms	Barbara	Kalembo	Gauteng Regional Environmental Officer	Gauteng Province
Provincial Government	Department of Water and Sanitation (DWS)	Ms	Faith Fulufhelo	Khosa	Gauteng Regional Representative	Gauteng Province
Provincial Government	Department of Water and Sanitation (DWS)	Mr	Khathutshelo	Mudau	Gauteng Regional Representative	Gauteng Province
Provincial Government	Department of Water and Sanitation (DWS)	Mr	Mabona (Rodney)	Lesiba	Environmental Officer	Gauteng Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Tendani	Rambuda		Gauteng Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Mokutu	Nketu		Gauteng Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Erick	Moletsane		Gauteng Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Tjatja	Mosia		Gauteng Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Steven	Mukhola		Gauteng Province
Provincial Government	Gauteng Department: Co-operative Governance and Traditional Affairs	Mr	Lebogang Isaac	Maile	MEC: Human Settlements, Urban Planning and (COGTA) (ANC)	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Provincial Government	Gauteng Region Department of Labour				The Manager	Gauteng Province
Provincial Government	Johannesburg Roads Agency (JRA)	Mr	Andre	Nel	Operations Manager	Gauteng Province
Provincial Government	South African Heritage Resources Agency	Mr	Andrew	Salomon	Gauteng Province	Gauteng Province
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Mr	Thendo Stanely	Makuya	Environmental Specialist	Gauteng Province
Water Bodies -Institution	Randwater	Mr	Marc	De Fontein	Senior Water Quality Advisor & Blesbokspruit to Forum Member	Gauteng Province
Water Bodies -Institution	Randwater	Ms	Natalie	Koneight	Secretary - Nursery-CD	Gauteng Province
Water Bodies -Institution	Randwater	Mr	Lesley	Hoy	Manager Environmental Assessments & Compliance	Gauteng Province
Water Bodies -Institution	Water Research Commission	Dr	Shafick	Adams		Gauteng Province
Water Bodies -Institution	Water Research Commission	Mr	Jay	Bhagwan	Executive Manager: Water Use and Waste Management	Gauteng Province
Water Bodies -Institution	Water Research Commission	Ms	Penny	Jaca	Water Resource Management	Gauteng Province
Water Bodies -Institution	Water Research Commission	Ms	Charmaine	Khanyile	Water Use & Waste Management	Gauteng Province
Water Bodies -Institution	Water Research Commission	Ms	Mapula	Mabitsela	Water-Linked Ecosystems	Gauteng Province

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Water Bodies -Institution	Water Research Commission	Mr	Bennie	Mokgonyana	Water Use & Waste Management	Gauteng Province
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Mr	Tshifhiwa	Nduvheni	Environmental Manager	Gauteng Province

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

Landowners Database

Directly Affected Landowners

Farm Name	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Driefontein	87 IR	137	Delmore Park Shopping Centre (Pty) Ltd	Delmore Park Shopping Centre (Pty) Ltd	
Driefontein	87 IR	1	Witwatersrand Gold Mining Realisation Trust	Witwatersrand Gold Mining Realisation Trust	Mr Ismal Asmal Mia (Dad) Mr Yousuf Asmal Mia (Son)

Indirectly Affected Landowners

Farm Name	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Driefontein	85 IR	504	Jabeam Prop Valuations CC	Jabeam Prop Valuations CC	-
Driefontein	85 IR	270 (Portion of Portion 266)	No Windeed Info (Now Delmore-Park)		-
Driefontein	87 IR	1	Witwatersrand Gold Mining Realisation Trust	Mr Mia Ismal Asmal (Dad) Mr Yousuf Asmal (Son)	Mr John Webber Director Real Estate
Driefontein	87 IR	122	African Steel Centre (Pty) Ltd	Midnight Feast Prop 11 (Pty) Ltd	Mr Daniel Barnett
Driefontein	87 IR	Erf 1744	Midnight Feast Prop 11 (Pty) Ltd	Midnight Feast Prop 11 (Pty) Ltd	Mr Daniel Barnett
Driefontein	87 IR	134	City of Ekurhuleni Metropolitan Municipality	City of Ekurhuleni Metropolitan Municipality	Mr Scelo Ndima, Environmental Resource and Waste Management Department Compliance Division
Driefontein	87 IR	32	National Housing Board	National Housing Board	-

Farm Name	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Driefontein	87 IR	155	Transnet Ltd	Transnet Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	164 (An Unregistered portion of 134)	City of Ekurhuleni Metropolitan Municipality	City of Ekurhuleni Metropolitan Municipality	Mr Scelo Ndima, Environmental Resource and Waste Management Department Compliance Division
Driefontein	87 IR	184	South African Rail Commuter Corp Ltd	Transnet Freight Rail Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	200 (Not registered, part of South Germiston Township)	South Germiston		-
Driefontein	87 IR	279 (An unregistered portion of portion 1)	Witwatersrand Gold Mining Realisation Trust	Mr Mia Ismal Asmal (Dad) Mr Yousuf Asmal (Son)	Mr John Webber Director Real Estate
Driefontein	87 IR	232	Crown Gold Recoveries (Pty) Ltd	Crown Gold Recoveries (Pty) Ltd	-
Driefontein	87 IR	178	South African Rail Commuter Corp Ltd	Transnet Freight Rail Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager

Farm Name	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Driefontein	87 IR	127	South African Rail Commuter Corp Ltd	Transnet Freight Rail Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	271 (An unregistered portion of portion 1)	Witwatersrand Gold Mining Realisation Trust	Mr Mia Ismal Asmal (Dad) Mr Yousuf Asmal (Son)	Mr John Webber Director Real Estate
Driefontein	724 IR	0	Azufon (Pty) Ltd	Azufon (Pty) Ltd	Mr Faizal Ahmed Salajee
Driefontein	682 IR	8	Shanike In No 55 (Pty) Ltd	Mr Mia Ismal Asmal (Dad) Mr Yousuf Asmal (Son)	Mr John Webber Director Real Estate
Driefontein	682 IR	0 (RE)	Kiron Developments (Pty) Ltd	Kiron Developments (Pty) Ltd	Ms Jana Odendaal Project Assistant
Driefontein	682 IR	6 (Unregistered, now part of Reiger Park Ext 8)	No Windeed Information (Now Reiger Park Extension 8)		-
Driefontein	87 IR	138	National Housing Board	National Housing Board	-

Farm Name	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Driefontein	87 IR	153	Transnet Ltd	Transnet Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	74	Transnet Ltd	Transnet Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	192	Transnet Ltd	Transnet Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager
Driefontein	87 IR	53	Transnet Ltd	Transnet Ltd	Mr Qatjha Ramokhothoanen Ms Pumelela Ndyawe, Environmental Manager

APPENDIX C:

Public Participation Information

- ❖ **Appendix C2 – Land Claims Letters**

Thursday, 16 February 2023

Attention: Mr Solomon Maruma
Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD)
Office of the Regional Land Claims Commissioner: Gauteng Province
Email: Solomon.Maruma@dalrrd.gov.za

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

LAND CLAIMS ENQUIRY

Kongiwe Environmental (Pty) Ltd ('Kongiwe') has been appointed as the Independent Environmental Assessment Practitioner, tasked with conducting the Scoping and Environmental Impact Assessment (S&EIA)/Integrated Water Use Licence application (IWULA) process which is aimed at critically evaluating the potential environmental and social impacts of the reclamation of the 4L39 TSF (proposed Project).

Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residues from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA).

The project area is made up of 2 farm portions all falling within the City of Ekurhuleni Metropolitan Municipality. The affected farms are listed in **Table 1** below.

Table 1: Directly Affected property details.

Farm Name	Farm ID	Farm Portion	Farm owner
Driefontein	87 IR	137	Delmore Park Shopping Centre (Pty) Ltd
Driefontein	87 IR	1	Witwatersrand Gold Mining Realisation Trust

Kongiwe would like to enquire if there are any land claims on any of the farms listed above. Please could you revert to us as a matter of urgency.

Kind regards,

Vanessa Viljoen
Stakeholder Engagement Consultant

Kongiwe Environmental (Pty) Ltd.
Reg No 2016 / 135562 / 07
Directors: GE Cornish-Bowden,MJ Hennessy,NK Ndala, BJ Thornton (CEO), GI Wilreker
Tel: +27 (10) 140 6508 | Email: info@kongiwe.com
150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

Vanessa Viljoen

From: Vanessa Viljoen
Sent: Thursday, 16 February 2023 13:47
To: Solomon Maruma
Cc: Amukelani Shiburi; Desiree Kgole; Fundiswa Ndaba; Nkokhelo Mshengu
Subject: LAND CLAIMS ENQUIRY: EA and an IWUL Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province
Attachments: 16Feb2023_4L39_Lclaims_Let.pdf

Importance: High

Dear Mr Solomon Maruma

Kongiwe Environmental (Pty) Ltd ('Kongiwe') has been appointed as the Independent Environmental Assessment Practitioner, tasked with conducting the Scoping and Environmental Impact Assessment (S&EIA)/Integrated Water Use Licence application (IWULA) process which is aimed at critically evaluating the potential environmental and social impacts of the reclamation of the 4L39 TSF (proposed Project).

We would appreciate it if you could assist us with the attached Land Claims enquire.

Kind Regards,

Vanessa Viljoen | Stakeholder Engagement Consultant | Kongiwe Environmental (Pty) Ltd.
Tel: +27 (12) 003 6627 | Cell: +27 (71) 485 5388 | Fax: +27 (86) 476 6438 | Email: vviljoen@kongiwe.com
Spaces, Byls Bridge Office Park, Building 14, Block B, Corner of Olievenhoutbosch &, Jean Ave, Centurion, 0157, South Africa. PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

APPENDIX C:

Public Participation Information

- ❖ **Appendix C3 – Background Information Document**

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

Background Information Document

DMRE reference number: To be confirmed
DWS reference number: WU25681

February 2023

PURPOSE OF THE DOCUMENT

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

- The proposed reprocessing and reclamation of the 4L39 Tailings Storage Facility;
- 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.

PROJECT BACKGROUND

Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residues from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). As such the reclamation activity does not require a Mining Right but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) and an Integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA). Kongiwe Environmental (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner to conduct the Environmental Impact Assessment (EIA) process and IWUL application for the proposed project.

This TSF is a historic mineral storage deposit, and it has been confirmed in various High Court judgements that such a TSF is moveable property. As such, it is not regulated by the MPRDA. Similarly, it is not a

"residue deposit" or "residue stockpile" as contemplated in the Environmental Impact Assessment Regulations, 2014, as amended (most recently by GN R517 of 11 June 2021).

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, a water monitor blasts the sides of the TSF with process water, the process water mixes with the unconsolidated material, resulting in what is known as a slurry. The slurry reports to a pump station, located at the lowest point of the TSF, where it will then be conveyed to the Ergo Processing Plant for reprocessing. Existing pipelines along existing pipeline routes within existing pipeline servitudes Surface Right Permits (SRPs) and or wayleaves will be used to convey the generated slurry. Final deposition of the processed slurry will be on the existing Brakpan/Withok TSF.

LOCALITY

In terms of regional locality, the TSF is situated approximately 3 km east of the Germiston CBD, in the CoE (Figure 1). Delmore Park is situated 400 m east of the 4L39 TSF. The community of Ulana Park is located approximately 300 m to the north of the TSF and the community of Good Hope is located 70 m west of the TSF. A community of Germiston South is located 250 m south of the TSF. Affected communities are located in Ward 21, Ward 33, Ward 35 and Ward 93.

The TSF is positioned on Portion 1 and Portion 137 of Driefontein 87 IR.

The reclamation area is surrounded by open areas to the east and the south-east, historical mining areas to the north, industrial development to the southwest and the Good Hope informal settlement to the west. The lower Bokburg road is located to the south of the TSF and the railway is located to the north of the TSF. A disturbed wetland is located to the east of the TSF. The pipelines will be situated within existing pipeline rights (Surface Right Permits (SRPs), servitudes and wayleave agreements) held by Ergo. Where Ergo does not possess surface rights these will be acquired.

The extent of the TSF is 32 Ha. Please refer to Table 1 for a list of the directly affected properties and Figure 1 for the project locality map.

Table 1: Directly Affected property details.

Farm Name	Farm ID	Farm Portion	Owner
Driefontein	87 IR	137	Delmore Park Shopping Centre (Pty) Ltd
Driefontein	87 IR	1	Witwatersrand Gold Mining Realisation Trust

Figure 1: 4L39 Locality Map

RECLAMATION METHOD

The proposed reclamation method which will be used to remove the TSF is referred to as top-down hydraulic reclamation. This technique uses high-pressure water monitors to deliver a high-pressure water jet to excavate unconsolidated tailings material within the TSF hydraulically. The water from the monitors 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 existing pipelines to the Elsburg pump station and then onward to the Ergo Processing Plant via existing and operational pipelines. At the Ergo Plant, the slurry is prepared and treated for gold extraction and beneficiation.

The tailings remaining after processing will be deposited on the existing Brakpan/Withok TSF.

INFRASTRUCTURE

The following infrastructure will be utilised on site:

- A connecting pipeline of 500 mm in diameter and less than 100 m in length (from the new reclamation station to the existing pipeline leading to the Elsburg pumpstation);
- One overland process water pipeline of 500 mm in diameter (from the Central Water Facility (CWF) to the reclamation station at the TSF);
- An 11 kV overhead powerline capable of transmitting 3 kVA of electricity (from 4A6 to the reclamation station);
- Reclamation infrastructure consisting of:
    - Pump stations which include:
        - Slurry sump;
        - Penstock;
        - Vibrating Screen;
        - Water tank;
        - Motor control centre;
        - Lined Catchment paddock;
        - Pump;
- Stormwater management infrastructure including:
    - Water infrastructure and stormwater systems; and
    - Existing catchment paddocks on the TSF footprint
- Electricity reticulation;
- Administration buildings, including change houses and ablution facilities;

- Access roads, routed from existing entry points; and
- Construction contractors' yards (temporary facilities).

PROPOSED PIPELINES

The proposed project will investigate one pipeline route from the Central Water Facility (CWF) to provide process water to the reclamation station at the TSF. A new pipeline will be required to transport process water from the CFW to the reclamation station for the proposed reclamations activity. This pipeline will be located within existing surface rights held by Ergo.

The reclamation station required for the activity will be connected into an existing and operational slurry pipeline, along which slurry will be transported to the Elsburg pumpstation and then onward to the Ergo plant for beneficiation. The pipeline connection will be less than 100m long and consist of a 500 mm diameter water pipeline.

The pipeline and the proposed reclamation activity will require authorisation in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) for Section 21 water uses, the National Environmental Management Act, 1998 (Act No 107 of 1998) (NEMA) and the National Environmental Management: Waste Act, 2008 (Act No 59 of 2008), Category B Activities. An Integrated Water Use Licence Application (IWULA) will be prepared and submitted in accordance with the Water Use Licence Application and Appeals Regulations 2017 published in GNR 267 on 24 March 2017 and will be supported by a Technical Report and Integrated Water and Waste Management Plan (IWWMP).

ACCESS

The main access route is off Lower Boksburg Road which runs parallel to and south of the reclamation site. Main Reef Road is situated past the railway to the North of the TSF, and also runs parallel to the reclamation site. Knights Road is situated directly to the west of the TSF and runs north where it reaches the Ezekiel pumpstation. As far as possible, existing access roads will be utilised, and where this is not possible, these will be constructed. Where access roads are to be constructed, these will be 4m wide gravel roads with 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.

POWER AND WATER SUPPLY

The proposed reclamation activity will require 3kVA of electricity. This will be transmitted via a new 11 kV powerline from a transformer located at the 4A6 dump. This powerline will follow existing servitudes. No authorisation will be required for this powerline in terms of the NEMA.

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 TSF. Water required for the reclamation activity will be sourced from the existing Ergo CWF located in Germiston and conveyed through a new process water pipeline to the project site for reuse in a closed-circuit system. This pipeline will follow existing pipelines.

LIFE OF OPERATION

The Proposed Project is expected to take approximately 5 years. An estimated amount of 270 000 tons/month ramping up to 350 000 tons/month of slurry is expected to be pumped from the TSF via existing pipelines to the Elsburg pumpstation and then via existing pipelines to the Ergo Plant for beneficiation.

REHABILITATION

Once reclamation is completed, the area will 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 evaluated for future development. The project will reclaim the historic TSF and remove a pollution source from the area, aiding in the rehabilitation of the mining legacy left behind in the area.

LEGISLATIVE FRAMEWORK

In terms of the environmental legislation, Ergo is required to obtain an Environmental Authorisation (EA), Waste Licence and an Integrated Water Use Licence (IWUL) from the relevant Competent Authorities before commencing with the reclamation process. The required environmental authorisation and IWUL will be undertaken in accordance with the following legislation:

- **Application for an Environmental Authorisation** for listed activities triggered in Listing Notices ***GN R983; and GN R984, as amended,*** 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) for listed activities under ***GN 921– B***.
- **An Integrated Water Use Licence Application (IWULA)** will be undertaken at a later stage in accordance with the National Water Act, 1998 (Act No.36 of 1998) (NWA) for water uses in terms of **Section 21.**

POPIA Disclaimer: Safeguarding registered person's personal information

In terms of section 19 of the Protection of Personal Information Act (POPIA), a responsible party must, subject to Sections 9 and 11 of the Act, ensure the integrity and confidentiality of personal information in its possession or under its control by taking appropriate, reasonable technical and organisational measures to prevent loss of, damage to or unauthorised destruction of personal information, unlawful access to or processing of personal information. POPIA requires that personal information should be adequately protected to avoid unauthorised access. Therefore, Kongiwe continuously reviews security controls and procedures to ensure that personal information is secured. It should be noted that in terms of Section 11, personal information may be processed to the extent that this is necessary for pursuing the legitimate interests of the responsible party to whom the information is supplied.

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

Table 2: List of Activities to be authorised in accordance with NEMA and NWA

Name of activity	Listed activities	Listed Waste Activities	Identified water uses
Dust Suppression			21 (g)
Reclamation of the TSFs No 4L39, as well as the construction and operation of the associated reclamation and stormwater management infrastructure within 500 m of a wetland and its associated tributaries.	GNR 984 – 6	GN 921: Category B (1)	21(c) & (i) 21 (g)
Process water pipeline	GNR 983 - 10 GNR 984 – 6 GNR 984 – 7		

The TSFs were created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA) and they are accordingly not regulated by the MPRDA. Similarly, they are not "residue deposits" or "residue stockpiles" as contemplated in the EIA 2014 Regulations, as amended (most recently by GN R517 of 11 June 2021).

SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Kongiwe Environmental (Pty) Ltd ('Kongiwe') has been appointed as the Independent Environmental Assessment Practitioner, tasked with conducting the Scoping and Environmental Impact Assessment (S& EIA)/Integrated Water Use Licence application (IWULA) 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:

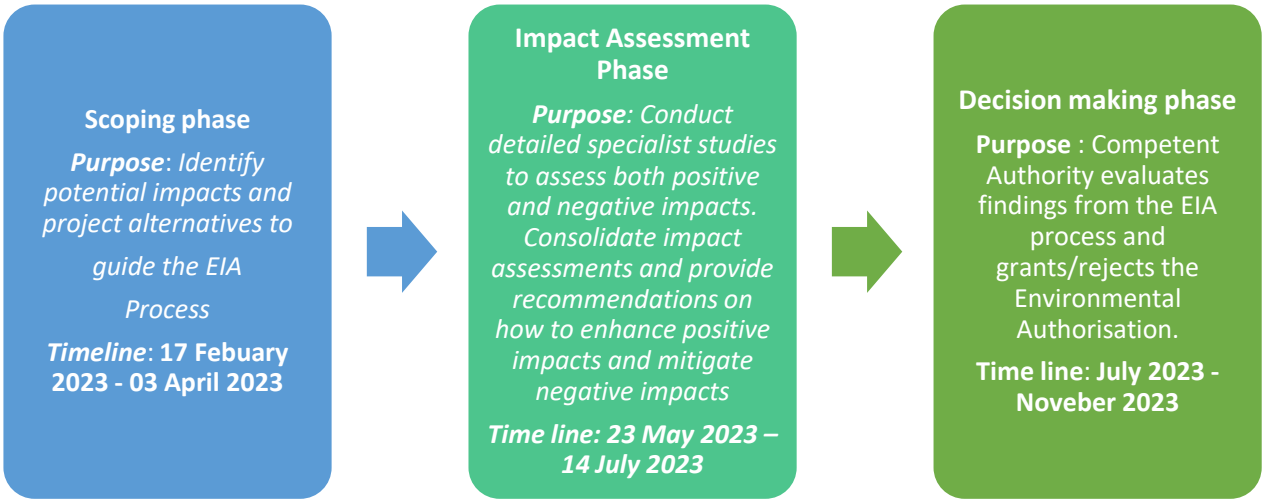


Figure 2: S& EIA process and the associated timeline

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 EA process for the proposed reclamation project.

SPECIALIST STUDIES

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

- Biodiversity
- Surface Water
- Groundwater
- Air quality
- Socio-economic
- Heritage and Archaeology
- Traffic

PUBLIC PARTICIPATION PROCESS

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

AVAILABILITY OF THE SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT

- The Draft Scoping Report (DSR) for the proposed project will be made available for public review and comment for a period of 30 days, from **Thursday, 23 February 2023 until Monday, 27 March 2023**. The DSR will be made available as follows:
  - Copies of the DSR will be made available for public review and comment **Thursday, 23 February 2023 until Monday, 27 March 2023** on the following website:
  - Kongiwe's website: http://www.kongiwe.com/publications-view/public-documents/
- A hard copy of the DSR will be made available at the following public place:
  - Location: Germiston Public Library
  - Contact Person: Ms Edith Kruger, Tel: (011) 999 1737
  - Physical Address: 14 Queen St, Germiston, 1400
- An electronic copy will be made available on request.
- Copies of the non-executive summary of the DSR will be distributed to all stakeholders on the database.

Once the information required for the IWULA has been finalised, a technical report, in support of the IWULA process, will be made available for a public review and commenting 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 technical report and how stakeholders can provide their comments will be communicated to all stakeholders.

STAKEHOLDER MEETINGS

Stakeholders are invited to participate through virtual and non-virtual engagements. One-on-one consultation meetings will be held via on-line forums such as Microsoft Teams, or telephonically. On-line engagement activities will be available during the public review period. Additionally, an Open Day which will be held at the **Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401** on **Saturday, 18 March 2023 from 10H00-14H00.** The purpose of these meetings is to discuss the proposed project, contents of the Scoping Report, to provide I&APs with an opportunity to raise their comments and to interact with the project team. Please see below (Table 3) for the proposed I&APs meeting schedule.

Table 3: Proposed dates and methods of public engagement

Proposed dates	Available time slots	Method of Engagement
Virtual meeting		
Thursday, 16 March 2023	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
Live meeting: Open Day		
Saturday, 18 March 2023	10H00 - 14H00	Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401

INVITATION TO BE INVOLVED AS AN I&AP

Kongiwe Environmental 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:

- Telephonic consultations;
- Short Message Services;
- Email correspondence - Stakeholders with access to email are requested to send their comments/queries via email;
- One-on-One consultation meetings;
- Online Microsoft Teams meetings;
- Open day;
- Online engagements – Project information will be timeously uploaded on Kongiwe's website. Stakeholders can send their comments by completing an online comment sheet; and
- Electronic comment sheets.

The purpose of the above-mentioned methods of engagements is to encourage dialogue with stakeholders and provide stakeholders with opportunities to raise their comments. Minutes from all engagements with stakeholders will be compiled and recorded in the Comments and Responses Report. Stakeholders are encouraged to indicate their preferred method of engagement to the stakeholder engagement team, please see contact details below.

COMMENTS AND QUERIES:

Should you have any comments/queries, please contact the Stakeholder Engagement Team

Vanessa Viljoen/Phumla Mngwengwe

Tel: 012 003 6627/Email: stakeholders@kongiwe.com

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

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

DMRE Ref Number: To be confirmed

DWS Ref Number: WU25681

Stakeholder Registration and Reply Form

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

Vanessa Viljoen / Phumla Mngwengwe

Phone: 012 003 6627 or E-mail: stakeholders@kongiwe.com

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

Please provide your complete contact details:

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

I intend attending the stakeholders' meeting (Please indicate your preference)

Proposed dates	Available time slots	Method of Engagement	Yes	No
Virtual meeting				
Thursday, 16 March 2023	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions	Yes	No
Live meeting: Open Day				
Saturday, 18 March 2023	10H00 - 14H00	Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401	Yes	No

Do you have any comments/suggestions regarding the proposed project? If so, please complete the section below/ send your comments to the stakeholder engagement team- please see details above.

Comments/Suggestions:

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							

Please note that the information supplied herein constitutes Personal Information as contemplated in Protection of Personal Information Act, 2013 (POPIA). All of your rights as set out in the Act will continue to be protected and Kongiwe will be accountable to ensure that all conditions for lawful processing are met. Your signature will be regarded as granting consent for the processing of the information strictly in accordance with the provisions of the Act. It must be noted that POPIA does not prevent any private body from exercising or performing its powers, duties and functions in terms of the law and accordingly the EAP and any appellant may perform its duties under the National Appeal Regulations provided the processing is in accordance with POPIA and meets the requirements of the National Appeal Regulations.

Signature:		Date:	

Vanessa Viljoen

From: Kongiwe Stakeholder Engagement
Sent: Friday, 17 February 2023 10:53
To: Vanessa Viljoen
Subject: EA and an IWUL Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province
Attachments: 17Feb2023_4L39_BID.pdf; 17Feb2023_4L39_Reg Form.pdf

Importance: High

Dear Stakeholders

This email serves to inform you that Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residues from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). As such the reclamation activity does not require a Mining Right but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)(NEM: WA) and an Integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA). Kongiwe Environmental (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner to conduct the Environmental Impact Assessment (EIA) process and IWUL application for the proposed project.

AVAILABILITY OF THE SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT

The Draft Scoping Report (DSR) for the proposed project will be made available for public review and comment for a period of 30 days, from **Thursday, 23 February 2023 until Monday, 27 March 2023**.

INVITATION TO AN OPEN DAY

Interested and Affected Parties (I&APs) are invited to attend an Open Day which will be held at the Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401 on Saturday, 18 March 2023 from 10H00-14H00. The purpose of these meetings is to discuss the proposed project, contents of the Scoping Report, to provide I&APs with an opportunity to raise their comments and to interact with the project team.

Any person affected by or who may be interested in the proposed project is asked to register as an I&AP by completing the attached Stakeholder Registration and Reply Form or by contacting the stakeholder engagement team.

Contact person: Vanessa Viljoen/Phumla Mngwengwe, Tel: 012 003 6627/Email: stakeholders@kongiwe.com.

For more information, please refer to the attached Background Information Document.

Kind Regards,

The Stakeholder Engagement Team | Kongiwe Environmental (Pty) Ltd.
Tel: +27 (12) 003 6627 | Fax: +27 (86) 476 6438 | Email: stakeholders@kongiwe.com
Spaces, Byls Bridge Office Park, Building 14, Block B, Corner of Olievenhoutbosch & Jean Ave, Centurion, 0157, South Africa.
PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.
www.kongiwe.com

APPENDIX C:

Public Participation Information

- ❖ Appendix C4 – Newspaper Advert

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

DMRE reference number: To be confirmed
DWS reference number: WU25681

Applicant: Ergo Mining (Pty) Limited
Project Name: 4L39 Reclamation Project

Notice is given that Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residue from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). As such the reclamation activity does not require a Mining Right but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) and an Integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA).

The required Environmental Authorisation Application and Integrated Water Use Licence applications will be undertaken in accordance with the following legislation:

- **Application for an Environmental Authorisation** for listed activities triggered in Listing Notices ***GN R983; and GN R984, all as amended,*** in terms of the Environmental Impact Assessment (EIA) Regulations, 2014, as amended, 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 ***GN 921– B***.
- **An Integrated Water Use Licence Application (IWULA)** in accordance with the National Water Act, 1998 (Act No.36 of 1998) (NWA) for water uses in terms of **Section 21.**

AVAILABILITY OF THE SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT: The Draft Scoping Report (DSR) for the proposed project will be made available for public review and comment for a period of 30 days, from **Thursday, 23 February 2023 until Thursday, 27 March 2023**. The DSR will also be made available electronically on Kongiwe Environmental's website http://www.kongiwe.com/publications-view/public-documents/, and an electronic copy will be made available upon request. Non-technical summaries of the DSR will also be distributed to stakeholders upon request.

- A hard copy of the DSR will be made available at the following public place:
  - Location: Germiston Public Library, 14 Queen St, Germiston, 1400
  - Contact Person: Ms Edith Kruger, Tel: (011) 999 1737

STAKEHOLDER CONSULTATION MEETINGS: Stakeholders are invited to participate through virtual and non-virtual engagements. One-on-one consultation meetings will be held via on-line forums such as Microsoft Teams, or telephonically. On-line engagement activities will be available during the public review period. The purpose of these meetings is to discuss the proposed project, contents of the Scoping Report, to provide I&APs with an opportunity to raise their comments and to interact with the project team. Please see below the proposed I&APs meeting schedule.

Proposed dates	Available time slots	Method of Engagement
Virtual meeting		
Thursday, 16 March 2023	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
Live meeting: Open Day		
Saturday, 18 March 2023	10H00 - 14H00	Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401

To register as an I&AP please contact: Kongiwe Environmental Stakeholder Engagement Team
Vanessa Viljoen/Phumla Mngwengwe, Tel: (012) 003 6627, Email: stakeholders@kongiwe.com

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

APPENDIX C:

Public Participation Information

- ❖ Appendix C5 – Site Notice Report and Map

Environmental Authorisation and an Integrated Water Use Licence Application for the reclamation and reprocessing of the 4L39 Tailings Storage Facility, City of Ekurhuleni Metropolitan Municipality - Gauteng Province

DMRE reference number: To be confirmed

DWS reference number: WU25681

Notice is given that Ergo Mining (Pty) Limited (hereafter Ergo) intends to reclaim and reprocess gold residues from the tailings storage facility (TSF), generally referred to as slimes dam or mine dump, No. 4L39. This TSF is situated 3 km east of Germiston CBD, in the City of Ekurhuleni Metropolitan Municipality (CoE) and was created prior to the promulgation of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA). As such the reclamation activity does not require a Mining Right, but does still require approval in terms of National Environmental Management Act, 1998 (Act No. 107 of 1998)(NEMA), the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)(NEM: WA) and an Integrated Water Use Licence (IWUL) in terms of the National Water Act, 1998 (Act No.36 of 1998) (NWA).

Kongiwe Environmental (Pty) Ltd has been appointed as an independent Environmental Assessment Practitioner to conduct the EIA process and IWUL application for the proposed project. The required Environmental Authorisation (EA) and IWUL applications will be undertaken in accordance with the following legislation:

- **Application for an Environmental Authorisation for listed activities triggered in Listing Notices GN R983 and GN R984,** all as amended, in terms of the Environmental Impact Assessment (EIA) Regulations, 2014, as amended, 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 GN 921– B.
- **An Integrated Water Use Licence Application (IWULA)** in accordance with the National Water Act, 1998 (Act No.36 of 1998) (NWA) for water uses in terms of Section 21.

AVAILABILITY OF THE SCOPING REPORT FOR PUBLIC REVIEW AND COMMENT: The Draft Scoping Report for the proposed project will be made available for public review and comment for a period of 30 days, from **Thursday, 23 February 2023 until Monday, 27 March 2023**. The DSR will also be made available electronically on Kongiwe Environmental's website http://www.kongiwe.com/publications-view/public-documents/, and an electronic copy will be made available upon request. Non-technical summaries of the DSR will also be distributed to I&APs upon request.

- A hard Copy of the DSR will be made available at the following public place:
  - Location: Germiston Public Library, 14 Queen St, Germiston, 1400
  - Contact Person: Ms Edith Kruger, Tel: (011) 999 1737

STAKEHOLDER CONSULTATION MEETINGS: Stakeholders are invited to participate through virtual and non-virtual engagements. One-on-one consultation meetings will be held via on-line forums such as Microsoft Teams, or telephonically. On-line engagement activities will be available during the public review period. The purpose of these meetings is to discuss the proposed project, contents of the Scoping Report, to provide I&APs with an opportunity to raise their comments and to interact with the project team. Please see below the proposed I&APs meeting schedule.

Proposed dates	Available time slots	Method of Engagement
Virtual meeting		
Thursday, 16 March 2023	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
Live meeting: Open Day		
Saturday, 18 March 2023	10H00 - 14H00	Institute Status Acres Combined School Hall, Quarry Road, Georgetown Germiston, 1401

To register as an I&AP please contact: Kongiwe Environmental Stakeholder Engagement Team.
Vanessa Viljoen/Phumla Mngwengwe, Tel: 012 003 6627, Email: stakeholders@kongiwe.com

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

Figure 1: Locality Map of the proposed project.

APPENDIX D:
Site Photographs

The 4L39 TSF as seen from Delmore Park - 26°12'43.20"S 28°11'50.35"E

View of 4L39 TSF from Lower Boksburg Road - 26°12'47.57"S 28°11'43.46"E

View of the 4L39 TSF from Knights road - 26°12'37.30"S 28°11'12.83"E

View of the community of Good Hope From Tide Street with the 4L39 TSF in the background - 26°12'50.73"S 28°11'11.02"E

Entrance to the 4L39 TSF from Lower Boksburg Road - 26°12'47.07"S 28°11'37.52"E

APPENDIX E:
Environmental Screening Tool

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number:

Project name: The reclamation of TSF no 4L39

Project title: The reclamation of the TSF no 4L39 **Date**

screening report generated: 13/10/2022 14:27:58

Applicant: Ergo Mining (Pty) Ltd

Compiler: Kongiwe Environmental (Pty) Ltd

Compiler signature:

.....

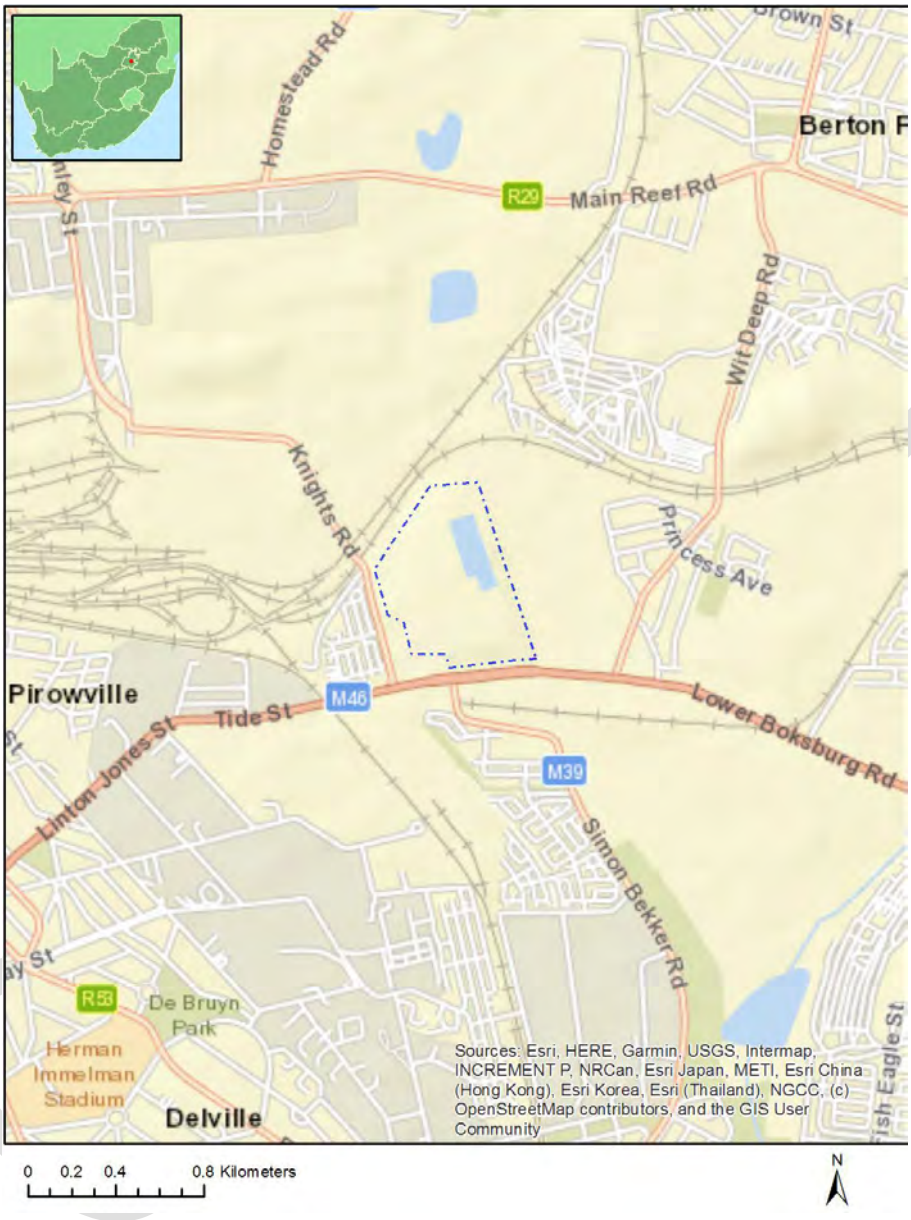
Application Category: Mining|Beneficiation|Mineral

Table of Contents

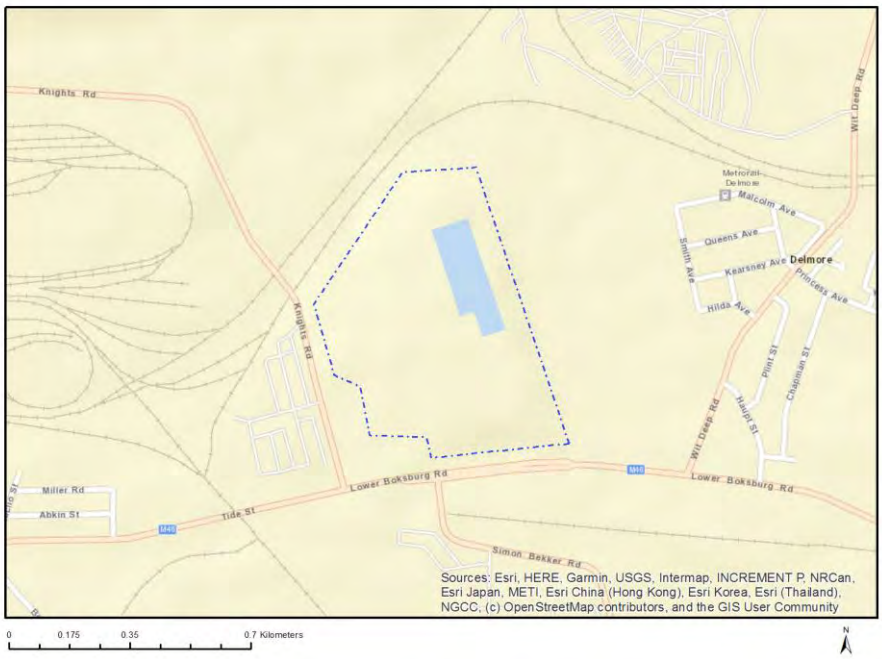
Proposed Project Location

Orientation map 1: General location

General Orientation: The reclamation of TSF no 4L39



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	GERMISTON	576	3	26°12'41.72S	28°11'17.27E	Erven
2	DRIEFONTEIN	87	0	26°12'15.43S	28°10'47.59E	Farm
3	DRIEFONTEIN	87	1	26°11'36.52S	28°10'15.41E	Farm Portion
4	DRIEFONTEIN	87	186	26°12'26.38S	28°11'17.77E	Farm Portion
5	DRIEFONTEIN	87	270	26°12'36.11S	28°11'24.26E	Farm Portion
6	DRIEFONTEIN	87	139	26°12'22.75S	28°11'42.59E	Farm Portion
7	DRIEFONTEIN	87	133	26°12'41.3S	28°11'16.59E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2551	Solar PV	Approved	23.8

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

2	14/12/16/3/3/1/569	Solar PV	Approved	17
3	12/12/20/2530	Solar PV	Approved	23.8

Environmental Management Frameworks relevant to the application

Environmental Management Framework	LINK
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Mining|Beneficiation|Mineral**.

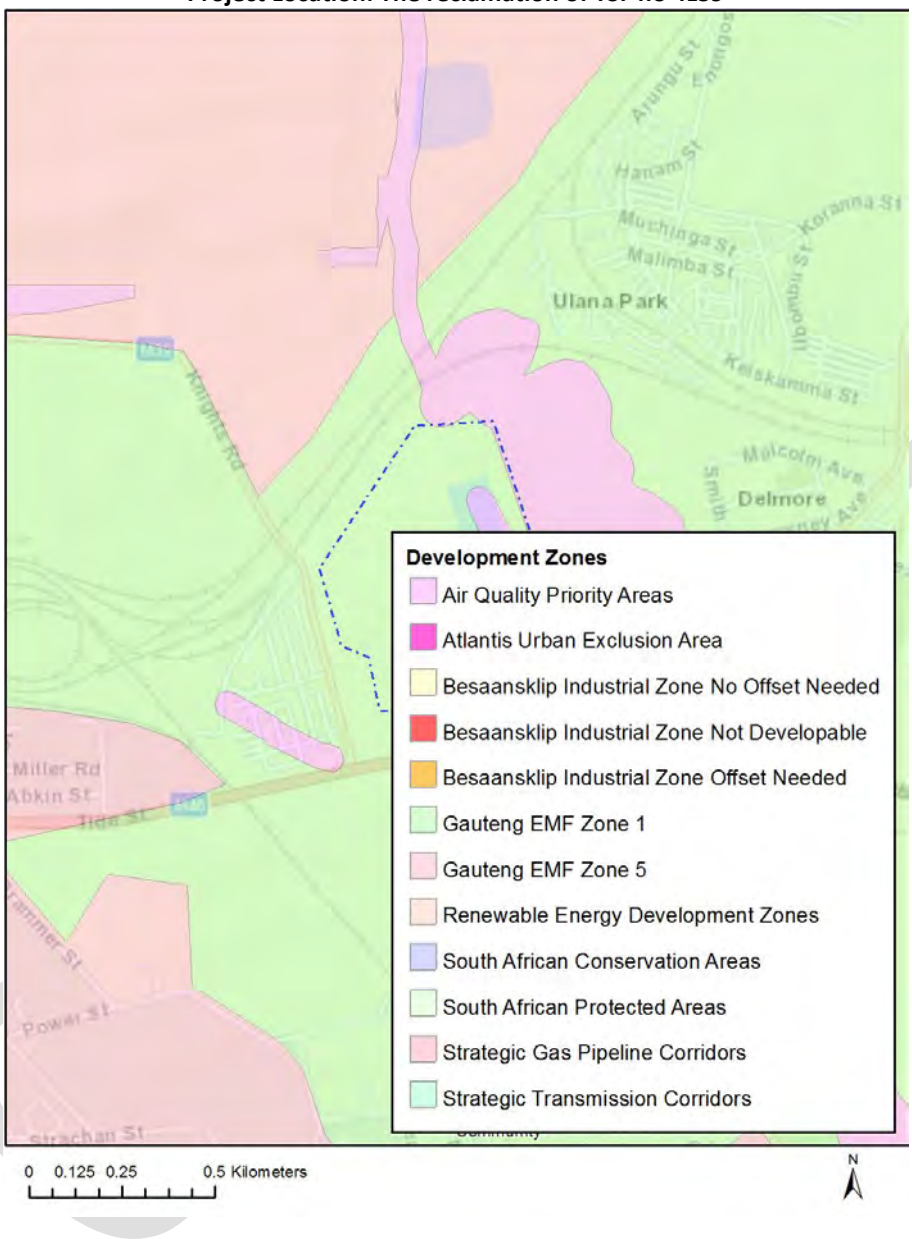
Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Gauteng EMF-Urban development zone 1	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Zone1_2021.pdf

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones

Project Location: The reclamation of TSF no 4L39



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme			X	
Animal Species Theme			X	

Aquatic Biodiversity Theme				X
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme			X	
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

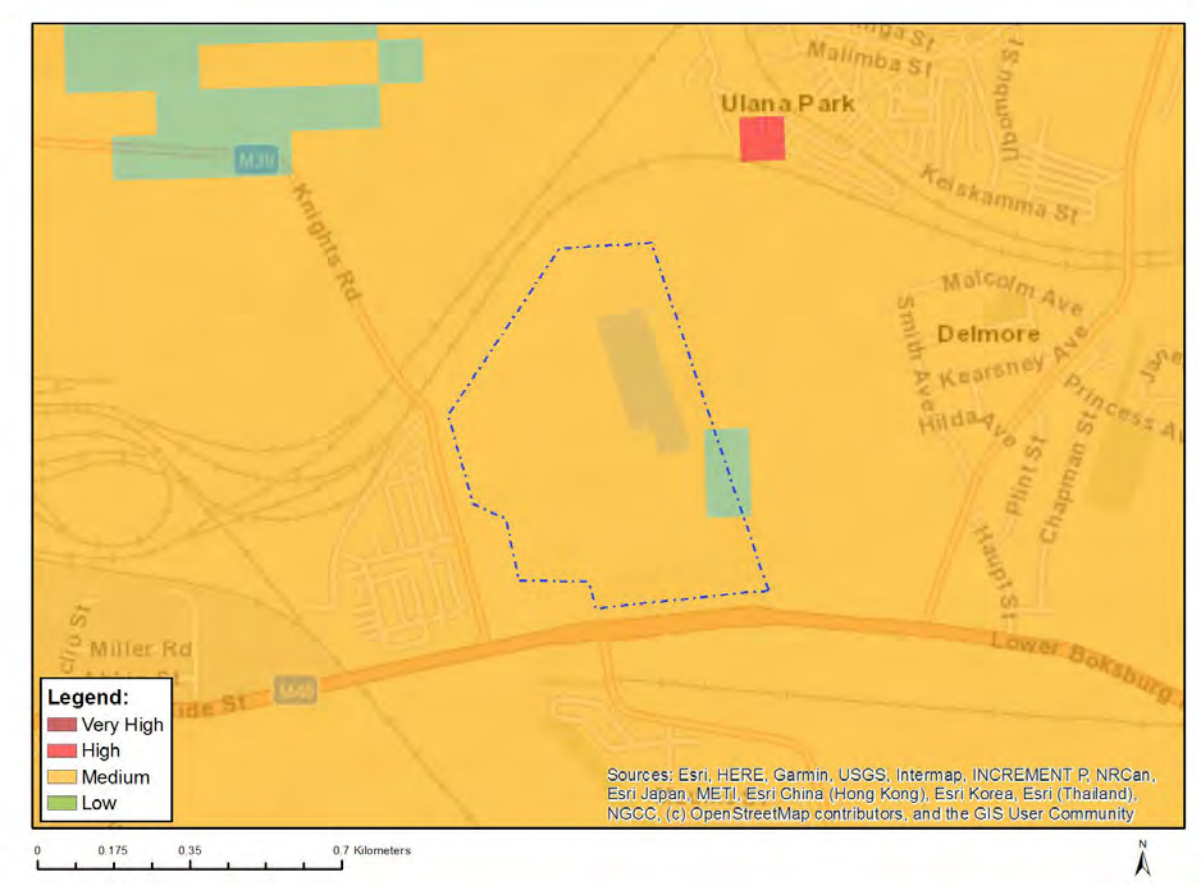
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assess	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

	ment	
7	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
8	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Climate Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
11	Health Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
12	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
15	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
16	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

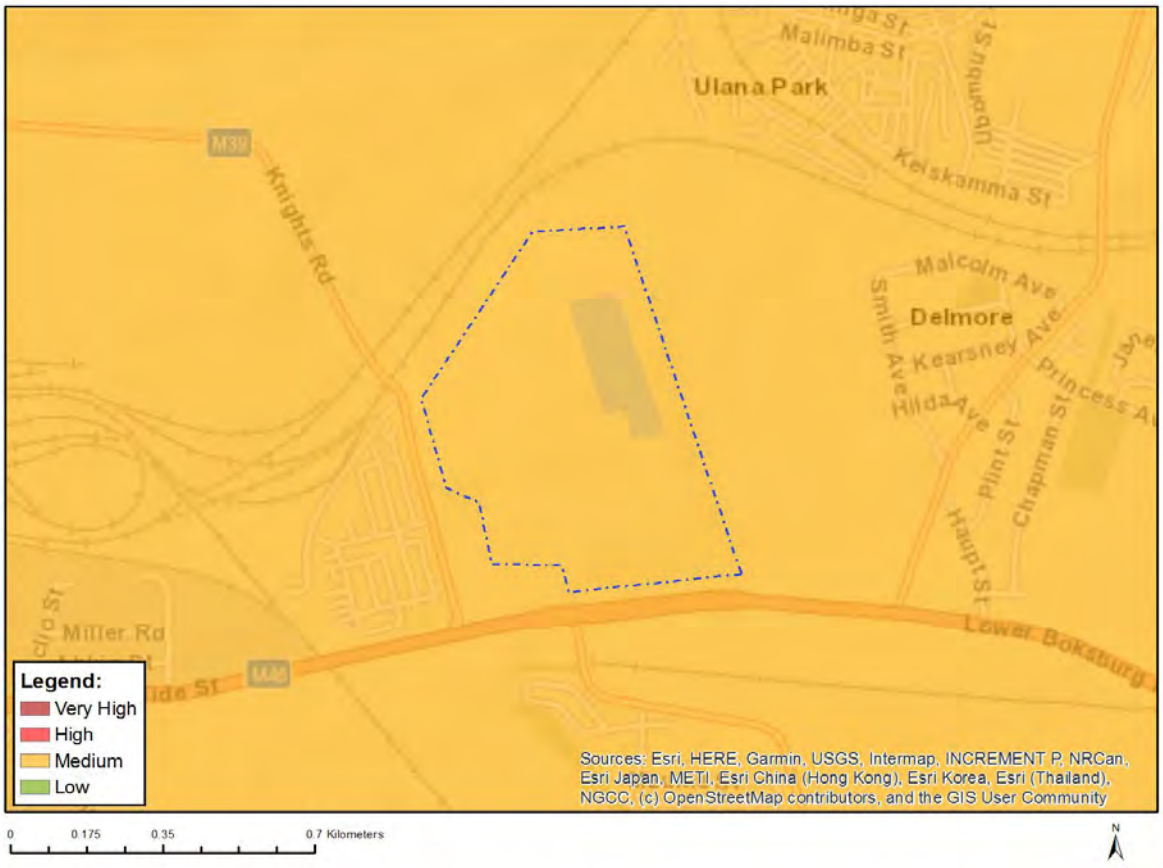


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



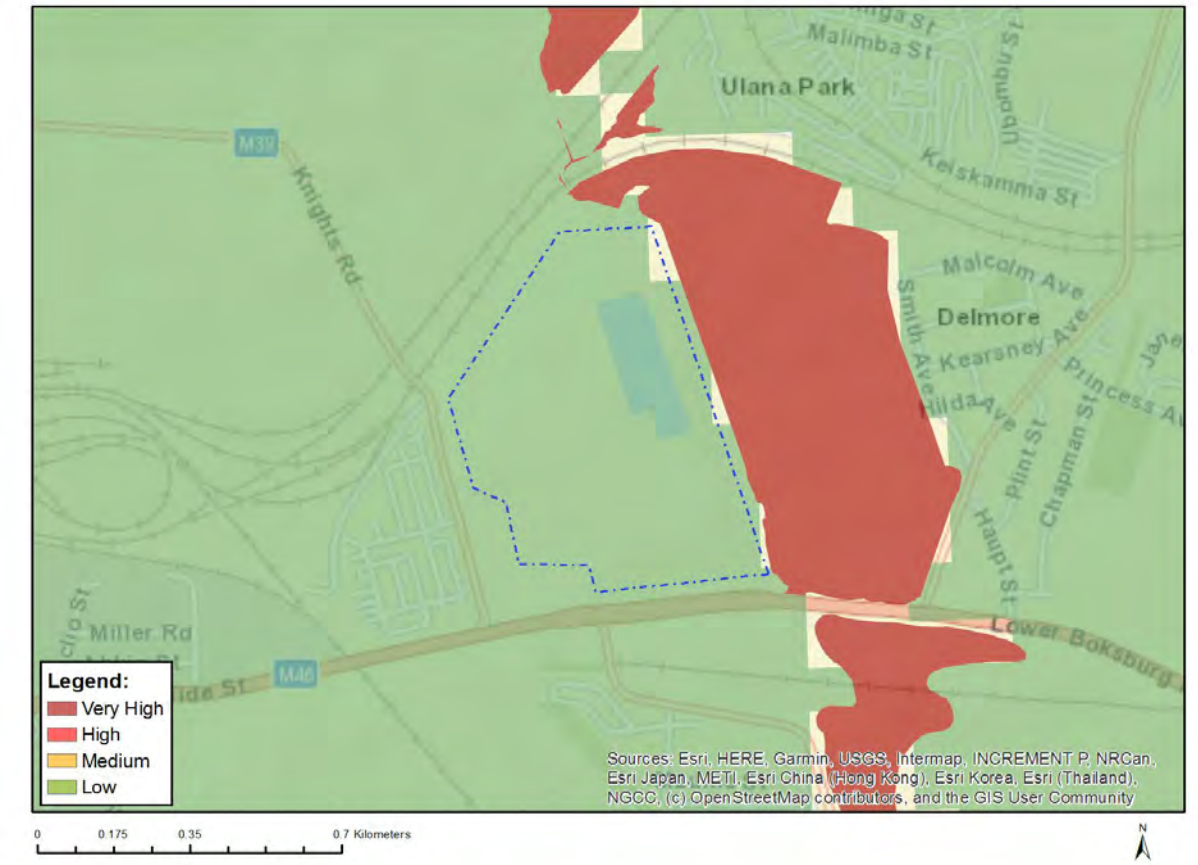
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Insecta-Aloeides dentatis dentatis
Medium	Insecta-Lepidochrysops procera
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Hydrictis maculicollis
Medium	Invertebrate-Clonia uvarovi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

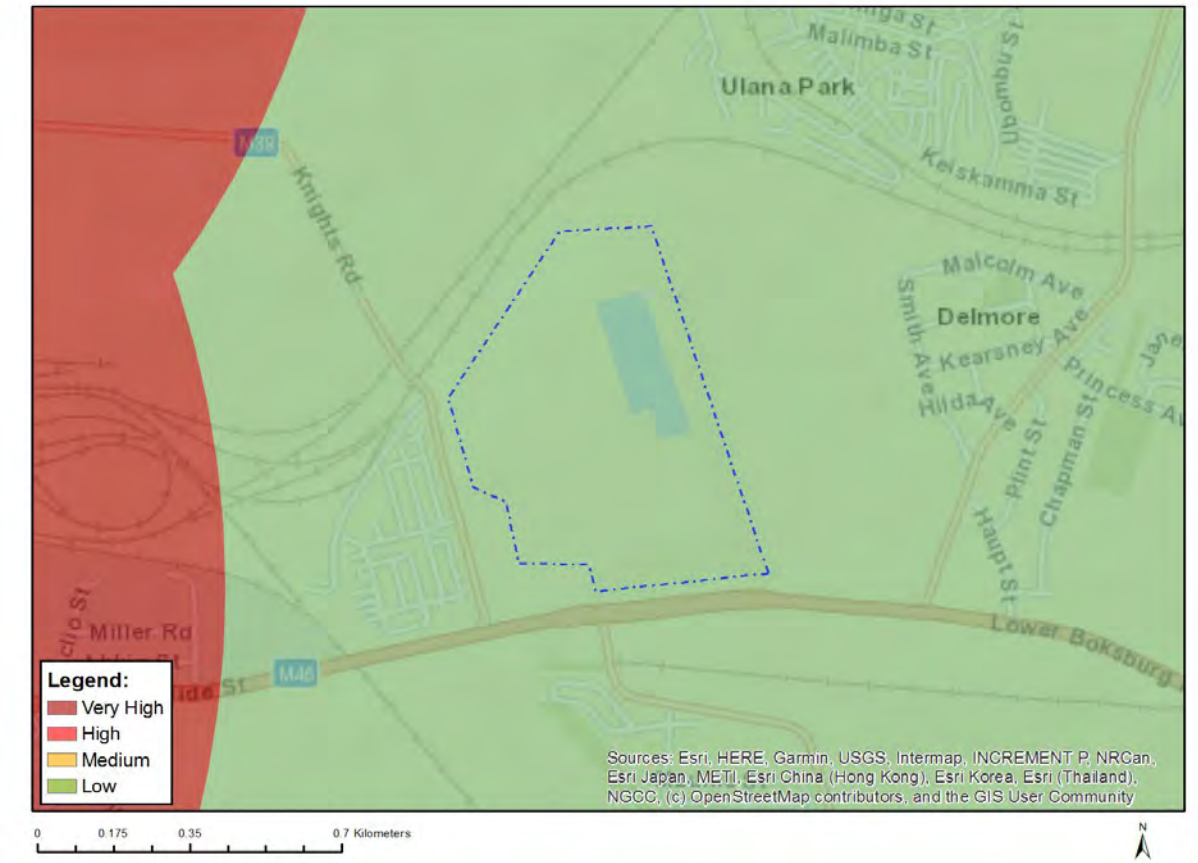


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

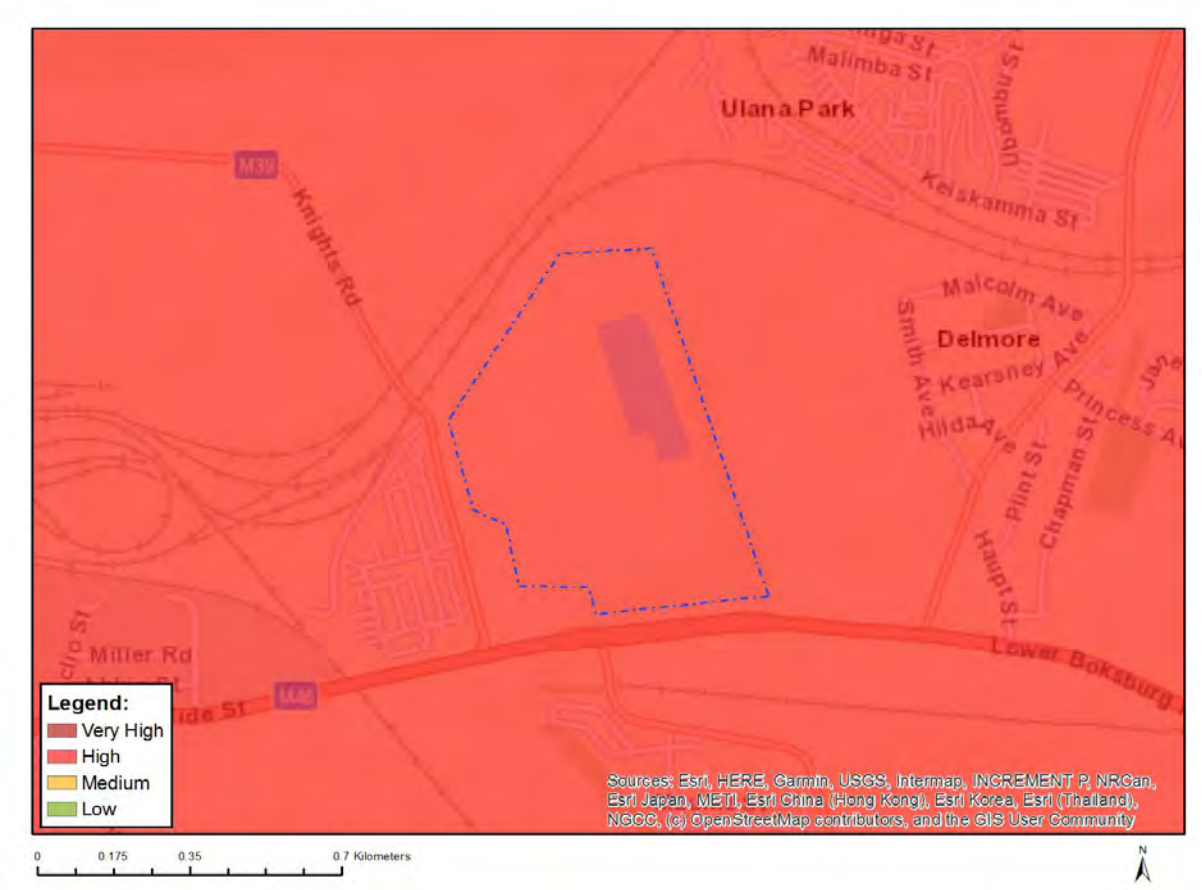


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 15 km of a civil aviation radar
High	Between 8 and 15 km from a major civil aviation aerodrome
High	Within 8 km of other civil aviation aerodrome
Medium	Within 5 km of an air traffic control or navigation site

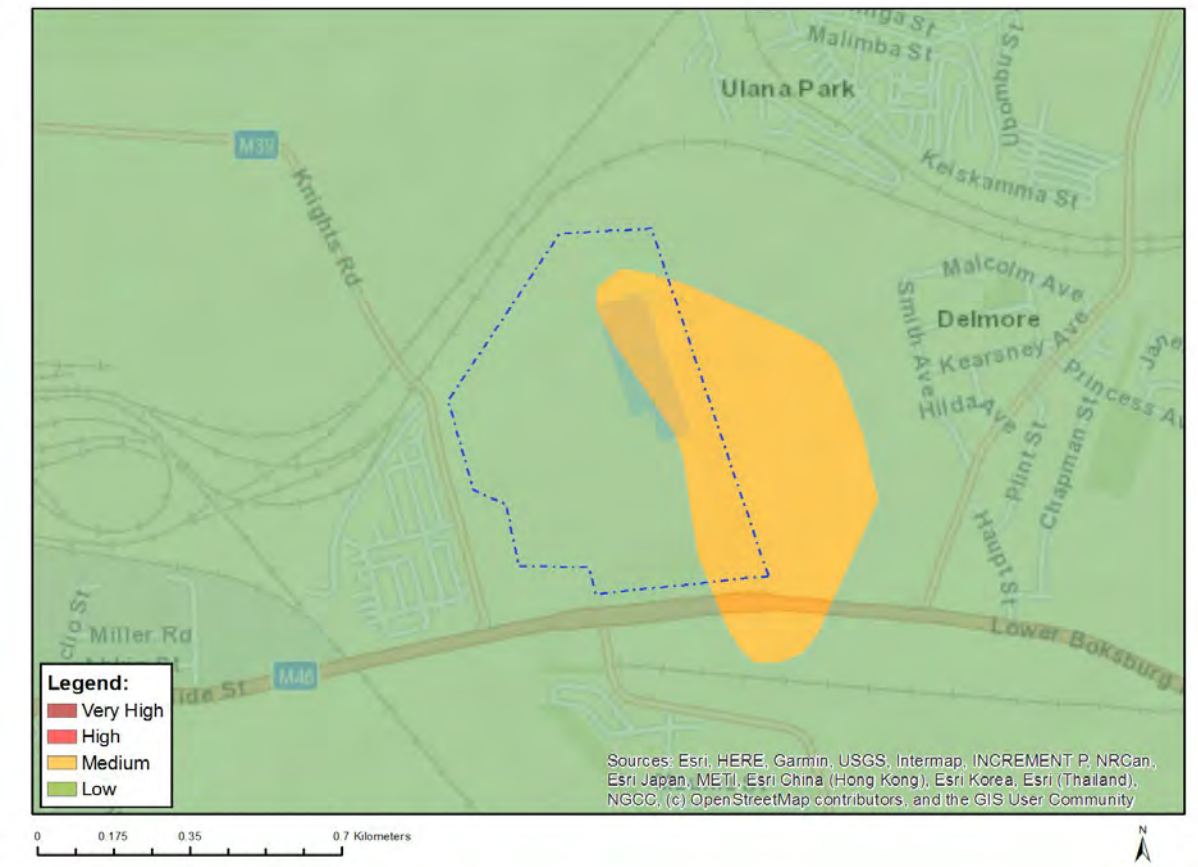
MAP OF RELATIVE DEFENCE THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

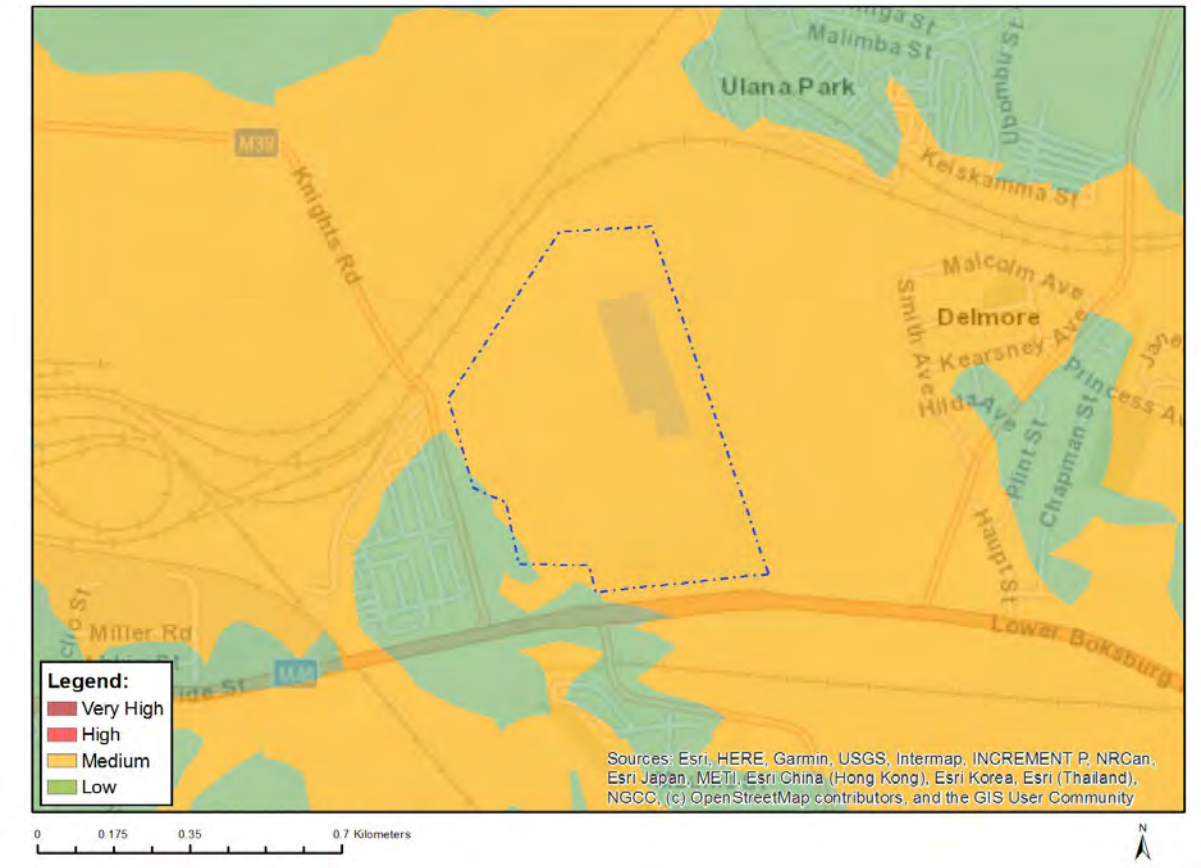


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



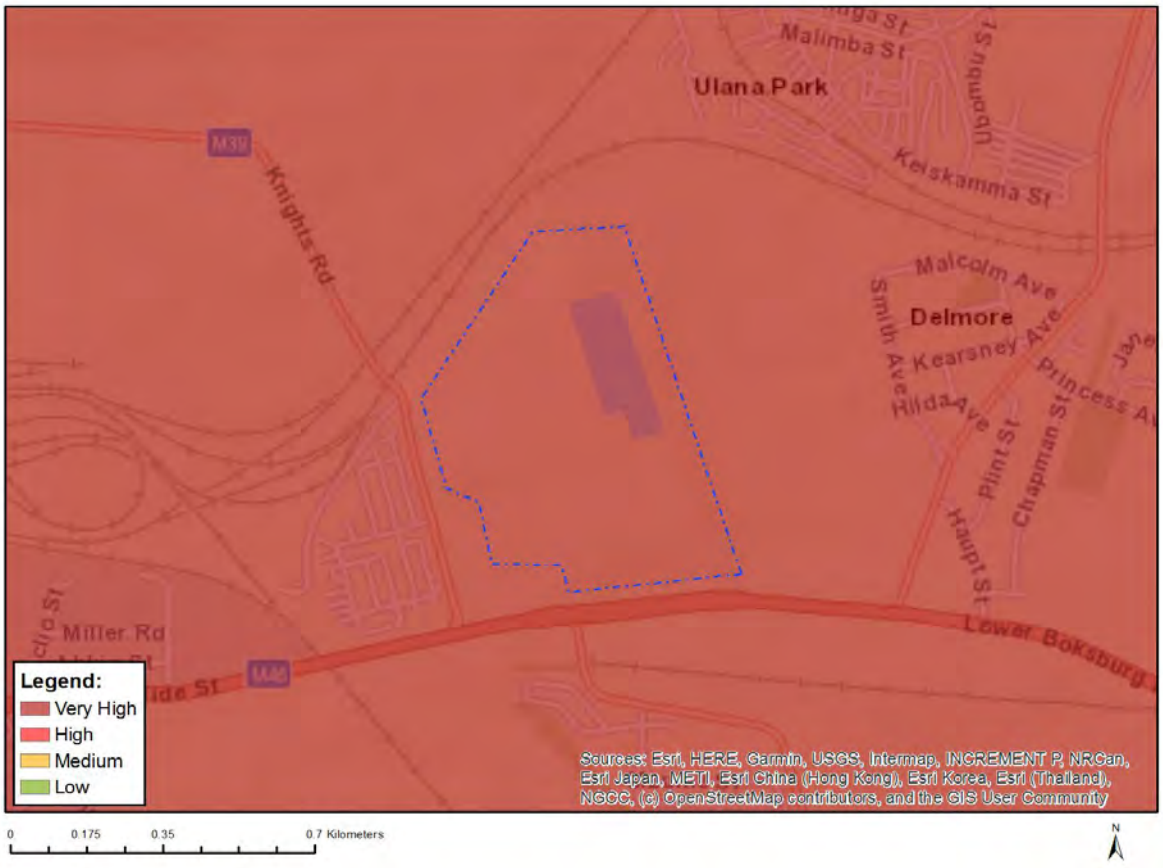
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Khadia beswickii
Medium	Sensitive species 691

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Critical biodiveristy area 2
Very High	Ecological support area
Very High	Protected Areas Expansion Strategy
Very High	Critically endangered ecosystem