



**THE RECOMMISSIONING OF THE WITHOK TAILINGS  
STORAGE FACILITY IN THE CITY OF EKURHULENI,  
GAUTENG PROVINCE**

**DRAFT SCOPING REPORT**

**DMRE REFERENCE NUMBER: GP 30/ 5/1/2/2 (158) MR**

**23 October 2024**



## mineral resources

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

### DRAFT SCOPING REPORT

#### **FOR LISTED ACTIVITIES ASSOCIATED WITH THE RECOMMISSIONING OF THE WITHOK TAILINGS STORAGE FACILITY IN THE CITY OF 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.

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**Document prepared by:** Kongiwe Environmental (Pty) Ltd

**Document Date:** 23 October 2024

## Draft Scoping Report Information

PROJECT:	The Recommissioning of the Withok TSF
Report Title:	Recommissioning of the Withok Tailings Storage Facility (TSF) in Ekurhuleni, Gauteng Province
DMRE Reference No.	GP 30/5/1/2/2 (158) MR
Client:	Ergo Mining (Pty) Ltd
Project No:	DRDG#012
Compilation Date:	23 October 2024
Status of Report:	Draft Scoping Report for Client review

VERIFICATION	CAPACITY	NAME	SIGNATURE	DATE
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## 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 (CA) 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.

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## Objective of the Scoping Process

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### 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, 24 October 2024 until Friday, 22 November 2024**. Notification of the availability of the documentation for review has been distributed on **22 October 2024**. The report will be made available in hard copy at the following locations:

Location	Physical Address	Contact person
<b>Draft Scoping Report</b>		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Librarian (011) 999 7748 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548	Ms Lindiwe Shandu, Librarian (011) 999 8046 Mon – Fri: 09h00 – 16h00
<b>Non-Technical Summary</b>		
<b>A non- technical summary of the DSR has been compiled and distributed through community representatives and also couriered to stakeholders who sent a request to the stakeholder engagement team. The hard copy can be also be accessed at the following libraries:</b>		
Katlehong Public Library	Civic Centre, 01 Masakhane Street, Katlehong	Ms Zanele Mpevu, Librarian (011) 999 1466 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Vosloorus Public Library	6125 Mc Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane, Librarian (011) 999 5937, Stated on the website. Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Zonkizizwe Public Library	4748, 4749 Ext 1 Zone 6, Zonkizizwe	Ms Thuli Mashego, Librarian (011) 999 1415 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Randvaal Public Library	514 Houtkapper Street, Randvaal, 1873	Ms Mara Frost, Librarian (016) 365 5093 – (071) 207 7269 Mon-Fri: 9:00am – 5:00pm Sat: 9:00am- 12:00pm
Henley on Klip Public Library	45 Regatta Rd, Henley on Klip, Meyerton, 1961	Ms Mara Frost, Librarian (016) 365 5093 – (071) 207 7269 Mon-Fri: 9:00am – 5:00pm Sat: 9:00am- 12:00pm
Meyerton Public Library	Loch Str, Mayerton, 1960	Ms Prudence Matitwana

		(061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm
<b>Electronic copies</b>		
Kongiwe Environmental website	<a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a>	Vanessa Viljoen / Thuli Phakathi
An electronic copy 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 (Vanessa Viljoen/Thuli Phakathi), tel: (010) 140 1725/(010) 140 1726, email: <a href="mailto:stakeholders@kongiwe.com">stakeholders@kongiwe.com</a> 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 (FSR).

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## Executive Summary:

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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 **Recommissioning of the Withok Tailings Storage Facility (TSF)** (hereafter the Proposed Project).

The Application for Environmental Authorisation (EA) was submitted to the Department of Mineral and Petroleum Resources (DMPR) ((previously the Department of Mineral Resources and Energy (DMRE)), which is the Competent Authority (CA) for the Proposed Project, on **18 October 2024**. The Draft Scoping Report (DSR) is available for public review from **Thursday, 24 October 2024 until Friday, 22 November 2024**.

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## Project Introduction and Background

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Ergo, a wholly owned subsidiary of DRDGOLD Ltd, within which the group's eastern surface retreatment assets are consolidated, is a major surface gold tailings retreatment operation that focuses on historic 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 reprocesses historical gold mine dumps and TSFs throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. The Brakpan TSF is reaching its designed capacity and height, and Ergo is investigating other deposition sites in the area which will enable them to continue with their reclamation operations.

Ergo has identified the footprint of the original Withok TSF (Withok TSF footprint), previously utilised by Anglo Gold Ashanti Limited (AGA) and subsequently reclaimed and rehabilitated over several years ending 2006, as a potential deposition site. Deposition at the Withok TSF, which is immediately south of the Brakpan TSF, halted prior to the cession of the AGA Mining Right (GP 158 MR) to Ergo in January 2013 and no deposition is currently taking place at this facility. It should be noted that even though deposition on the Withok TSF had ceased, this was included in the Mining Right duly ceded to Ergo.

The Withok TSF is included in the 1997 Environmental Management Programme (EMPr) as approved by the then Department of Minerals and Energy on 09 July 1998 (Reference No.: PWV6/2/2/340, December 1997). This EMPr fell under Mining Licence ML34/2000. An old order mining right conversion was undertaken in 2009, with a new Mining Right reference of GP 30/5/1/2/2 (158) MR being issued. The Brakpan/Withok TSF is further authorised under Water Use Licence 08/C22C/CGI/425.

Successfully implementing the recommissioning of Withok TSF will allow Ergo to continue reclaiming areas that act as a significant contributor to the progressive, permanent, removal of a myriad of historic, tailings

facilities scattered across the Central and East Rand. Making vast portions of currently sterilized land, available for redevelopment in an economically beneficial manner aligning with the Gauteng Mine Residue Area Strategy (2012), Ekurhuleni Metropolitan Spatial Development Framework (2011), City of Johannesburg (CoJ) Metropolitan Spatial Development Framework (MSDF), the CoJ Integrated Public Transport Network (IPTN), and the Ekurhuleni Environmental Management Framework's (2014) objectives to remove historic TSFs scattered throughout the Gauteng landscape.

Economic value attributed to the continuation of Ergo Mining, represents a significant investment into the East of Gauteng over an expected 20-year period, the associated job creation and multiplier effect are unquestionably aligned with Government's objective to accelerate sustainable job creation and supporting local business.

Ergo's objective is to reprocess the remaining large historical TSFs located in Gauteng such as but not limited to the Marievale cluster, Crown Tailings Complex, Benoni Cluster and other dumps in the Springs area. Through this process Ergo will clear and rehabilitate approximately 1800 ha of sterilized mine land, into that of wilderness or industrial land uses. Not only are there great economic benefits in terms of the immediate land use, but the retreatment and tailings removal make lives easier for communities living next to these facilities by reducing dust, runoff, and fine sediment siltation.

Removing current tailings facilities off highly sensitive permeable dolomitic landscapes susceptible to acid mine drainage, formation of sinkholes and rapid movements of contaminants in the groundwater is highly beneficial. The reclamation/rehabilitation of these historic facilities potentially reduces groundwater seepage of around 3,7 million m<sup>3</sup> per year. This is equivalent to just over 10 000 m<sup>3</sup>/d over the Witwatersrand area, which is a significant reduction in groundwater contamination. This will further result in a reduction of around 7 400 tons in the sulphate salt load to the groundwater aquifers per year.

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## Project Description

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The following facility components are currently present on the Proposed Project area:

- ❖ Access roads;
- ❖ Withok footprint; and
- ❖ Attenuation dam, sump and diversion pipeline.

The proposed recommissioned Withok TSF will buttress the southern flank of the Brakpan TSF. The footprint required for the recommissioned the Withok TSF is approximately 400ha, which is less than the original Withok TSF footprint of approximately 550ha. The maximum vertical height at the end of the facility life is planned to be 103m.

The intended recommissioning of the Withok TSF is to utilize similar methodology as previously deployed, i.e. cyclone deposition with a floating decant pumping system. However, the first phases (lower portion) of development will be on a centreline basis to provide a much wider underflow prism, improving geotechnical characteristics and drainage. The principle of cyclone development is to create a sufficiently

robust underflow perimeter wall to contain the overflow with adequate freeboard and inherent stability to avoid overtopping and to prevent side slope failure.

The recommissioning of the Withok TSF entails the following:

- ❖ Upgrading of the current footprint to allow for the redevelopment of the Withok TSF. This will involve the following civil work:
  - A sump and stormwater diversion trench;
  - A toe embankment which acts as an access road and slurry distribution pipeline servitude;
  - A starter embankment;
  - An HDPE liner;
  - Toe drain, intermediate drain, main drain, radial drain, and interface drain platforms;
  - Drainage outlet pipe platforms (cross walls);
  - Toe drain, intermediate drain, main drain, radial, basin drain, interface blanket drain, as well as below liner seepage cutoff/collector drains;
  - A decant berm and pool wall;
  - Drainage collector pipes;
  - A dual compartment return water dam (Withok RWD) and return water pumping system;
  - A floating decant barge pumping system, as well as a decant pipeline;
  - Slurry feed pipelines;
  - Slurry distribution pipelines;
  - An HDPE pipe ring main; and
  - 250mm diameter cyclones, complete with feed pipes, valves, overflow pipes.
- ❖ Deposition of tailings;
- ❖ Water management; and
- ❖ Temporary construction camp.
- ❖ Borrow pits for material required during civil works and concurrent rehabilitation of the side slopes of the Withok TSF.

The water management plan details during the life of operation are:

- ❖ Dirty side slope storm water management on the TSF will be achieved through chutes discharging into catchment paddocks, some of which decant into a collector pipe. This water will be piped to the return water dam and pumped to the Brakpan RWD and from there to the Ergo Plant for re-use in the system. The remainder is attenuated in the catchment paddocks where it evaporates.
- ❖ Drain flows will also be collected in the same collector pipe.
- ❖ Decant return is pumped directly to the Brakpan RWD for re-use in the process. Most dirty side slope storm water and all drain water is routed to the Withok RWD. The remaining dirty side slope storm water is evaporated in the catchment paddocks. Because decant water is not pumped to the Withok RWD, a silt trap at the Withok RWD is not required. Desilting is taking place in the catchment paddocks. Water is pumped to the Brakpan RWD for re-use in the process.

- ❖ The Withok RWD must have a capacity of at least 65 000m<sup>3</sup> to comply with GN 704. Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Currently, the design capacity of the Withok RWD is approximately 100,000m<sup>3</sup>.
- ❖ Water must be returned to process, from the Withok RWD, at a rate of up to 9 800m<sup>3</sup>/day.
- ❖ There is an attenuation dam located to the east of Heidelberg Road. Drainage from the Tsakane township collects in the attenuation dam. From there, overflow is released into a culvert which crosses below Heidelberg Road and into a sump. From there an underground pipe diverts the stormwater under the site and releases the water into a tributary to the Rietspruit, a short distance west of the site. The new design, however, includes a storm water diversion trench, which will divert the stormwater water from the sump, east to west along the southern flank of the optimised Withok TSF footprint. Upgrades to the attenuation dam will be undertaken as part of the proposed project.

The Withok TSF will be designed, constructed and managed as per the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012). Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM). The final life of the Withok TSF design, construction, operation and monitoring will align with these requirements where appropriate.

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## Environmental Impact Process

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The Department of Forestry, Fisheries and the 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<sup>1</sup>.

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 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.<sup>2</sup>

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

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<sup>1</sup> 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.

<sup>2</sup> The most recent amendment is GN R517 of 11 June 2021. This S&EIA takes these amendments into account.

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 0-1 cross-references the various sections in this report with these requirements.

**Table 0-1: Structure of the Scoping Report in line with the Appendix 2 of the EIA 2014 Regulations, as amended.**

No.	Regulation Requirement	Report Section
<b>(a)</b>	<b>Details of -</b>	1.6
(i)	The EAP who prepared the report and;	
(ii)	The expertise of the EAP including a CV	
<b>(b)</b>	<b>The location of the activity, including –</b>	2
(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
<b>I</b>	<b>A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is –</b>	2.1
(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	
<b>(d)</b>	<b>A description of the scope of the proposed activity, including –</b>	2.4
(i)	All listed and specified activities triggered	2.5
(ii)	A description of the activities to be undertaken, including associated structures and infrastructure	2.6
<b>I</b>	<b>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</b>	3
<b>(f)</b>	<b>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</b>	4
<b>(g)</b>	<b>Period of environmental authorisation</b>	5
<b>(h)</b>	<b>A full description of the process followed to reach the proposed preferred activity, site and location within the site, including -</b>	6
(i)	Details of the alternatives considered	6.1

No.	Regulation Requirement	Report Section
(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
(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
(iv)	<b>The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects</b>	8
(v)	<b>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 –</b>  <b>(aa) can be reversed;</b>  <b>(bb) may cause irreplaceable loss of resources; and</b>  <b>(cc) can be avoided, managed or mitigated</b>	9
(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
(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
(viii)	The possible mitigation measures that could be applied and level of residual risk	9.4
(ix)	The outcome of the selection matrix	9.5
(x)	If no alternatives, including alternative locations for the activity were investigated, the motivation for no considering such	9.6
(xi)	A concluding statement indicating the preferred alternatives, including preferred locations of the activity	9.7
<b>(i)</b>	<b>A plan of study for undertaking the environmental impact assessment process to be undertaken, including -</b>	10
(i)	A description of the alternatives to be considered and assessed within the preferred site	10.1
(ii)	A description of the aspects to be assessed as part of the environmental impact assessment process	10.2
(iii)	Aspects to be assessed by specialists	10.3
(iv)	A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists	10.4
(v)	A description of the proposed method assessing duration significance	10.4.1
(vi)	An indication of the stages at which the competent authority will be consulted	10.4.2
(vii)	Particulars of the public participation process that will be conducted during the environmental impact assessment process	10.4.3
(viii)	A description of the tasks that will be undertaken as part of the environmental impact assessment process	10.4.4
(ix)	Identify suitable measures to avoid, reverse, mitigate or manage identified impacts	10.4.5

No.	Regulation Requirement	Report Section
	and to determine the extent of the residual risks that need to be managed and monitored	
(j)	<b>An undertaking under oath or affirmation by the EAP in relation to –</b>  (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
(k)	<b>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</b>	11
(l)	<b>Where applicable, any specific information required by the competent authority</b>	N/A
(m)	<b>Any other matter required in terms of section 24(4)(a) and (b) of the Act</b>	N/A

### Environmental Considerations

The Proposed Project will adopt the standards as set out in the Ergo’s Environmental Policy and align with the Global Industry Standards on Tailings Management (GISTM) where appropriate. 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 0-2** 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

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identified. The potential positive and negative impacts which may arise because of the Proposed Project have also been summarised in the **Table 0-2** overleaf.

**Table 0-2: Potential identified impacts as a result of the Proposed Project**

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
<b>Physical Environment (non-living)</b>	Hydrology (including wetlands, surface water and ground water)	<ul style="list-style-type: none"> <li>❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface and groundwater if runoff from operations is not adequately managed through efficient storm water management structures or adequate liners;</li> <li>❖ Potential contamination of shallow groundwater resources due to accidental hydrocarbon or other chemical spillages from vehicles and operational activities might occur;</li> <li>❖ Continuing deposition of tailings on the Brakpan TSF will potentially maintain higher seepage rates over the TSF footprint area with a subsequent local mounding of the water table;</li> <li>❖ Deposition of tailings on the lined Withok TSF will potentially reduce the currently prevailing recharge rate with a subsequent local, insignificant lowering of the water table;</li> <li>❖ Poor quality seepage water infiltrating into the underlying shallow weathered aquifer;</li> <li>❖ Potential water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented;</li> <li>❖ Potential pollution of the Rietspruit and further downstream watercourses in the event of a TSF failure.</li> </ul>	<p>Surface Water Impact Assessment</p> <p>Groundwater Impact Assessment</p> <p>Wetland Impact Assessment</p>
<b>Biological Environment (living)</b>	Ecology and Biodiversity	<ul style="list-style-type: none"> <li>❖ Disturbance of site and species of ecological importance;</li> </ul>	Biodiversity Impact Assessment

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
	(including fauna and flora)	<ul style="list-style-type: none"> <li>❖ Loss of migration corridors, and access to nesting and refuge areas, watering points, food supplies for faunal species;</li> <li>❖ Displacement of animal habitat due to the recommissioning of the TSF.</li> </ul>	
<b>Cultural Environment</b>	Heritage Resources	<ul style="list-style-type: none"> <li>❖ Since the footprint was a TSF previously, it is unlikely for there to be any heritage resources on site.</li> </ul>	Heritage Impact Assessment
<b>Social and Economic Environment</b>	Employment	<ul style="list-style-type: none"> <li>❖ Continued employment and job security;</li> <li>❖ Continued investment in local economy;</li> <li>❖ Possible health and economic impacts due to the recommissioning of the TSF.</li> </ul>	Social Impact Assessment
	Land-use	<ul style="list-style-type: none"> <li>❖ Land use impacts in the area due to the recommissioning of the TSF.</li> </ul>	Social Impact Assessment
	Air Quality	<ul style="list-style-type: none"> <li>❖ Increase in dust levels as a result of increased size of the TSF;</li> <li>❖ Health impacts on livestock and people in proximity to the project site due to fine particulate emissions during operational phase.</li> </ul>	Air Quality Impact Assessment

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## Overall Conclusions

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According to the Way Forward and the Plan of Study, contained in this report, impacts associated with the Proposed Project need to be carefully 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 proposed location for the TSF recommissioning was the site of a historical TSF that was reclaimed.

The Proposed Project will assist Ergo in continuing their operations, which in turn is 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 historic TSFs scattered throughout the Gauteng landscape.

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## Way Forward

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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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## Appendices

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- ❖ **Appendix C8** – Stakeholder Correspondence
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## Appendix D – Site Photographs

## Appendix E – Environmental Screening Tool

## Abbreviations

Abbreviation/ Symbol	Description
ADU	Animal Demography Unit
AGA	Anglo Gold Ashanti Limited
AMD	Acid Mine Drainage
BA	Basic Assessment
BBBEE	Broad-Based Black Economic Empowerment
BID	Background Information Document
BRP	Bioregional Plan
CA	Competent Authority
CARA	Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)
CBA	Critical Biodiversity Area
CIL	Carbon in Leach
CIP	Carbon in Pulp
CoE	City of Ekurhuleni Metropolitan Municipality
CoP	Code of Practice
CR	Critically Endangered
CRR	Comments and Responses Report
DALRRD	Department of Agriculture, Land Reform and Rural Development
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DMPR	Department of Mineral AND Petroleum Resources
DoH	Department of Health
DPWI	Department of Public Works and Infrastructure
DSR	Draft Scoping Report
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMPr	Environmental Management Programme
EN	Endangered
EPWP	Expanded Public Works Programme
e-WULAAS	Electronic Water Use Licence Application and Authorisation System
ESA	Ecological Support Area
FEPA	Freshwater Ecosystem Priority Areas

Abbreviation/ Symbol	Description
FSR	Final Scoping Report
GCP	Gauteng Conservation Plan
GDARD	Gauteng Department of Agriculture and Rural Development
GISTM	Global Industry Standard on Tailings Management
GGDA	Gauteng Growth and Development Agency Strategic Plan
GSDF	Gauteng Spatial Development Framework
HIA	Heritage Impact Assessment
HPA	High Priority Area
IBA	Important Bird Areas
IDP	Integrated Development Plan
IUCN	International Union for Conservation of Nature
IWULA	Integrated Water Use Licence Application
IWWMP	Integrated Water and Waste Management Plan
LC	Least Concern
mamsl	metres above mean sea level
MAP	Mean Annual Precipitation
MAR	Mean Annual Runoff
MAT	Mean Annual Temperature
MHSA	Mine Health and Safety Act, 1996 (Act No. 29 of 1996)
MP	Moderately Protected
MPRDA	Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)
MR	Mining Right
NAAQS	National Ambient Air Quality Standards
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEA	Nuclear Energy Act, 1999 (Act 46 of 1999)
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
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)
NEPAD	New Partnership of Africa's Development
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
NNR	National Nuclear Regulator
NPAES	National Protected Area Expansion Strategy
NP	Not Protected
NT	Near Threatened
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PA	Protected Areas
PAIA	Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)
PM	Particulate Matter
POPIA	Protection of Personal Information Act, 2013 (Act No. 4 of 2013)
PP	Poorly Protected
PPP	Public Participation Process
RCAM	Road Classification and Access Management
RLE	Red List Ecosystems

Abbreviation/ Symbol	Description
RoD	Record of Decision
RWD	Return Water Dam
S&EIA	Scoping and Environmental Impact Assessment
SABAP2	South African Bird Atlas Project, Version 2
SACAD	South African Conservation Areas Database
SAHRA	South African Heritage Resource Agency
SANBI	South African National Biodiversity Institute
SANS	South African National Standards
SANRAL	South African National Roads Agency SOC Limited
SAPAD	South African Protected Areas Database
SDF	Spatial Development Framework
SEIA	Socio-Economic Impact Assessment
SOP	Standard Operating Procedure
SMME	Small, Medium and Micro Enterprises
SPLUMA	Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013)
SSRP	Regulations on Safety Standards and Regulatory Practices
STR	Screening Tool Report
TSF	Tailings Storage Facility
ToR	Terms of Reference
VU	Vulnerable
WMA	Water Management Area
WML	Waste Management Licence
WP	Well Protected
WULA	Water Use Licence Application
ZoI	Zone of Influence

## SECTION 2:

# THE RECOMMISSIONING OF THE WITHOK TAILINGS STORAGE FACILITY

## 1 Introduction and Background

### 1.1 The History of Gold Mining in South Africa

The first official gold prospector of the Transvaal Republic was Pieter Jacob Marais 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, 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.

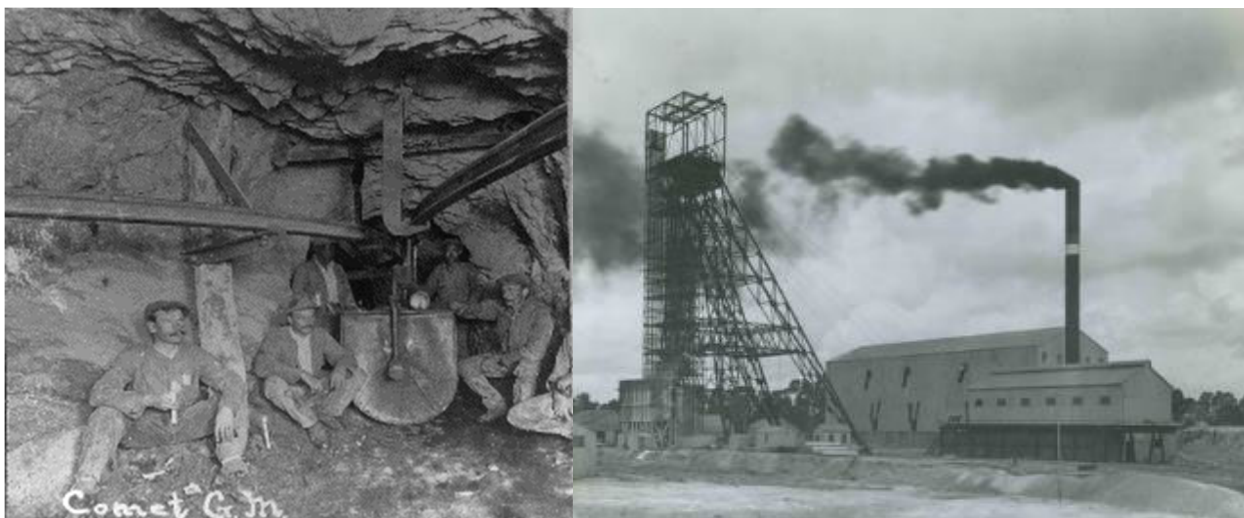
Durand (2012) further explains that in September 1886, nine farms were proclaimed as public diggings. These public digging sites formed the focus of the initial gold development which would later become known as the Central Rand. The development of the Central Rand and the outlying goldfields along the 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 Leeupoort 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 Leeuwoort 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 km<sup>2</sup> was historically mined and produced an estimated 10 000 tonnes 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 gold-bearing 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 Heritage, 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 (Cartwright, 1965) formed the company Rand Mines Ltd, which took over the administration of these and other mines (Cartwright, 1965). Russell (n.d.) (as cited in (PGS Heritage, 2018)) 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)

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 Tailings Storage Facilities (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.

### 1.3 Origins of the Brakpan/Withok TSF

The re-processing of gold tailings was introduced on a large scale by Anglo American Gold Division in the late 1970s, this operation was centred south of Brakpan on the East Rand (Environmental Law Group, 2022). The Brakpan Plant was commissioned by Anglo Gold Ashanti Limited (AGA) in 1977 to recover residual gold and uranium, as well as pyrite to produce sulphuric acid from gold mine tailings/slimes dams attached to old mine workings on the East Rand (Environmental Law Group, 2022).

The Brakpan Plant was originally planned to operate for 15 years but its life was extended to 25 years in 1985 with the introduction of new technology. However, over time the profitability of the project gradually decreased, and the operation reached its closure phase in March 2005.

Ergo originally operated two processing plants, one at Vulcania in Brakpan and the other at Daggafontein near Springs. The Brakpan plant had a depositional rate of 2.5 million tonnes of slurry per month. The plant received material for beneficiation from various reclamation stations on the East Rand. The Brakpan tailings dam was used to house the waste material generated from the Brakpan plant. The plant residue was pumped in a slurry form to the TSF. The solids were allowed to settle on the beach area whilst water was drawn off through a decanting tower to the return water dams (RWDs).

The slimes dam construction was different to the conventional daywall and night pool deposition of the time. The walls were constructed using numerous cyclones around the perimeter wall, arranged at approximately 30m intervals. These were moved periodically to build up the walls. Slime was delivered into the dam and the solid content settles along the beach area to allow the water to drain towards the centrally located floating penstock tower. The philosophy behind this method of slimes dam construction is not the rapid removal of water from the dam, but instead the dam acts more as a storage reservoir. The penstock drainage was delivered to an intermediate RWD, which acts more as a pumping sump than storage dam. The flow into the return water transfer dam was monitored by a continuous level meter.

The initial TSF established for the Ergo Brakpan plant in 1977, was the Withok TSF (Withok compartment). This compartment deviated from past disposal practices and was the first fourth generation cyclone TSF, introduced and designed by Watermeyer, Legge, Piesold and Uhlmann (WPLU), now Knight Piesold Consulting (The Environmental Law Group, 2022). The TSF was successfully used for approximately eight years, receiving approximately 100 Mt of tailing material, during which time carbon in pulp (CIP) and Carbon in Leach (CIL) metallurgical processes were developed and introduced, making it economically viable to reprocess the tailings already deposited on the Withok compartment (Environmental Law Group, 2022).

This in turn led to the development of the new Brakpan TSF (Brakpan compartment), north of but partially overlapping the Withok compartment. The Brakpan compartment was commissioned in 1985 and remained operational until 2006, receiving some 560 Mt of tailings material, including 100 Mt from the remaining of the Withok compartment. The reclamation of the Withok compartment occurred between 1996 and 2004 (Environmental Law Group, 2022). The Withok compartment was mostly cleared down to natural ground, with some tailings material remaining on site in the lower western part of the basin. The footprint is currently used as a source of dolerite material to act as “rock armouring” to clad the slopes of the Brakpan compartment (Environmental Law Group, 2022).

AGA discontinued reclamation activities on the East Rand Gold dumps in 2004. In 2007, Ergo approached AGA with the intention of purchasing certain assets including the Brakpan/Ergo and Daggafontein plants and recommissioning a reclamation or retreatment operation. Ergo concluded an agreement with AGA in terms of which, the AGA mining licence and other assets would be ceded to Ergo, allowing Ergo to undertake reclamation activities (Environmental Law Group, 2022). This Old Order Mining Right was converted into a New Order Mining Right in terms of Item 7, Schedule II of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), and subsequently ceding the Converted Mining Right to Ergo. The Brakpan Compartment is currently being used to deposit waste material from Ergo’s other active reclamation sites which is treated at the Ergo Plant (Environmental Law Group, 2022).

#### 1.4 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, 2001). 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. In 2023, South African mines produced an estimated 110 tonnes of Gold (Statista, 2004).

The price of gold per ounce underwent a steady increase from 2011 until it reached the high point in 2020 (R36 000/ounce). **Figure 1-3** 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. On the 15<sup>th</sup> of August 2024, the gold price was \$2 456.70 per troy ounce (SA Bullion, 2024).



**Figure 1-3: Price of Gold per ounce 2000-2024 (Macrotrends, 2024)**

## 1.5 Scoping and Environmental Impact Assessment

### 1.5.1 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 Integrated Environmental Authorisation (IEA). The S&EIA and specialist studies are being undertaken in support of the applications for the required approvals. The Department of Mineral and Petroleum Resources (DMPR) (previously the Department of Mineral Resources and Energy (DMRE)) is the Competent Authority for the Proposed Project, since the Withok TSF falls within Ergo’s existing Mining Right, GP 158 MR. The following applications are being made to the CA for the Project:

1. **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985<sup>3</sup> published pursuant to the Environmental Impact Assessment (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

<sup>3</sup> 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

listed in GN 921 of 29 November 2013 published in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (as amended) (NEM:WA).

In addition, the following application is being made to the Department of Water and Sanitation (DWS):

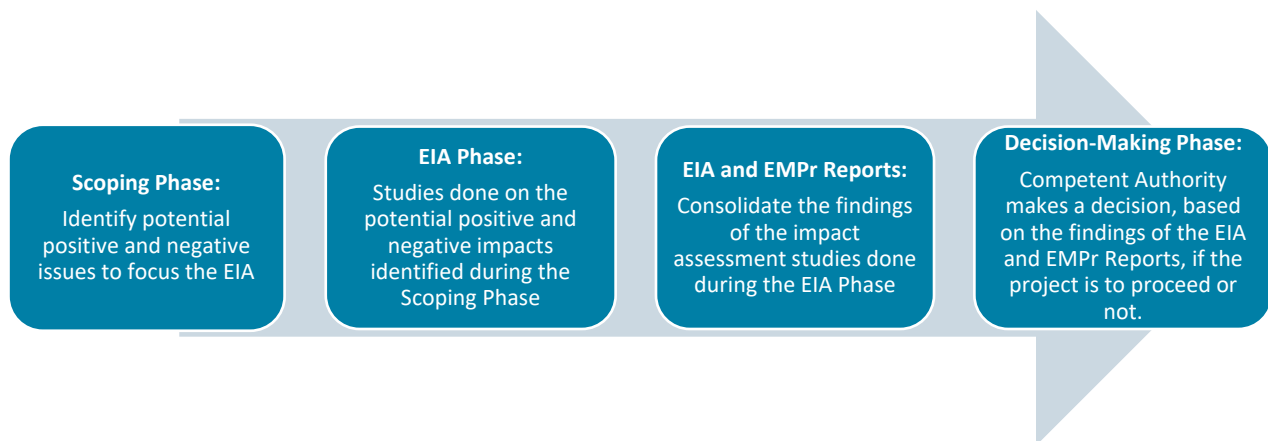
3. **An Integrated Water Use Licence Application (IWULA)** in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) to be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project.

The period of EA being applied for is **20 years**.

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 from the Proposed Project activities. Measures for the avoidance or mitigation of negative impacts will be proposed and positive impacts will be enhanced.

#### 1.5.2 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 1-4: Different phases of S&EIA**

#### 1.5.3 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 (FSR).

Once the FSR has been submitted to the DMRE as the Competent Authority (CA), the Department must

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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**, and during this period stakeholders will be afforded a **30-day** period to review and comment on the S&EIA documentation.

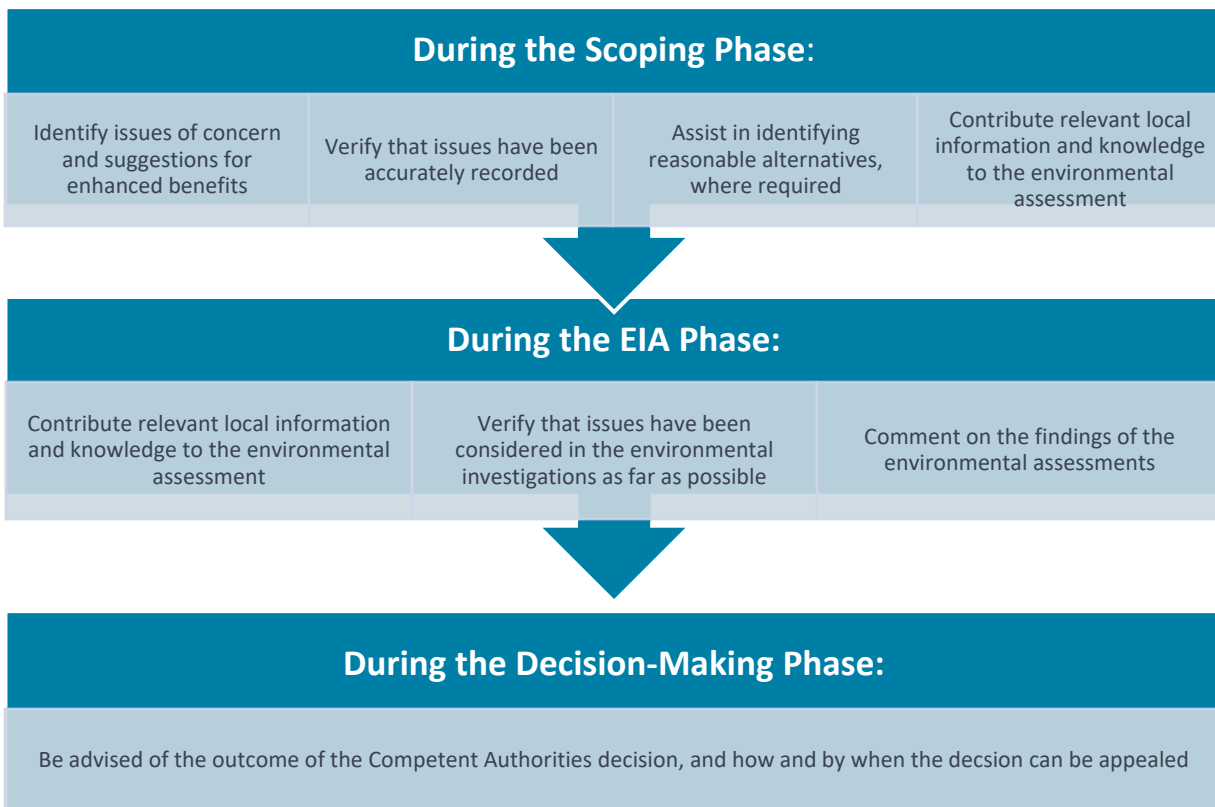
Upon submission of the EIA / Environmental Management Programme (EMPr) report the CA will have **107 days** to reach a decision on the project (Record of Decision (RoD)). The RoD is otherwise referred to as the EA which authorises the activities to proceed. The decision to grant the EA may be appealed (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 (PPP), 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.

#### 1.5.4 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, 2019).

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 DSR will be made available for public comment from **Thursday, 24 October 2024 until Friday, 22 November**. The project team will conduct an Open Day with stakeholders at the Tsakane ext.22 Mega Primary School (19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550) on **Saturday, 9 November 2024 from 09:00 to 12:00**. 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.

### 1.6 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 and social challenges by providing expert bespoke solutions that promote current and future sustainability globally.’*

Based in Johannesburg and with offices in the mining and finance hubs of the United Kingdom and Canada, our team of professional Environmental and Social Scientists are highly trained in various environmental disciplines and have significant, hands-on experience in an array of projects across various 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.

### 1.6.1 Contact Person and Corresponding Address

The report was compiled by Foord Ceronio and Phumla Mngwengwe under the guidance and supervision of Gerlinde Wilreker who is a registered Environmental Assessment Practitioner (EAP) (EAP registration number: 2019/1589). Author details are in **Table 1-1** and **Table 1-2**, and details of the EAP are in **Table 1-3**.

**Table 1-1: Details of Candidate EAP**

<b>Name of Practitioner</b>	<b>Foord Ceronio, Kongiwe Environmental (Pty) Ltd</b>
<b>EAP No.</b>	Cand. EAP 2020/2580
<b>Tel No.</b>	(010) 140 6508
<b>Cell No.</b>	(072) 984 8574
<b>E-mail Address</b>	fceronio@kongiwe.com

Foord Ceronio is an Environmental Assessment Practitioner 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). Foord has more than 5 years of work experience.

Foord Ceronio’s work experience has given him the required knowledge regarding project processes from pre-feasibility phase through to implementation and execution. He is adept at working in different contexts and on different tasks. He is a skilled problem solver with his team to meet client needs. His proficiency ranges from Environmental Authorisations and Auditing to onsite monitoring and ECO work and Environmental due diligence.

**Table 1-2: Details of Environmental Consultant**

<b>Name of Consultant</b>	<b>Phumla Mngwengwe, Kongiwe Environmental (Pty) Ltd</b>
<b>SACNASP No.</b>	121442
<b>Tel No</b>	(010) 140 6508
<b>Cell No</b>	(076) 605 6867
<b>e-mail address</b>	pmngwengwe@kongiwe.com

Phumla is a dedicated Environmental Consultant and holds a BSc (Hons) in Environmental Science and Geography from the University of Pretoria. She is a Professional Natural Scientist (Environmental Science) (Registration No: 121442). Her professional experience in mining and construction projects has equipped her with invaluable insights into project processes, spanning from the pre-feasibility phase to implementation and execution.

Her versatility shines as she adeptly navigates various contexts and tasks, ensuring optimal outcomes to meet client needs. Her responsibilities include environmental impact reporting and authorisations, water use licensing, environmental compliance and auditing, project management, authority liaison and stakeholder engagement. Driven by a passion for environmental stewardship, Phumla is committed to delivering excellence in every project she undertakes.

**Table 1-3: Details of the EAP**

<b>Name of Practitioner</b>	<b>Gerlinde Wilreker, Kongiwe Environmental (Pty) Ltd</b>
<b>EAP registration No.</b>	2019/1589
<b>Tel No</b>	(010) 140 6508
<b>Cell No</b>	(074) 173 0023
<b>e-mail address</b>	gwilreker@kongiwe.com

Gerlinde has over eighteen 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 the required outcomes.

She has expertise in relation to Environmental Authorisation Processes in terms of the South African legal regime and has extensive environmental auditing experience, particularly in the mining sector.

She has a M.Sc. Environmental Management from the former RAU (now UJ) and is also a registered Environmental Assessment Practitioner (EAP) with the Environmental Assessment Practitioners Association of South Africa (EAPASA), and a Natural Scientist with the South African Council for Natural Science Professionals (SACNASP). Refer to **Appendix A** for qualifications.

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## 2 Project Description

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### 2.1 Description and Location of the Property

Ergo Mining (Pty) Ltd (“Ergo”) intends to recommission the Withok TSF for the purpose of depositing retreated tailings (slurry), hence the proposed Recommissioning of the Withok TSF project (the “Proposed Project”).

The Withok TSF area and proposed project infrastructure are located on portions 77, 78, 79 and 80 of the farms Withok 131 IR, portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR, in the magisterial district of Benoni, within the City of Ekurhuleni Metropolitan Municipality (CoE). The TSF is situated 7km south of Brakpan. Tsakane is situated directly east across the R23 from the TSF. The Rooikraal TSF, which is currently being reclaimed, is located directly west of the Withok TSF.

The area is predominantly surrounded by agricultural holdings, the Rooikraal TSF, the Brakpan TSF and the residential area of Tsakane. Refer to **Appendix D** for more images of the Proposed Project site.

The following infrastructure is currently encountered in the surrounding area:

- ❖ National and provincial roads (N17);
- ❖ Agricultural holdings;
- ❖ Power lines;
- ❖ Slurry and water pipelines; and
- ❖ Other TSFs (Brakpan TSF and Rooikraal TSF).

Figure 2-1 and Figure 2-2 show the regional and local orientation of the Proposed Project.

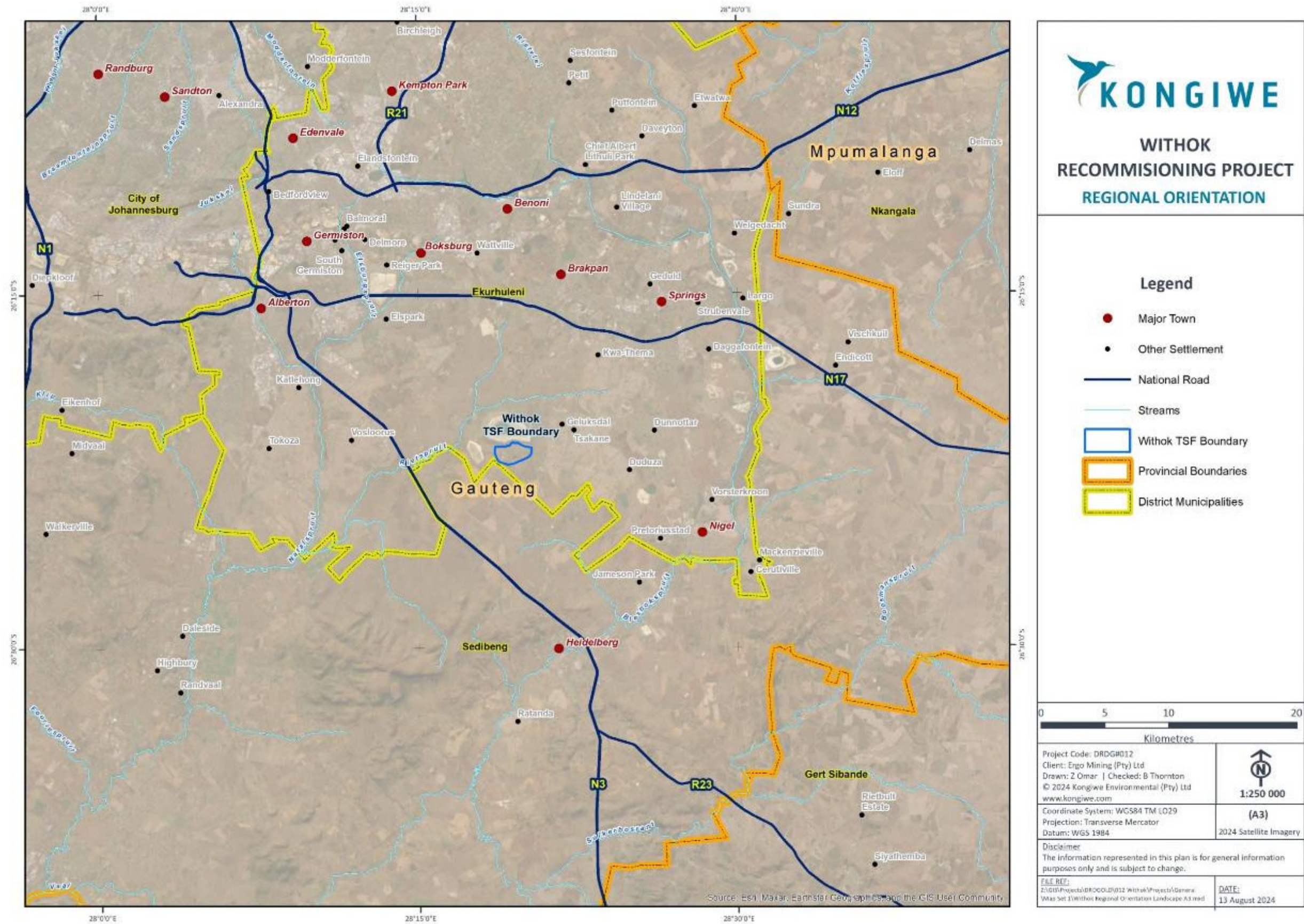


Figure 2-1: Regional orientation of the Proposed Project

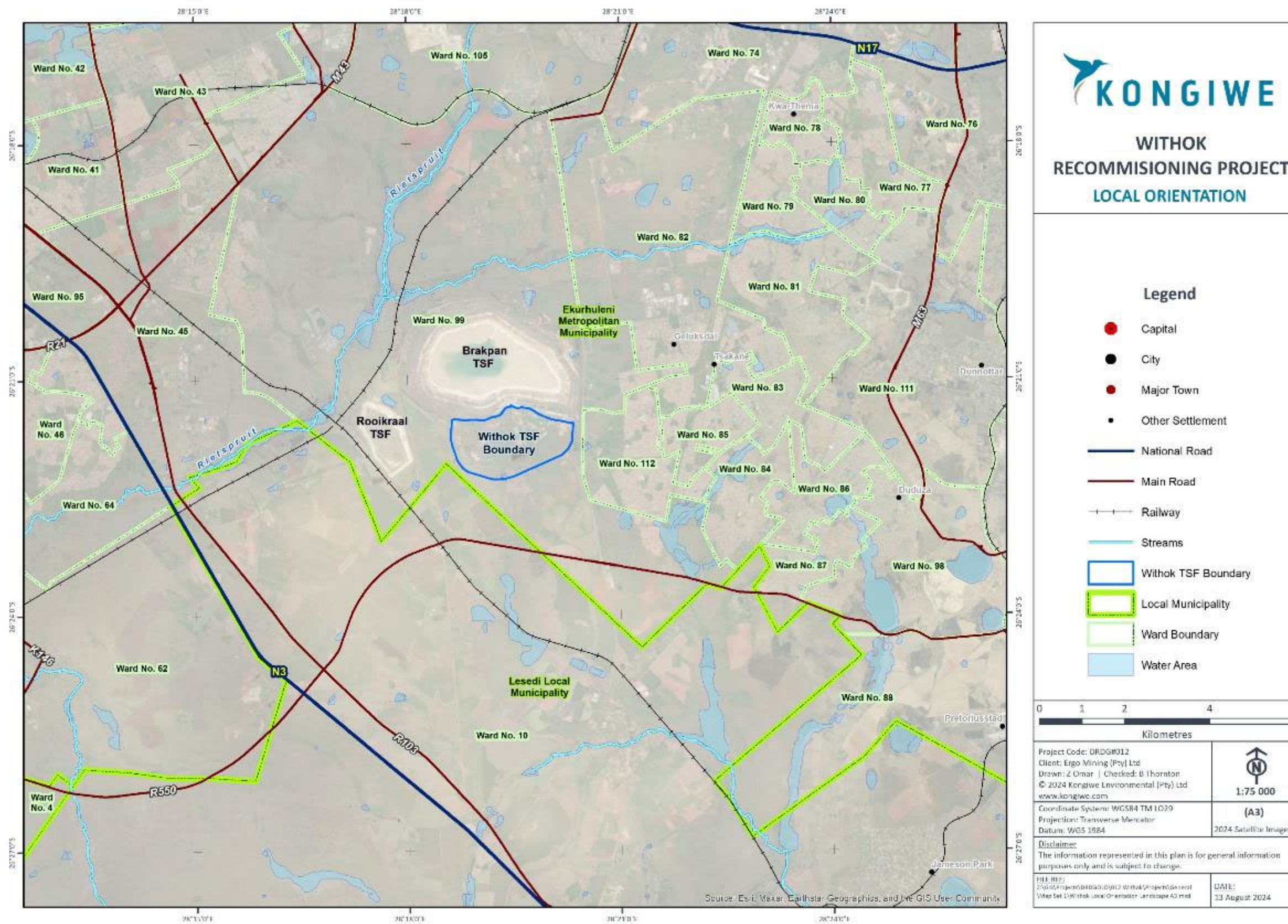


Figure 2-2: Local orientation of the Proposed Project

2.1.1. Description of the Properties affected by the Project

This S&EIA process is being conducted for an IEA to recommission the Withok TSF, located on portions 77, 78, 79 and 80 of the farms Withok 131 IR and portions 14, 15 and 20 of Vlakfontein 161 IR.

This is a “Brownfield Project” as it entails the recommissioning of an existing historical, reclaimed TSF with some existing infrastructure. The potential negative and positive impacts of the Proposed Project on the environmental and social aspects will be objectively considered through studies undertaken by specialist professionals during the EIA phase.

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

**Table 2-1: Property Details**

<b>Application Area (ha)</b>	The Proposed Project site covers an area <b>550 Ha</b>
<b>Municipality</b>	Ward 99 of the City of Ekurhuleni Metropolitan Municipality (CoE).
<b>Distance and Direction from Nearest Town</b>	The Withok TSF is located directly (approximately 1km) west of Tsakane and 7 km east of Vosloorus.

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

Farm Name	Farm ID	Portion	SG Code	Landowner
<b>Directly Affected Properties</b>				
Withok 131	IR	77	TOIR00000000013100077	Ergo Mining Pty Ltd
Withok 131	IR	78	TOIR00000000013100078	Ergo Mining Pty Ltd
Withok 131	IR	79	TOIR00000000013100079	Ergo Mining Pty Ltd
Withok 131	IR	80	TOIR00000000013100080	Ergo Mining Pty Ltd
Vlakfontein 161	IR	14	TOIR00000000016100014	Ergo Mining Pty Ltd
Vlakfontein 161	IR	15	TOIR00000000016100015	Ergo Mining Pty Ltd
Vlakfontein 161	IR	20	TOIR00000000016100020	Ergo Mining Pty Ltd
Rooikraal 156	IR	11	TOIR00000000015600011	Ergo Mining Pty Ltd
<b>Indirectly Affected Properties</b>				
Withok 131	IR	Holding 398	TOIR07370000039800000	TBC
Withok 131	IR	Holding 376	TOIR07370000037600000	City of Ekurhuleni Metropolitan Municipality
Withok 131	IR	Holding 375	TOIR07370000037500000	Department of Public Works and Infrastructure
Withok 131	IR	Portion 1 of Holding 397	TOIR07370000039700001	Ergo Mining (Pty) Ltd
Withok 131	IR	Portion 0 of Holding 397	TOIR07370000039700000	Mr Ronald Erol Hirschowitz
Withok 131	IR	76	TOIR00000000013100076	Ergo Mining Pty Ltd
Glen Roy 132	IR	0 (RE)	TOIR00000000013200000	Ergo Mining Pty Ltd
Rooikraal 156	IR	10	TOIR00000000015600010	Ergo Mining Pty Ltd
Rooikraal 156	IR	11	TOIR00000000015600011	Ergo Mining Pty Ltd
Vlakfontein 161	IR	5	TOIR00000000016100005	City of Ekurhuleni Metropolitan Municipality
Vlakfontein 161	IR	8 (RE)	TOIR00000000016100008	City of Ekurhuleni Metropolitan Municipality
Vlakfontein 161	IR	9	TOIR00000000016100009	Heidi & Tskane Eiendomme Pty Ltd
Vlakfontein 161	IR	12	TOIR00000000016100012	Nkomo Prop CC
Vlakfontein 161	IR	18	TOIR00000000016100018	Multi-Waste (Jet Park) (Pty)
Witklip 172	IR	10	TOIR00000000017200010	Department of Public Works and Infrastructure (DPWI)

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.

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## 2.2 Description of the Current Land Uses Applicable

As per Section 8.4.2, the land uses on the Project site are typified by waterbodies and wetlands, mine, grasslands and woodlands. It is important to note that there is no mining activity being undertaken on site. Currently the site contains waterbodies (natural and artificial), vegetation and cladding stockpiles for the Brakpan TSF.

The current land uses of the surrounding areas are typified by wetlands, agricultural activities; settlements; and other TSFs. The project area is located within Region E of the CoE, this is one of the city's six regions.

## 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 located directly south of the Brakpan TSF which is an active TSF used by Ergo to deposit and store tailings emanating from its active reclamation operations, and directly east of the Rooikraal TSF which is currently being reclaimed. 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 reprocesses historical mine dumps and TSFs throughout the Central and Eastern areas of Gauteng. Most of the material is fed to the Ergo plant in Brakpan. The facility makes use of some milling and conventional CIL as part of the retreatment process. A CIL circuit is used to optimise leaching and adsorption. At present, reprocessed mine tailings are deposited on the Brakpan TSF. The Brakpan TSF is expected to reach its maximum capacity in the future, and Ergo is investigating other deposition sites in the area, which will enable it to continue with its reclamation operations.

Ergo has identified the footprint of the original Withok TSF (Withok TSF footprint) as a potential deposition site. The Withok TSF footprint, which is situated immediately south of the Brakpan TSF, is a historic TSF footprint (approximately 550 hectares). The original Withok TSF was reclaimed over several years ending in 2006.

The Withok TSF is included in the 1997 Environmental Management Programme (EMPr) as approved by the then Department of Minerals and Energy on 09 July 1998 (Reference No.: PWV6/2/2/340, December 1997). This EMPr fell under Mining Licence ML34/2000. An old order mining right conversion was undertaken in 2009, with a new Mining Right reference of GP 30/5/1/2/2 (158) MR being issued. The Brakpan/Withok TSF is further authorised under Water Use Licence 08/C22C/CGI/425.

The following facility components are currently present on the Proposed Project area:

- 
- ❖ Access roads;
  - ❖ Withok TSF footprint;
  - ❖ Withok pump station; and
  - ❖ Attenuation dam, sump and diversion pipeline.

The Withok TSF footprint is currently used to collect drainage water and stormwater runoff from the Brakpan TSF. This water is collected at the lowest point and pumped back to Ergo Plant via the Withok pump station for reuse in Ergo's processes.

- ❖ The recommissioning of the Withok TSF entails the following: Upgrading of the current footprint to allow for the redevelopment of the Withok TSF. This will involve the following civil work:
  - A sump and stormwater diversion trench;
  - A toe embankment which acts as an access road and slurry distribution pipeline servitude;
  - A starter embankment;
  - An HDPE liner;
  - Toe drain, intermediate drain, main drain, radial drain, and interface drain platforms;
  - Drainage outlet pipe platforms (cross walls);
  - Toe drain, intermediate drain, main drain, radial, basin drain, interface blanket drain, as well as below liner seepage cutoff/collector drains;
  - A decant berm and pool wall;
  - Drainage collector pipes;
  - A return water dam (approved DWS liner system) and return water pumping system;
  - A floating decant barge pumping system, as well as a decant pipeline;
  - Slurry feed pipelines;
  - Slurry distribution pipelines;
  - An HDPE pipe ring main; and
  - 250mm diameter cyclones, complete with feed pipes, valves, overflow pipes.
- ❖ Deposition of tailings;
- ❖ Water management;
- ❖ Temporary construction camp; and
- ❖ Borrow pits for material required during civil works and concurrent rehabilitation of the side slopes of the Withok TSF.

The proposed recommissioned Withok TSF will buttress the southern flank of the Brakpan TSF. The footprint required for the new Withok TSF is approximately 400ha, which is less than the original Withok TSF footprint of approximately 550ha. The maximum vertical height at the end of the facility life is planned to be 103m.

The intended recommissioning of the Withok TSF is to utilize similar methodology as previously deployed, i.e. cyclone deposition with a floating decant pumping system.

However, the first phases (lower portion) of development will be on a centreline basis to provide a much wider underflow prism, improving geotechnical characteristics and drainage. The principle of cyclone development is to create a sufficiently robust underflow perimeter wall to contain the overflow with adequate freeboard and inherent stability to avoid overtopping and to prevent side slope failure.

#### 2.4.1 Water Management Plan Details

The water management plan details during the life of operation are:

- ❖ Dirty side slope storm water management on the TSF will be achieved through chutes discharging into catchment paddocks, some of which decant into a collector pipe. This water will be piped to the return water dam (RWD) and pumped to the Brakpan RWD for recycling. The remainder is attenuated in the catchment paddocks where it evaporates.
- ❖ Drain flows will also be collected in the same collector pipe.
- ❖ Decant return is pumped directly to the Brakpan RWD for re-use in the process. Most dirty side slope storm water and all drain water is routed to the Withok RWD. The remaining dirty side slope storm water is evaporated in the catchment paddocks. Because decant water is not pumped to the Withok RWD, a silt trap at the Withok RWD is not required. Desilting is taking place in the catchment paddocks. Water is pumped to the Brakpan RWD for re-use in the process.
- ❖ The Withok RWD must have a capacity of at least 65 000m<sup>3</sup> to comply with the DWS' Regulations on Use of Water for Mining and Related Activities aimed at the Protection of Water Resources (Regulation GN 704). Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Currently, the design capacity of the Withok RWD is approximately 100,000m<sup>3</sup>.
- ❖ Water must be returned to process, from the Withok RWD, at a rate of up to 9 800m<sup>3</sup>/day.
- ❖ There is an attenuation dam located to the east of Heidelberg Road. Drainage from the Tsakane township collects in the attenuation dam. From there, overflow is released into a culvert which crosses below Heidelberg Road and into a sump. From there an underground pipe diverts the stormwater under the site and releases the water into a tributary to the Rietspruit, a short distance west of the site. The new design, however, includes a storm water diversion trench, which will divert the stormwater water from the sump, east to west along the southern flank of the optimised Withok TSF footprint. Upgrades to the attenuation dam will be undertaken as part of the proposed project.

The Withok TSF will be designed, constructed and managed as per the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012). Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM).

The flood design criteria for the GISTM requires the use of the 10 000-year event (GlobalTailingsReview.org, 2020). GISTM further states that the Probable Maximum Precipitation (PMP) may also be used, provided that the storm depth meets or exceeds the 10 000-year depth. The PMP is often regarded as being equal to the 10 000-year recurrence interval storm depth (iLanda Water Services,

2024). Therefore, the freeboard targets for the Proposed Project are guided by the GISTM 10 000-year (PMP) storm design.

The final life of the Withok TSF design, construction, operation and monitoring will align with these strict design requirements.

## 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 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 2-3 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 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 an 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 for the Proposed Project's EA application, since the Withok TSF falls within Ergo's existing Mining Right, GP 158 MR.

The Commenting Authorities for the Proposed Project are:

- ❖ Gauteng Department of Agriculture and Rural Development (GDARD);
- ❖ DWS;
- ❖ The Department of Forestry, Fisheries and the Environmental (DFFE);
- ❖ Department of Public Works and Infrastructure (DPWI);
- ❖ National Nuclear Regulator (NNR);
- ❖ Department of Health (DoH);
- ❖ South African Heritage Resource Agency (SAHRA);
- ❖ Provincial Heritage Resources Authority Gauteng (PHRA-G);
- ❖ Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD); and
- ❖ CoE.

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 including the Integrated Water and Waste Management Plan (IWWMP).

**Table 2-3: Listed Activities Triggered by the Proposed Project.**

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>4</sup>
The collector pipe will exceed the length of 1000m and will have an internal diameter 0.8m. The Withok TSF is outside the urban edge.	Pipeline length: approximately 4.5km long Pipeline internal diameter: 0.8m Pipeline throughput: 126 litres/second	GNR 983 – Activity 9	The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		21 (c) & (i)
The development of pipelines for the transportation of reprocessed slurry. The Withok TSF is outside the urban edge.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 983 – Activity 10	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		21 (c) & (i)
The development of pipelines for the transportation of reprocessed slurry.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 984 – Activity 7	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods— (i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day; (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 50 cubic metres per day; or (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day.		21 (c) & (i)
Construction and operation of the Withok return water dam	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 983 – Activity 12	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding—		21 (g) 21 (c) & (i)

<sup>4</sup> Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities. These have not been specifically listed in this Application, but the necessary application will be submitted to the DWS

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>4</sup>
			(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.		
		GNR 983 – activity 13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2.		21 (g)  21 (c) & (i)
The construction and operation of the RWD	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 984 – Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding— (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.		Section 21(g) Section 21(c) and (i)
The upgrading of the Withok attenuation dam wall.		GNR 983 – Activity 19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;		Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>4</sup>
			but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.		
Re-establishment of the Withok TSF and associated infrastructure	TSF size: 400ha	GNR – 983 – Activity 19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;  but excluding where such infilling, depositing, dredging, excavation, removal or moving-  (a) will occur behind a development setback;  (b) is for maintenance purposes undertaken in accordance with a maintenance management plan;  (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;  (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or  (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.		Section 21(c) and (i)
		GNR 984 – Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—  (i) activities which are identified and included in Listing Notice 1 of 2014;  (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National	Category B – 10 The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).  Category B – 11 The establishment or reclamation of a residue stockpile or residue	Section 21(g) Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>4</sup>
			<p>Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>	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).	
		GNR 984 – Activity 15	<p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for:</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>		
Temporary hydrocarbon and diesel storage at the construction camp	To be determined	GNR 983 – Activity 14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.		
Borrow pits		GNR 984 – Activity 15	<p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for:</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>		Section 21(c) and (i)
		GNR 983 – Activity 21D	Any activity including the operation of that activity which requires an amendment or variation to a right or permit in terms of section 102 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity contained in this Listing Notice or in Listing Notice 3 of 2014, required for such amendment.		Section 21(c) and (i)

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## 2.6 Environmental Authorisation Application: Activities and Infrastructure

### 2.6.1 Infrastructure intended for the Project

The following facility components are currently present on the Proposed Project area:

- ❖ Access roads;
- ❖ Withok TSF footprint;
- ❖ Withok pump station; and
- ❖ Attenuation dam, sump and diversion pipeline.

The following infrastructure will be constructed and utilised on site:

- ❖ Slurry deposition pipelines;
- ❖ Return water pipelines;
- ❖ RWD;
- ❖ Borrow pits;
- ❖ Catchment paddocks; and
- ❖ Temporary construction camp which will include a site office, vehicle service area, hydrocarbon storage, diesel storage, and septic tanks.

Figure 2-3 below indicates the infrastructure to be used on site. Figure 2-4 shows photographs of the current state of the project site.

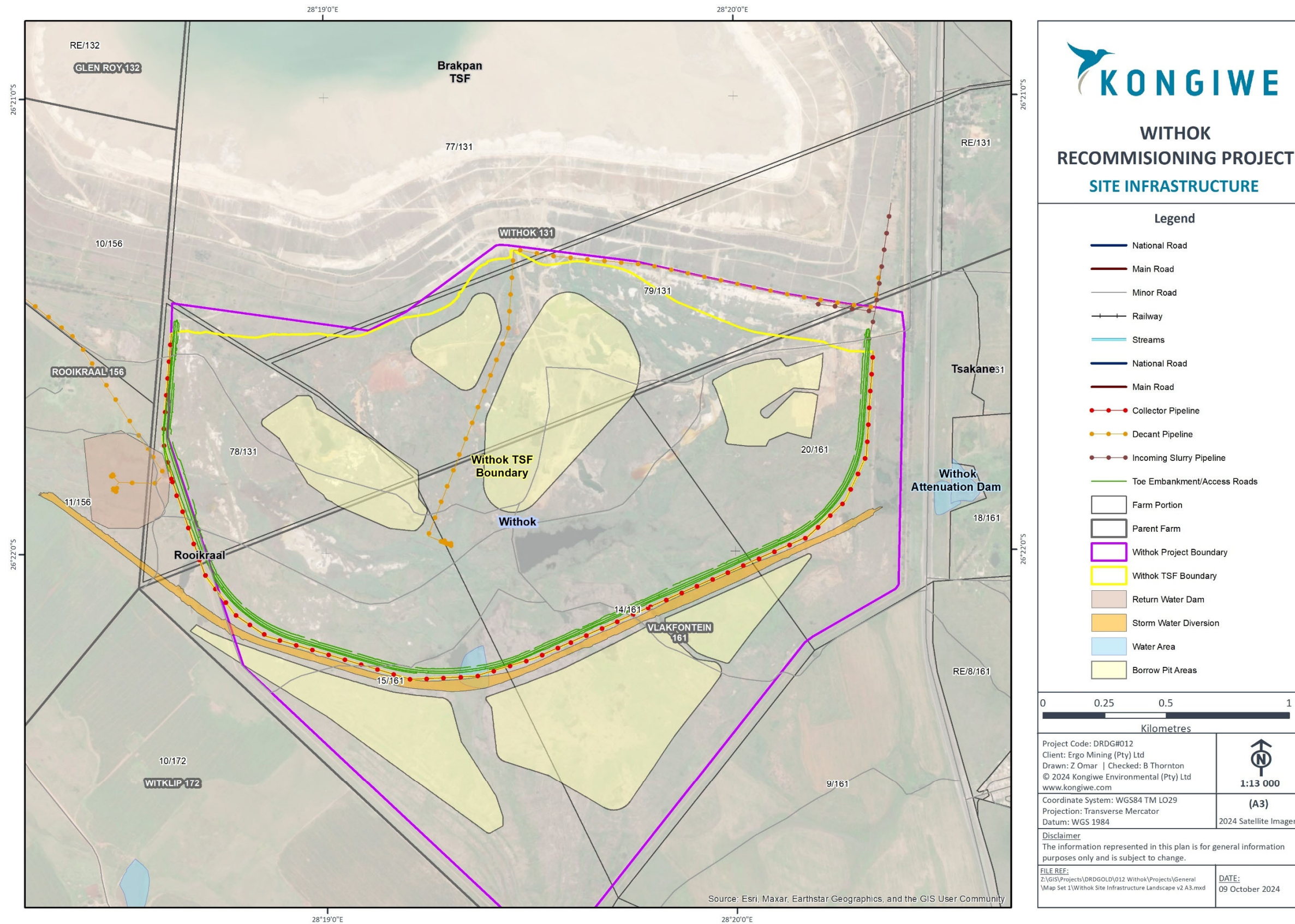


Figure 2-3: Infrastructure Map



Figure 2-4: Photographs of the current status of the project site

### 2.1.2. Rehabilitation

Once deposition is completed, the Withok TSF will require rehabilitation.

The side slopes will be progressively cladded. The cladding serves an environmental purpose, providing a natural growing medium for the vegetation, but must also fulfil other crucial requirements, as well. Firstly, the cladding must contain sufficient gravel to impart “armouring” for erosion resistance (water and wind) and, secondly, the clay content and PI must not be too high that moisture is prevented from evapotranspiration from the surface. Consequently, material stockpiled for cladding also needs to be selective.

The side slope will require vegetating as soon as the cover material has been placed. The vegetation is to consist of a mix of trees, shrubs, and grasses of ideally indigenous vegetation. This vegetation of the slope will need to be undertaken through the manual planting of young plants and some hydroseeding.

Stormwater from the final rehabilitated side slopes is assumed to be clean and will be released to the environment utilising the existing chutes.

The recommended closure concept is to paddock the top surface, while treating drain flows. The drain water can be treated to discharge quality and released into the receiving environment. Alternatively, this water can be treated to higher water quality standards. The brine from the treatment process would have to be pumped to the top surface where it will be evaporated. There will be significant periods where the paddocks are dry so no long-term brine ponds will form.

The applicable parts of the operating infrastructure, i.e., power supply, seepage recycling and water storage dams and pump stations will be used and/or re-purposed to suit the post-closure requirements.

### 2.1.3. The Period required for Environmental Authorisation:

Based on an average deposition rate of 1.3 million dry tons per month (tpm), the design life of the facility is approximately 20 years.

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### 3 Policy and Legislative Context

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This chapter provides an overview of the policy and legislative context relevant to the recommissioning of the Withok 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 legislation 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
<p><b><u>The Constitution of South Africa, 1996</u></b></p> <p>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.</p> <p>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.</p> <p>Section 33 of the Constitution states that everyone has a right to just and procedurally fair administrative action.</p>	<p>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.</p> <p>The DSR &amp; 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.</p> <p>The TSF will assist with the further processing of other TSFs in the area, thereby assisting with the removal of multiple pollution sources. This 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.</p>
<p><b><u>The One Environmental System</u></b></p> <p>In terms of the One Environmental System established by the NEMLAA, an EA in respect of a Listed Activity 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.</p>	<p>Ergo proposes to recommission the Withok TSF and submit the required documents within the prescribed timeframes.</p>
<p><b><u>Mine Health and Safety Act (MHSA), Act 29 of 1996 (as amended):</u></b></p>	<p>Although not strictly addressed in the Scoping Report or EMPr, protecting the environment</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>Ergo operates in accordance with the MHSA and associated regulations. This includes creating a safe and healthy work environment and providing the necessary protection and training to staff to ensure their health and safety is not compromised.</p> <p>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.</p>	<p>contributes to a safe working environment. MHSA regulations will be worked into the operations' Code of Practice (COP) and Standard Operating Procedures (SOPs).</p>
<p><b><u>National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)</u></b></p> <p>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.</p> <p>NEMA authorises the Minister of the DFFE to make Regulations relating to the administration of the Act<sup>5</sup>, 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</p>	<p>It is the objective of this application to align to NEMA.</p> <p>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.</p> <p>Listed activities as per the EIA 2014 Regulations, as amended, have been identified (refer to Chapter 2, subsection 2.5).</p>

<sup>5</sup> Sections 24(5) and Section 44

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>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.</p> <p>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&amp;EIA 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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	
<p><b><u>National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA)</u></b></p>	<p>Listed activities as per the NEM:WA regulations have been identified (refer to Chapter 2, subsection 2.5).</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>As part of the waste management matters dealt with in the NEM: WA, waste activities have been identified in GN 921 of 29 November 2013 List of Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment. GN 921 provides that the waste management activities listed in Category A and B thereof may not commence, be undertaken, or conducted without a 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.</p> <p>Category A activities require a Basic Assessment (BA) process while Category B Activities require a S&amp;EIA 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.</p> <p>NEM:WA and NEMA will be amended by the National Environmental Laws Amendment Act, 2022 (Act No 1 of 2022) (NEMLAA4) so that residue stockpiles and residue deposits will no longer be regulated under NEM:WA but under NEMA itself, although certain of the provisions of NEMLAA4 are not yet applicable.</p> <p>The Proposed Project is likely to trigger the following waste activities, all of which require a Category B WML:</p> <ol style="list-style-type: none"> <li>1. Activity 10: The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).</li> <li>2. Activity 11: 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).</li> </ol> <p>The EA and WML are being dealt with as an integrated application.</p>	
<p><b><u>National Water Act, 1998 (Act No. 36 of 1998) (NWA)</u></b></p>	<p>An IWUL will be required for the recommissioning of the TSF and associated</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>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)).</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li><b>(a) taking water from a water resource;</b></li> <li>(b) storing water;</li> <li><b>(c) impeding or diverting the flow of water in a watercourse;</b></li> <li>(d) engaging in a stream flow reduction activity contemplated in Section 36;</li> <li>(e) engaging in a controlled activity identified as such in Section 37(1) or declared under Section 38(1);</li> <li>(f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;</li> <li><b>(g) disposing of waste in a manner which may detrimentally impact on a water resource;</b></li> <li>(h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;</li> <li><b>(i) altering the bed, banks, course or characteristic of a watercourse;</b></li> <li>(j) removing, discharging or disposing of water found underground if it is necessary for the efficient</li> </ul>	<p>infrastructure and an application will be submitted to the DWS. The required specialist studies are also being undertaken as part of the impact identification and mitigation phase.</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>continuation of an activity or for the safety of people; and            (k) using water for recreational purposes.</p> <p>It is not likely that sub-sections <b>(b), (d), (e), (f), (h), (j) or (k)</b> will apply to the Proposed Project.</p> <p>Water uses associated with the recommissioning activities, <u>will</u> include the actual recommissioning of the Withok 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.</p> <p>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.</p>	
<p><b><u>National Environmental Management: Biodiversity Act, 2004 (Act No.10 of 2004) (NEM:BA)</u></b></p> <p>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 tools were utilised to determine whether any nationally protected and threatened ecosystems occur on site.</p> <p>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.</p>	<p>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 identification phase.</p>
<p><b><u>National Environmental Management: Protected Areas Act (NEM:PAA), Act 57 of 2003 as amended</u></b></p> <p>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</p>	<p>SANBI website and GIS tools are utilised to determine if the project area overlaps with CBAs.</p> <p>The Regulations will be utilised to determine</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>landscapes and seascapes, and includes <i>inter alia</i>:</p> <ul style="list-style-type: none"> <li>❖ The establishment of a national register of all national, provincial and local protected areas;</li> <li>❖ The management of those areas in accordance with national standards; and</li> <li>❖ Inter-governmental co-operation and public consultation in matters concerning protected areas.</li> </ul> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Special nature reserve or nature reserve;</li> <li>❖ Protected environment without the written permission of the Minister and the Cabinet member responsible for minerals and energy affairs; and</li> </ul> <p>Protected area referred to in Section 9:</p> <ul style="list-style-type: none"> <li>❖ world heritage sites; and</li> <li>❖ specially protected forest areas, forest nature reserves and forest wilderness areas declared in terms of the National Forests Act (No. 84 of 1998);</li> </ul>	<p>the need for any additional listed scheduled activities under GNR 985.</p>
<p><b><u>National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)</u></b></p> <p>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.</p> <p>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.</p>	<p>A Heritage Impact Assessment is being undertaken as part of the EIA Phase .</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<ul style="list-style-type: none"> <li>❖ The South African Heritage Resources Agency (SAHRA) will need to approve the heritage assessment undertaken as part of the impact assessment process.</li> </ul>	
<p><b><u>Conservation of Agricultural Resources Act (No. 43 of 1983)</u></b></p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Category 1: Declared weeds that are prohibited on any land or water surface in South Africa. These species must be controlled, or eradicated where possible;</li> <li>❖ 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</li> <li>❖ Category 3: Declared invader species that may remain but must be prevented from spreading. No further planting of these species is allowed.</li> </ul> <p>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.</p>	<p>The protection of land, soil, wetlands and vegetation and the control of weeds and invader plants will be contained within the EIA Report.</p>
<p><b><u>The South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998)</u></b></p> <p>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.</p>	<p>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.</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>The mine owner is responsible for:</p> <ul style="list-style-type: none"> <li>❖ Offloading of the dangerous goods;</li> <li>❖ Providing the dangerous goods offloading supervisor; and</li> <li>❖ Ensuring that the loading and offloading are carried out by qualified employees trained in the relevant procedures.</li> </ul> <p>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.</p>	
<p><b><u>Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA)</u></b></p> <p>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.</p>	<p>The TSF is already in existence and falls within a High control zone (outside the urban development zone) (Zone 3).</p>
<p><b><u>Hazardous Substances Act, 1973 (Act No. 15 of 1973)</u></b></p> <p>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.</p>	<p>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.</p>
<p><b><u>National Development Plan, 2030</u></b></p> <p>The National Development Plan (NDP) offers a long-term perspective. It defines a desired destination and identifies</p>	<p>The requirements of this Plan will be considered when assessing the project impacts and developing the associated</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p>the role different sectors of society need to play in reaching that goal.</p> <p>As a long-term strategic plan, it serves four broad objectives:</p> <ol style="list-style-type: none"> <li>1. Providing overarching goals for what we want to achieve by 2030.</li> <li>2. Building consensus on the key obstacles to us achieving these goals and what needs to be done to overcome those obstacles.</li> <li>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.</li> <li>4. Creating a basis for making choices about how best to use limited resources.</li> </ol> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Housing, water, electricity and sanitation;</li> <li>❖ Safe and reliable public transport;</li> <li>❖ Quality education and skills development;</li> <li>❖ Safety and security;</li> <li>❖ Quality health care;</li> <li>❖ Social protection;</li> <li>❖ Employment;</li> <li>❖ Recreation and leisure;</li> <li>❖ <b>Clean environment</b>; and</li> <li>❖ Adequate nutrition</li> </ul> <p>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.</p>	<p>mitigation measures in the EIA Phase. The proposed project is in line with the NDP and will address its requirements by assisting with the continuation of removal of a pollution source and availing land for the landowners to use.</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p><b><u>Action Plan of the Environmental Initiative of the New Partnership of Africa’s Development, 2003.</u></b></p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Combating land degradation, drought and desertification;</li> <li>❖ <b>Conserving Africa’s wetlands;</b></li> <li>❖ <b>Preventing and controlling invasive alien species;</b></li> <li>❖ Conservation and sustainable use of coastal and marine resources;</li> <li>❖ Combating climate change in Africa; and</li> <li>❖ Cross-border conservation and management of natural resources.</li> </ul>	<p>The Proposed Project may result in the decrease of pollution sources across the East Rand, the objectives of the NEPAD to systematically address and sustain ecosystems, biodiversity and wildlife will be considered during the EIA Phase of the project.</p>
<p><b><u>South Africa’s National Biodiversity Strategy and Action Plan</u></b></p> <p>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:</p>	<p>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.</p> <p>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.</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
<p><b>Vision of the NBSAP:</b></p> <p>Conserve, manage and sustainably use biodiversity to ensure equitable benefits to the people of South Africa, now and in the future.</p> <p><b>Strategic objectives:</b></p> <ol style="list-style-type: none"> <li>1. Management of biodiversity assets and their contribution to the economy, rural development, job creation and social wellbeing is enhanced.</li> <li>2. Investments in ecological infrastructure enhance resilience and ensure benefits to society</li> <li>3. Biodiversity considerations are mainstreamed into policies, strategies and practices of a range of sectors.</li> <li>4. People are mobilized to adopt practices that sustain the long-term benefits of biodiversity.</li> <li>5. Conservation and management of biodiversity is improved through the development of an equitable and suitably skilled workforce.</li> <li>6. Effective knowledge foundations, including indigenous knowledge and citizen science, support the management, conservation and sustainable use of biodiversity.</li> </ol> <p>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.</p> <p>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.</p>	
<p><b><u>Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)</u></b></p> <p>The PAIA gives effect to the constitutional right of access to any information held by the state and any information that is held by another person and that is required for the exercise or protection of any rights; and to provide for</p>	<p>The requirements of the Act will be considered when assessing and involving the public and registered interested and affected parties.</p>

Applicable Legislation and Guidelines used to compile the report.	Reference where applied
matters connected therewith.	
<p><b><u>National Environmental Management Act; National Appeal Regulations, 2014</u></b></p> <p>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.</p>	<p>The requirements of the Act will be considered if an appeal may need to be or is lodged for the project.</p>
<p><b><u>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).</u></b></p> <p>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</p>	<p>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.</p>

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

Policies, Guidelines and By-Laws	
<p><b><u>Gauteng Mine Residue Areas Strategy, 2012</u></b></p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ To evaluate current pollution problems caused by mining activities and suggest how they should be addressed;</li> <li>❖ To quantify the amount of land under mining activities and classify them in terms of impacts and potential for reclamation;</li> <li>❖ To investigate which mining areas could be made available to be used for other purposes; and</li> <li>❖ To provide preliminary and conceptual recommendations on the short-term priorities for the reclamation of the mining site which could be economically sustainable.</li> </ul>	<p>The Proposed Project is in line with the objectives of the Strategy as it will assist with the continued removal of TSFs across the East Rand. The guidelines of the Strategy will be considered throughout the S&amp;EIA process and reporting.</p>
<p><b><u>Gauteng Nature Conservation Bill, 2014</u></b></p>	<p>Aspects of this Bill are applicable to the Proposed Project. Where applicable, these</p>

Policies, Guidelines and By-Laws	
<p>The Bill was established in 2014, and contains the following objectives:</p> <ul style="list-style-type: none"> <li>❖ To provide for the sustainable utilization and protection of biodiversity within Gauteng;</li> <li>❖ to provide for the protection of wild and the management of alien animals; protected plants; aquatic biota and aquatic systems;</li> <li>❖ To provide for the protection of invertebrates and the management of alien invertebrates;</li> <li>❖ To provide for professional hunters, hunting outfitters and trainers;</li> <li>❖ To provide for the preservation of caves, cave formations, cave biota and karst systems;</li> <li>❖ To provide for the establishment of zoos</li> <li>❖ To provide for the powers and establishment of Nature Conservators;</li> <li>❖ To provide for administrative matters and general powers; and to provide for matters connected therewith.</li> </ul>	<p>will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>
<p><b><u>Gauteng Conservation Plan Version 3.3</u></b></p> <p>The main purposes of C-Plan 3.3 are:</p> <ul style="list-style-type: none"> <li>❖ To serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process;</li> <li>❖ To inform protected area expansion and biodiversity stewardship programmes in the province;</li> <li>❖ To serve as a basis for development of Bioregional Plans in municipalities within the province.</li> </ul> <p>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.</p>	<p>Aspects of this Plan are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>
<p><b><u>Gauteng Environmental Implementation Plan, 2016</u></b></p> <p>The purpose of the EIP is to:</p> <ul style="list-style-type: none"> <li>❖ Coordinate and harmonise environmental policies, plans and programmes and decisions to (i) minimise the</li> </ul>	<p>Aspects of this Plan are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>

Policies, Guidelines and By-Laws	
<p>duplication of procedures and functions; and (ii) promote consistency in the exercise of functions that may affect the environment;</p> <ul style="list-style-type: none"> <li>❖ Give effect to the principle of cooperative governance in Chapter 3 of the Constitution;</li> <li>❖ Secure the protection of the environment across the country as a whole;</li> <li>❖ 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</li> <li>❖ Enable monitoring of the achievement, promotion and protection of a sustainable environment.</li> </ul>	
<p><b><u>Gauteng Growth and Development Agency Strategic Plan 2014-2019</u></b></p> <p>The main purpose of the GGDA Strategic Plan is:</p> <ul style="list-style-type: none"> <li>❖ Addressing the persistent racial imbalances regarding ownership and general configuration of Gauteng’s economy;</li> <li>❖ Addressing the spatially distorted economic development legacy of apartheid rule;</li> <li>❖ Broadening the base of economic development beyond the Province’s dominant metropolitan municipal areas;</li> <li>❖ The socio-economic transformation envisaged for the second phase of transition to a national democratic society; and</li> <li>❖ Achieving the outcomes of creating decent work, economic inclusion and equality.</li> </ul>	<p>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.</p>
<p><b><u>Ekurhuleni Regional Spatial Development Framework,2015</u></b></p> <p>The Ekurhuleni Spatial Development Framework (SDF) provides a framework for making resource-effective decisions that can help mitigate the following identified issues in the municipal zone:</p> <ul style="list-style-type: none"> <li>❖ Increasing pressure on the natural environment and green infrastructure;</li> <li>❖ Urban sprawl and fragmentation;</li> <li>❖ Spatial inequalities and the job-housing mismatch;</li> <li>❖ Exclusion and disconnection emanating from high potential underused areas;</li> <li>❖ Lack of securitisation and gated developments, and disconnected street networks (high cul-de-sac ratios and</li> </ul>	<p>Aspects of this SDF are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>

Policies, Guidelines and By-Laws	
<p>low intersection densities);</p> <ul style="list-style-type: none"> <li>❖ Inefficient residential densities and land use diversity.</li> </ul> <p>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.</p>	
<p><b><u>Ekurhuleni Environmental Management Framework (EMF), 2007</u></b></p> <p>The aim of the EMF for the CoE is to provide a framework that identifies and illustrates the general environmental characteristics of the municipality:</p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ low to no constraint zone;</li> <li>❖ agricultural constraint zone;</li> <li>❖ geotechnical constraint zone;</li> <li>❖ hydrological constraint zone; and</li> <li>❖ ecological constraint zone.</li> </ul>	<p>Aspects of this EMF are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>
<p><b><u>Ekurhuleni Bioregional Plan (BRP), 2014</u></b></p> <p>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</p>	<p>Aspects of this BRP are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>

Policies, Guidelines and By-Laws	
<p>'critical biodiversity areas and ecological support areas', with accompanying land use planning and decision-making guidelines.</p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Critical Biodiversity Area One;</li> <li>❖ Critical Biodiversity Area Two;</li> <li>❖ Ecological Support Area One;</li> <li>❖ Ecological Support Area Two;</li> <li>❖ Protected areas;</li> <li>❖ Important areas</li> <li>❖ Other natural areas</li> </ul>	
<p><b><u>The Gauteng Province Environmental Management Framework, 2018</u></b></p> <p>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, serves the following purposes:</p> <ul style="list-style-type: none"> <li>❖ To provide a strategic and overall framework for environmental management in Gauteng;</li> <li>❖ Align sustainable development initiatives with the environmental resources, developmental pressures, as well as the growth imperatives of Gauteng;</li> <li>❖ Determine geographical areas where certain activities can be excluded from an EIA process; and</li> <li>❖ Identify appropriate, inappropriate and conditionally compatible activities in various Environmental Management Zones in a manner that promotes proactive decision-making.</li> </ul>	<p>Aspects of this management framework are applicable to the Proposed Project. Where applicable, these will be considered throughout the S&amp;EIA process and will be included within the reporting documents.</p>
<p><b><u>The Public Participation Guidelines in terms of the National Environmental Management Act, 1998 Environmental</u></b></p>	<p>This guideline was used to ensure that all of</p>

Policies, Guidelines and By-Laws	
<p><b><u>Impact Assessment Regulations, 2017</u></b></p> <p>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.</p>	<p>the required steps are followed to ensure that a complete and successful public participation process is conducted.</p>
<p><b><u>Integrated Environmental Management Guideline on Need and Desirability, 2017</u></b></p> <p>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.</p>	<p>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.</p>

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## 4 The Need and Desirability of the Project

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The “need and desirability” during an environmental authorisation application process must be addressed throughout all stages of the EIA process. During the Scoping phase (present phase) the Need and Desirability Guideline (GN891 of 2014) questions will be used to identify key issues and alternatives and will help to determine which areas require further investigation in the EIA phase (to follow), and which areas do not require further information.

Table 4-1 overleaf addresses the Need and Desirability Guideline questions. The assessment of the need and desirability of the Proposed Project was done in terms of the Department of Environmental Affairs (now the DFFE) Guideline on Need and Desirability (2017) and will be updated during the EIA phase as more information becomes available (i.e. specialist studies).

Successfully implementing the recommissioning of Withok TSF will allow Ergo to continue reclaiming areas that act as a significant contributor to the progressive, permanent, removal of a myriad of historic, tailings facilities scattered across the Central and East Rand. Making vast portions of currently sterilized land, available for redevelopment in an economically beneficial manner aligning with the Gauteng Mine Residue Area Strategy (2012), Ekurhuleni Metropolitan Spatial Development Framework (2011), City of Johannesburg (CoJ) Metropolitan Spatial Development Framework (MSDF), the CoJ Integrated Public Transport Network (IPTN), and the Ekurhuleni Environmental Management Framework’s (2014) objectives to remove historic TSFs scattered throughout the Gauteng landscape.

Economic value attributed to the continuation of Ergo Mining, represents a significant investment into the East of Gauteng over an expected 20-year period, the associated job creation and multiplier effect are unquestionably aligned with Government’s objective to accelerate sustainable job creation and supporting local business.

Ergo’s objective is to reprocess the remaining large historical TSFs located in Gauteng such as but not limited to the Marievale cluster, Crown Tailings Complex, Benoni Cluster and other dumps in the Springs area. Through this process Ergo will clear and rehabilitate approximately 1800 ha of sterilized mine land, into that of wilderness or industrial land uses. Not only are there great economic benefits in terms of the immediate land use, but the retreatment and tailings removal make lives easier for communities living next to these facilities by reducing dust, runoff, and fine sediment siltation.

Removing current tailings facilities off highly sensitive permeable dolomitic landscapes susceptible to acid mine drainage, formation of sinkholes and rapid movements of contaminants in the groundwater is highly beneficial. The reclamation/rehabilitation of these historic facilities potentially reduces groundwater seepage of around 3,7 million m<sup>3</sup> per year. This is equivalent to just over 10 000 m<sup>3</sup>/d over the Witwatersrand area, which is a significant reduction in groundwater contamination. This will further result in a reduction of around 7 400 tons in the sulphate salt load to the groundwater aquifers per year.

At present the reprocessed tailings are deposited on the Brakpan TSF. This facility is reaching its capacity,

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and a new deposition site is required to enable Ergo to continue with its reclamation operations. The Withok TSF is part of an existing facility with dirty water management measures in place. Additional stormwater management infrastructure will be required.

**Table 4-1: Need and Desirability Assessment**

Question	Response and Reference in The Report
<b>Securing ecological sustainable development and use of natural resources</b>	
<p>How will this development (and its separate elements / aspects) impact on the ecological integrity of the area?</p> <p>1.1. How were the following ecological integrity considerations taken into account?:</p> <p>1.1.1. Threatened Ecosystems</p> <p>1.1.2. Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure</p> <p>1.1.3. Critical Biodiversity Areas (“CBAs”) and Ecological Support Areas (“ESAs”),</p> <p>1.1.4. Conservation targets,</p> <p>1.1.5. Ecological drivers of the ecosystem,</p> <p>1.1.6. Environmental Management Framework,</p> <p>1.1.7. Spatial Development Framework, and</p> <p>1.1.8. Global and international responsibilities relating to the environment (e.g., RAMSAR sites, Climate Change, etc.).</p>	<p>The recommissioning of the Withok TSF will occur on the footprint of the old Withok TSF that was previously reclaimed. This is a disturbed footprint and the environment has been heavily impacted on by anthropogenic influences and historical mining activities. The project area is drained in a north-westerly direction towards the Rietspruit stream. The project is also located adjacent to the operational Brakpan TSF. The provincial and international frameworks and guidelines considered for the proposed project are detailed in Table 3-1.</p> <p>The Biodiversity Impact Study will assess the impacts that the recommissioning would have on the receiving environment, as well as the impacts that would occur should there be a failure.</p> <p>Section 8.7 of this DSR provides ecological background information.</p>
<p>1.2. How will this development disturb or enhance ecosystems and / or result in the loss or protection of biological diversity? What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>The recommissioning of the Withok TSF will occur on the footprint of the old Withok TSF that was previously reclaimed. This is a disturbed footprint and the environment has been heavily impacted on by anthropogenic influences and historical mining activities. The project area is drained in a north-westerly direction towards the Rietspruit stream. The project is also located adjacent to the operational Brakpan TSF.</p> <p>The biodiversity impact assessment will investigate the impacts that could occur from the recommissioning of the facility as well as the risks that would occur should there be a failure.</p>
<p>1.3. How will this development pollute and / or degrade the biophysical</p>	<p>The recommissioning of the Withok TSF will occur on the footprint of the old</p>

Question	Response and Reference in The Report
<p>environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>Withok TSF that was previously reclaimed. This is a disturbed footprint and the environment has been heavily impacted on by anthropogenic influences and historical mining activities.</p> <p>Updated groundwater and surface water impact assessments are being undertaken to identify the extent of the impact and to propose mitigation measures. Additionally to this, required designs are being undertaken in alignment with the requirements of the various Competent Authorities. This will ensure that additional mitigation measures and pollution prevention measures are implemented.</p> <p>An air quality impact assessment is being undertaken to identify the current impacts and the impacts of the recommissioning.</p> <p>Stormwater management and pollution plume management options will also be investigated.</p>
<p>1.4. What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and / or recycle the waste? What measures have been explored to safely treat and / or dispose of unavoidable waste?</p>	<p>The activity is in itself a waste activity as it is the establishment of a residue stockpile and the deposition of reprocessed tailings.</p> <p>A Waste Management Licence (WML) is being applied for as part of the IEA application.</p> <p>The project might also generate a minimal amount of general (domestic) waste. Ergo has a waste management procedure for all its activities and this will be implemented at the TSF.</p> <p>Mitigation measures to manage waste will be included in the EMPr.</p>

Question	Response and Reference in The Report
<p>1.5. How will this development disturb or enhance landscapes and / or sites that constitute the nation’s cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed. The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF, the visual landscape of the area has already been impacted by the historical impact of mining in the area.</p> <p>Recommissioning the facility is not anticipated to further change the visual characteristic of the area. The project does not constitute an irreplicable loss of visual resources. Following closure, it is advised that the TSF be vegetated and rehabilitated to represent an artificial mountainous / hill feature. Mitigation measures to reduce the visual intrusion of the TSF will be included in the EMPr.</p> <p>The project is not expected to disturb or impact on the nation’s cultural heritage. However, a heritage impact assessment is being undertaken to identify whether not the recommissioning or a potential failure would have any impacts on cultural heritage downstream of the project site.</p>
<p>1.6. How will this development use and / or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>Resources which will be utilised for the project include water and electricity.</p> <p>Electricity is currently sourced from Eskom. However Ergo has built a 60MW Photovoltaic (PV) Plant and 180MW Battery Energy Storage System (BESS). This will be able to provide an alternative source of electricity to Ergo’s operations.</p> <p>Process water from the TSFs or RWD from Brakpan will be pumped to the Ergo C operations for re-use at all reclamation operations. This reduces the need of potable water for reclamation and processing activities. Approximately 60% of the water used in the reclamation activities is recycled back to the TSF. The balance of the water is made up of treated AMD and catchment dams.</p>
<p>1.7. How will this development use and / or impact on renewable natural</p>	<p>This development will result in impacts to the local environment. The required</p>

Question	Response and Reference in The Report
<p>resources and the ecosystem of which they are part? Will the use of the resources and / or impact on the ecosystem jeopardise the integrity of the resource and / or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts?</p> <p>1.7.1. Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life)</p> <p>1.7.2. Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources this the proposed development alternative?)</p> <p>1.7.3. Do the proposed location, type and scale of development promote a reduced dependency on resources?</p>	<p>specialists have been mobilised to identify the possible impacts that might occur to the local environment as well as proposed possible mitigation measures to minimise these.</p> <p>The proposed project will house waste material from the re-establishment of the TSF to be undertaken by Ergo.</p> <p>Electricity is currently sourced from Eskom. However Ergo has built a 60MW PV Plant and 180MW BESS. This will be able to provide an alternative source of electricity to Ergo’s operations.</p> <p>Process water from the TSFs or RWD from Brakpan/Withok will be pumped back to the Ergo operations for re-use at all reclamation operations. This reduces the need of potable water for reclamation and processing activities.</p>
<p>1.8. How were a risk-averse and cautious approach applied in terms of ecological impacts?</p> <p>1.8.1. What are the limits of current knowledge (note: the gaps, uncertainties and</p>	<p>The list of gaps and uncertainties will be listed in the EIA once the specialist studies have been completed.</p> <p>The potential for Acid Mine Drainage (AMD) formation will be determined by means of a geochemical model in the groundwater impact assessment. It must</p>

Question	Response and Reference in The Report
<p>assumptions must be clearly stated)?</p> <p>1.8.2. What is the level of risk associated with the limits of current knowledge?</p> <p>1.8.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?</p>	<p>be understood that this does not represent the actual impacts as they are realised.</p> <p>The potential impacts of air quality and noise will also be determined by modelling simulations. This is as accurate as can be predicted but may not represent the actual impacts as they are realised. To validate modelled predictions, dust fallout monitoring, surface- and groundwater, and radiological monitoring must be undertaken throughout the project life.</p>
<p>1.9. How will the ecological impacts resulting from this development impact on people’s environmental right in terms following:</p> <p>1.9.1. Negative impacts: e.g., access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?</p> <p>1.9.2. Positive impacts: e.g., improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?</p>	<p>The ecological impacts will be assessed during the EIA phase.</p> <p>Section 9.2 of this report lists potential impacts identified.</p>
<p>1.10. Describe the linkages and dependencies between human wellbeing, livelihoods, and ecosystem services applicable to the area in question and how the development’s ecological impacts will result in socio-economic impacts (e.g., on livelihoods, loss of heritage site, opportunity costs, etc.)?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed. The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF. The Proposed socio-economic impacts will be investigated during the EIA via specialist studies.</p> <p>There is an impact risk should there be a failure and this impact is being assessed by a zone of influence analysis, which will feed into the specialist studies.</p>
<p>1.11. Based on all the above, how will this development positively or negatively impact on ecological integrity objectives / targets / considerations of the area?</p>	<p>Section 9.2 of the Scoping Report list potential impacts identified.</p>

Question	Response and Reference in The Report
<p>1.12. Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the “best practicable environmental option” in terms of ecological considerations?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed (Brownfields). The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF. No location alternative was assessed. The location of the site and associated infrastructure are limited and therefore this site is considered the best practicable environmental option rather than a new Greenfields location.</p> <p>The environmental and social impacts resulting from a failure will also be assessed.</p>
<p>1.13. Describe the positive and negative cumulative ecological / biophysical impacts bearing in mind the size, scale, scope, and nature of the project in relation to its location and existing and other planned developments in the area?</p>	<p>Section 9.2 of the Scoping Report list potential impacts identified. Potential cumulative impacts could include:</p> <ul style="list-style-type: none"> <li>• Contamination of soils and groundwater resources through improper vegetating / sealing of the TSF at decommissioning.</li> <li>• Soil erosion due to ineffective re-vegetation / rehabilitation at disturbed areas and excessive surface water runoff from the TSF (at decommissioning).</li> <li>• Dust generation and subsequent decrease in air quality affecting human health, nearby agricultural fields and nearby businesses and dwellings and due to ineffective vegetating of the TSF / sealing and rehabilitation.</li> <li>• Potential TSF failure and associated damage to the environment.</li> </ul>
<b>Promoting justifiable economic and social development</b>	
<p>2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?:</p> <p>2.1.1. The IDP (and its sector plans’ vision, objectives, strategies, indicators, and targets) and any other strategic plans, frameworks of policies applicable to the</p>	<p>A socio-economic impact assessment will be undertaken. The socio-economic context of the region and the area around the Withok TSF is described in Section 8.14</p> <p>Table 3-2 in Section 3 details the applicable provincial and local policies, guidelines</p>

Question	Response and Reference in The Report
<p>area,</p> <p>2.1.2. Spatial priorities and desired spatial patterns (e.g., need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.),</p> <p>2.1.3. Spatial characteristics (e.g., existing land uses, planned land uses, cultural landscapes, etc.), and</p> <p>2.1.4. Municipal Economic Development Strategy (“LED Strategy”).</p>	<p>and by-laws considered during the EIA process.</p>
<p>2.2 Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements / aspects), and specifically also on the socio-economic objectives of the area?</p> <p>2.2.1. Will the development complement the local socioeconomic initiatives (such as local economic development (LED) initiatives), or skills development programs?</p>	<p>The proposed project is the recommissioning of a TSF that will not result in any further economic benefits for the employees or nearby communities. However, there will be temporary jobs created during the construction phase. If the project is authorised, it will provide continuous employment for a portion of the current Ergo employees.</p> <p>Ergo has a Social and Labour Plan (SLP) in place which considers LED initiatives. The SLP will be applicable to this project. Ergo contributes millions per year to the SLP and will continue to do so for the next 20 years.</p>
<p>2.3 How will this development address the specific physical, psychological, developmental, cultural, and social needs and interests of the relevant communities?</p>	<p>The development will contribute to the ongoing operation of Ergo’s processing plant and reclamation activities.</p> <p>Although this will not create permanent additional employment opportunities, it will allow for the continued employment for Ergo’s employees. This will be beneficial to the existing employees of Ergo and will allow Ergo to continue to positively contribute to the regional economy and GDP. The project will create temporary employment opportunities during the construction period. The TSF recommissioning is however unlikely to meet any specific needs and interests or</p>

Question	Response and Reference in The Report
	result in positive benefits for the communities surrounding the TSF.
<p>2.4 Will the development result in equitable (intra- and intergenerational) impact distribution, in the short and long-term? Will the impact be socially and economically sustainable in the short- and long-term?</p>	<p>The development will contribute to the ongoing operation of Ergo’s processing plant and reclamation activities. This will promote the continued employment of Ergo employees.</p> <p>The project will enable the continued removal of TSFs across the region. The removal of TSFs will make land available for redevelopment which will benefit communities and businesses.</p>
<p>2.5. In terms of location, describe how the placement of the proposed development will:</p> <p>2.5.1. result in the creation of residential and employment opportunities in close proximity to or integrated with each other,</p> <p>2.5.2. reduce the need for transport of people and goods,</p> <p>2.5.3. result in access to public transport or enable nonmotorized and pedestrian transport (e.g., will the development result in densification and the achievement of thresholds in terms public transport),</p> <p>2.5.4. compliment other uses in the area,</p> <p>2.5.5. be in line with the planning for the area,</p> <p>2.5.6. for urban related development, make use of underutilised land available with the urban edge,</p>	<p>Ergo’s employment policies indicate that where feasible, employment should be offered to local residents. Residential opportunities will not be generated by the project. The recommissioned TSF will enable the continuation of reclamation activities and allow for the continued employment of employees at Ergo.</p> <p>The project will not reduce the need for transport of people and goods or result in changes to public transport. The proposed project will not improve access to public transport or enable non-motorised and pedestrian transport.</p> <p>The TSF will be recommissioned on the previously disturbed land which previously housed the TSF. This will be located on Land owned by Ergo next to it existing and operational Brakpan TSF.</p> <p>The project is not related to urban development and will not result in the construction of bulk infrastructure for public use. Most of the infrastructure will be removed from site at closure. The TSF will be vegetated and rehabilitated to an artificial mountainous / hill feature.</p> <p>The recommissioning activities will enable land previously sterilised by TSFs to be made available for development. This is in line with the Gauteng Mine Residue</p>

Question	Response and Reference in The Report
<p>2.5.7. optimise the use of existing resources and infrastructure,</p> <p>2.5.8. opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g., not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement),</p> <p>2.5.9. discourage "urban sprawl" and contribute to compaction/densification,</p> <p>2.5.10. contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,</p> <p>2.5.11. encourage environmentally sustainable land development practices and processes, 2.5.12. take into account special locational factors that might favour the specific location (e.g., the location of a strategic mineral resource, access to the port, access to rail, etc.),</p> <p>2.5.12. the investment in the settlement or area in question will generate the highest socio-economic returns (i.e., an area with high economic potential),</p> <p>2.5.13. impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural historic characteristics and sensitivities of the area, and</p> <p>2.5.14. in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?</p>	<p>Area Strategy (2011).</p> <p>The project is unlikely to result in urban sprawl.</p> <p>Electricity is currently sourced from Eskom. However Ergo has built a 60MW PV Plant and 180MW BESS. This will be able to provide an alternative source of electricity to Ergo's operations.</p> <p>Process water will be pumped to the Ergo Central Water Facility in Germiston for re-use at all reclamation operations. This reduces the need of potable water for reclamation and processing activities.</p> <p>The recommissioning of the TSF is not expected to result in any changes to existing and planned settlements in the area. No resettlement of surrounding communities is required.</p> <p>The proposed project will make use of the existing road networks and will not include the construction of any additional residential settlements.</p>
<p>2.6. How were a risk-averse and cautious approach applied in terms of socio-</p>	<p>The socio-economic study is being undertaken and the gaps and limitations will be included in the EIA.</p>

Question	Response and Reference in The Report
<p>economic impacts?</p> <p>2.6.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?</p> <p>2.6.2. What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability, and sustainability) associated with the limits of current knowledge?</p> <p>2.6.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?</p>	
<p>2.7. How will the socio-economic impacts resulting from this development impact on people’s environmental right in terms following:</p> <p>2.7.1. Negative impacts: e.g., health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?</p> <p>2.7.2. Positive impacts. What measures were taken to enhance positive impacts?</p>	<p>The negative impacts will be identified during the Socio-economic study and will be presented in the EIA.</p> <p>Mitigation measures relating to the potential socio-economic impacts will be included in the EMPr.</p> <p>Possible impacts are listed below:</p> <p>Negative impacts</p> <ul style="list-style-type: none"> <li>• Loss of life, damages to infrastructure, and damage to the environment (soils, surface water, groundwater etc.) due to the potential of TSF failure.</li> <li>• Decrease in air quality as a result of dust generated.</li> <li>• Safety impacts on people (accidents; fire hazards; risk of theft; vandalism; damage to equipment).</li> </ul>

Question	Response and Reference in The Report
	<p>Positive impacts</p> <ul style="list-style-type: none"> <li>• If the proposed project gets authorised, Ergo will be able to continue its reclamation activities, thereby extending the life of its operations and delaying the retrenchment of employees.</li> <li>• Investment into and development of LED initiatives.</li> <li>• Rehabilitation and improvement of an area significantly impacted by historical and current mining activities - this may result in a reduction of illegal mining activities and associated social ills.</li> </ul>
<p>2.8 Considering the linkages and dependencies between human wellbeing, livelihoods, and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development’s socio-economic impacts will result in ecological impacts (e.g., over utilisation of natural resources, etc.)?</p>	<p>Currently, the TSF does not provide any ecosystem services as the land has been transformed by historic mining and agricultural activities.</p>
<p>2.9 What measures were taken to pursue the selection of the “best practicable environmental option” in terms of socioeconomic considerations?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed. The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF. Therefore no location alternatives are considered. The location of the TSF recommissioning is constrained by the existing TSF location and the Brakpan TSF, and it associated infrastructure.</p>
<p>2.10 What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice, do the alternatives identified, allow the “best practicable environmental option” to be selected, or is there a need for other alternatives to be considered?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed. The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF. Therefore no location alternatives are considered. No feasible alternatives are available for consideration, and the location of the project and associated impacts is not in favour of one group of people over another.</p> <p>A comprehensive public participation process, guided by Chapter 6 of the EIA</p>

Question	Response and Reference in The Report
	<p>Regulations (GNR982 of 2014), will be undertaken throughout the Scoping and EIA phases. The Public Participation Process followed is described in Section 7 of this Scoping Report.</p> <p>The TSF will be designed using, among other things, best practice and the Code of Practice for Mine Residue (SABS 0286:1998) which will include stringent safety precautions to prevent TSF failure. The TSF will be managed as a high hazard facility in terms of the Code of Practice. The TSF align with the GISTM requirements.</p> <p>The EMPr will provide mitigation measures for any expected impacts on all sectors of society and include grievance management measures.</p> <p>A Financial Provision for closure will also be included in the EIA/EMPr to ensure that rehabilitation and any potential long-term impacts of the recommissioned TSF are adequately provided for.</p>
<p>2.11 What measures were taken to pursue equitable access to environmental resources, benefits, and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?</p>	<p>The proposed project area is not providing any ecosystem services as the land has been transformed by agricultural and historic mining activities. Therefore, should the project go ahead, it would not affect equitable access to environmental resources, benefits, and services to meet basic human needs</p>
<p>2.12. What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?</p>	<p>The EMPr will provide mitigation measures for any expected impacts throughout the life cycle of the project – construction, operation, decommissioning, closure, and post-closure.</p> <p>A detailed zone of influence analysis is being undertaken.</p> <p>The TSF should be designed and operated using best practice and the Code of Practice for Mine Residue (SANS 10286) that include stringent safety precautions</p>

Question	Response and Reference in The Report
	<p>to prevent TSF failure.</p> <p>The proposed activities will be operated in strict accordance with the requirements of the Mine Health and Safety Act, No. 29 of 1996.</p> <p>The EIA will also include a Financial Provision report for closure to ensure that the rehabilitation and any long-term impacts of the expanded TSF are adequately provided for.</p>
<p>2.13. What measures were taken to:</p> <p>2.13.1. ensure the participation of all interested and affected parties,</p> <p>2.13.2. provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,</p> <p>2.13.3. ensure participation by vulnerable and disadvantaged persons,</p> <p>2.13.4. promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means,</p> <p>2.13.5. ensure openness and transparency, and access to information in terms of the process,</p> <p>2.13.6. ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge, and</p>	<p>A comprehensive public participation process is being undertaken as per the requirements of Chapter 6 of the EIA Regulations (GNR982 of 2014), detailed in Section 7 of this report.</p>

Question	Response and Reference in The Report
<p>2.13.7. ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were be promoted?</p>	
<p>2.14. Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g., a mixture of low-, middle-, and high income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)</p>	<p>A comprehensive public participation process is being undertaken as per the requirements of Chapter 6 of the EIA Regulations (GNR982 of 2014), detailed in Section 7 of this report.</p>
<p>2.15. What measures have been taken to ensure that current and / or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?</p>	<p>Ergo will comply with the requirements of the Mine Health and Safety Act, No. 29 of 1996 and will ensure that itself and the contractor/s employed will comply with the relevant legislation and company policies.</p>
<p>2.16. Describe how the development will impact on job creation in terms of, amongst other aspects:</p> <p>2.16.1. the number of temporary versus permanent jobs that will be created,</p> <p>2.16.2. whether the labour available in the area will be able to take up the job opportunities (i.e., do the required skills match the skills available in the area),</p> <p>2.16.3. the distance from where labourers will have to travel,</p> <p>2.16.4. the location of jobs opportunities versus the location of impacts (i.e., equitable distribution of costs and benefits), and</p> <p>2.16.5. the opportunity costs in terms of job creation (e.g., a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).</p>	<p>Ergo’s employment policies indicate that where feasible, employment should be offered to local labour.</p>

Question	Response and Reference in The Report
<p>2.17. What measures were taken to ensure:</p> <p>2.17.1. that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and</p> <p>2.17.2. that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?</p>	<p>Section 3 of this report details all relevant national and local legislation, policies, and guidelines that have been reviewed and incorporated.</p> <p>During the Scoping phase, all relevant State Departments will be provided with copies of environmental documentation for comment and will be afforded the same opportunity during the EIA Phase.</p>
<p>2.18. What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people’s common heritage?</p>	<p>The recommissioning of the current location of the Brakpan TSF and future location of the Withok TSF does not provide any ecosystem services and therefore, no ecosystem services will be lost if the proposed project is granted.</p> <p>All environmental impacts, including appropriate mitigation and management measures as well as monitoring measures, will be considered by the EAP and incorporated into the EIA / EMPr.</p> <p>The project area will be rehabilitated at decommissioning and closure to closely resemble an artificial hill / mountainous feature.</p> <p>The Financial Provision report for closure will ensure that environmental remedies and rehabilitation are incorporated, and sufficient budget has been allocated for these.</p>
<p>2.19. Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?</p>	<p>The mitigation measures which will be set out in the EMPr will be realistic and practical.</p> <p>If the recommended closure measures are successfully implemented, it is anticipated that the project area will be of an improved condition after rehabilitation and closure.</p>
<p>2.20. What measures were taken to ensure that the costs of remedying pollution,</p>	<p>The proposed project is being implemented as a means of reducing pollution from</p>

Question	Response and Reference in The Report
<p>environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?</p>	<p>other TSFs, by allowing those TSFs to be reclaimed and the reprocessed tailings to be deposited at a controlled facility.</p> <p>In accordance with the requirements of Regulations 5 and 6 of the NEMA Regulations on Financial Provision (GN940 of 2014) and the DMRE Guidelines on Financial Provision, the quantum for closure-related financial provision will be determined to ensure that adequate funds are made available upfront (prior to the commencement of the project) for the rehabilitation, management, and remediation of negative residual environmental impacts.</p> <p>The EMPr will provide mitigation, management and monitoring measures to ensure that potential negative impacts are managed throughout the life of the TSF and post-closure.</p> <p>The Applicant will be legally bound to comply with the conditions of the EMPr.</p>
<p>2.21. Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?</p>	<p>The Withok TSF will be situated on the historical footprint of the old Withok TSF that was reclaimed. The Proposed recommissioning will also be placed just south of the existing and operational Brakpan TSF. Therefore, no location alternatives are considered.</p> <p>The no-go alternative involves not recommissioning the TSF. Should the proposed recommissioning not go ahead, Ergo will have a reduced Life of Operations. There would be an opportunity cost as this would not extend the life of Ergo’s operations. Decommissioning would involve the retrenchment of employees in line with the approved SLP. This will also mean that the existing TSFs that are pollution sources will not be removed; they will continue to pollute and be sources of crime and Zama-Zama activity. The available resources will be lost and not contribute to the GDP of the country. Ergo contributes millions per year to the SLP</p>

Question	Response and Reference in The Report
	and will continue to do so for the next 20 years and therefore the no-go alternative will result in a direct loss to communities.
2.22. Describe the positive and negative cumulative socioeconomic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	The cumulative socio-economic impacts will be identified by the Socio-Economic Impact Assessment being undertaken and will be included during the EIA phase.

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## 5 Period for which the Environmental Authorisation is Required

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The Environmental Authorisation (EA) is required for **20 years**. Subsequent amendments can be lodged as the operational structures change accordingly.

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

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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 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.

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

The Proposed Project is the recommissioning of a TSF on a previously disturbed footprint. This location is preferred because it is an existing historical deposition site adjacent to the operational Brakpan TSF and its associated and existing infrastructure. Therefore, there can be **no alternative sites** in terms of the Project location. From an environmental impact perspective, utilising the existing Withok TSF (brownfields) footprint is better than a new greenfields site.

#### 6.1.2 The Type of Activity to be Undertaken

The only optional activity for Ergo is to deposit reprocessed tailings onto the recommissioned 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. The recommissioning of the Withok TSF will enable the continued reclamation activities. This, together with the incentive to find a solution to Gauteng's TSF-related issues, has led to the 'Preferred Activity'.

Recommissioning the Withok TSF reduces the need to find an alternative “greenfields” site for a new TSF which would result in land sterilisation for any future use, as well as generating a new source of pollution.

**Table 6-1: The advantages and disadvantages of the recommissioning of the TSF – Preferred Activity**

Option	Advantage	Disadvantage
Recommissioning of the TSF (Preferred)	<ul style="list-style-type: none"> <li>❖ Enables the continued operation of tailings retreatment leading to contribution to local economy.</li> <li>❖ Enables the continued removal of other TSF’s which are pollution sources and opens land after rehabilitation and cessation of project.</li> <li>❖ Removes the need for the creation of a new TSF.</li> <li>❖ Using an existing footprint reduces need to disrupt ecosystems for the construction of a new TSF.</li> <li>❖ Upgrade and improvement of surface water and groundwater management infrastructure.</li> <li>❖ Linked to existing infrastructure.</li> <li>❖ The recommissioning of the TSF will allow Ergo to implement new construction and pollution prevention mechanisms on a previously disturbed footprint.</li> <li>❖ Job creation during construction.</li> <li>❖ Possible pollution will be earmarked to a previously impacted but re-commissioned to new best practice area.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Increased surface water, groundwater and air pollution.</li> <li>❖ Failure risk if not engineered and operated correctly.</li> </ul>
Establishing an alternative TSF	<ul style="list-style-type: none"> <li>❖ Enables the continued removal of a pollution source after rehabilitation and cessation of project.</li> <li>❖ Lining of TSF to prevent groundwater pollution.</li> <li>❖ Job creation during construction.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Additional pollution source in the East Rand.</li> <li>❖ Land sterilisation.</li> <li>❖ Loss of agricultural land.</li> <li>❖ Destruction of fauna and flora habitat.</li> <li>❖ Failure risk if not engineered and operated correctly.</li> </ul>

### 6.1.3 The Design and Layout of the Activity

The current layout plan for the Proposed Project is considered as the preferred layout plan. The layout plan is dictated by the previously impacted TSF footprint and the adjacent Brakpan TSF, existing paddocks, associated infrastructure and the routes of the existing pipelines. There will be no expansion of the TSF footprint. The footprint will be smaller than the original footprint.

### 6.1.4 The Technology to be Used in the Activity

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. Valid alternative technologies are continually investigated and will be implemented where applicable.

The recommissioning of the TSF is the “Preferred Activity” and there are no alternatives.

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.

### **Recycling, Water and Electricity**

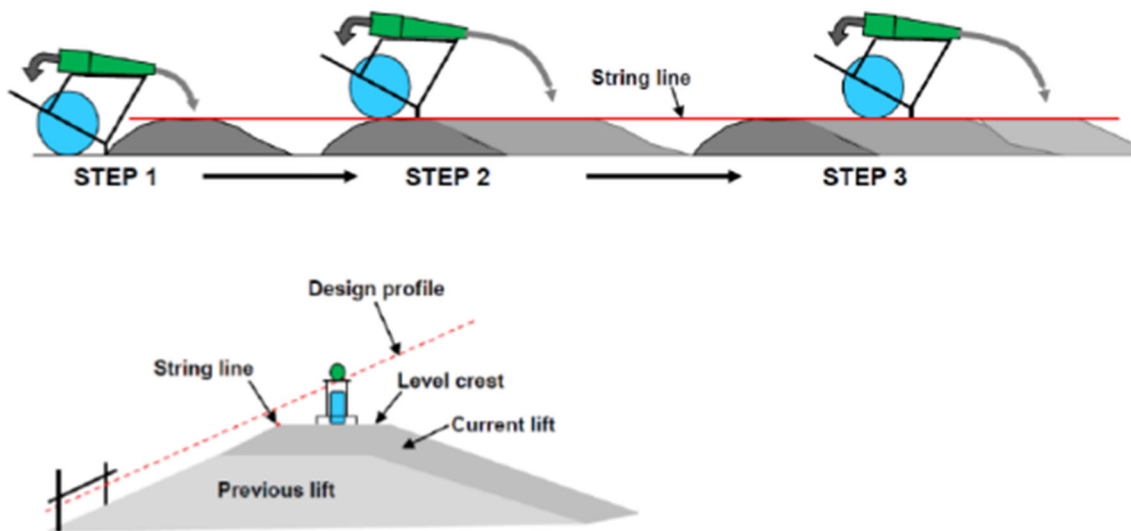
Water which seeps from the TSF will collect in the RWD. From the RWD, it will be pumped into the Ergo process water circuit. Ergo is commissioning its solar project. This will be able to provide an alternative source of electricity to Ergo’s operation.

### 6.1.5 The Operational Aspects of the Activity

The Proposed Project will convey the deposition of slurry onto the Withok TSF from the Ergo plant pumpstation via existing pipelines. Cyclone deposition will be used for the deposition of slurry.

#### Cyclone Deposition

The cyclone method of deposition is the preferred deposition technique. The principle of cyclone development is to create a sufficiently robust underflow perimeter wall to contain the overflow with adequate freeboard and inherent stability to avoid overtopping and to prevent side slope failure. Figure 6-1 shows the basis of the operation of a cyclone.



**Figure 6-1: The operation of an advancing cyclone (©GeoTail, 2024)**

The net effect is that the finer particles and most of the water leave the cyclone to form the “overflow”, while the dewatered larger particles leave the cyclone to form a coarser “underflow” (Goldfields, 2024) as shown in Figure 6-2.



**Figure 6-2: Illustration of "overflow" and "underflow" (©Gold Fields Limited, 2024)**

**Table 6-2: The advantages and disadvantages of the operational alternative considered**

Option	Advantage	Disadvantage
Recommissioning of the Withok TSF and associated slurry and water pipeline (s)	<ul style="list-style-type: none"> <li>❖ The Withok TSF is a previously contaminated site.</li> <li>❖ The pipeline route is within SRPs owned by Ergo.</li> <li>❖ HDPE lined steel pipelines have higher reliability.</li> <li>❖ All of the pipelines leading from the Ergo plant are existing and operational.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Re-establishing a TSF where one was reclaimed.</li> </ul>

### 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 long-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, retention of <1800 permanent jobs, and the availability of land for re-development at other TSFs being reclaimed by Ergo would not occur.

The only alternative land use is to leave the Withok TSF footprint as it stands.

The “No-Go” Option would reduce the life of Ergo’s operations as no further TSF reclamation could take place once the Brakpan TSF reaches full capacity. This would mean that pollution caused by other abandoned TSFs would continue, rather than being removed by reclamation activities. This as a result would lead to continued land sterilisation, instead of making land available for much needed development.

Furthermore, this 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 project. The expected indirect benefits resulting from the recommissioning of the TSF include the ability of Ergo to continue with its reclamation and processing activities. These will result in:

- ❖ The removal of sources of pollution and potential radiation in the East Rand area.
- ❖ Centralised deposition site which can be managed and controlled efficiently to reduce negative environmental impacts caused by abandoned and unrehabilitated TSFs across 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 Withok TSF Recommissioning 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);
- ❖ International good-practice guidelines for public participation and the Core Values of the International Association for Public Participation; and
- ❖ Any additional considerations noted in the International Finance Corporation (IFC) Performance Standards.

#### **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 recommissioning of the Withok Tailings Storage Facility Project as well as the Withok Zone of Influence (Zoi) Area.

- ❖ 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.
- ❖ Create awareness of the GISTM processes and that environmental permitting is the first step to this alignment.

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
<p><b>Pre-scoping Phase</b></p>	<ul style="list-style-type: none"> <li>❖ Site Visit;</li> <li>❖ Stakeholder identification (WinDeed searches, compilation of stakeholder database);</li> <li>❖ Landowner/ occupier consultation meetings;</li> <li>❖ Consultation with the relevant Authorities (including ward councillors) (Microsoft teams/One-on-one consultation meetings);</li> <li>❖ Compilation of announcement documents (BID, Registration Sheet, Advert, site notice and DSR notification letter) and providing project information to stakeholders;</li> <li>❖ Compilation of awareness creation Fact Sheet for GISTM;</li> <li>❖ Obtaining initial comments and suggestions from stakeholders; and</li> <li>❖ Land Claims enquiry.</li> </ul>
<p><b>Scoping Phase</b></p>	<ul style="list-style-type: none"> <li>❖ Consultations with Directly Affected Landowners (One-on-one consultation meetings/online via Microsoft Teams Meetings);</li> <li>❖ Distribution and placement of project announcement materials (site notices, newspaper advertisements);</li> <li>❖ Updating of the stakeholder database;</li> <li>❖ Availability of the Scoping Report for public review and comment;</li> <li>❖ Providing stakeholders with further details of the proposed project and associated specialist studies;</li> <li>❖ Consultations with stakeholders (Open Day and Online Meeting);</li> <li>❖ Obtaining further comments and suggestions from stakeholders; and</li> <li>❖ Informing specialists and the applicant about comments received from stakeholders.</li> </ul>
<p><b>EIA Phase</b></p>	<ul style="list-style-type: none"> <li>❖ Provide feedback about the specialist studies conducted and mitigation measures proposed by means of consultation with stakeholders;</li> <li>❖ Provide opportunity for I&amp;APs to comment on specialist findings, impacts assessments and recommendations;</li> <li>❖ Make the relevant environmental reports available for public review and comment;</li> <li>❖ Consultations with stakeholders (Open Day and Online Meeting);</li> </ul>

Project Phase	Activities to be Undertaken
	<ul style="list-style-type: none"> <li>❖ Verify that comments raised by I&amp;APs have been accurately recorded; and</li> <li>❖ Inform specialists and the proponent of stakeholders' comments.</li> </ul>
<b>Decision Making Phase</b>	<ul style="list-style-type: none"> <li>❖ 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.</li> </ul>

### 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. 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.

In this case Ergo is the landowner and consent is not required.

#### 7.4.2 Submission of the Environmental Authorisation Application Form/IWULA Registration

An application for an EA for the Proposed Project was submitted to the DMRE on **Friday, 18 October 2024**.

An IWULA, via the electronic - Water Use Licence Application and Authorisation System (e-WULAAS), will be submitted once complete. The project has been registered (WU38174). The e-WULAAS process has commenced and is ongoing.

#### 7.4.3 Stakeholder Identification and Analysis

Project stakeholders (or I&APs) 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 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 will be used as part of the stakeholder identification and analysis process for the **Withok Project Area as well as the Withok ZoI Area where relevant:**

- ❖ WinDeed searches for the directly affected and adjacent farms;
- ❖ Desktop and online research;
- ❖ Developing a list of relevant community leaders and authorities (Tsakane, Geluksdal);
- ❖ Consult with relevant district and local authorities:
  - CoE;
  - Sedibeng District Municipality;
    - Lesedi Local Municipality;
- ❖ Identifying the relevant ward councillors for the affected wards;
  - Ward 99, 112 – Ekurhuleni (Gauteng);
  - Ward 10 – Lesedi (Gauteng);
- ❖ Consulting landowners and land occupiers (Directly and indirectly affected);
- ❖ 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.

Additional stakeholders for the Withok Zone of Influence include:

- ❖ Informing relevant district and local municipalities in the Withok zone of influence:
  - CoE (Gauteng);
  - Sedibeng District Municipality;
    - Lesedi Local Municipality (Gauteng); and
    - Midvaal Local Municipality (Gauteng);
- ❖ Identifying the relevant ward councillors for the affected areas;
  - Ward 4, 12, 13, 14, 15 Midvaal (Gauteng);
  - Ward 10 Lesedi (Gauteng); and
  - Ward 45, 61, 62, 64, 99, 108 Ekurhuleni (Gauteng).
- ❖ Stakeholders who respond to the publication of newspaper advertisements;

- ❖ Stakeholders who respond to the distribution of project documentation (site notices, emails & bulk sms);
- ❖ 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

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 Commissioner, Mr Solomon Maruma from the DALRRD, Office of the Regional Land Claims Commissioner: Gauteng Province on **Friday, 18 October 2024**. The letter contained a list of all the directly affected properties for the project. Should DALRRD confirmed that there are land claims on the affected project areas, the 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 S&EIA and IWULA process.

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

- ❖ A project description of the Proposed 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 **Tuesday, 22 October 2024**, to the stakeholder database (**Appendix C6**). The BID is available on the following website:

- ❖ Kongiwe's website: <https://kongiwe.com/projects/>

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

**Fact Sheet:** The purpose of the fact sheet is to create awareness of GISTM within the EIA Process. The fact sheet was emailed to all stakeholders on the database, including the new identified stakeholders within the Withok zone of influence, when the project was announced. The Fact Sheet is available on Kongiwe's website: <https://kongiwe.com/projects/>

**Newspaper advertisements:** Newspaper adverts (**Appendix C4**) were placed in the *Ekurhuleni News*, on **Thursday, 24 October 2024** and *The Star*, on **Tuesday, 22 October 2024**. 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 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 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

Stakeholders will be invited to participate through online and face-to-face engagements. One-on-one consultation meetings with authorities, directly and indirectly affected landowners will be held via on-line forums such as Microsoft Teams, or telephonically or face-to-face depending on preference. 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.

**Consultation 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 recommissioning of the Withok TSF project. Locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Authority Meetings** will be held with various Organs of State. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Landowner Consultation Meetings** will be held with directly and indirectly affected landowners on a one-on-one basis. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Online meetings** will be held with stakeholders who prefer online engagements, and an open day will be held with the broader public who prefer online meetings.

**Broader Public Consulting meetings:** An Open day will be held with the broader public who prefer online meetings during the public review period. 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.

Refer to Table 7-2 for the stakeholders’ meeting schedule.

**Table 7-2: Stakeholder Meetings**

Proposed dates	Available time slots	Method of Engagement
<b>Online meeting</b>		
Wednesday, 6 November 2024	10H00 – 11H00	Microsoft teams/ scheduled Telephonic discussions
<b>Face-to-Face meeting</b>		
Saturday, 9 November 2024	09H00 – 10H00	Tsakane ext.22 Mega Primary School 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
	10H00 – 11H00	
	11H00 – 12H00	

Focused efforts will be made to engage with directly impacted stakeholders (those residents in the proposed project area). Meetings will be held in a culturally appropriate manner, allowing stakeholders to voice their opinions and/or concerns openly. To respect the social and political hierarchy in the project area, meetings with the local and traditional leadership structures might be held prior to wider communication with the broader public but these meetings will be made known to the communities and

will not displace community engagement. All affected communities and groups will be made aware of the project feedback.

Stakeholders will also be given the option to raise issues in the language of their choice, and where translation is required, it will be provided. It is anticipated that the languages would be English, Afrikaans, isiZulu and SeSotho.

Stakeholder meetings will be accessible and adequate notice will be given to stakeholders to encourage stakeholder involvement and participation. 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.

Refer to **(Appendix C8)** for a list of all the above 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)**.

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)**.

#### 7.4.5.3 Availability of Reports for Public Review and Comment

Copies of the DSR will be made available for public review and comment for a period of 30 days from **Thursday, 24 October 2024 until Friday, 22 November 2024.**

#### The DSR will be made available as follows:

- ❖ Kongiwe’s website: <https://kongiwe.com/projects/>
- ❖ A hard copy of the DSR will be made available at the following public place within the Withok Project Area as indicated below:

Location	Physical Address	Contact Person
<b>Public Libraries within the Withok Project Area (Scoping Report):</b>		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Librarian (011) 999 7748 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548	Ms Lindiwe Shandu, Librarian (011) 999 8046

		Mon – Fri: 09h00 – 16h00
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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 of the reports can be made available upon a request directed to the stakeholder engagement team.

- ❖ A hard copy of the DSR non-technical summary will be made available at the following public place within the Withok Zone of Influence as indicated in the table below:

Location	Physical Address	Contact Person
<b>Public Libraries within the Withok Zone of Influence (non-technical summary):</b>		
Vosloorus Public Library	6125 Mc Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane, Librarian (011) 999 5937, Stated on the website. Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Katlehong Public Library	Civic Centre, 01 Masakhane Street, Katlehong	Ms Zanele Mpevu, Librarian (011) 999 1466 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Zonkizizwe Public Library	4748, 4749 Ext 1 Zone 6, Zonkizizwe	Ms Thuli Mashego, Librarian (011) 999 1415 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Randvaal Public Library	514 Houtkapper Street, Randvaal, 1873	Ms Mara Frost, Librarian (016) 365 5093 – (071) 207 7269 Mon-Fri: 9:00am – 5:00pm Sat: 9:00am- 12:00pm
Henley on Klip Public Library	45 Regatta Rd, Henley on Klip, Meyerton, 1961	Ms Ntswaki Mofokeng, Librarian (016) 366 0112 – (074) 933 8715 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm
Meyerton Public Library	Loch Str, Mayerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm
Vereeniging Public Library	Leslie Str, Vereeniging, 1930	Ms Lehlohonolo Seboko, Librarian (079) 724 8453 Mon-Fri: 7:45am – 16:15pm
Meyerton Public Library	Loch Str, Mayerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm

- ❖ An electronic copy will be made available on request.
- ❖ Copies of the non-technical summary of the DSR will be distributed electronically to all stakeholders on the database. Copies will also be made available at the public place within the Withok Zone of Influence as indicated in the table above.

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.

The DSR and appendices will be delivered to the DMRE on **Thursday, 24 October 2024**. 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:

**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;
- ❖ Ekurhuleni Metropolitan Municipality (Gauteng);
- ❖ Sedibeng District Municipality;
- ❖ Lesedi Local Municipality (Gauteng); and
- ❖ Midvaal Local Municipality (Gauteng);

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
<b>Stakeholder identification and analysis</b>	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.	<b>Appendix C1</b>  Stakeholder database

Activity	Details	Reference in Draft Scoping Report
<b>Identification of land claims</b>	<p>A formal Letter of enquiry was compiled and sent to the Land Claims Commission, Mr Solomon Maruma from the Gauteng DALRRD, Office of the Regional Land Claims Commissioner: Gauteng Province. The letter contained a list of all the directly affected properties for the project. Should the Gauteng DALRRD confirm that there are land claims on the affected project area, our project team will consult with the relevant parties.</p>	<p><b>Appendix C2</b></p> <p>Land claims enquiry letter and correspondence from the DALRRD.</p>
<b>Distribution of the Background Information Document</b>	<p>The BID was developed and distributed to stakeholders. The BID is available on the following website:</p> <ul style="list-style-type: none"> <li>❖ Kongiwe’s website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a></li> </ul>	<p><b>Appendix C3</b></p> <p>BIDs</p>
<b>Distribution of GISTM Fact Sheet</b>	<p>The fact sheet was emailed to all stakeholders on the database, including the new identified stakeholders within the Withok zone of influence, when the project was announced. The Fact Sheet is available on Kongiwe’s website: Kongiwe’s website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a></p>	<p><b>Appendix C3</b></p> <p>GISTM Fact Sheet</p>
<b>Placement of newspaper advertisements</b>	<p>Newspaper adverts were placed in the <b>Ekurhuleni News</b>, on <b>Thursday, 24 October 2024</b>, <b>The Star</b>, on <b>Tuesday, 22 October 2024</b>.</p>	<p><b>Appendix C4</b></p> <p>Newspaper advertisements</p>
<b>Placement of site notices</b>	<p>Site notices will be placed at publicly accessible places within proximity of the project.</p> <p>Copies of the Site Notices will also be placed at the following public places:</p> <p><b>Public Libraries within the <u>Withok Project Area</u> (Scoping Report):</b></p> <ul style="list-style-type: none"> <li>❖ Brakpan Public Library</li> <li>❖ Tsakane Public Library</li> </ul> <p><b>Public Libraries within the <u>Withok Zone of Influence</u> (non-technical summary):</b></p> <ul style="list-style-type: none"> <li>❖ Vosloruus Public Library</li> <li>❖ Katlehong Public Library</li> <li>❖ Zonkizizwe Public Library</li> </ul>	<p><b>Appendix C5</b></p> <p>Site notice report and placement map</p>

Activity	Details	Reference in Draft Scoping Report
	<ul style="list-style-type: none"> <li>❖ Randvaal Public Library</li> <li>❖ Henley on Klip Public Library</li> <li>❖ Meyerton Public Library</li> </ul> <p>Photos 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.</p>	
<p><b>Announcement of the project and the availability of the Draft Scoping Report</b></p> <p><b>DSR Non-Technical Summary</b></p>	<p>The announcement letter was distributed to stakeholders to:</p> <ul style="list-style-type: none"> <li>❖ Announce availability of the Draft Scoping Report;</li> <li>❖ Invite stakeholders to the open day;</li> <li>❖ Indicate where the Scoping Report will be available for public review and comment.</li> </ul> <p>The DSR will be made available on the following website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a></p> <p>A copy of the DSR and non-technical summaries will also be placed in the following public place:</p> <p><b>Public Libraries within the <u>Withok Project Area</u> (Scoping Report):</b></p> <ul style="list-style-type: none"> <li>❖ Brakpan Public Library</li> <li>❖ Tsakane Public Library</li> </ul> <p><b>Public Libraries within the <u>Withok Zone of Influence</u> (non-technical summary):</b></p> <ul style="list-style-type: none"> <li>❖ Vosloruus Public Library</li> <li>❖ Katlehong Public Library</li> <li>❖ Zonkizizwe Public Library</li> <li>❖ Randvaal Public Library</li> <li>❖ Henley on Klip Public Library</li> <li>❖ Meyerton Public Library</li> </ul>	<p><b>Appendix C6</b></p> <p>Announcement Correspondence</p> <p><b>Appendix C3</b></p> <p>BID</p>
<p><b>Stakeholder meetings</b></p>	<p>Consultation during the scoping phase will be aimed at providing key stakeholders with an overview of the proposed project, potential impacts, mitigation measures, risks, opportunities and to obtain</p>	<p><b>Appendix C8</b></p> <p>List of Meetings &amp; Meeting Minutes</p>

Activity	Details	Reference in Draft Scoping Report
	<p>comments which will inform specialist studies and project planning.</p> <p>Stakeholders will be invited to participate through online and face-to-face engagements. One-on-one consultation meetings with authorities, directly and indirectly affected landowners will be held via on-line forums such as Microsoft Teams, or telephonically or face-to-face depending on preference. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.</p>	<p><b>Appendix C9</b></p> <p>Comment and Response Report</p>
<p><b>Broader Public Consulting meetings:</b></p> <p><b>Scoping Phase</b></p>	<p>Stakeholders will be invited to participate through online and face-to-face engagements. Consultation meetings will be held via online forums such as Microsoft Teams and an Open day will be held with the broader public who prefer online meetings during the public review period. 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.</p> <p>The following meetings will be held:</p> <p><b>Face-to-Face Meeting:</b></p> <ul style="list-style-type: none"> <li>❖ An Open day will be held on Saturday, 9 November 2024 from 09H00 – 12H00 at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &amp;, Shiburi St, Tsakani, Brakpan, 1550</li> </ul> <p><b>Online Meeting:</b></p> <ul style="list-style-type: none"> <li>❖ <b>Wednesday, 6 November 2024 from 10H00-11H00</b> on Microsoft teams/scheduled Telephonic discussions.</li> </ul> <p>Minutes of these meetings will be compiled and distributed to everyone who attended these</p>	<p><b>Appendix C8</b></p> <p>List of meetings &amp; Meeting Minutes</p> <p><b>Appendix C9</b></p> <p>Comment and Response Report</p>

Activity	Details	Reference in Draft Scoping Report
	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
<b>Update of stakeholder information</b>	The stakeholder database will be updated with new I&APs who formally registered, participated in stakeholder meetings or submitted comments.
<b>Placement of Final Scoping Reports</b>	The Final Scoping Report (FSR) will be made available following website: <ul style="list-style-type: none"> <li>❖ Kongiwe’s website:  <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a></li> </ul>
<b>Announcement of the Final Scoping Report</b>	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 Report (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.

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#### 7.4.5.6 *Consultation during the Decision-Making Phase*

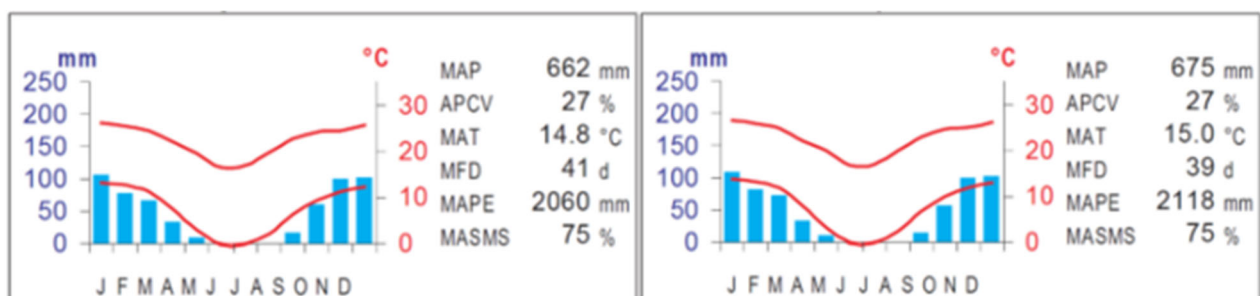
Once the competent authority has come to a decision regarding the authorisation of the project, all registered stakeholders will be notified of the decision made and the appeal process to be followed. The decision from the Competent Authority (CA) will be communicated to stakeholders by means of a notification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

## 8 The Baseline Environment

Information for the baseline environment was extracted from the EIA Report written for the Rooikraal TSF Reclamation Project. The Rooikraal TSF is situated near the Withok TSF, as reflected in Figure 2-2 above, and therefore the information from the Rooikraal TSF Reclamation EIA is deemed applicable. However, specialist studies specific to the Proposed Project are underway, and where required, baseline environment information will be updated during the EIA phase.

### 8.1 Climate

The Withok TSF falls within the Highveld climatic zone which can be associated by warm, rainy summers and cold winters. The area's wettest months occur from October through to March, with the driest months occurring over the period of June to August. The Proposed Project falls within the Soweto Highveld Grassland vegetation type. This is characterised by summer rainfall with a cool temperature with frequent occurrence of frost. This vegetation unit experiences thermic continentality, with high extremes between maximum and minimum winter temperature, along with large thermic diurnal differences (Mucina, 2006). The mean annual temperature (MAT) of 15°C indicates a transition between a cool-temperate and a warm-temperate climate. Frost is frequent during the winter months (Mucina, 2006)

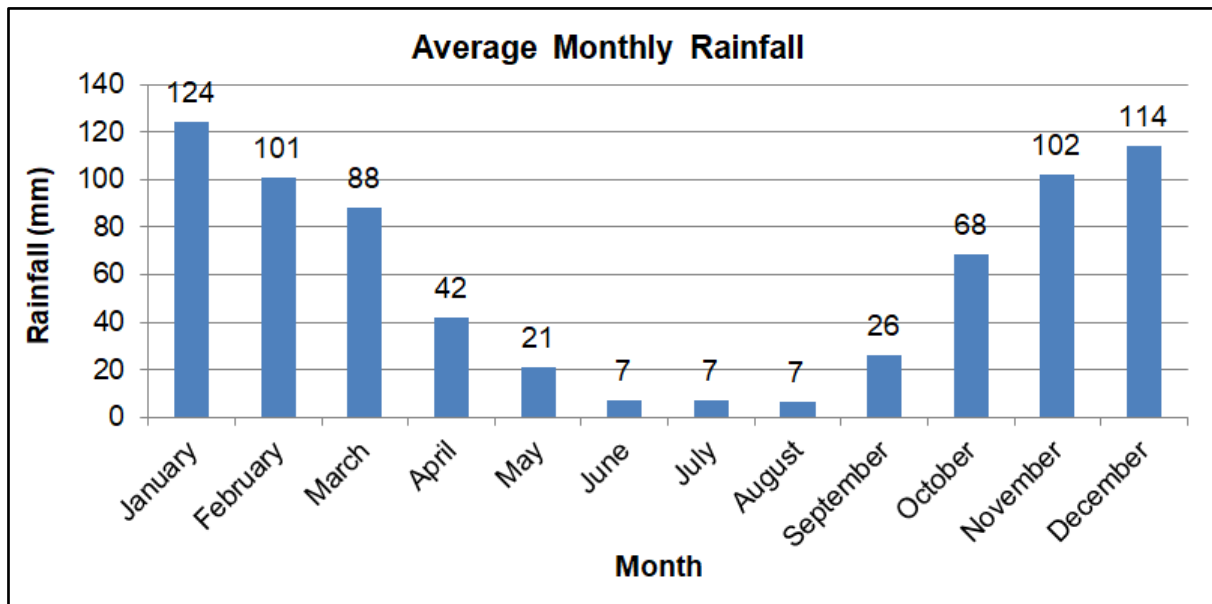


**Figure 8-1: Climate based on the Soweto Highveld Grassland (left) and the Tsakane Clay Grassland (right) Vegetation Types.**

#### 8.1.1 Rainfall

Daily rainfall depths were extracted from the Lynch (2003) database for the most reliable (most complete rainfall record) weather station near the Project. This was the Springs (RWB) (0476736 W) weather station, located approximately 15 km north-east of the project. The Daily Rainfall Extraction Utility software programme was used to extract the rainfall depths for the period 1920/1/1 to 2000/8/31 (80 years and 8 months of rainfall data). The Tsakane Clay Grassland vegetation type experiences strongly seasonal rainfall with very dry winters and a Mean Annual Precipitation (MAP) of 630-720 m (Mucina, 2006).

The site has a MAP of 707 mm. The average monthly rainfall is indicated in Figure 8-2. The wettest months occur from October through to March, with the driest months occurring over the period of June to August. Rainfall is mostly in the form of convective thunderstorms, which are often brief, but regularly high in intensity. Tropical and frontal rainfall systems also occur in the region, but are not as common.



**Figure 8-2: Average monthly rainfall totals for the project area (Springs weather station)**

8.1.1.1 Storm Rainfall Depths

The storm rainfall depths for the centre position of the project area were extracted from the Design Rainfall Estimation in South Africa software programme (Smithers and Schulze, 2002). The programme uses the six closest rainfall stations to a user specified coordinate, to calculate the storm rainfall depths for that area. The six closest rainfall stations to the project area are indicated in Table 8-1.

**Table 8-1: Six closest rainfall stations to the project**

Station Name	Station No.	Distance from Site (km)	Record (Years)	Latitude	Longitude	MAP (mm)	Altitude (mamsl)
Glen Roy (Station)	0476563_W	1.8	43	26°23S	28°18E	661	1 590
Rondebult (PUR)	0476378_W	11.5	47	26°17S	28°14E	639	1 604
Heidelberg-PS	0476660_W	13.7	61	26°29S	28°21E	712	1 560
Sub-Nigel (GM)	0476802_W	14.5	65	26°21S	28°26E	701	1 577
Heidelberg I	0476630_W	14.8	92	26°30S	28°20E	726	1 560
Roodekop	0476317_W	15.5	47	26°17S	28°11E	591	1 540

The extracted storm rainfall depths for the Project are indicated in Table 8-2.

**Table 8-2: Storm rainfall depths for the Project**

Storm Duration min / hr / day	Return Period / Storm Rainfall Depth (mm)						
	1:2 yr	1:5 yr	1:10 yr	1:20 yr	1:50 yr	1:100 yr	1:200 yr
5 min	8.7	12	14.5	17.2	21.1	24.3	27.9
10 min	12.5	17.3	20.9	24.8	30.4	35.1	40.2
15 min	15.5	21.4	25.9	30.7	37.6	43.5	49.9

Storm Duration	Return Period / Storm Rainfall Depth (mm)						
30 min	19.9	27.5	33.2	39.3	48.2	55.6	63.8
45 min	23	31.7	38.4	45.4	55.7	64.3	73.8
1 hr	25.5	35.1	42.5	50.3	61.7	71.2	81.7
1.5 hr	29.4	40.6	49.1	58.1	71.2	82.3	94.4
2 hr	32.6	45	54.4	64.4	78.9	91.2	104.6
4 hr	38.9	53.7	65	76.9	94.3	108.9	124.9
6 hr	43.2	59.6	72.1	85.3	104.6	120.8	138.6
8 hr	46.5	64.2	77.6	91.8	112.6	130	149.2
10 hr	49.2	67.9	82.2	97.2	119.2	137.7	158
12 hr	51.6	71.2	86.1	101.9	124.9	144.3	165.5
16 hr	55.5	76.6	92.7	109.7	134.5	155.3	178.2
20 hr	58.8	81.2	98.1	116.1	142.4	164.4	188.7
24 hr	61.6	85	102.8	121.7	149.2	172.3	197.7
1 day	53.4	73.7	89.1	105.4	129.3	149.3	171.3
2 day	65.7	90.7	109.7	129.8	159.2	183.8	210.9
3 day	74.2	102.4	123.9	146.6	179.8	207.6	238.2
4 day	80.7	111.4	134.8	159.5	195.6	225.8	259.1
5 day	86.2	119	143.9	170.3	208.8	241.1	276.6
6 day	90.9	125.5	151.7	179.6	220.2	254.3	291.8
7 day	95.1	131.3	158.7	187.9	230.4	266.1	305.3

### 8.1.2 Evaporation

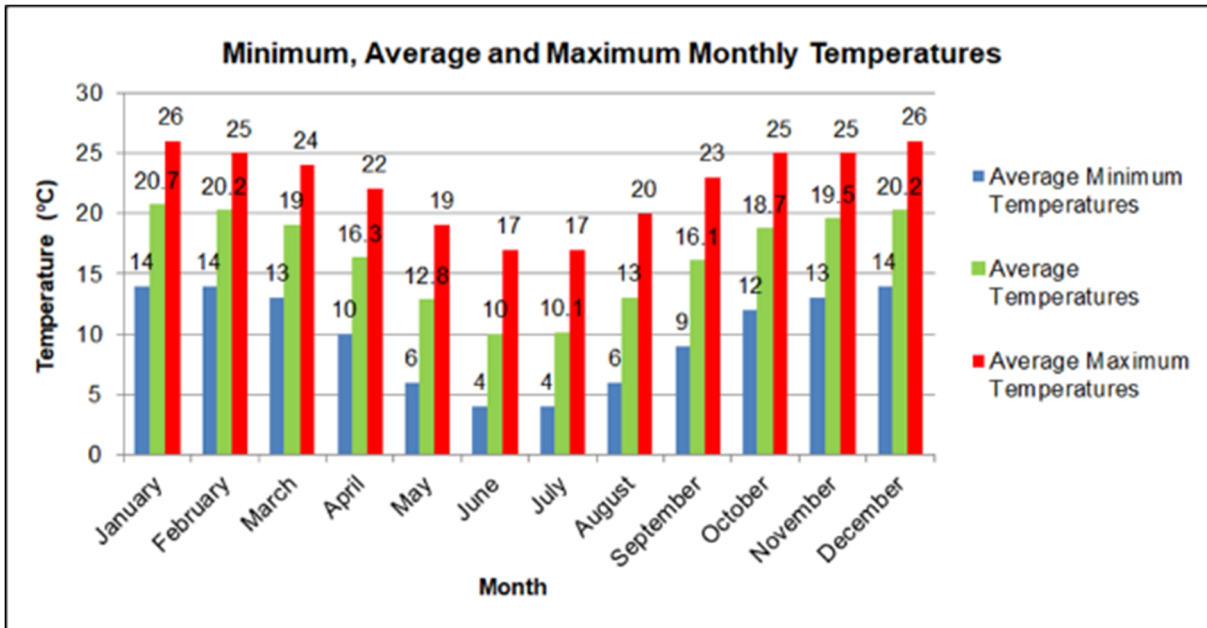
The adopted monthly evaporation for the Project is indicated in Table 8-3. Evaporation is highest over the summer months, with December and January being the highest, and lowest over the winter months.

**Table 8-3: Symons Pan and open water evaporation for the project**

Month	Symons Pan Evaporation (mm)	Open Water Evaporation Factor	Open Water Evaporation (mm)
January	199	0.84	167
February	160	0.88	141
March	146	0.88	128
April	106	0.88	94
May	80	0.87	70
June	61	0.85	52
July	69	0.83	57
August	99	0.81	81
September	140	0.81	113
October	178	0.81	144
November	185	0.82	152
December	201	0.83	167
<b>Total</b>	<b>1 625</b>	<b>N/A</b>	<b>1 366</b>

### 8.1.3 Temperature

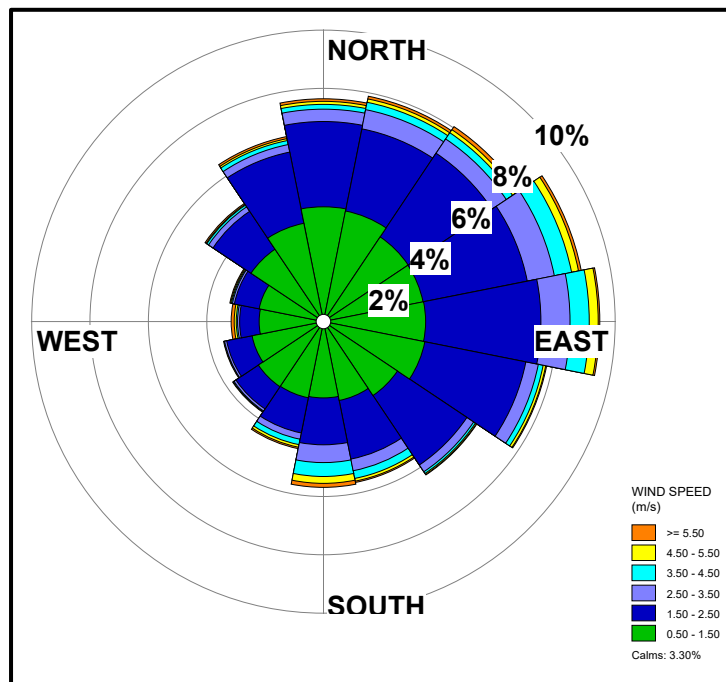
The average monthly temperatures for the project were extracted using the LocClim Local Climate Estimator software programme (FAO, 2005), using the nearest neighbour method from weather stations in the region. Figure 8-3 indicates the minimum, average and maximum temperatures for the Project. The warmest months occur from October through to March. The coolest months occur over the period of May to August.



**Figure 8-3: Minimum, average and maximum monthly temperature for the project (Source: HydroSpatial, 2018)**

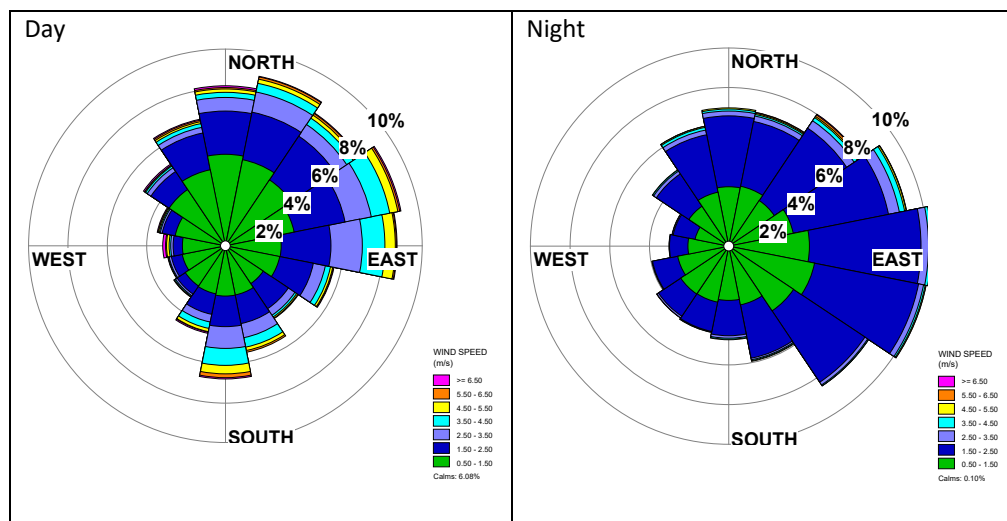
### 8.1.4 Wind Direction

The predominant wind direction at the project site (as given by the WRF data for the period from 2015 to 2017 for the project area) is from an easterly direction (for approximately 9.4% of the time) (Figure 8-4). However, the highest number of winds with speeds greater than 5.5 m/s are expected from the north-easterly, southerly and westerly directions. The average hourly wind speed predicted by the WRF model is approximately 1.62 m/s. Calm conditions (wind speeds below 0.5 m/s) are predicted for approximately 3.3% of the time.



**Figure 8-4: Wind rose of the average winds produced by the WRF model for the Withok TSF, for the years 2015-2017.**

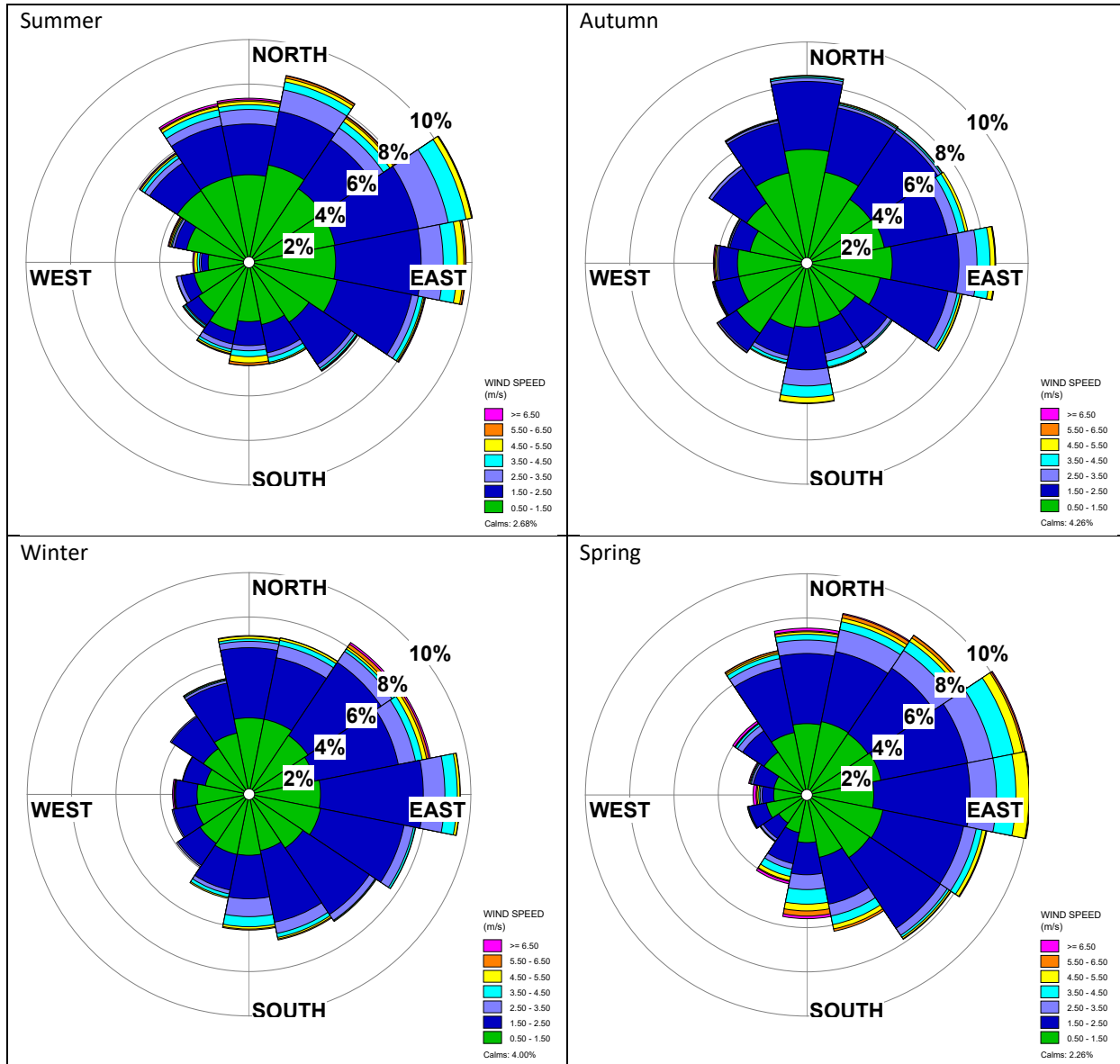
At the project site, winds speeds are higher during the day than during the night. There is, however, a small diurnal variation in wind direction. The dominant daytime wind directions are from the northerly to easterly quadrant, while during the night, the dominant wind directions are from the north-easterly to south-easterly quadrant (Figure 8-5).



**Figure 8-5: Diurnal wind roses predicted by the WRF model for the Withok TSF for the years 2015-2017.**

The seasonal variations in wind direction for the site are illustrated in Figure 8-6. The prevalence of the easterly winds is evident in all seasons. The highest wind speeds (wind speeds above 6.5 m/s) are

experienced mainly in Spring and Summer, with the highest average wind speeds occurring in Spring. The maximum number of calm conditions are experienced in Autumn and Winter.



**Figure 8-6: Seasonal wind roses of winds predicted by the WRF model for the Withok TSF, for the years 2015-2017.**

## 8.2 Topography

The topography of the site varies from 1 550 metres above mean sea level (mamsl) to 1 590 mamsl as shown in Figure 8-7. Even though the slope of the Project Site is gentle, it is surrounded by steep slopes. The Brakpan TSF, located directly north of the Withok TSF footprint, has an elevation of 1560 - 1610 mamsl. The Rooikraal TSF, located to the west of the Withok TSF footprint, has an elevation of 1545 – 1565 mamsl.

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A steep elevation is located to the south of the Withok TSF footprint, while the slopes to the east and west of the TSF footprint are predominantly gentle.

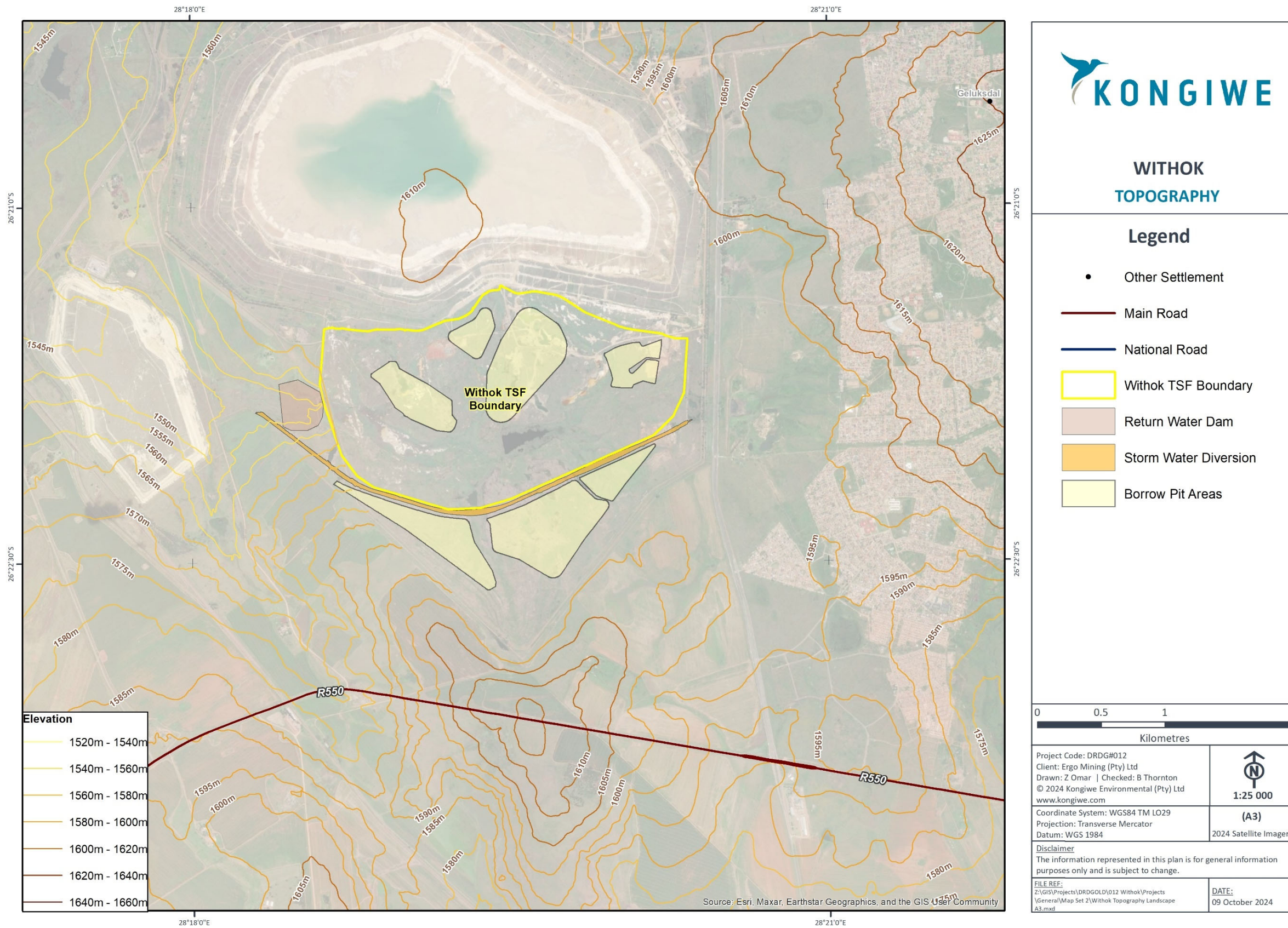


Figure 8-7: Topography of the project area

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### 8.3 Geology

The existing Withok TSF footprint is underlain by the Ventersdorp and Transvaal Supergroup formations, which have been intruded by post-Karoo dolerite. The Withok TSF site is adjacent the Malmani dolomite, in particular the Oaktree and Monte Christo formations. The dolomite becomes thinner towards the southeast where it extends beneath the Withok TSF footprint (Groundwater Abstract, 2018).

The Oaktree formation is a dark coloured, chert-poor dolomite found between 4.5 to 23.5 m below surface, with a maximum thickness of 2.5 m (Digby Wells, May 2009). The Monte Christo formation is a light-coloured, chert-rich dolomite. Chert deposits are present at shallow depths in the form of angular gravel or boulders (Groundwater Abstract, 2018).

The Turffontein Subgroup (quartzite with prominent conglomerate zones and sandy shale) of the Witwatersrand Supergroup is conformably overlain by Klipriviersberg Group (andesite, agglomerate and tuff) of the Ventersdorp Supergroup.

Strata in the Witwatersrand group generally dip at variable angles in a south or south-westerly direction. Geological faults are present in the area and orientated parallel to local streams.

Figure 8-8 shows the geology of the project area.

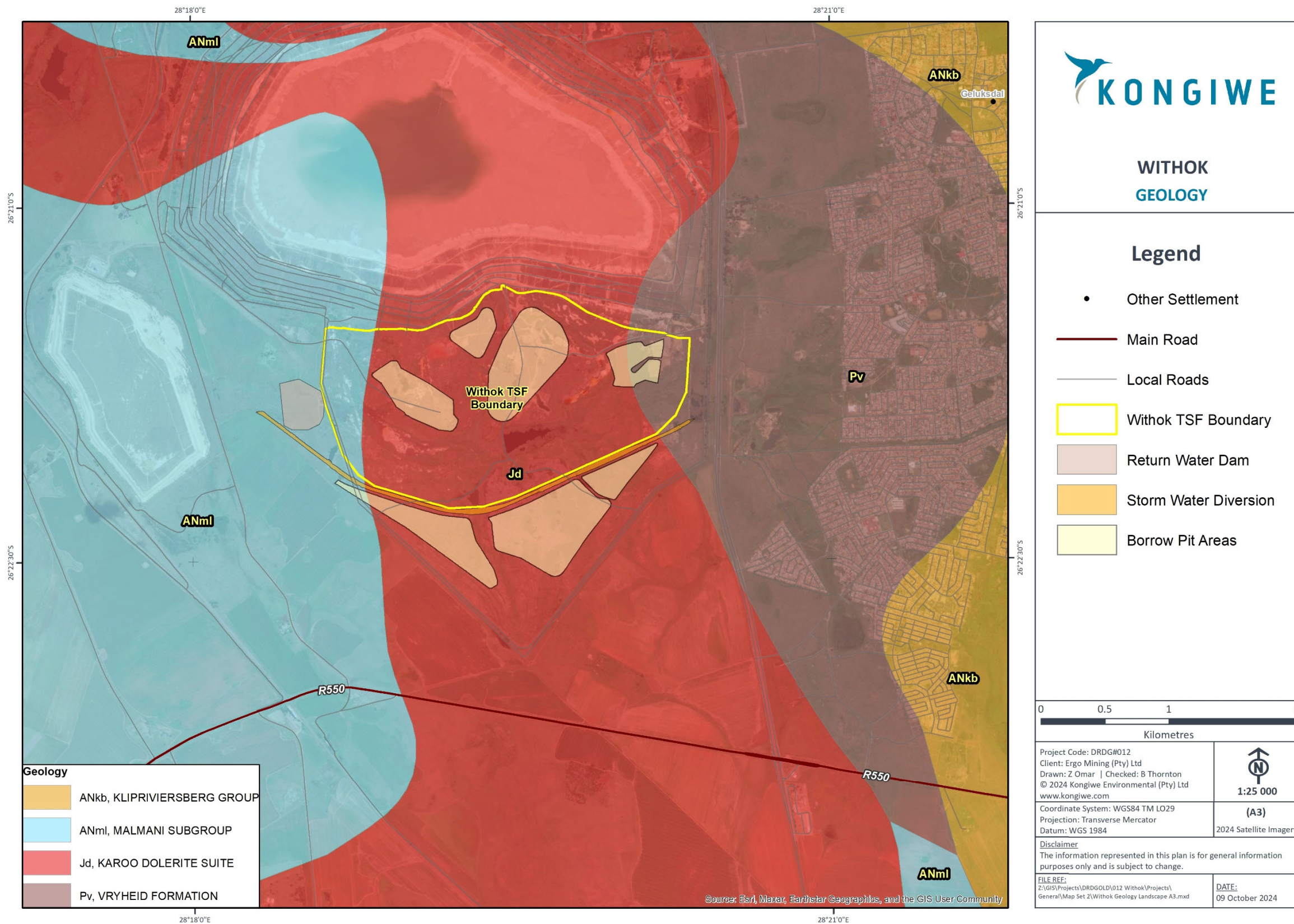


Figure 8-8: Geology of the project area

## 8.4 Soils, Land Use, and Land Capability

### 8.4.1 Soils

Landtype data was used to provide a general description of soils in the study area (land types are areas with largely uniform soils, topography and climate). The Withok TSF area falls within the Ea20 landtype with a small portion of the TSF area falling with the Ba1 land type (Figure 8-10). The Ea20 land type is characterised by Arcadia and Milkwood soil forms, with the possibility of other soils occurring. It is characterised by one or more of vertic, melanic and/or red structured diagnostic horizons (TBC, 2024).

The B-group of land types contains soils with a plinthic catena in which upland duplex and marginalitic soils are rare (Hoare, 2018). The Ba 1 land type is predominantly characterised by Hutton and Mispah soil forms, with the possibility of other soils occurring. Upland duplex and marginalitic soils are rare and red soils are not widespread. This land type is dystrophic and/or mesotrophic.

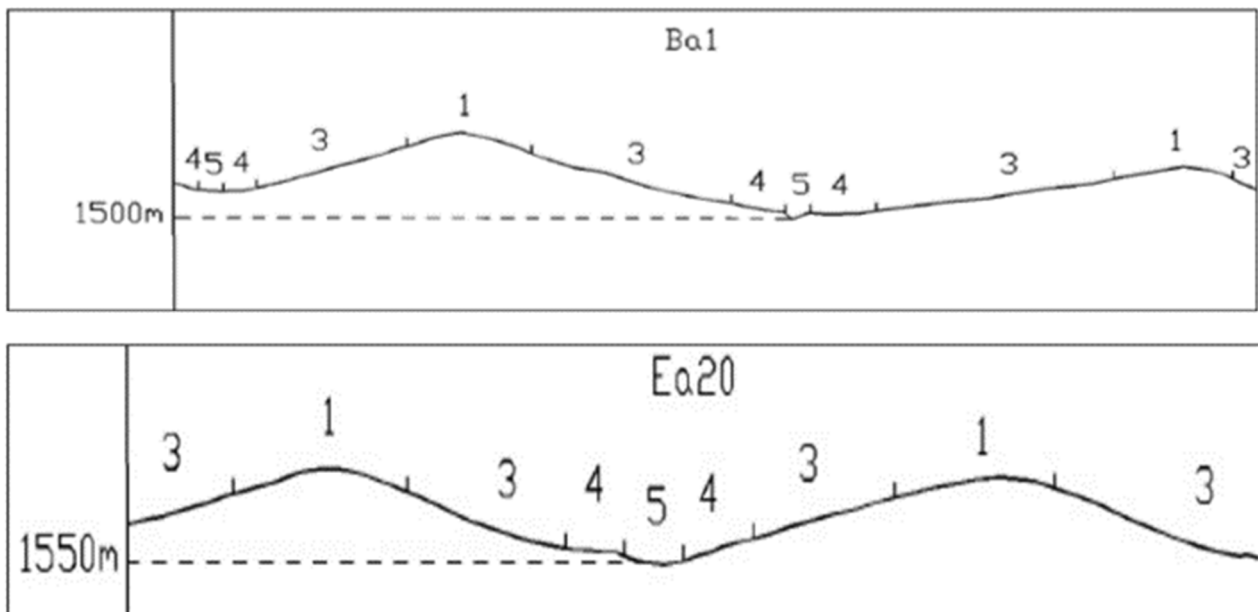


Figure 8-9: Illustration of the land type terrain unit (Land Type Survey Staff, 1972 - 2006)

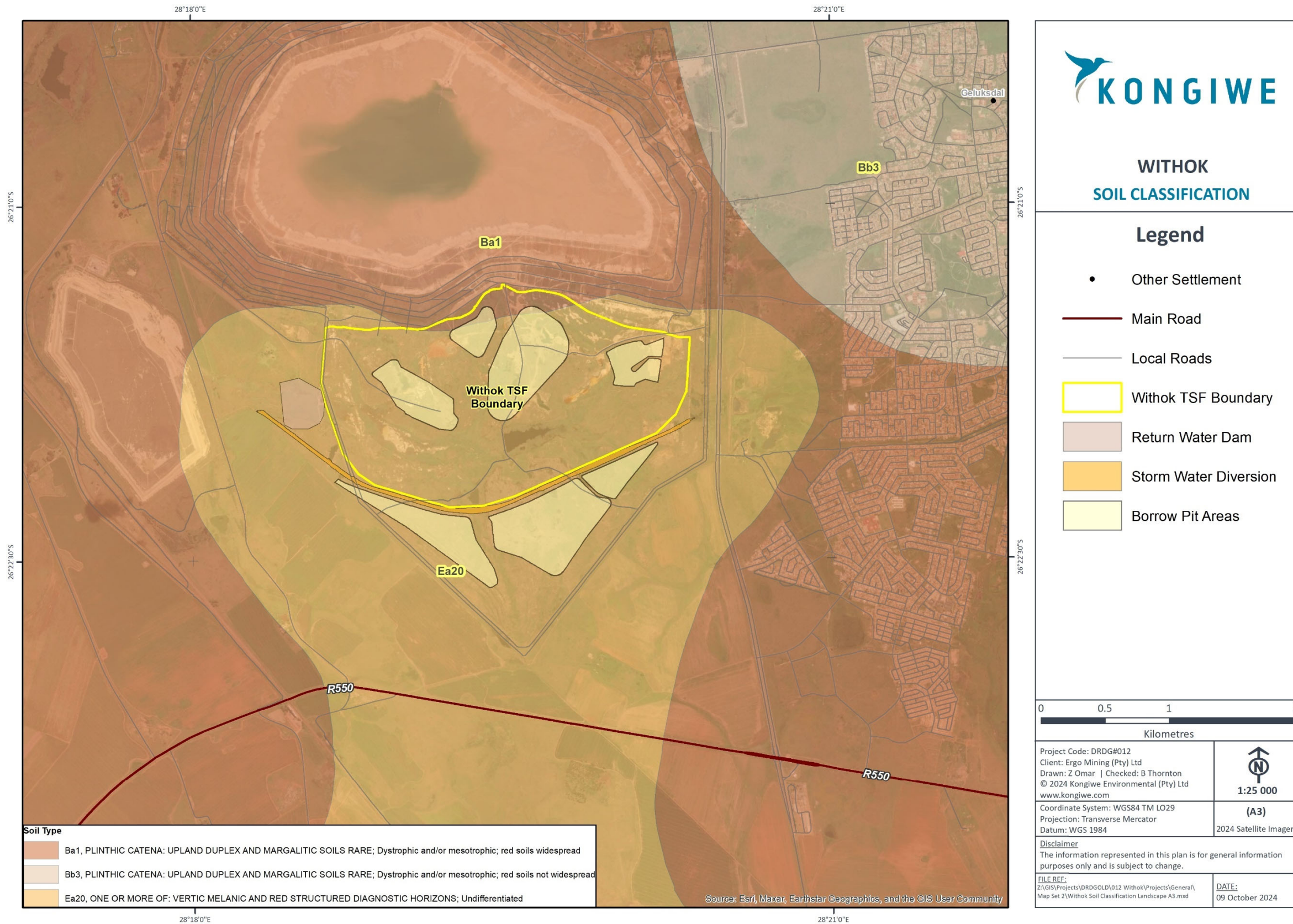


Figure 8-10: Soil classification of the Project area

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#### 8.4.2 Land Use and Land Capability

The land use around the Withok TSF is a mixture of bare ground, agricultural land, grasslands, residential settlements, mines and water bodies traversing the site (Figure 8-11).

According to Regional E Spatial Development Framework (SDF,2015), the Withok TSF falls within the Zone 2: Agricultural 2b, which is a predominated moderate - high agricultural land potential land. The proposed location for the recommissioned TSF is on previously disturbed historic TSF footprint where the original Withok TSF was before it was reclaimed.

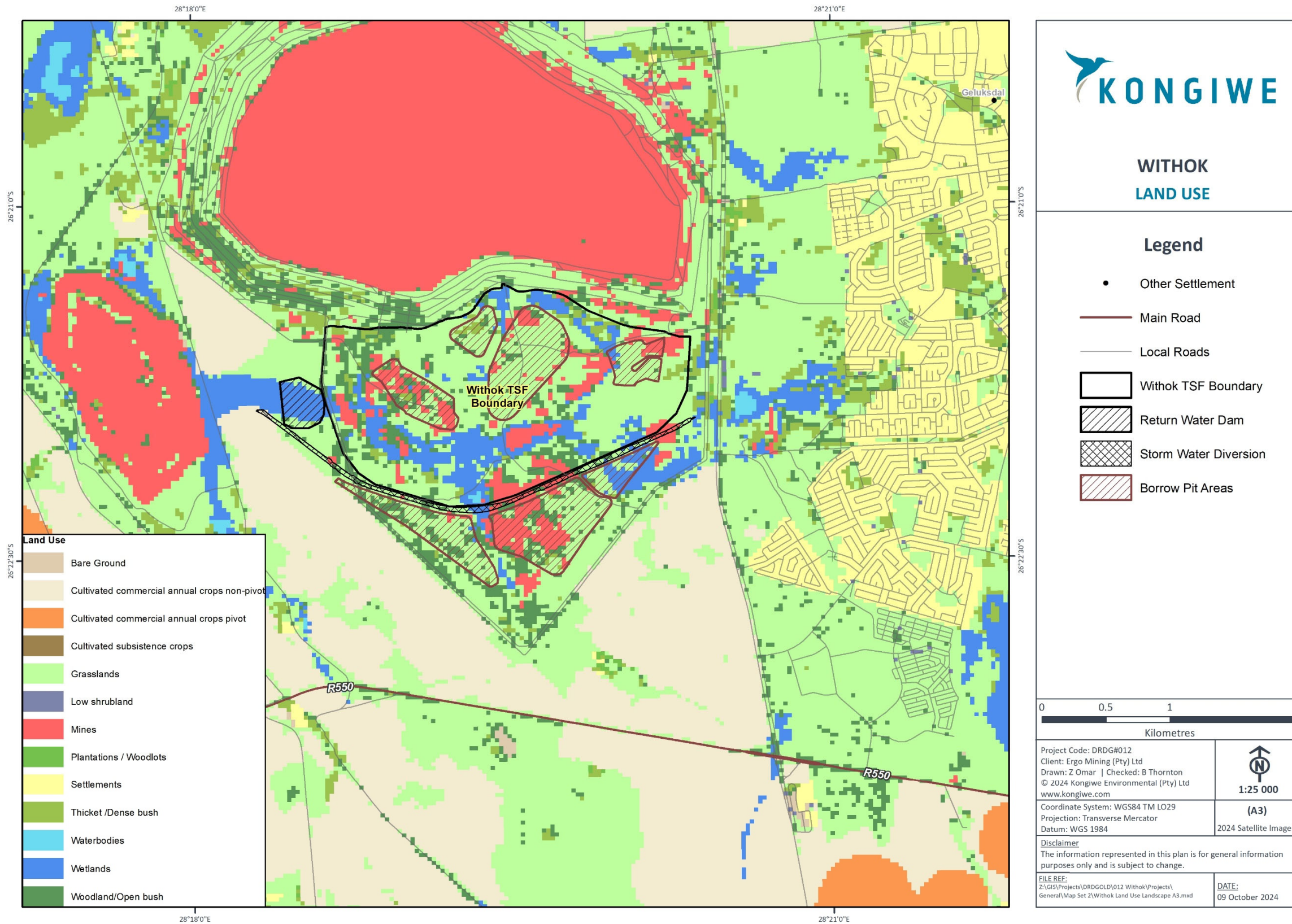


Figure 8-11: Land use in the Project area

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## 8.5 Biodiversity

### 8.5.1 Ecosystem Threat Status

The Ecosystem Threat Status is an indicator of an ecosystem's wellbeing, based on the level of change in structure, function or composition. Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT) or Least Concern (LC), based on the proportion of the original extent of each ecosystem type that remains in good ecological condition. According to the spatial dataset the proposed project overlaps with an EN and VU ecosystem (Figure 8-12) (The Biodiversity Company , 2024).

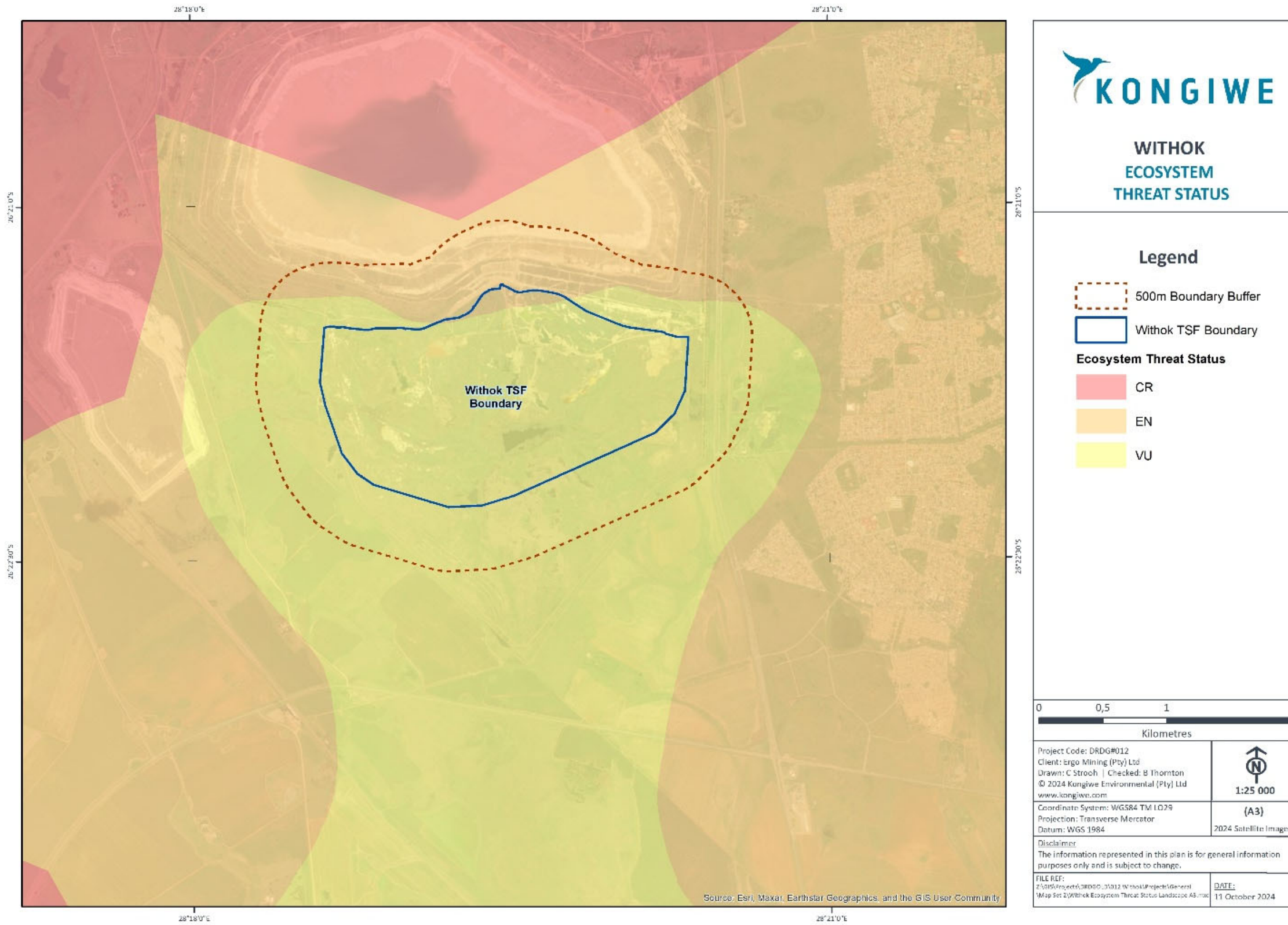


Figure 8-12: Map illustrating Ecosystem threat status

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### 8.5.2 Ecosystem Protection Level

This is an indicator of the extent to which ecosystems are adequately protected or under-protected. Ecosystem types are categorised as Well Protected (WP), Moderately Protected (MP), Poorly Protected (PP), or Not Protected (NP), based on the proportion of the biodiversity target for each ecosystem type that is included within one or more protected areas. NP, PP or MP ecosystem types are collectively referred to as under-protected ecosystems. The Proposed Project overlaps with a NP and PP ecosystem (Figure 8-13) (The Biodiversity Company , 2024).

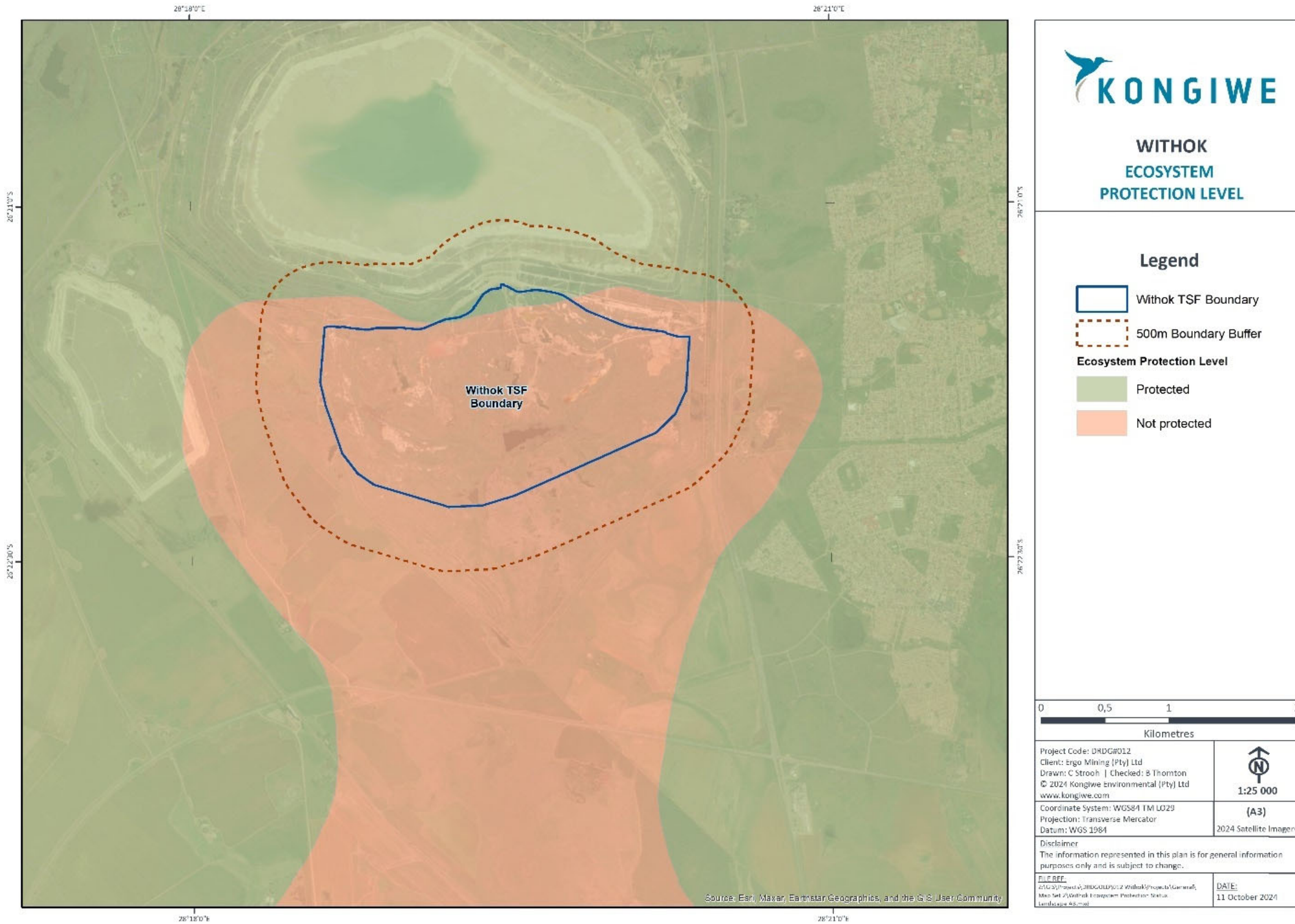


Figure 8-13: Withok TSF project area showing the level of protection of terrestrial ecosystems (NBA, 2011).

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### 8.5.3 Red List of Ecosystems

Red List of Ecosystems (RLE) 2021 – The list was first published in 2011 and has since been substantially revised by authors Dr Andrew Skowno and Mrs Maphale Monyeki ((SANBI, 2022 as cited in (The Biodiversity Company , 2024)). This list is based on assessments that followed the International Union for Conservation of Nature (IUCN) Red List of Ecosystems Framework (version 1.1) and covers all 456 terrestrial ecosystem types described in South Africa by Mucina and Rutherford (2006). A total of 120 of the 456 terrestrial ecosystem types assessed are categorised as threatened and together make up approximately 10% of the remaining natural habitat in the country. Of these 120 ecosystem types, 55 are CR, 51 EN and 14 are VU. The remainder are categorised as LC ((SANBI, 2022; Skowno & Monyeki, 2021) as cited in (The Biodiversity Company , 2024)).

According to the 2022 Red List of Ecosystems dataset, the project area falls within an EN and VU ecosystem (Figure 8-14) (The Biodiversity Company , 2024).

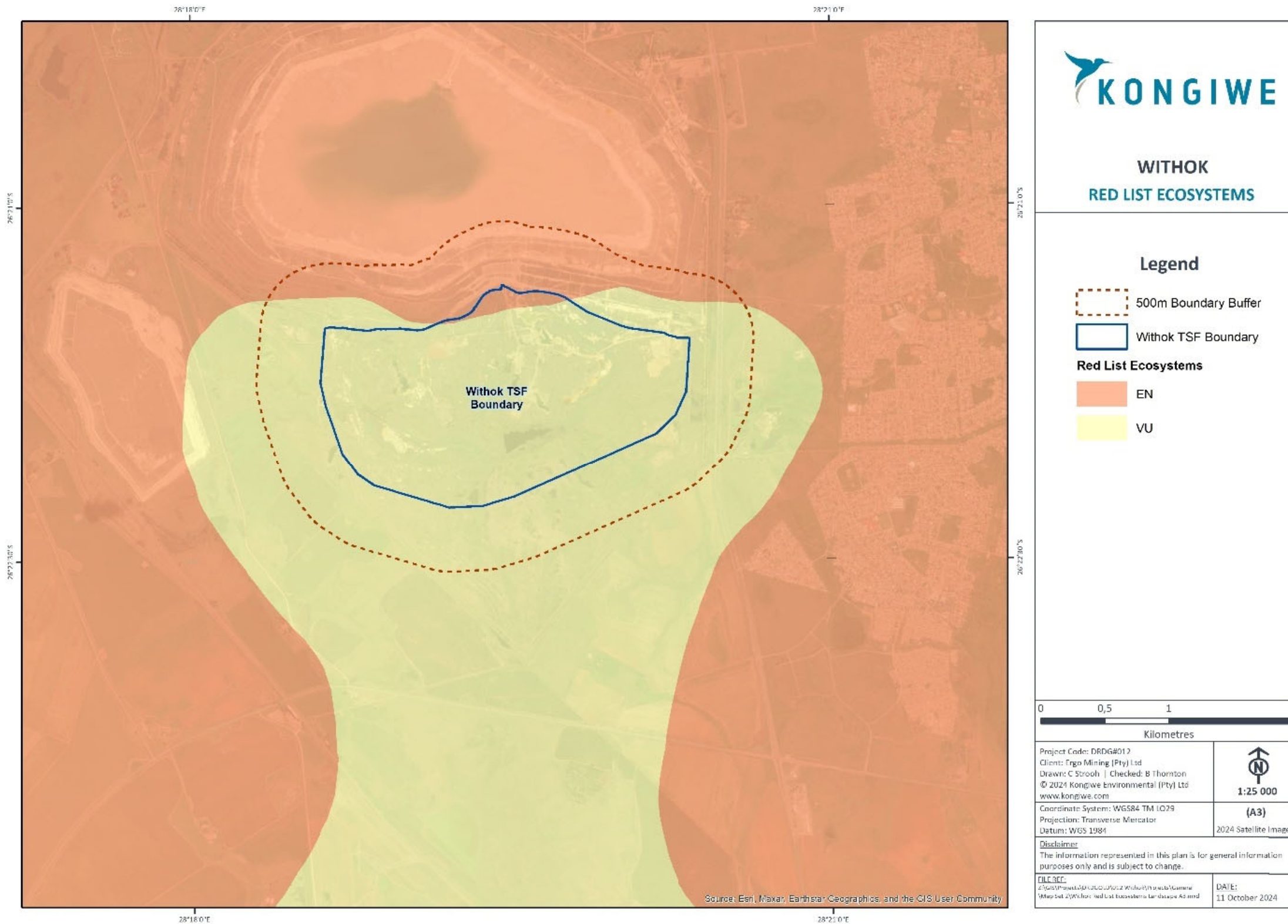


Figure 8-14: Map illustrating the Red List of Ecosystems dataset

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#### 8.5.4 Gauteng Conservation Plan

The Gauteng Conservation Plan (Version 3.3) (GDARD, 2014b) classified areas within the province based on its contribution to reach the conservation targets within the province. These areas are classified as CBAs and ESAs to ensure sustainability in the long term. The CBAs are classified as either 'Irreplaceable' (must be conserved), or 'Important' (The Biodiversity Company , 2024).

CBAs are terrestrial and aquatic areas of the landscape that need to be maintained in a natural or near-natural state to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. Thus, if these areas are not maintained in a natural or near natural state then biodiversity targets cannot be met (The Biodiversity Company , 2024).

Figure 8-15 shows the Proposed Project area superimposed on the Gauteng Conservation Plan. The Proposed Project overlaps with ESAs only.

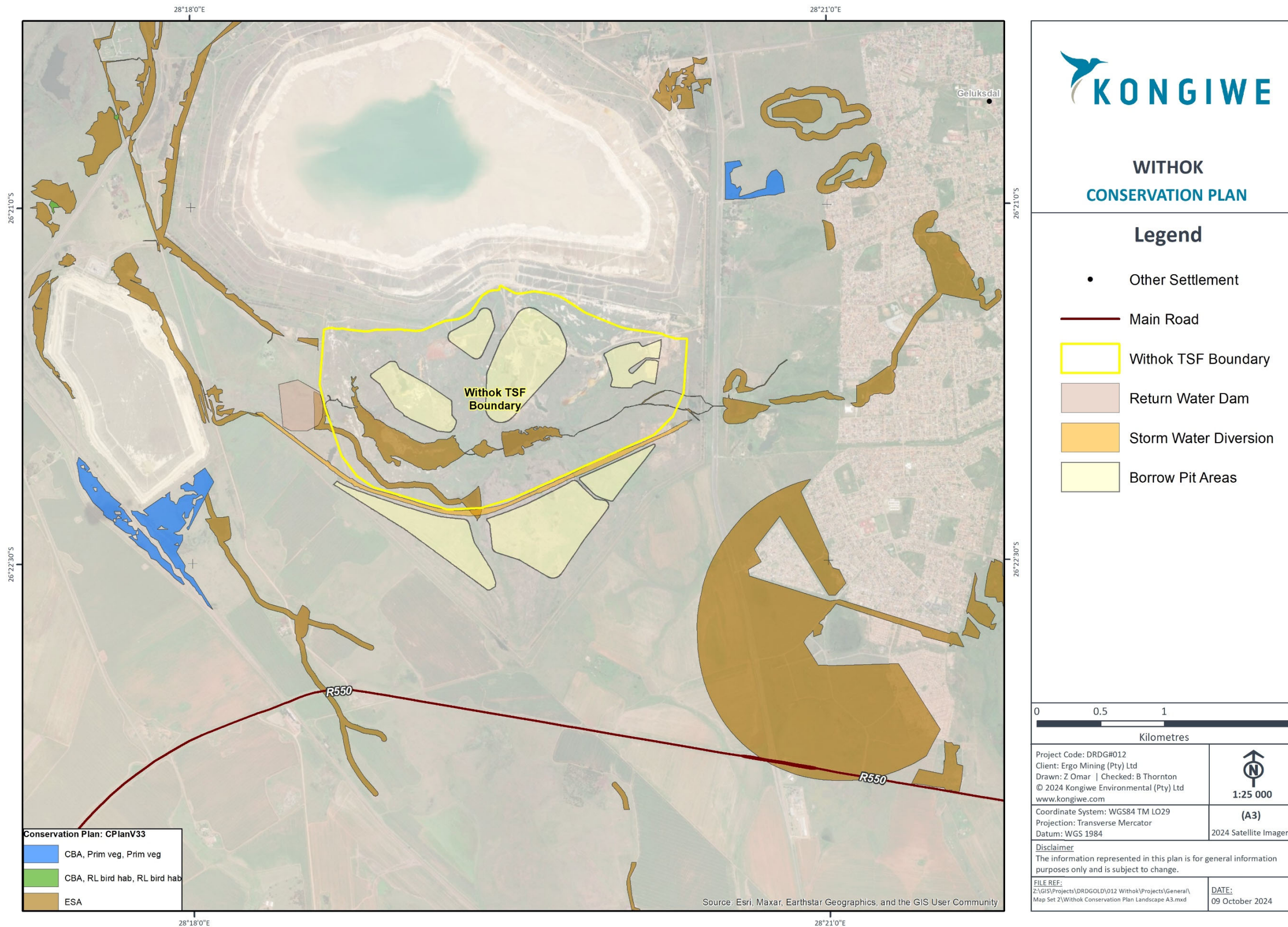


Figure 8-15: The project area in relation to the Gauteng Conservation Plan

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#### 8.5.5 Gauteng Ridges

The quartzite ridges of Gauteng are one of the most important natural assets in the northern regions of South Africa. This is because these ridges, and the areas immediately surrounding them, provide unique habitat for a wide variety of fauna and flora, some of which are Red-Listed, rare or endemic species. Figure 8-16 indicates that the Proposed Project overlaps with class 4 Gauteng Ridges. A class 4 ridge does not require a buffer zone and, in this case, one of the highlighted ridges is, in fact, the existing adjacent Brakpan TSF (The Biodiversity Company , 2024).

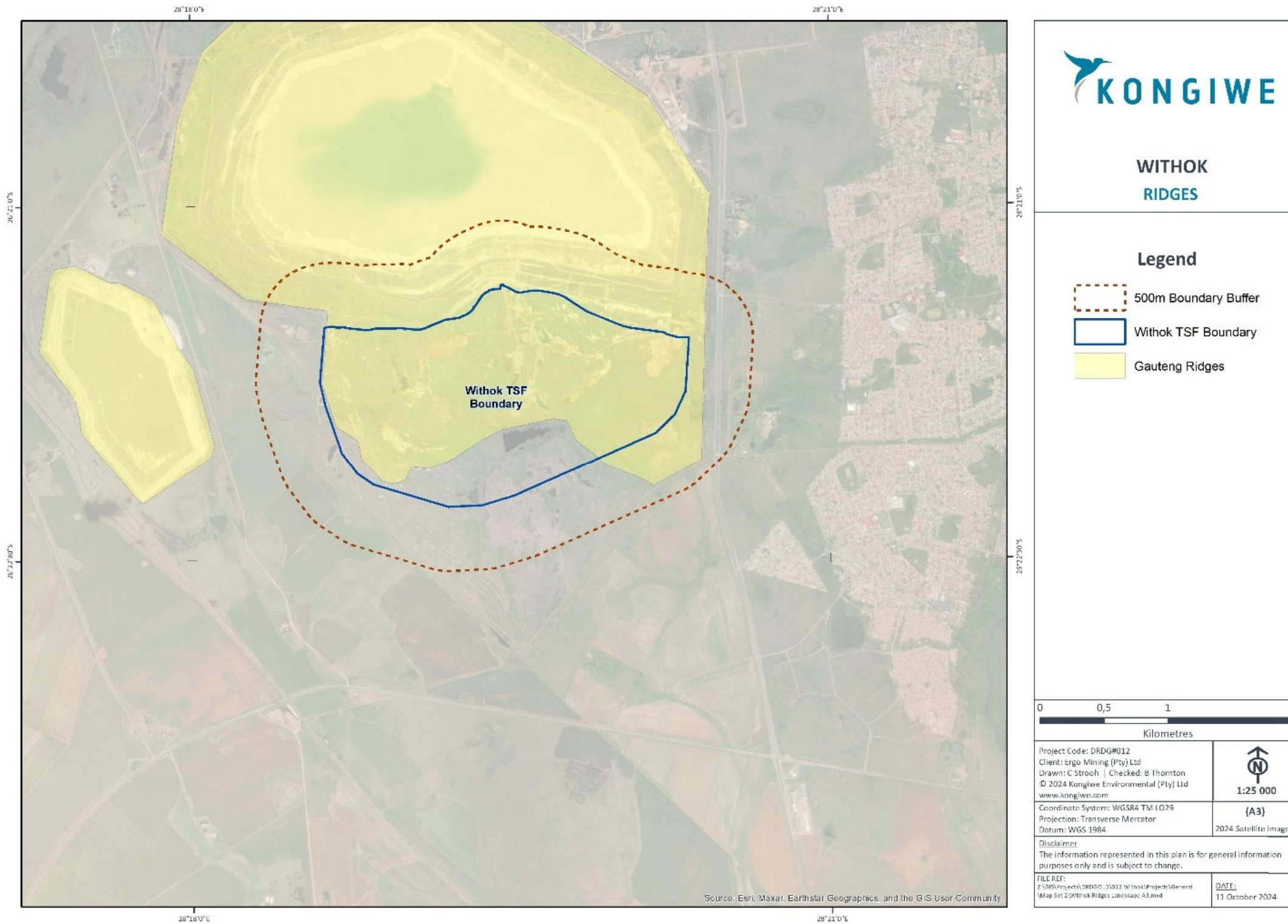


Figure 8-16: Map illustrating the Project area in relation to the Class 4 Gauteng Ridges.

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#### 8.5.6 Project Area in relation to Protected Areas

According to the protected area spatial datasets from the South African Protected Areas Database (SAPAD) (2023) and South African Conservation Areas Database (SACAD) (2023), the Proposed is approximately 1km away from one PA, namely the Avalon Private Nature Reserve (Figure 8-17) (The Biodiversity Company , 2024)

#### 8.5.7 National Protected Areas Expansion Strategy

National Protected Area Expansion Strategy 2018 (NPAES) areas were identified through a systematic biodiversity planning process. They present the best opportunities for meeting the ecosystem-specific protected area targets set in the NPAES and were designed with a strong emphasis on climate change resilience and requirements for protecting freshwater ecosystems. These areas should not be seen as future boundaries of protected areas, as in many cases only a portion of a particular focus area would be required to meet the protected area targets set in the NPAES. They are also not a replacement for fine scale planning which may identify a range of different priority sites based on local requirements, constraints and opportunities (NPAES, 2018) (The Biodiversity Company , 2024).

According to the NPAES dataset (2018), the Proposed Project overlaps with priority focus areas and PAs (Figure 8-18).

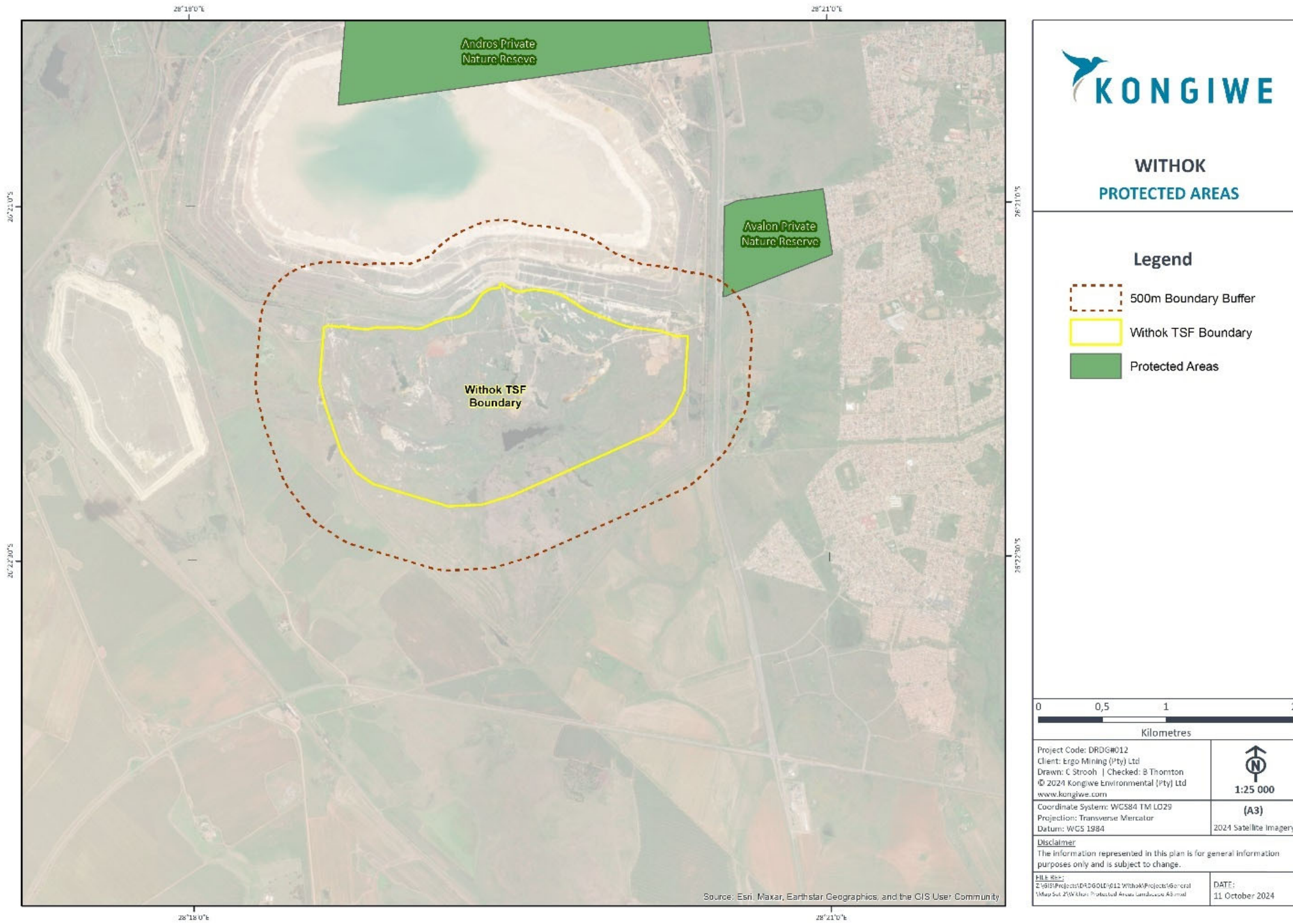


Figure 8-17: Map illustrating the Project area in relation to Protected areas in the region.

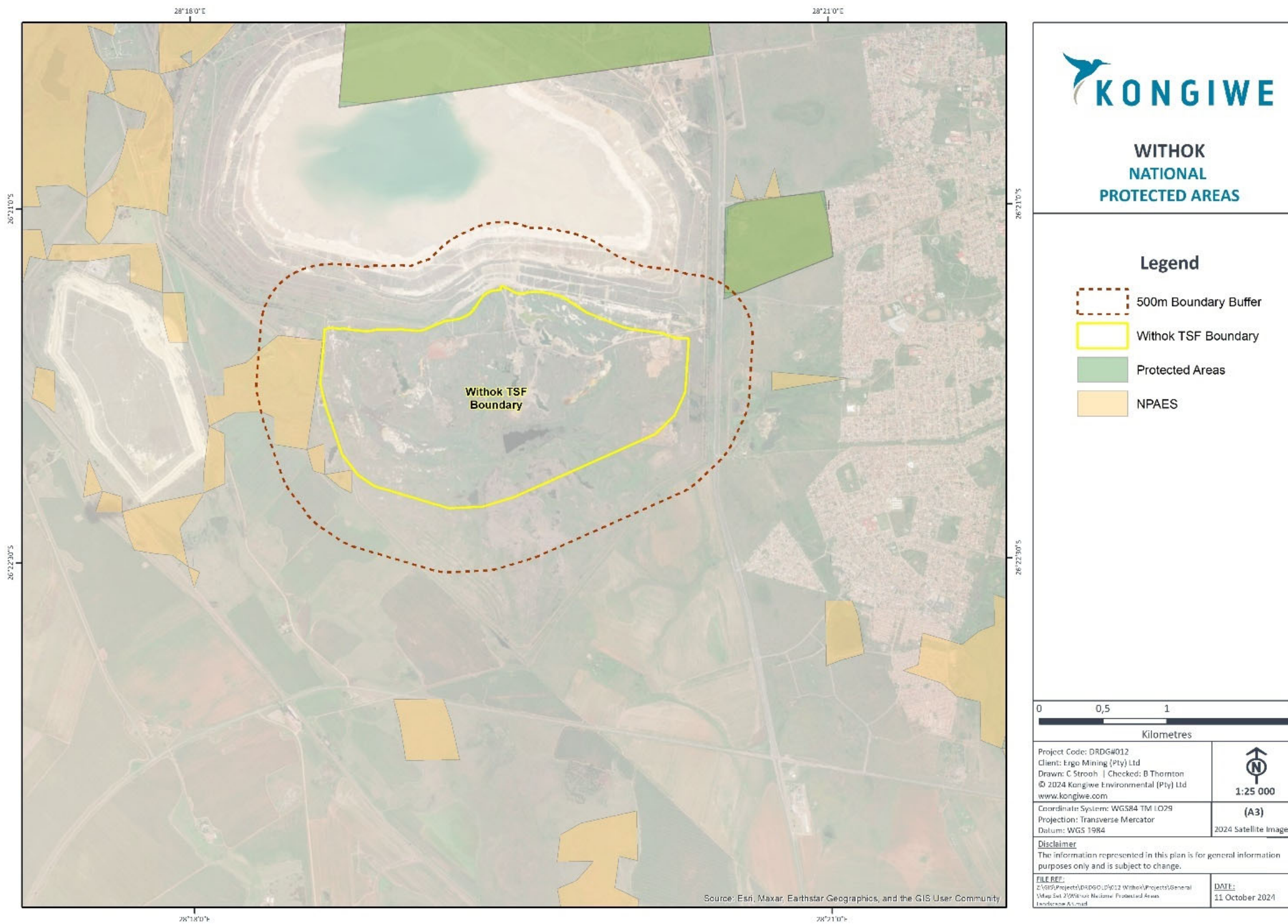


Figure 8-18: Map illustrating the Project area in relation to the National Protected Area Expansion Strategy.

#### 8.5.8 The South African Inventory of Inland Aquatic Ecosystems

The South African Inventory of Inland Aquatic Ecosystems (SAIIAE) was released with the NBA in 2018. Ecosystem Threat Status (ETS) of river and wetland ecosystem types are based on the extent to which each river ecosystem type had been altered from its natural condition. Ecosystem types are categorised as CR, EN, VU or LT, with CR, EN and VU ecosystem types collectively referred to as ‘threatened’ ((Van Deventer et al., 2019; Skowno et al., 2019 as cited in (The Biodiversity Company , 2024)). The Proposed Project does not overlap with any threatened ecosystems (Figure 8-19).

#### 8.5.9 National Freshwater Ecosystem Priority Area (NFEPA) Status

In an attempt to better conserve aquatic ecosystems, South Africa has categorised its river systems according to set ecological criteria (i.e., ecosystem representation, water yield, connectivity, unique features, and threatened taxa) to identify Freshwater Ecosystem Priority Areas (FEPAs) ((Driver et al., 2011 as cited in (The Biodiversity Company , 2024)). The FEPAs are intended to be conservation support tools and envisioned to guide the effective implementation of measures to achieve the NEM:BA’s biodiversity goals (Nel et al., 2011).

Figure 8-20 illustrates that the Proposed Project overlaps with a “Non-Priority” FEPA wetland (The Biodiversity Company , 2024).

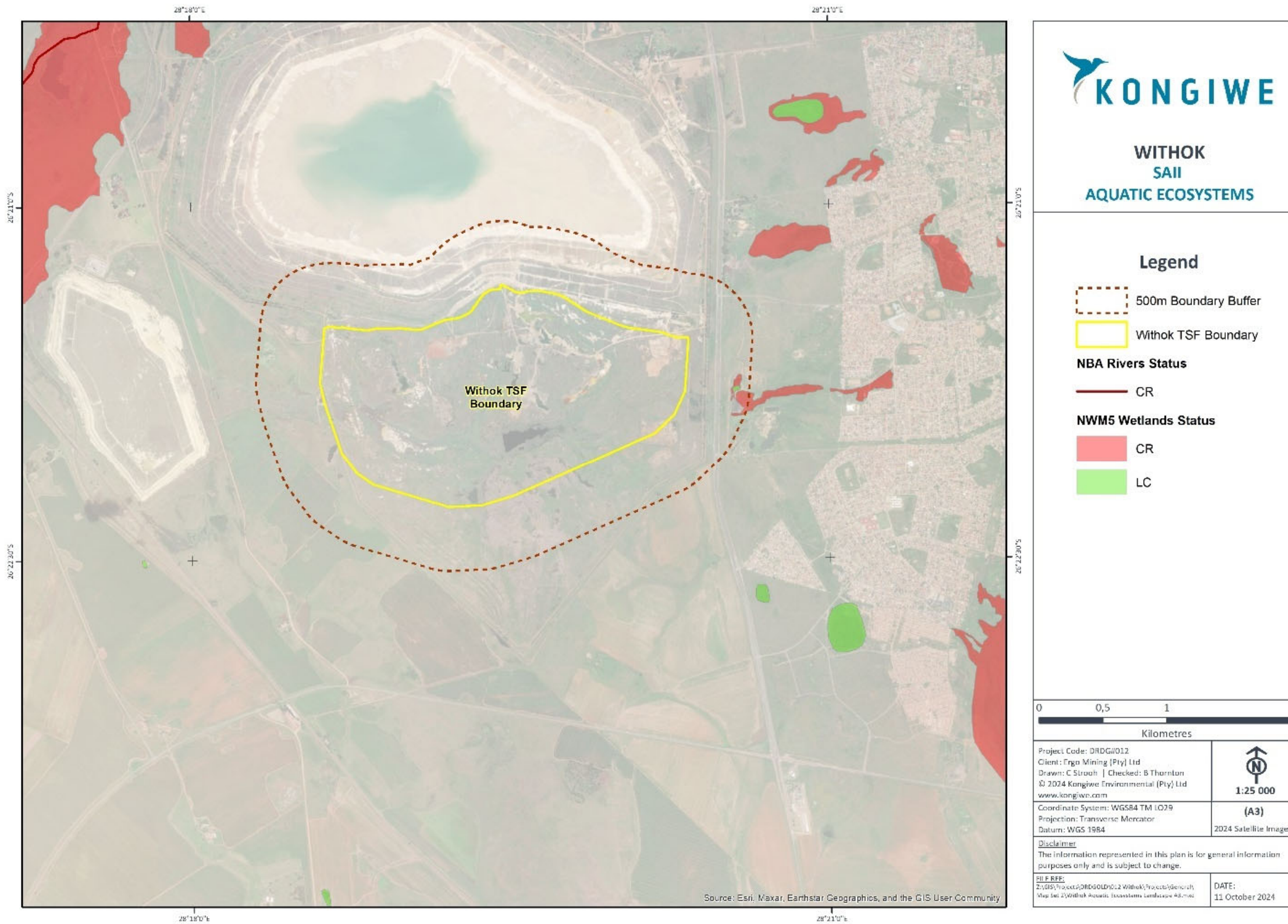


Figure 8-19: Map illustrating the Project area in relation to the South African Inventory of Inland Aquatic Ecosystem (NBA, 2018).

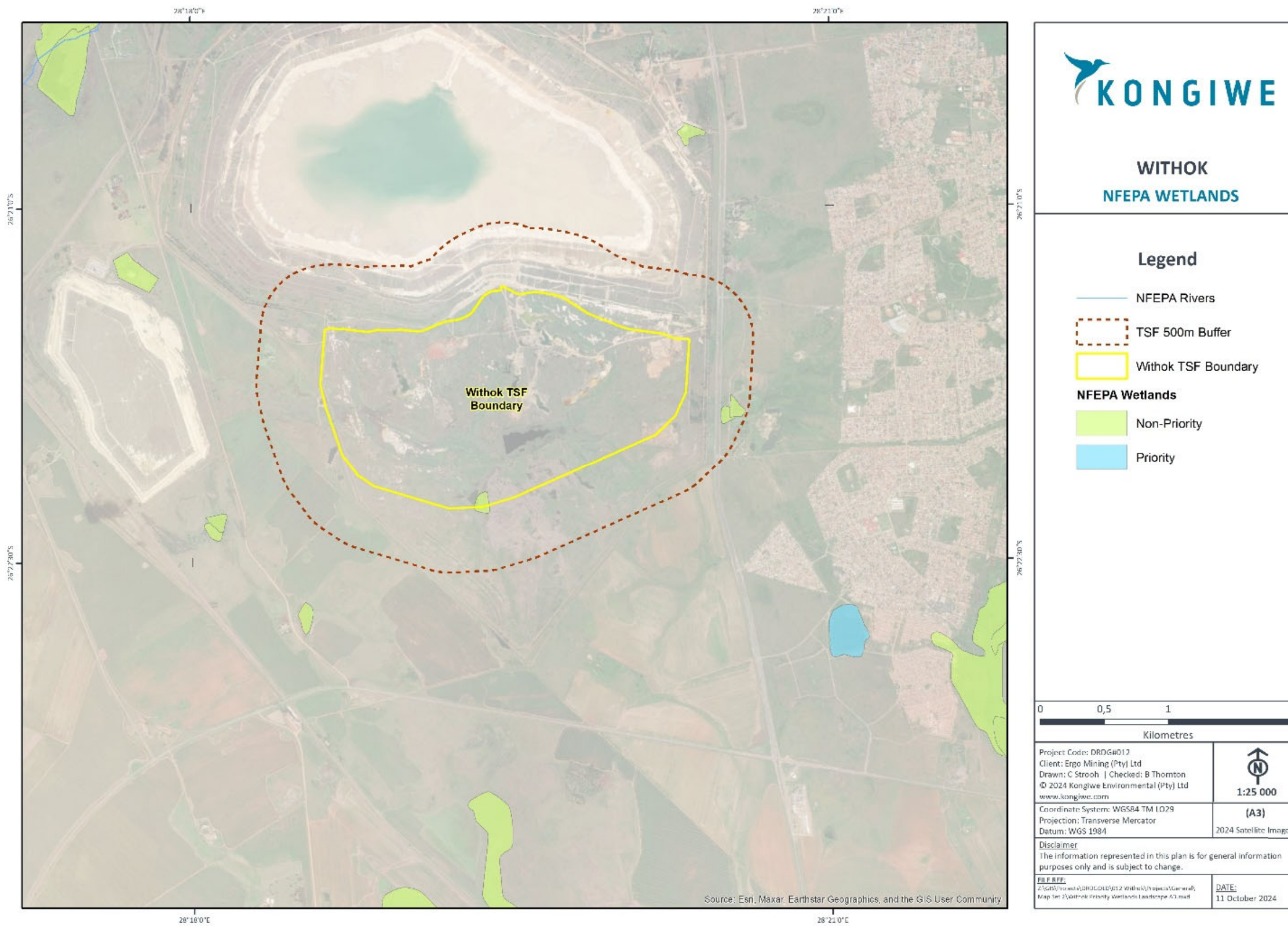


Figure 8-20: The project area in relation to the National Freshwater Ecosystem Priority Area.

#### 8.5.10 Flora

The proposed sites fall within the Grassland biome ((Rutherford & Westfall, 1994 as cited in (The Biodiversity Company , 2024)) within the Mesic Highveld Grassland Bioregion (Mucina, 2006). The grassland biome is found chiefly on the high central plateau of South Africa, and the inland areas of KwaZulu-Natal and the Eastern Cape.

Grasslands are dominated by a single layer of grasses. The amount of cover depends on rainfall and the degree of grazing. The grassland biome experiences summer rainfall and dry winters with frost (and fire), which are unfavourable for tree growth. Thus, trees are typically absent, except in a few localized habitats. Geophytes (bulbs) are often abundant. Frosts, fire and grazing maintain the grass dominance and prevent the establishment of trees.

The grassland biome comprises many different vegetation types. The project area is situated within two vegetation types; namely the Tsakane Clay Grassland and the Soweto Highveld Grassland as shown in Figure 8-21. Important Plant Taxa species of this vegetation type include:

- ❖ Graminoids: Grasses include *Andropogon schirensis*, *Brachiaria serrata*, *Cymbopogon caesius*, *Cynodon dactylon*, *Digitaria ternata*, *Diheteropogon amplexans*, *Elionurus muticus*, *Eragrostis racemosa*, *Eragrostis chloromelas*, *Eragrostis patentipilosa*, *Eragrostis plana*, *Heteropogon contortus*, *Hyparrhenia hirta*, *Microchloa caffra*, *Setaria sphacelata*, *Themeda triandra* and *Trachypogon spicatus*;
- ❖ Herbs: Herbs occurring in this vegetation type include *Acanthospermum australe*, *Ajuga ophrydis*, *Eriosema salignum*, *Euryops transvaalensis* subsp. *transvaalensis*, *Gerbera viridifolia*, *Helichrysum nudifolium*, *Helichrysum rugulosum*, *Hermannia depressa*, *Lotononis macrosepala*, *Nidorella hottentotica*, *Pentanisia prunelloides*, *Peucedanum caffrum*, *Rothea hirsuta*, *Selago paniculata*, *Senecio coronatus*, *Senecio inornatus*, *Sonchus nanus* and *Vernonia oligocephala*;
- ❖ Geophytic Herbs: Geophytic herbs occurring in this vegetation type include *Aspidoglossum oligocephala*, *Hypoxis rigidula* var. *pilosissima*, and the semi-parasitic herb *Striga asiatica*;
- ❖ Low Shrubs: Shrubs occurring in this vegetation type include *Anthospermum rigidum* subsp. *pumilum*, *Chaetacanthus setiger*, *Tephrosia capensis* var. *acutifolia* and *Thesium impeditum*.

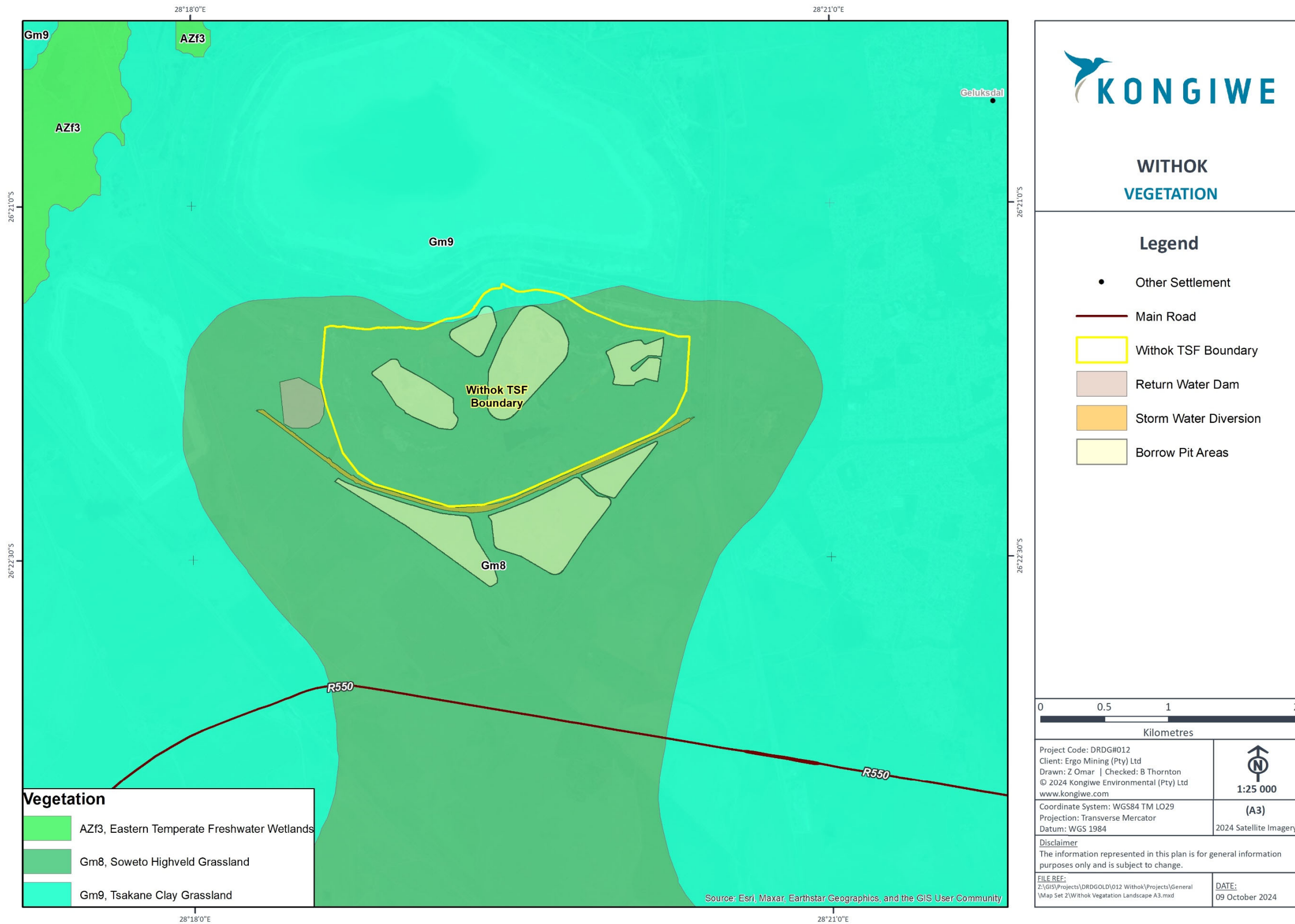


Figure 8-21: Vegetation in relation to the Proposed Project

8.5.10.1 Conservation Status

According to Mucina and Rutherford (2006) (The Biodiversity Company, 2018), the Tsakane Clay Grassland vegetation type is classified as Endangered. The national target for conservation protection for both these vegetation types is 24%, but only 1.5% conserved in statutory reserves (Suikerbosrand, Olifantsvlei, Klipriviersberg, Marievale) and a small portion also in private nature reserves (Avalon, Ian P. Coetser, Andros as cited in (The Biodiversity Company, 2018)).

More than 60% of this vegetation type has been transformed by cultivation, urbanisation, mining, dam-building and roads. Large portions of Alberton, Springs, Tsakane and part of Soweto (all south and east of Johannesburg) were built in the area of this vegetation unit. Urbanisation is increasing and further expansion of especially the southern suburbs of Johannesburg and the towns of the East Rand (especially the Brakpan District) will bring further pressure on the remaining vegetation. A majority of the project falls within the Soweto highveld Grassland area.

8.5.10.2 Plant Species of Conservation Concern

Based on the Plants of Southern Africa (BODATSA-POSA, 2016) database, 579 plant species are expected to occur in the area (Figure 8-22). Of the 579-plant species, three (3) species are listed as being Species of Conservation Concern (SCC) (Table 8-4).

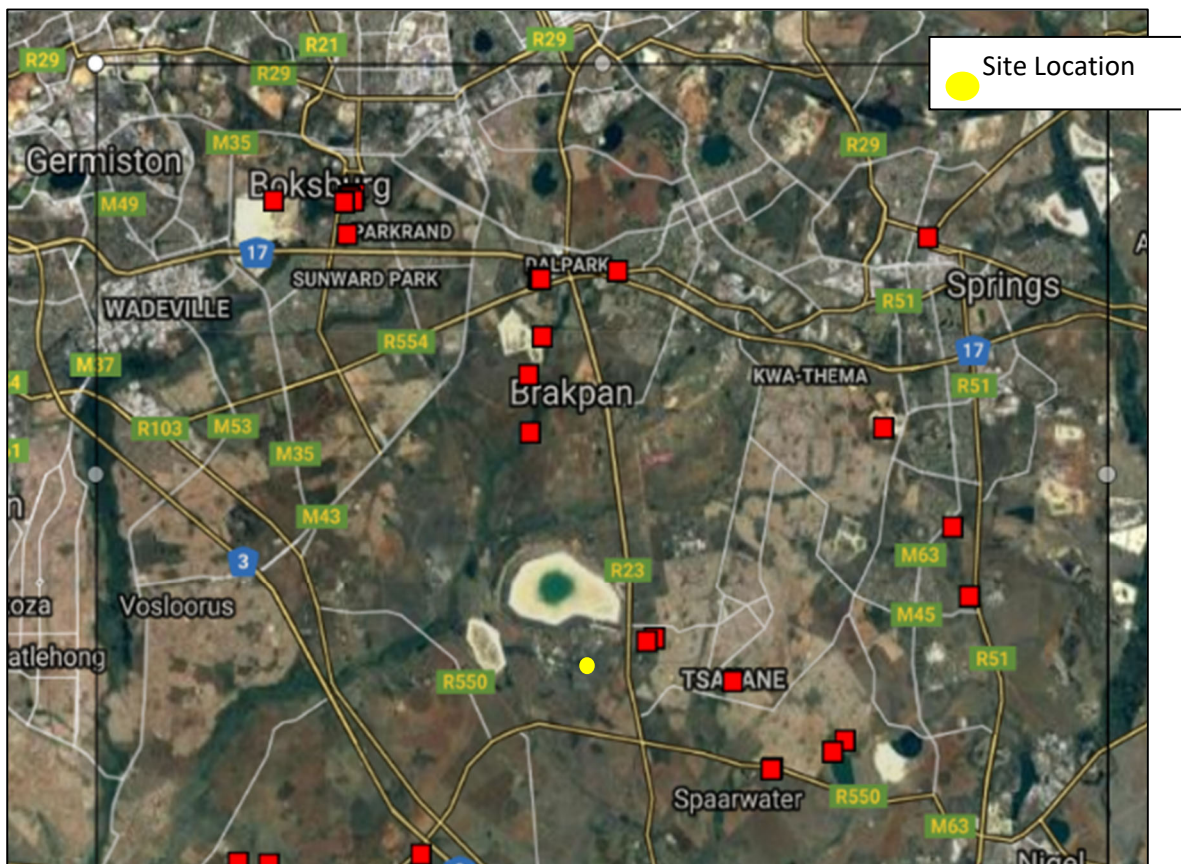


Figure 8-22: Map showing the grid drawn to compile an expected species list (BODATSA-POSA, 2016).

**Table 8-4: Plant Species of Conservation Concern (SCC) expected to occur in the project area (BODATSA-POSA, 2016)**

Family	Taxon	IUCN	Ecology
Aizoaceae	<i>Delosperma leendertziae</i>	NT	Indigenous; Endemic
Aizoaceae	<i>Khadia beswickii</i>	VU	Indigenous; Endemic
Aizoaceae	<i>Lithops lesliei subsp. lesliei</i>	NT	Indigenous



*Delosperma leendertziae* is listed as NT according to the Red List of South African Plants ((SANBI, 2017 as cited in (The Biodiversity Company, 2018)) and can be found in the Savanna Veld type, and prefers steep, south-facing slopes of quartzite in mountain grassland. Major threats are due to habitat quality at more than 10 existing locations is declining due to soil erosion, alien plant invasion and inappropriate fire management.

*Khadia beswickii* is listed as VU according to the Red List of South African Plants ((SANBI, 2017 as cited in (The Biodiversity Company, 2018)). It is endemic to South Africa where it mainly occurs in Gauteng and the Northwest. It occurs in open shallow soil over rocks in grassland.

*Lithops lesliei subsp. lesliei* is listed as NT according to the Red List of South African Plants ((SANBI, 2017 as cited in (The Biodiversity Company, 2018)). This species is not endemic to South Africa but does occur in a number of provinces, namely, Free State, Gauteng, Limpopo, Mpumalanga, Northern Cape and the North West. This species is primarily in arid grasslands, usually in rocky places, growing under the protection of forbs and grasses.

#### 8.5.10.3 Habitat Assessment

Habitats identified during the field visit for the Rooikraal TSF reclamation project were Degraded Grassland, Transformed area, Wetlands and a mixed area consisting of Wetlands and Grassland Habitats (The Biodiversity Company, 2018).

Degraded and Transformed habitats are those which were considered to have been extensively altered from their natural state and no longer provide ecosystem services or suitable habitat for indigenous species. Areas such as the TSF, roads and existing infrastructure occur in this habitat type and is usually infested with alien or invasive plant species (The Biodiversity Company, 2018).

Wetland habitats were those areas which are in a relatively natural or semi-natural condition and provide suitable habitat and a food resource for various species, including possible species of conservation concern (The Biodiversity Company, 2018).

The wetland and grassland habitat are still in a relatively natural condition. The identified CBA area is included in this habitat type.

#### 8.5.10.4 Vegetation Assessment

A vegetation assessment was conducted throughout the extent of the Rooikraal TSF project area. A total of 26 trees, shrub and herbaceous plant species were recorded in the project area during the field assessment (Table 8-5). Plants listed as alien or invasive species under the NEMBA category 1 appear in green text.

**Table 8-5: Trees, shrubs and weeds recorded at the proposed project area**

Scientific Name	Common Name	Threat Status (SANBI, 2017)	SA Endemic	NEMBA Category
<i>Acalypha angustata</i>	Copper Leaf	LC	No	
<i>Argemone ochroleuca</i>	White-Flowered Mexican Poppy			NEMBA Category 1b
<i>Bidens pilosa</i>	Blackjack			Not Indigenous, Naturalised
<i>Celtis africana</i>	White Stinkwood	LC	No	
<i>Cirsium vulgare</i>	Spear Thistle			NEMBA Category 1b
<i>Cortaderia selloana</i>	Pampas Grass			NEMBA Category 1b
<i>Cynodon dactylon</i>	Bermuda Grass / Common Couch			NEMBA Category 2
<i>Felicia muricata</i>	Fine-leaved Aster	LC	No	
<i>Gomphocarpus fruticosus</i>	Milkweed, Wild Cotton	LC	No	
<i>Helichrysum rugulosum</i>	Marotole	LC	No	
<i>Hyparrhenia hirta</i>	Common Thatching Grass	LC	No	
<i>Morus alba</i>	Common Mulberry			NEMBA Category 3
<i>Pennisetum clandestinum</i>	Kikuyu Grass			NEMBA Category 1b in protected areas and wetlands
<i>Phragmites australis</i>	Common Reed	LC	No	
<i>Plantago lanceolata</i>	Narrow-leaved Ribwort	LC	No	
<i>Populus alba</i>	White Poplar			NEMBA Category 2
<i>Solanum sisymbriifolium</i>	Dense-thorned Bitter Apple			NEMBA Category 1b
<i>Stoebe plumosa</i>	Slangbos	LC	No	
<i>Tagetes minuta</i>	Khaki Weed			Not Indigenous, Naturalised
<i>Tamarix ramosissima</i>	Pink Tamarisk			NEMBA Category 1b
<i>Themeda triandra</i>	Red Grass	LC	No	
<i>Typha capensis</i>	Bulrush	LC	No	
<i>Vachellia tortilis</i>	Umbrella Thorn	LC	No	
<i>Verbena bonariensis</i>	Wild Verbena			NEMBA Category 1b
<i>Vernonia oligocephala</i>	Bicoloured-leaved Vernonia	LC	No	
<i>Ziziphus zeyheriana</i>	Dwarf Buffalo-thorn	LC	No	

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#### 8.5.10.5 Alien and Invasive Plants

Declared weeds and invader plant species have the tendency to dominate or replace the canopy or herbaceous layer of natural ecosystems, thereby transforming the structure, composition and function of these systems. Therefore, it is important that these plants are controlled and eradicated by means of an eradication and monitoring programme. Some invader plants may also degrade ecosystems through superior competitive capabilities to exclude native plant species.

The NEMBA is the most recent legislation pertaining to alien invasive plant species. In August 2014, the list of Alien Invasive Species was published in terms of the NEMBA (Government Gazette No 78 of 2014). The Alien and Invasive Species Regulations were published in the Government Gazette No. 37886, 1 August 2014. The legislation calls for the removal and / or control of alien invasive plant species (Category 1 species). In addition, unless authorised thereto in terms of the NWA, no land user shall allow Category 2 plants to occur within 30 meters of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland. Category 3 plants are also prohibited from occurring within proximity to a watercourse.

Seven (7) Category 1b invasive plant species were recorded within the Rooikraal TSF project area. The NEMBA listed species identified within the project area are marked in green (Table 8-5).

#### 8.5.11 Fauna

Most of the study area has been transformed by agricultural activities in the form of commercial crop farming, settlements and mining activities. Throughout the study area, wetlands occur.

##### 8.5.11.1 Avifauna

Based on the South African Bird Atlas Project, Version 2 (SABAP2) database, 422 bird species are expected to occur in the vicinity of the project area. Of the expected bird species, thirty-seven (37) species (8.7%) are listed as SCC either on a regional (33) or global scale (18) (The Biodiversity Company, 2018).

Important Bird & Biodiversity Areas (IBAs) are the sites of international significance for the conservation of the world's birds and other conservation significant species as identified by BirdLife International. Two IBAs are found near the project area; the Blesbokspruit IBA is 11.34km east of the project site and the Suikerbosrand Nature Reserve IBA is 6.56km south of the project area.

27 bird species were recorded in the project area during a November 2018 survey based on either direct observations, vocalisations, or the presence of visual tracks & signs (Table 8-6).

No avifaunal SCC were recorded during the survey but based on the presence of some suitable grassland habitat, there is a moderate probability that other bird SCC occur within the project area – especially grassland bird species.

**Table 8-6: A list of avifaunal species recorded for the project area**

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Acridotheres tristis</i>	Myna, Common	Unlisted	LC
<i>Alopochen aegyptiacus</i>	Goose, Egyptian	Unlisted	LC
<i>Anas erythrorhyncha</i>	Teal, Red-billed	Unlisted	LC
<i>Anas smithii</i>	Shoveler, Cape	Unlisted	LC
<i>Anas undulata</i>	Duck, Yellow-billed	Unlisted	LC
<i>Ardea melanocephala</i>	Heron, Black-headed	Unlisted	LC
<i>Bostrychia hagedash</i>	Ibis, Hadeda	Unlisted	LC
<i>Bubulcus ibis</i>	Egret, Cattle	Unlisted	LC
<i>Dendrocygna viduata</i>	Duck, White-faced Whistling	Unlisted	LC
<i>Egretta alba</i>	Egret, Great	Unlisted	LC
<i>Elanus caeruleus</i>	Kite, Black-shouldered	Unlisted	LC
<i>Euplectes progne</i>	Widowbird, Long-tailed	Unlisted	LC
<i>Fulica cristata</i>	Coot, Red-knobbed	Unlisted	LC
<i>Hirundo albigularis</i>	Swallow, White-throated	Unlisted	LC
<i>Hirundo cucullata</i>	Swallow, Greater Striped	Unlisted	LC
<i>Macronyx capensis</i>	Longclaw, Cape	Unlisted	LC
<i>Numida meleagris</i>	Guineafowl, Helmeted	Unlisted	LC
<i>Phalacrocorax africanus</i>	Cormorant, Reed	Unlisted	LC
<i>Pternistis swainsonii</i>	Spurfowl, Swainson's	Unlisted	LC
<i>Saxicola torquatus</i>	Stonechat, African	Unlisted	LC
<i>Sphenoeacus afer</i>	Grassbird, Cape	Unlisted	LC
<i>Streptopelia capicola</i>	Turtle-dove, Cape	Unlisted	LC
<i>Streptopelia senegalensis</i>	Dove, Laughing	Unlisted	LC
<i>Tachybaptus ruficollis</i>	Grebe, Little	Unlisted	LC
<i>Thalassornis leuconotus</i>	Duck, White-backed	Unlisted	LC
<i>Threskiornis aethiopicus</i>	Ibis, African Sacred	Unlisted	LC
<i>Vanellus armatus</i>	Lapwing, Blacksmith	Unlisted	LC

#### 8.5.11.2 Mammals

The IUCN Red List Spatial Data ((IUCN, 2017 as cited in (The Biodiversity Company, 2018)) lists 86 mammal species that could be expected to occur within the project area. Of these species, 5 are medium to large conservation dependant species, such *Ceratotherium simum* (Southern White Rhinoceros) and *Tragelaphus oryx* (Common Eland) that, in South Africa, are generally restricted to protected areas such as game reserves. Of the remaining 81 small to medium sized mammal species, thirteen (13) (16%) are listed as being of conservation concern on a regional or global basis. These species are not expected to occur in the project area

Overall, mammal diversity in the project area was low, with no mammal species were recorded during the November 2018 survey based on direct observations and/or the presence of visual tracks & signs.

No mammal SCC were recorded, but due to the availability of some natural areas the likelihood of other SCCs being present does exist.

### 8.5.11.3 Herpetofauna (Reptiles & Amphibians)

Based on the IUCN Red List Spatial Data ((IUCN, 2017 as cited in (The Biodiversity Company, 2018)) and the Reptile Map database provided by the Animal Demography Unit (ADU, 2017) 50 reptile species are expected to occur in the project area. Of the expected reptile species, only one is regarded as a SCC, namely the Striped Harlequin Snake (*Homoroselaps dorsalis*) which is partially fossorial and known to inhabit old termitaria in grassland habitat ((IUCN, 2017 as cited in (The Biodiversity Company, 2018)). Most of its range is at moderately high altitudes, reaching 1 800 m in Mpumalanga and Swaziland, but it is also found at elevations as low as about 100 m in KwaZulu-Natal. The likelihood of occurrence was rated as moderate due to some suitable habitat remaining in the grassland areas south and east of the Rooikraal TSF (Table 8-7).

**Table 8-7: List of reptile species of conservation concern that may occur in the project area as well as their global and regional conservation statuses (IUCN, 2017; Bates et al., 2014)**

Species	Common name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Homoroselaps dorsalis</i>	Striped Harlequin Snake	NT	NT	Moderate

Based on the IUCN Red List Spatial Data ((IUCN, 2017 as cited in (The Biodiversity Company, 2018)) and the AmphibianMap database provided by the Animal Demography Unit (ADU, 2017 as cited in (The Biodiversity Company, 2018)) 20 amphibian species are expected to occur in the project area. One amphibian species of conservation concern should be present in the project area (Table 8-8) according to the above-mentioned sources but *in situ* confirmation is required.

**Table 8-8: List of amphibian species of conservation concern that may occur in the project area as well as their global and regional conservation statuses (IUCN, 2017; SANBI, 2016).**

Species	Common name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Pyxicephalus adspersus</i>	Giant Bullfrog	NT	LC	Moderate

The Giant Bull Frog (*Pyxicephalus adspersus*) is a species of conservation concern that will possibly occur in the project area. The Giant Bull Frog is listed as near threatened on a regional scale. It is a species of drier savannahs. It is fossorial for most of the year, remaining buried in cocoons. They emerge at the start of the rains, and breed in shallow, temporary waters in pools, pans and ditches (IUCN, 2017). The likelihood of occurrence is rated as moderate due to the proximity to urbanization and the lack of adequate temporary water pool in the project area.

Herpetofauna diversity was low with no reptile and three amphibian species observed or recorded in the project area during the November 2018 survey. Based on the disturbed nature of the area the herpetofauna diversity is expected to be low (

Table 8-9).

**Table 8-9: The Herpetofauna species recorded in the project area.**

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Afrana angolensis</i>	Common River Frog	LC	LC
<i>Sclerophrys gutturalis</i>	Guttural Toad	LC	LC
<i>Xenopus laevis</i>	Common Platanna	LC	LC

## 8.6 Surface Water

### 8.6.1 Regional Catchments and Drainage

The Proposed Project is in the Vaal-Orange Water Management Area (WMA), within quaternary catchment C22C in the Klip River Catchment (Figure 8-23). The project area is drained in a north-westerly direction towards the Rietspruit River. The Rietspruit flows in a south-westerly direction until it meets the Klip River at the outlet of quaternary catchment C22C. From here, the Klip River then flows in a south-westerly direction past the town of Meyerton, and into the Vaal River immediately above the Vaal Barrage, near the town of Vereeniging.

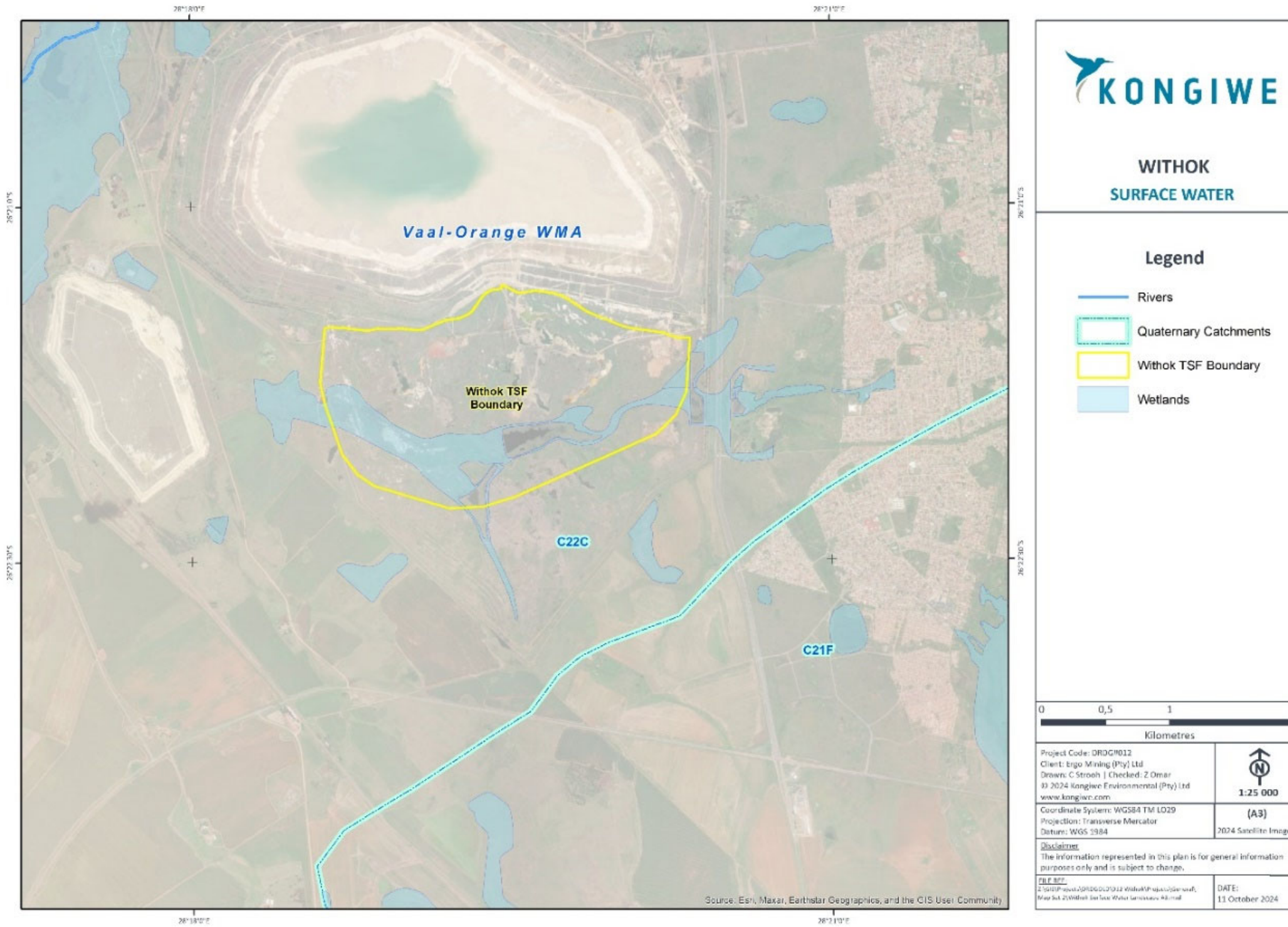


Figure 8-23: Surface water map

## 8.6.2 Surface Water Runoff

According to the WR2012 study, quaternary catchment C22B has a Mean Annual Runoff (MAR) of 23.12 million cubic metres (mcm).

## 8.7 Groundwater

### 8.7.1 Conceptual Hydrogeological Model (Groundwater Abstract, 2018)

The project area is underlain by both Karoo and Transvaal Supergroup rocks. Sedimentary rocks from the Karoo Supergroup, together with Karoo dolerite intrusions and dolomites from the Malmani group, all underlie the TSF footprint area (Delta H Water Systems Modelling, 2024).

According to Barnard (2000) various aquifer types are found in the area i.e. fractured aquifers, karst aquifers and intergranular and fractured aquifers:

- ❖ Karst aquifers: The Malmani dolomite aquifers are irregular shaped cavities and fractures.
- ❖ Weathered and fractured aquifers: 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.
- ❖ Fractured aquifers: The Turffontein Subgroup and Black Reef quartzite are hard rock aquifers where water is stored and moves through fractures, fissures and joints.

The Rooikraal area (directly west of the Proposed Project area) is underlain by 5 m of topsoil/gravel (on average), which act as a shallow perched aquifer in areas where the impermeable dolerite sill is present. The perched aquifer may be absent over the dolomitic aquifer, and infiltration of rainwater takes place with greater ease due to a higher permeability. The shallow weathered aquifer varies between 3 m and 22 m in thickness, based on borehole information collected at the Brakpan/Withok TSF. The primary flow of groundwater and the migration of contamination in the weathered aquifer is predominantly horizontally, but also vertically where the aquifer overlies dolomite (Irene Lea, 2016).

The depth to groundwater in the area varies between surface and 25 m below surface, which indicates that the rest water levels are within the upper weathered aquifer (first 22 m below surface).

The water table in the area mimics the topography and drains on a regional scale towards the local rivers. Groundwater level measurements suggest that groundwater drains radially from the TSF complex due to the impact of artificial recharge from the TSF, to the underlying aquifers. The perched and deeper fractured rock aquifers are interconnected. Subsequently contamination from the shallow aquifer could infiltrate to the deeper dolomitic aquifers, if the dolerite sill is absent.

Historical drilling and water level data indicate that the deeper aquifers are semi-confined in nature. Borehole yields in the Malmani dolomite is classified as excellent because most of borehole yields are higher than 5 litres per second (L/s), and recharge is typically in the order of 9% of the mean annual

precipitation. Borehole yields are enhanced by the effects of karstification or along dolerite intrusions or fault zones. These linear geological features, as well as the cavities are good flow and contaminant pathways. Boreholes drilled into the dolerite sill or Karoo shale and mudstone present low yields, with groundwater strikes linked to fractures, faults and geological contacts.

#### 8.7.1.1 Groundwater Levels

Groundwater levels in the area generally occur between surface and 25 m bgl (Irene Lea, 2016). The groundwater flow direction is from the southeast to the northwest, towards the Rietspruit. Generally, a groundwater mound occurs beneath a TSF as a result of seepage from the TSF that recharges the underlying aquifer. This results in radial flow from the TSF footprint, but assumes regional flow direction again as the distance increase from the TSF.

The 2016 (Irene Lea, 2016) and 2018 hydrocensus (Groundwater Abstract, 2018) data indicate groundwater elevations of:

❖ B1 – 1549,88 m amsl (2016) -	1549,99 m amsl (Nov2018).
❖ B20 – 1550,19 m amsl (2016) -	1549,65 m amsl (Nov2018).
❖ B28 – 1538,94 m amsl (2016) -	no access.
❖ RKL01 –1551,61 m amsl (2016) -	1551,35 m amsl (Nov2018).
❖ RKL02 –1550,34 m amsl (2016) -	1550,41 m amsl (Nov2018).
❖ RKL03 –1552,00 m amsl (2016) -	1552,00 m amsl (Nov2018).

The Digby Wells hydrocensus (Digby Wells & Associates, 2009) found that the water levels in the area vary between 2.12 and 13.4 m bgl. Borehole B15 is located next to the Rietspruit and presented a water level depth of 3.3 m below surface. The date of the 2016 measurements is unknown, but this could indicate that the Rietspruit is a losing river at this point. It is possible that this level depth was measured in a dry period and that during good rainfall months the water table will be closer to the surface elevation and result in good surface water-groundwater interaction. The data presented above indicates that the water table is stable and no changes are observed in terms of the depths.

The borehole yields were mostly unknown by the land owners, but good yields were noted.

Groundwater levels in the area generally occur between 5 and 25 mbgl. The groundwater flow direction is from the southeast to the northwest, where the Rietspruit is located.

The groundwater in the area is usually dominated by sulphate. This is an indication of groundwater impacted by mining activities. The main contributor to salinity (indicated by the TDS concentration) is sulphate, chloride, calcium, magnesium, manganese and aluminium. Acidic conditions also favour the presence of heavy and trace metals in water.

Except for the Malmani dolomite, all the aquifers in the study area are classified as minor aquifer systems according to the South African aquifer system management classification. The groundwater is therefore

of limited quantity, but potentially important for local water supply and base flow for rivers. The dolomite underlying the Rooikraal TSF is classified as a major aquifer system, which are viewed as a high yielding aquifer with generally good quality water.

8.7.1.2 Groundwater Quality

Groundwater monitoring data obtained from Ergo (as sampled and presented by Compliance Africa) indicate one groundwater sampling point (RKL02) at the Rooikraal TSF. The borehole is located on the southern perimeter of the Rooikraal TSF. Groundwater quality monitoring data was only available for the period November 2017, January 2018 and October 2018 (Table 8-10)

Table 8-10 presents the parameters (for borehole RKL02) exceeding the instream water quality guidelines, for the <sup>6</sup>Blesbokspruit catchment. Other salts and metals were consistently below the guideline values. The data is graphically presented in Table 8-10.

**Table 8-10: Borehole RKL02 water quality data – past 12 months**

Instream water quality guidelines for the Blesbokspruit catchment (June 2003)								
	pH	EC	Cl	SO <sub>4</sub>	Na	Mg	Mn	
	6,5-8,5	<45	<80	<150	<70	<8	<0,2	Ideal catchment background
		45-70	80-150	150-300	70-100	8-30	0,2-0,5	Acceptable management target
		70-120	150-200	300-500	100-150	30-70	0,5-1	Tolerable Interim target
		>120	>200	>500	>150	>70	>1	Unacceptable
Groundwater Quality								
Nov-17	7.1	252	162	1,213	111	133	1.5	
Jan-18	7.2	242	153	1,139	109	136	1.13	
Oct-18	7.2	227	137	1,043	82	126	0.43	

Contaminants of concern that typically occur at gold tailings facilities include:

- ❖ Low pH;
- ❖ TDS higher than 1 200 mg/L;
- ❖ SO<sub>4</sub> higher than 600 mg/L; and
- ❖ High metal concentrations, especially Fe, Mn, As and CN.

Water quality data presented by Irene Lea (2016) indicate that the groundwater in the immediate vicinity of the Brakpan/Withok Tailing Complex is characterised by elevated sulphate (SO<sub>4</sub>) and Total Dissolved Solid (TDS) concentrations, and the pH is neutral to alkaline. In general, sulphate concentrations around the tailings complex vary between 2 and 2,500 mg/L. Groundwater sampled along the south-eastern and

<sup>6</sup> There are no water quality guidelines for the Rietspruit Catchment, hence the Blesbokspruit water quality guidelines are used.

western perimeter of the Withok TSF have sulphate concentrations below 200 mg/L. Some boreholes along the Brakpan TSF's western perimeter (B4, B5, B7, B8) also have sulphate concentrations below 200 mg. Fluctuations in groundwater quality are observed and it is thought that the fluctuations are probably the result of a specific water management event at the tailings complex, rather than seasonal infiltration.

The 2016 hydrocensus by Digby Wells Environmental indicates sulphate concentrations of:

- ❖ B1 – 20 mg/L
- ❖ B20 – 794 mg/L
- ❖ B28 – 1 221 mg/L
- ❖ RKL01 – 1 180 mg/L
- ❖ RKL02 – 107 mg/L
- ❖ RKL03 – 117 mg/L

Unfortunately, the borehole construction details for the B-series boreholes, as well as fracture depths (water strike depths) are not known. This would have helped to define a reason for high and low sulphate concentrations. The water strike in borehole RKL01 was shallow (7 m below surface) and is most probably the reason for the high sulphate concentrations. Data has shown that most of the groundwater and pollutant flow occur in the shallow weathered zone. Boreholes RKL02 and RKL03 had deeper water strikes (22 m and 45 m respectively), with deep clay or fresh dolomite above the water strikes. This could potentially seal off the deeper aquifer from shallow contaminated water.

Borehole B4, situated along the western perimeter of the Brakpan TSF, monitors the shallow weathered aquifer. The sulphate concentrations in this borehole fluctuate between 50 mg/L and 1 500 mg/L. The sulphate concentration in this borehole was 20 mg/L during the 2016 hydrocensus.

The Irene Lea Report (2016) presents sulphate graphs for boreholes B2, B4, B7 and B11. These are four boreholes often sampled at the Brakpan/Withok TSF sites. The graphs present sulphate curves from 2010 to 2016. What was concluded from the graphs was that a sulphate spike appeared approximately every June, in the four boreholes. This could indicate a possible delayed plume response to summer rainfall events.

The pyrite present in the tailings and sand material is oxidised in the presence of oxygen and water to form ferrous sulphate and sulphuric acid. Both reactions result in an acidic pH, and high sulphate and metal concentrations (AMD) are often measured in leachate from tailings. The rate at which pyrite oxidation takes place within the TSF varies and decreases with depth. The addition of lime during the gold recovery process raises the pH to neutral conditions when tailings are deposited on the facilities (Digby Wells, 2009). The dolomite underlying the TSF will have a neutralising effect on the acidic waters that pass through them.

Groundwater quality in both the shallow and deeper aquifers have been impacted by the Brakpan/Withok TSF facilities. Numerical model simulations suggest that the spread of contamination in the weathered aquifers is slow, especially in the dolerite and Karoo formations. The contamination spreads in a north-

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westerly direction from the Rooikraal TSF, towards the Rietspruit. The numerical model simulations presented sulphate concentration maps, as measured during 2016; shown in Figure 8-24, Figure 8-25 and Figure 8-26.

Although arsenic and uranium are not expected to leach at significant concentrations, they are generally perceived to be contaminants of concerns at gold mines and TSFs. A study by MINTEK in 2016, on several TSF dumps in the Witwatersrand gold mining zone indicate that the tailings samples from the East Rand and Central Gauteng regions contained the lowest uranium concentrations (generally not requiring uranium removal prior to re-dumping). The bulk make up of each of the TSFs included quartz, pyrophyllite and mica as major minerals.

Figure 8-25 shows that the sulphate plume in the subsurface is generally limited to the weathered zone and extends in a north-westerly direction towards the Rietspruit. Sulphate concentrations of approximately 400 mg/L is shown in this area. Sulphate concentrations of approximately 1 500 mg/L are focussed around the perimeter and underlying the Rooikraal TSF.

The sulphate concentrations in the deeper fractured aquifer is less compared to the shallow weathered zone and concentrations of approximately 200 mg/L is shown in the vicinity of the Rietspruit (Figure 8-26).

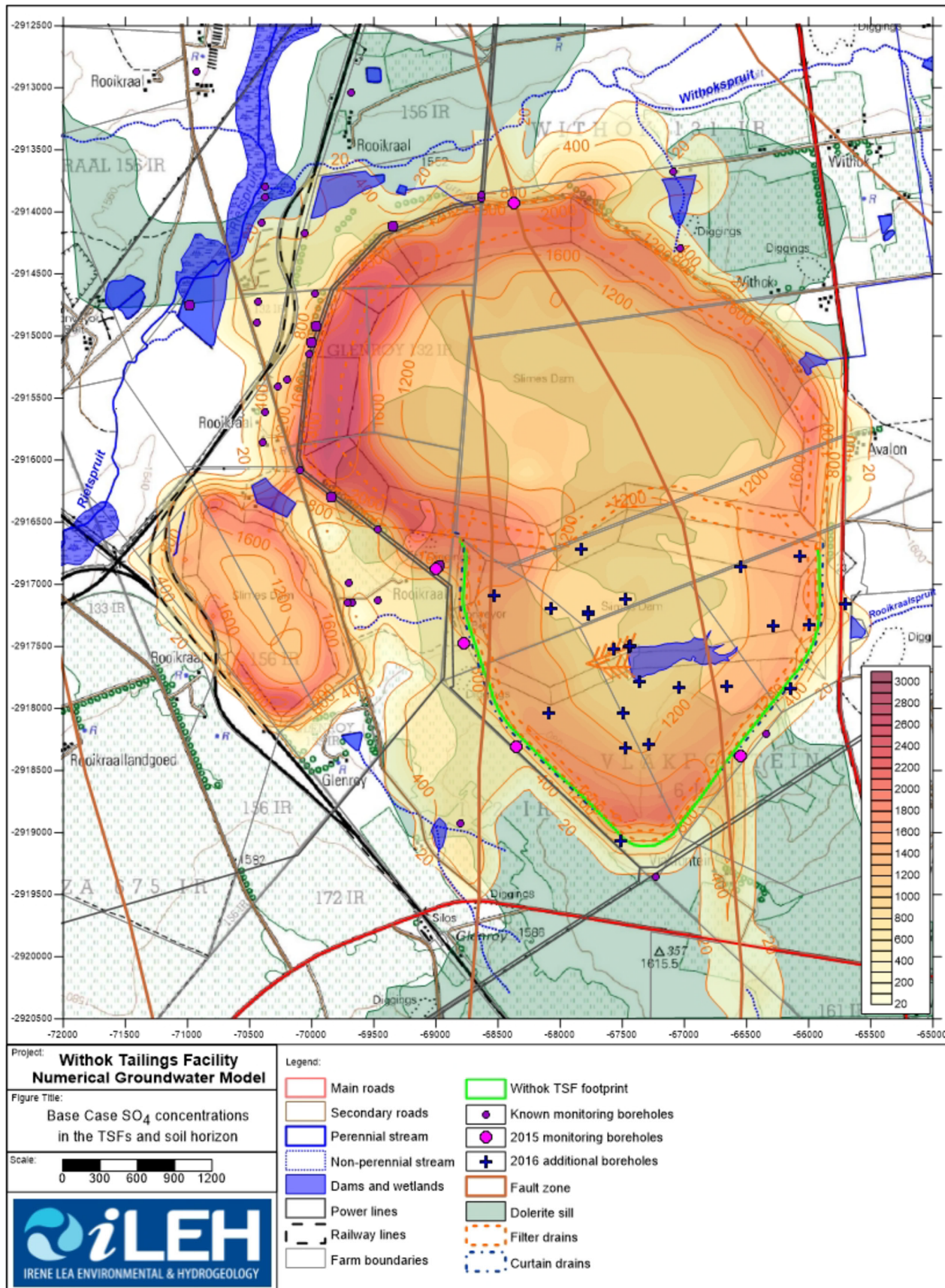


Figure 8-24: Sulphate concentrations in the TSF and soil horizon – 2016.

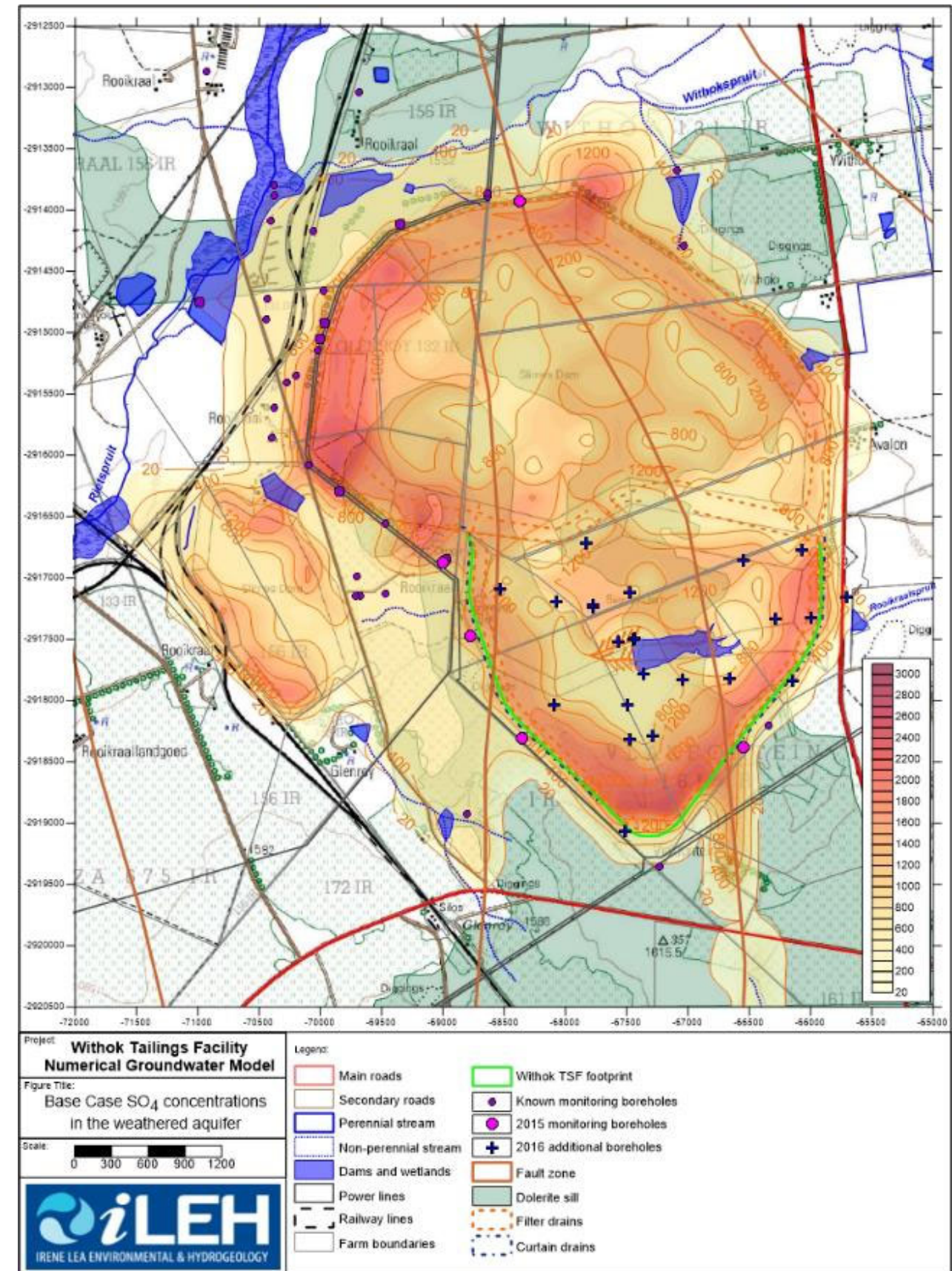
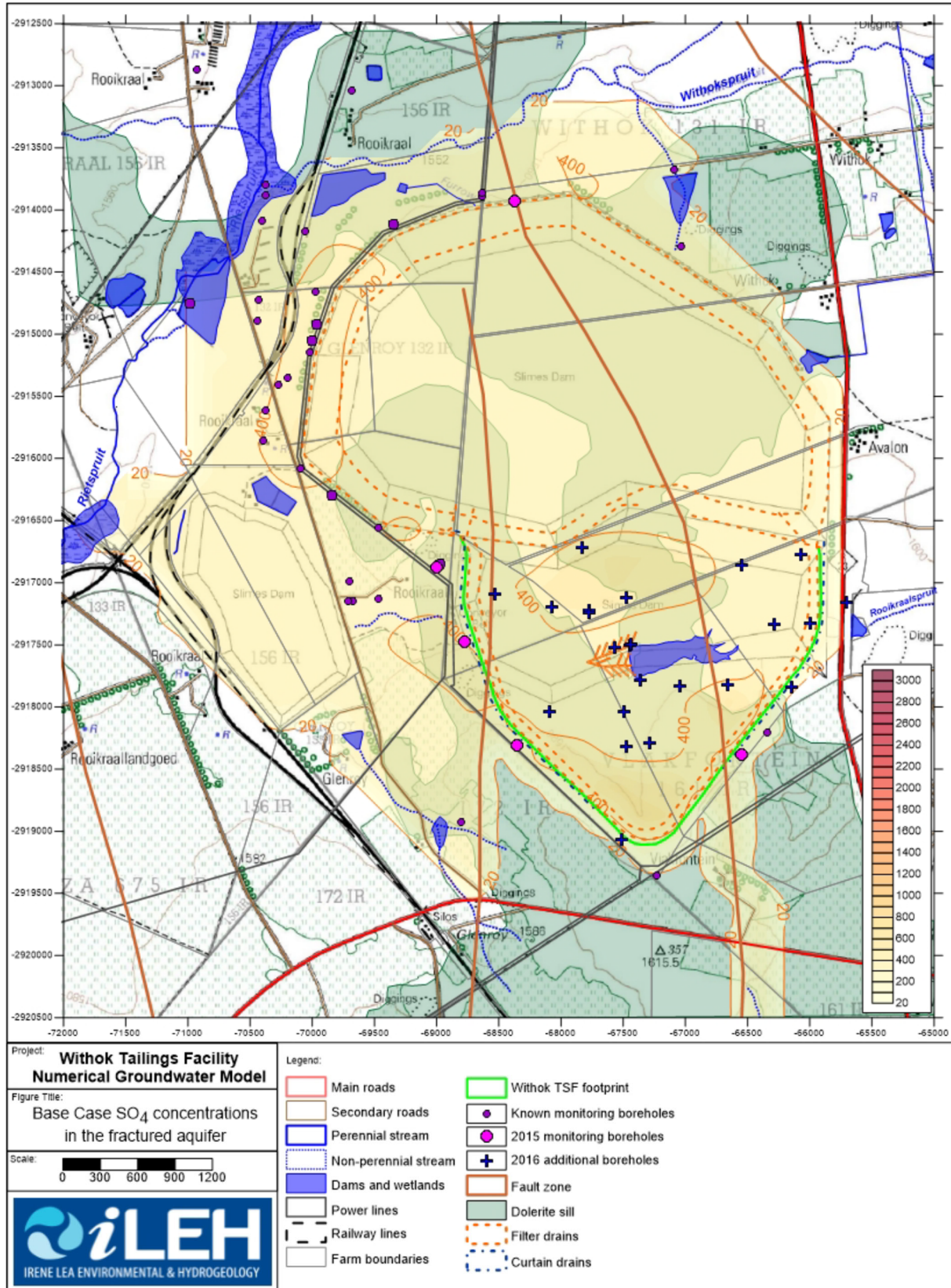


Figure 8-25: Sulphate concentrations in the weathered aquifer – 2016.



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## 8.7.2 Aquifer Characterisation

Aquifer characterisation is done based on the information presented thus far, and guidelines and maps provided by the DWS. This system was created as it allows the grouping of aquifer areas into types according to their associated supply potential, water quality and local importance as a resource.

With the exception of the Malmani dolomite, all the aquifers in the study area are classified as minor aquifer systems according to the South African aquifer system management classification. The groundwater is therefore of limited quantity, but potentially important for local water supply and base flow for rivers.

The dolomite underlying the Rooikraal TSF is classified as a major aquifer system, which are viewed as a high yielding aquifer with generally good quality water (Parsons and Conrad, 1998).

### 8.7.2.1 Groundwater Vulnerability

Groundwater vulnerability indicates the tendency or likelihood for contamination to reach a specified position in the groundwater system after introduction at some location above the uppermost aquifer. Based on the aquifer vulnerability map published by the DWS in July 2013 the dolomite is classified as a vulnerable aquifer system (DWS, 2013). The Witwatersrand and Ventersdorp formations are less vulnerable.

### 8.7.2.2 Aquifer Classification

Based on the aquifer classification map published by the DWS in August 2012 the aquifer classification system defines the dolomite in the area as a major aquifer region, which is a high-yielding system of good water quality. The Witwatersrand and Ventersdorp systems are classified as minor aquifers.

### 8.7.2.3 Aquifer Susceptibility

Aquifer susceptibility is a qualitative measure of the relative ease with which a groundwater body can potentially be contaminated by anthropogenic activities and includes both aquifer vulnerability and the relative importance of the aquifer in terms of its classification. Based on the classification above the Witwatersrand and Ventersdorp formations have a low susceptibility to contamination. The dolomite is highly susceptible to contamination.

## 8.8 Air Quality

### 8.8.1 Health Effects of Particulate Air Pollutants

There are an increasing number of research studies highlighting the impact of gases and air pollutants on humans. Many of these emissions, even in small quantities, have adverse effects on workers and neighbouring residents alike.

Particles can be classified by their aerodynamic properties into coarse particles, PM<sub>10</sub> and fine particles, PM<sub>2.5</sub> (Harrison & Van Grieken, 1998). The fine particles contain the secondarily formed aerosols such as sulphates and nitrates, combustion particles and recondensed organic and metal vapours. The coarse particles contain earth crust materials and fugitive dust from roads and industries (Fenger, 2002). Particle size is important for health because it controls where in the respiratory system a given particle is deposited. Fine particles are thought to be more damaging to human health than coarse particles, as they can penetrate deeper into the lungs (Manahan, 1991). Larger particles are deposited into the extrathoracic part of the respiratory tract while smaller particles are deposited into the smaller airways leading to the respiratory bronchioles (WHO, 2000). Furthermore, both the amount and the chemical and mineralogical composition of these small particles will influence the potential for health impacts (Schwegler, 2006).

In terms of health effects, particulate air pollution is associated with respiratory and cardiovascular morbidity, such as aggravation of asthma, respiratory symptoms and an increase in hospital admissions. Inhalable particulate matter (PM) also leads to increased mortality from cardiovascular and respiratory diseases and from lung cancer (WHO, 2013). A study was undertaken to investigate the association between proximity to mine dumps and prevalence of chronic respiratory disease in people aged 55 years and older (Nkosi, Wichmann, & Voyi, 2015). Elderly people in communities 1-2 km (exposed) and ≥5 km (unexposed), from five mine dumps in Gauteng and North West Province, in South Africa were included in a cross-sectional study. The results showed that exposed elderly people had a significantly higher prevalence of chronic respiratory symptoms and diseases than those who were unexposed.

In the past, daily particulate concentrations were in the range 100 to 1000µg/m<sup>3</sup> whereas in more recent times, daily concentrations are between 10 and 100µg/m<sup>3</sup>. However, it has been found that overall, exposure-response can be described as curvilinear, with small absolute changes in exposure at the low end of the curve having similar effects on mortality to large absolute changes at the high end (WHO, 2000). Both short-term and long-term exposure to particulate matter in the air can have health impacts (Table 8-11).

**Table 8-11: Short-term and long-term health effects associated with exposure to PM (WHO, 2004).**

Pollutant	Short-term exposure	Long-term exposure
Particulate matter	<ul style="list-style-type: none"> <li>❖ Lung inflammatory reactions</li> <li>❖ Respiratory symptoms</li> <li>❖ Adverse effects on the cardiovascular system</li> <li>❖ Increase in medication usage</li> <li>❖ Increase in hospital admissions</li> <li>❖ Increase in mortality</li> </ul>	<ul style="list-style-type: none"> <li>❖ Increase in lower respiratory symptoms</li> <li>❖ Reduction in lung function in children</li> <li>❖ Increase in chronic obstructive pulmonary disease</li> <li>❖ Reduction in lung function in adults</li> <li>❖ Reduction in life expectancy</li> <li>❖ Reduction in lung function development</li> </ul>

#### 8.8.1.1 Short-term Exposure

There is good evidence that short-term exposure to particulate matter is associated with health effects (WHO, 2013). Health effects associated with short-term exposure to particulates include increases in lower respiratory symptoms, medication use and small reductions in lung function. Susceptible groups with pre-existing lung or heart disease, as well as elderly people and children, are particularly vulnerable. Exposure to particulate matter affects lung development in children, including reversible deficits in lung function as well as chronically reduced lung growth rate and a deficit in long-term lung function (WHO, 2011). There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur (WHO, 2013).

#### 8.8.1.2 Long-term Exposure

Long-term exposure to low concentrations ( $\sim 10\mu\text{g}/\text{m}^3$ ) of particulates is associated with mortality and other chronic effects such as increased rates of bronchitis and reduced lung function (WHO, 2000). Studies have indicated an association between lung function, chronic respiratory disease and airborne particles. Relative risk estimates suggest an 11% increase in cough and bronchitis rates for each  $10\mu\text{g}/\text{m}^3$  increase in annual average particulate concentrations (WHO, 2000). Based on studies conducted in the USA, Europe and Canada, mortality is estimated to increase by 0.2–0.6% per  $10\mu\text{g}/\text{m}^3$  of  $\text{PM}_{10}$  (WHO, 2005; Samoli, et al., 2008).  $\text{PM}_{2.5}$  is a higher risk factor than the coarse part of  $\text{PM}_{10}$  (particles in the 2.5– $10\mu\text{m}$  range), especially as a consequence of long-term exposure. Long-term exposure to  $\text{PM}_{2.5}$  is associated with an increase in the long-term risk of cardiopulmonary mortality by 6–13% per  $10\mu\text{g}/\text{m}^3$  of  $\text{PM}_{2.5}$  (Beelen, et al., 2008; Krewski, et al., 2009; Pope III, et al., 2002).

#### 8.8.2 Ambient Air Quality

The Project area falls within the declared Highveld Priority Area (HPA). The Minister declared the HPA on 23 November 2007 (Government Notice No. 1123, 2007). Therefore, stricter air quality standards may be imposed by the MEC in terms of the 2012 National Framework for Air Quality Management (Government Notice No. 115, 2013).

The Highveld area in South Africa is associated with poor air quality. Elevated concentrations of criteria pollutants occur due to the concentration of industrial and non-industrial sources (Held, 1996; DEAT, 2006). The CoE has both a high population density and a high-density industrial sector (DEA, 2015).

### 8.9 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.

### 8.9.1 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 construction activities.

### 8.9.2 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.

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 8-27 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 8-27: Acceptable Zone Sound Levels for noise in districts (from SANS 10103:2008)**

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## 8.10 Traffic

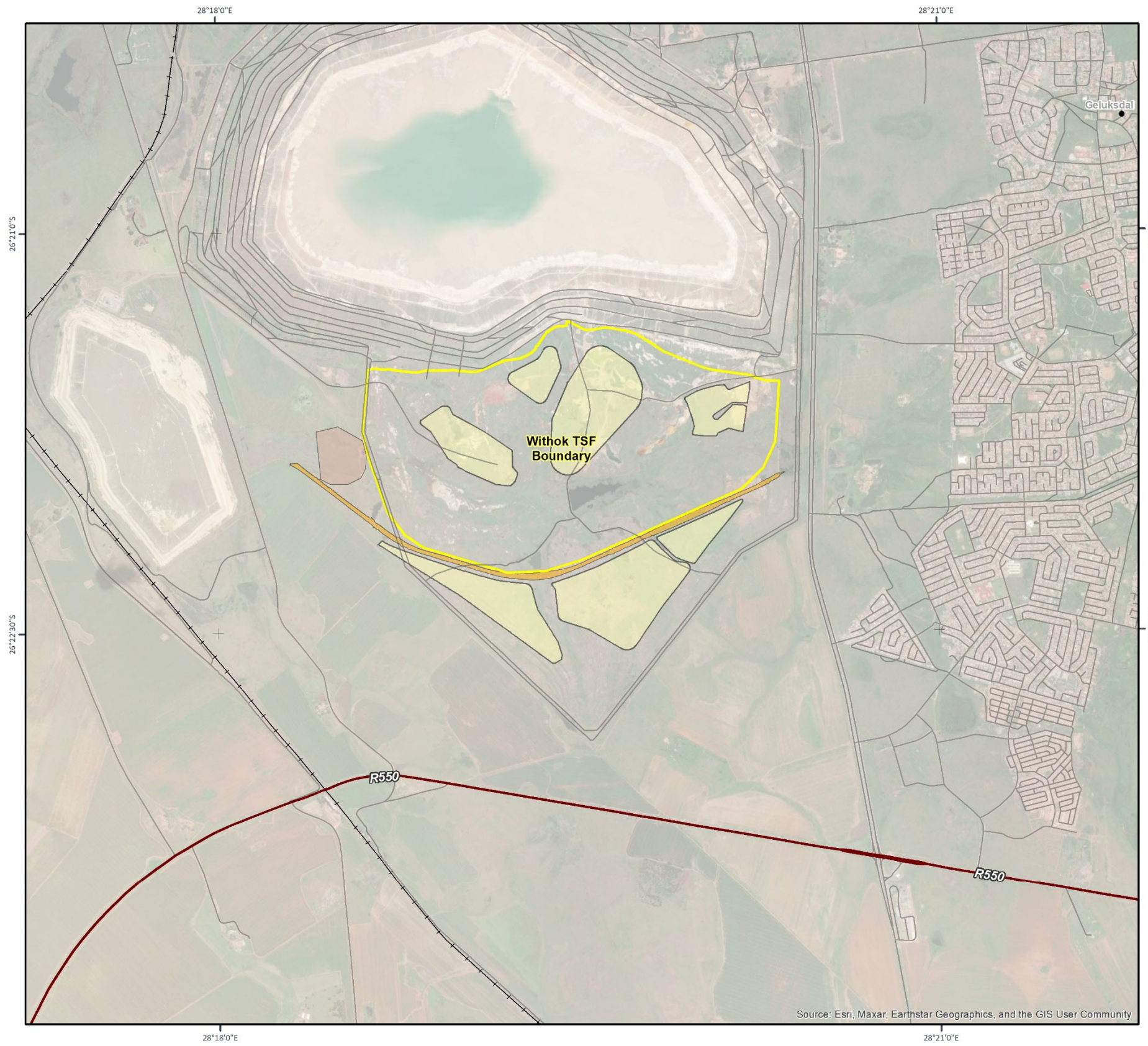
The Proposed Project Site is located in an area with an existing road network. The R23 runs directly East of the project site and the R550 runs just South of the site as shown in Figure 8-28. No major road construction is planned for the project. Roads will mainly be utilised during the construction 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 R23 and the R550.





## WITHOK TRAFFIC


### Legend

- Other Settlement
- Main Road
- Local Roads
- Railway
- Withok TSF Boundary
- Return Water Dam
- Storm Water Diversion
- Borrow Pit Areas

0      0.5      1      2

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Kilometres



**1:25 000**

**(A3)**

2024 Satellite Imagery

Project Code: DRDG#012	
Client: Ergo Mining (Pty) Ltd	
Drawn: Z Omar   Checked: B Thornton	
© 2024 Kongiwe Environmental (Pty) Ltd www.kongiwe.com	
Coordinate System: WGS84 TM LO29	
Projection: Transverse Mercator	
Datum: WGS 1984	
<b>Disclaimer</b>	
The information represented in this plan is for general information purposes only and is subject to change.	
FILE REF: Z:\GIS\Projects\DRDGOLD\012 Withok\Projects\General\ Map Set 2\Withok Traffic Landscape A3.mxd	DATE: 09 October 2024

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Figure 8-28: Traffic network in relation to the Proposed Project**

### 8.11 Visual

The project area is characterised by undulating plains with some pans and intermittent hills. The topography consists of a flat terrain, ranging between 1 535 and 1 635 metres. The site consists mainly of agricultural, industrial and residential areas, vacant land with infrastructure (noticeably powerlines, highways and gravel access roads), and other mining sites. AfriSam’s aggregate quarry is located approximately 3 km north-west of the Proposed Project site. Chicken facilities/farms can be found 4 km north of the proposed site. The communities of Tsakane and Geluksdal are also located within close proximity to the Proposed Project site.

The Proposed Project site has been disturbed by the legacy of historical mining in the area. This means that the Proposed Project will not impact visual resources any further. 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.

### 8.12 Social

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 in Africa, with a population estimated to be 15.8 million, (Gauteng Spatial Development Framework 2030) (GSDF). In terms of land area, Gauteng is the smallest province in South Africa but also densely populated. Table 8-12 below provides an overview of the socio-economic baseline information for Gauteng province.

**Table 8-12: Socio-economic baseline information: Gauteng at a glance**

Description	Statistics
<b>Demographics</b>	
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)
<b>Households</b>	
Number of households	5 384 000, with 19.1% of the population reside in informal dwellings
<b>Service Delivery</b>	

Description	Statistics
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.
<b>Education</b>	
Educational level	80.2% of individuals aged 5-24 are attending some form of schooling.
<b>Employment</b>	
Employment status	67% stated that they receive salaries as their main form of income
Unemployment status	37%
<b>Economics</b>	
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%.
Average annual income	R57 500 nearly double the amount in South Africa

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

#### 8.12.1 Demographics and Population characteristics

The CoE has a total surface area of 1 975km<sup>2</sup> that accommodates a population of about 3 379 104 people, about one quarter of the figure in Gauteng. It is expected to have a population of 3 485 697 at the end of the current term (2011-2016). Table 8-13 below shows the composition and size of the different population groups in Ekurhuleni.

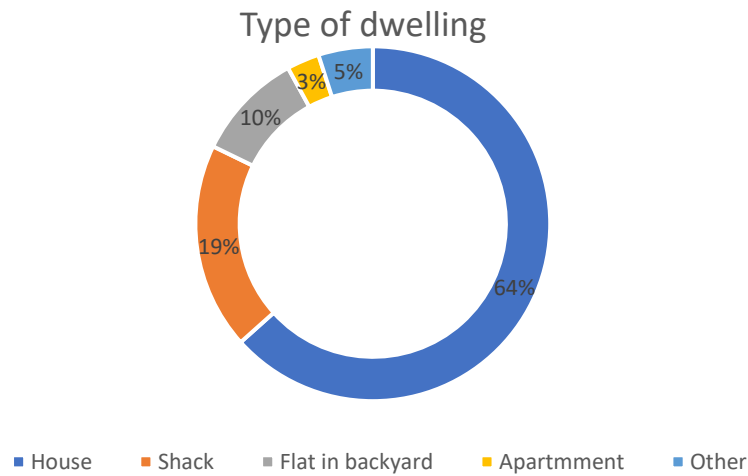
**Table 8-13: Population group.**

Ethnic Group	Statistics
Black African	82%
Coloured	3%
Indian or Asian	2%
White	14%

Source: Community survey 2016

#### 8.12.2 Households types, Employment and Economy

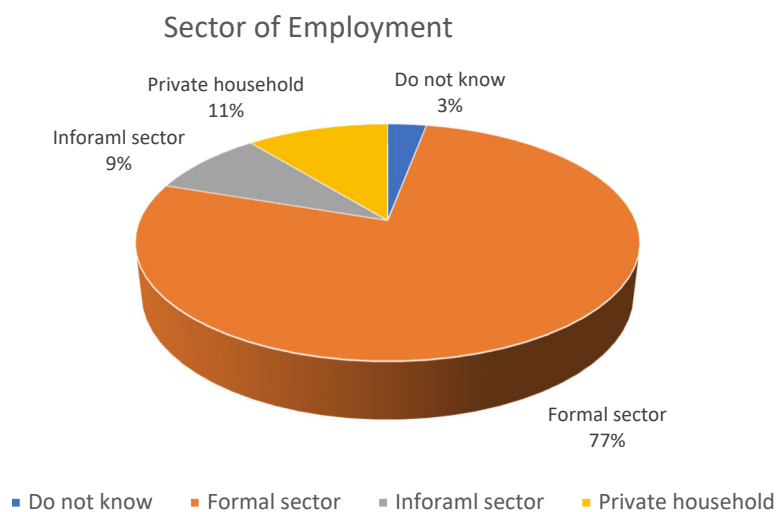
There are currently 1 299 490 households within the CoE, 18.7% of the household are categorised as informal dwellings (shacks). Figure 8-29 below provides an indication of households by type of dwelling.



**Figure 8-29: Households by the type of dwelling.**

The CoE’s economy is larger and more diverse compared to other small countries within the African continent. The economy sector is dominated by manufacturing (23%), finance and business services (22%), community services (19%), trade (15%), transport (11%), construction (5%), electricity (3%) and mining (2%).

In terms of sector of employment, about 78% of the population within Ekurhuleni is employed in the formal sector and about 9% is employed in the informal sector. An overview of the different sectors of employment is indicated in Figure 8-30.



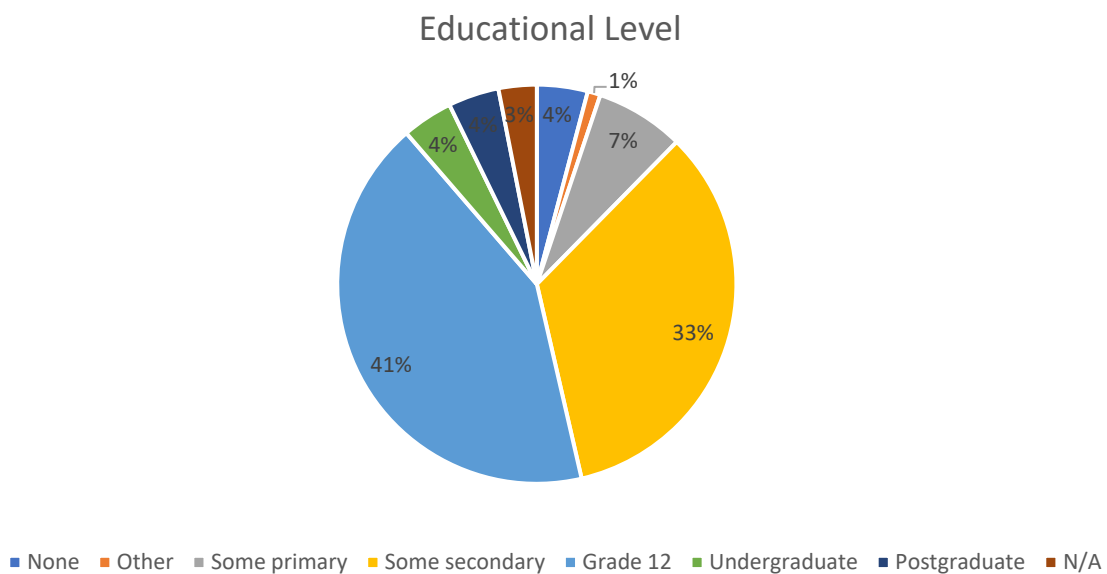
**Figure 8-30: Sectors of employment.**

According to the Community survey 2016, about 49% of the population is employed which is almost similar to Gauteng (51%). Ekurhuleni has more than 20% unemployment which translates to approximately 455,608 people. According to the IDP, the Municipality is actively finding solutions to address the

unemployment rate. One of the solutions is community works and the Expanded Public Works Programme (EPWP).

### 8.12.3 Educational Level

About half of the population have completed matric or higher which is about 20% higher compared to the national statistic. Approximately 4% of the population have post graduate qualification. According to the IDP, the figure of those not schooling, has decreased drastically by 6.3%.



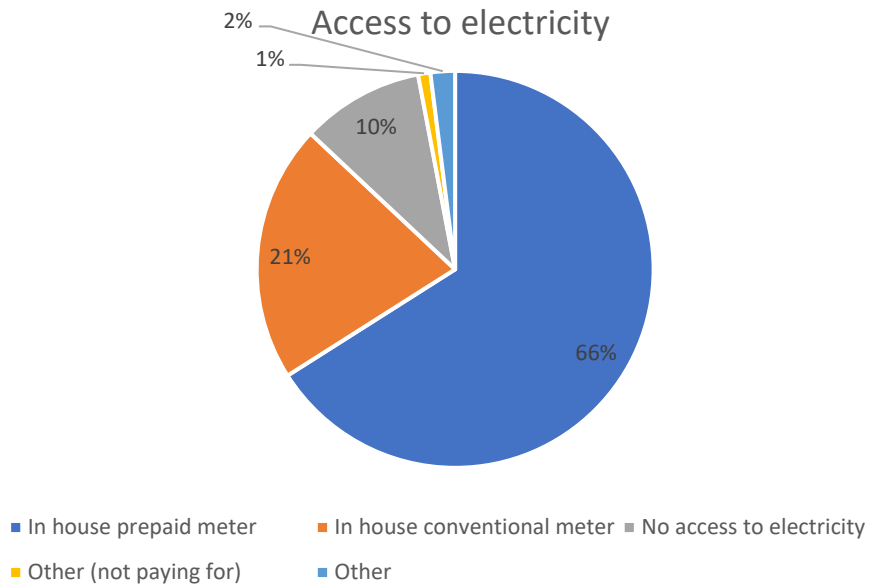
**Figure 8-31: Population by highest education level.**

### 8.12.4 Access to Services

#### ❖ Water

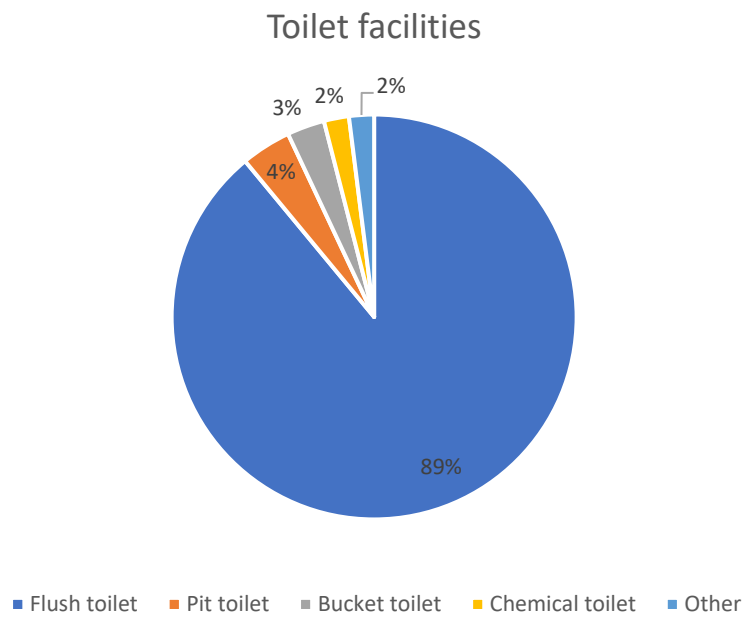
Access to basic services (in terms of water supply) is relatively high, majority (98.5%) of the population get water from a regional or local service provider. 60% have access to piped water in their house and 30% have access to piped water in their yards. Only 4% of the population have access to piped water from community stands

#### ❖ Electricity



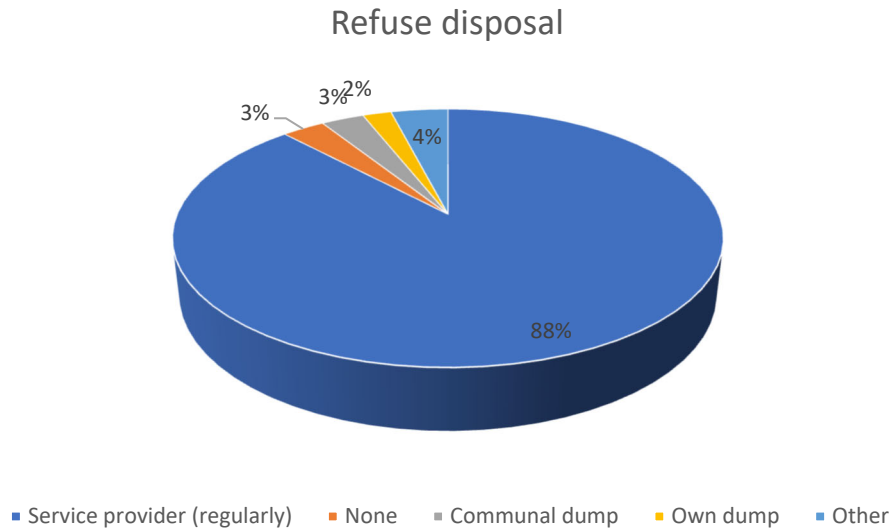
**Figure 8-32: Population by electricity access.**

❖ Toilets Facilities



**Figure 8-33: Access to toilet facilities.**

❖ Refuse Disposal



**Figure 8-34: Refuse disposal.**

#### 8.12.5 Key Challenges with Ekurhuleni

According to the 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; and
- ❖ Unemployment.

## 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 9-5. 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: <i>Describe the Impact in Respect to The Activity to be Undertaken</i>		
	Impact Rating Without Mitigation	Impact Rating With Mitigation
Impact Status: <i>(positive or negative)</i>		
Extent <i>(Local, Regional, International)</i>		
Duration <i>(Short term, Medium term, Long term)</i>		
Magnitude <i>(Major, Moderate, Minor)</i>		
Probability <i>(Definite, Possible, Unlikely)</i>		
Calculated Significance Rating <i>(Low, Medium, High)</i>		
Reversibility: <i>(Reversible or Irreversible)</i>		
Irreplaceable loss of resources: <i>(Yes or No)</i>		
<b>Residual impacts</b>		
❖ <i>(List these below)</i>		
<b>Cumulative Impacts</b>		
❖ <i>(List these below)</i>		
<b>Mitigation measures</b>		
❖ <i>(List these below)</i>		

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 9-2, Table 9-3, as well as Table 9-4 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 9-2: Consequence Rating Methodology**

Impact Characteristics	Definition	Criteria
<b>Magnitude</b>	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
<b>Spatial scale or population</b>	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
<b>Duration</b>	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 9-3: 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 9-4: 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 9-5 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 9-5: Potential Impacts Identified for the Project**

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
<b>Physical Environment (non-living)</b>	Hydrology (including wetlands, surface water and ground water)	<ul style="list-style-type: none"> <li>❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface and groundwater if runoff from operations is not adequately managed through efficient storm water management structures or adequate liners;</li> <li>❖ Potential contamination of shallow groundwater resources due to accidental hydrocarbon or other chemical spillages from vehicles and operational activities might occur;</li> <li>❖ Continuing deposition of tailings on the Brakpan TSF will potentially maintain higher seepage rates over the TSF footprint area with a subsequent local mounding of the water table;</li> <li>❖ Deposition of tailings on the lined Withok TSF will potentially reduce the currently prevailing recharge rate with a subsequent local, insignificant lowering of the water table;</li> <li>❖ Poor quality seepage water infiltrating into the underlying shallow weathered aquifer;</li> </ul>	<p>Surface Water Impact Assessment</p> <p>Groundwater Impact Assessment</p> <p>Wetland Impact Assessment</p>

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
		<ul style="list-style-type: none"> <li>❖ Potential water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented;</li> <li>❖ Potential pollution of the Rietspruit and further downstream watercourses in the event of a TSF failure.</li> </ul>	
<b>Biological Environment (living)</b>	Ecology and Biodiversity (including fauna and flora)	<ul style="list-style-type: none"> <li>❖ Disturbance of site and species of ecological importance;</li> <li>❖ Loss of migration corridors, and access to nesting and refuge areas, watering points, food supplies for faunal species;</li> <li>❖ Displacement of animal habitat due to the recommissioning of the TSF.</li> <li>❖</li> </ul>	Biodiversity Impact Assessment
<b>Cultural Environment</b>	Heritage Resources	<ul style="list-style-type: none"> <li>❖ Since the footprint was a TSF previously, it is unlikely for there to be any heritage resources on site.</li> </ul>	Heritage Impact Assessment
<b>Social and Economic Environment</b>	Employment	<ul style="list-style-type: none"> <li>❖ Continued employment and job security;</li> <li>❖ Continued investment in local economy;</li> <li>❖ Possible health and economic impacts due to the recommissioning of the TSF.</li> </ul>	Social Impact Assessment

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
	Land-use	❖ Land use impacts in the area due to the recommissioning of the TSF.	Social Impact Assessment
	Air Quality	<ul style="list-style-type: none"> <li>❖ Increase in dust levels as a result of increased size of the TSF;</li> <li>❖ Health impacts on livestock and people in proximity to the project site due to fine particulate emissions during operational phase.</li> </ul>	Air Quality Impact Assessment

### 9.3 Cumulative Impacts

Due to the existence of other TSFs 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.

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## 10 Plan of Study for the Environmental Impacts Assessment

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### 10.1 Aspects to be Assessed as part of the Environmental Impact Assessment Process

The Screening Tool Report (STR) identified the following aspects to be assessed as part of the EIA process:

- ❖ Agricultural;
- ❖ Archaeological and Cultural Heritage;
- ❖ Palaeontology;
- ❖ Terrestrial Biodiversity;
- ❖ Aquatic Biodiversity;
- ❖ Hydrology;
- ❖ Noise;
- ❖ Traffic;
- ❖ Health;
- ❖ Socio-Economic;
- ❖ Ambient Air Quality;
- ❖ Plant Species; and
- ❖ Animal Species.

The aspects listed above were assessed for the purpose of verifying their sensitivities as identified in the STR. Table 10-1 below confirms (with reasoning) the need for some of these aspects to be assessed as part of the EIA process, and therefore the aspects listed in Table 10-1 will be assessed as part of the EIA process. Table 10-2 contests (with reasoning) the need for some of these aspects to be assessed as part of the EIA process, and therefore the aspects listed in Table 10-2 will not be assessed as part of the EIA process. Table 10-3 lists additional aspects (which are not in the STR) to be assessed as part of the EIA process.

**Table 10-1: Aspects to be assessed in the EIA process**

No.	Environmental Theme	Applicable Protocol	Response
1.	<p><b>ARCHAEOLOGICAL AND CULTURAL HERITAGE IMPACT ASSESSMENT</b></p> <p>Sensitivity Rating: <b>Low</b></p> <p>Requiring an Archaeological and Cultural Impact Assessment</p> <p>Actual Sensitivity: To be determined in the EIA Phase</p>	<p>Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).</p>	<p>The STR denoted the site as Low sensitivity.</p> <p>A Heritage Impact Assessment (HIA) will be included as an appendix to the EIA/EMPr.</p>
2.	<p><b>PALEONTOLOGY THEME</b></p> <p>Sensitivity Rating: <b>Very High</b></p> <p>Requiring a Palaeontology Impact Assessment</p> <p>Actual Sensitivity: Very High</p>	<p>Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).</p>	<p>The STR indicates that the Palaeontological Sensitivity of the proposed project area is Very High.</p> <p>According to the SAHRIS palaeontology ratings table the Withok TSF is on an area that is classified to have very high palaeosensitivity and therefore a field assessment and protocol for findings is required.</p> <p>A palaeontological assessment will be undertaken and included in the HIA which will be included as an appendix to the EIA/EMPr.</p>
3.	<p><b>TERRESTRIAL BIODIVERSITY</b></p> <p>Sensitivity Rating: <b>Very High</b></p> <p>Requiring a Terrestrial Biodiversity Impact Assessment</p>	<p>Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Biodiversity (Published in Government Notice No. 320, Government Gazette 43110, dated 20 March 2020)</p>	<p>The Screening Tool has marked the site as Very High Sensitivity.</p> <p>According to the Baseline Biodiversity Desktop Assessment (The Biodiversity Company, 2024), the project area falls on an ecosystem denoted as VU.</p> <p>A Terrestrial Biodiversity Assessment will be undertaken and will include management measures for the protection of terrestrial biodiversity. The Assessment will be included as an appendix to the EIA Report.</p>

No.	Environmental Theme	Applicable Protocol	Response
	Actual Sensitivity: To be determined in the EIA Phase		
4.	<p><b>AQUATIC BIODIVERISTY</b></p> <p>Sensitivity Rating: <b>Very High</b></p> <p>Requiring an Aquatic Biodiversity Impact Assessment</p> <p>Actual Sensitivity: To be determined in the EIA Phase</p>	<p>Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Aquatic Biodiversity (Published in GN No. 320, Government Gazette 43110, dated 20 March 2020)</p>	<p>The Screening Tool denoted the site as Very High sensitivity.</p> <p>According to the Baseline Biodiversity Desktop Assessment (The Biodiversity Company, 2024), the Proposed Project overlaps with a CR river and wetlands.</p> <p>This theme will be further addressed in the EIA which will provide measures to protect aquatic biodiversity on site as per the specialist recommendations.</p> <p>The Terrestrial Biodiversity Impact Assessment will include an assessment of the aquatic ecology. The Assessment will be included as an appendix to the EIA/EMPr.</p>
5.	<p><b>HYDROLOGY</b></p> <p>No sensitivity rating.</p> <p>Requiring a Hydrology Assessment</p>	<p>Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).</p>	<p>The screening tool has not assigned a sensitivity rating to hydrology.</p> <p>The Surface Water Study is a requirement as per the NWA. A comprehensive surface water impact assessment will be prepared to assess the potential impacts that the proposed activities may have and to provide mitigation measures for identified impacts. The impact assessment will make use of a numerical rating system, that takes into consideration the intensity, duration, spatial scale and probability of the impacts in order to determine the impact significance. The cumulative impacts will also be assessed.</p> <p>The final deliverables will be a Surface Water Report as well as a Groundwater Report that details all methodologies, assumptions, results, discussions and recommendations. Detailed plans will be provided in the report.</p>

No.	Environmental Theme	Applicable Protocol	Response
6.	<p><b>NOISE</b></p> <p>No sensitivity rating.</p> <p>Requiring a Noise Impact Assessment</p>	<p>Protocol for Specialist Assessment and Minimum Report Content Requirements for Noise Impacts, Published in Gazette Notice No. 320, Government Gazette 43110 dated 20 March 202</p>	<p>The STR has not assigned a sensitivity rating for this theme. The main construction related noises that are expected are listed below:</p> <ul style="list-style-type: none"> <li>❖ Transport of workers, components &amp; equipment to site;</li> <li>❖ Digging of foundations for infrastructure and pipeline support – TLB;</li> <li>❖ Development of stormwater infrastructure – TLB;</li> <li>❖ Civil construction activities.</li> </ul> <p>Noise impacts are anticipated to only contribute to the surrounding ambient sound levels for a short period of time. A screening level report based on SANS 10328:2008 is proposed to be undertaken as there are no residences within 500m of the proposed co-disposal facility.</p>
7	<p><b>HEALTH</b></p> <p>No sensitivity rating.</p> <p>Requiring a Health Impact Assessment</p>	<p>Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).</p>	<p>The screening tool has not assigned a sensitivity rating to the Health Theme. It has, however, indicated the need for further assessment.</p> <p>Due to the scope and the nature of the project it was determined that a Health impact Assessment will be required to determine the possible health impacts expected to occur as a result of the recommissioning of the Withok TSF area. The specialist study will include an assessment of potential impacts that are anticipated during the construction, operational, and decommissioning phases, and provide an air quality management plan to mitigate negative impacts.</p>
8.	<p><b>SOCIO-ECONOMIC THEME</b></p> <p>No sensitivity rating.</p> <p>Requiring a Socio-Economic Impact Assessment</p>	<p>Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette</p>	<p>The Screening Tool has not assigned a sensitivity rating to the socio-economic theme. It has, however, indicated the need for further assessment.</p> <p>The socio-economic aspects of the proposed project site have been considered and will be addressed in the EIA. The Socio-Economic Impact</p>

No.	Environmental Theme	Applicable Protocol	Response
		43110; Dated 20 March 2020).	Assessment will include an assessment of potential impacts that are anticipated during the construction, operational, and decommissioning phases, and provide a socio-economic management plan to enhance positive impact and mitigate negative impacts.
9.	<b>AMBIENT AIR</b>  No sensitivity rating.  Requiring an Ambient Air Impacts Assessment	Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).	<p>The STR has not assigned a sensitivity rating to the ambient air theme. It has, however, indicated the need for further assessment.</p> <p>The ambient air aspects of the proposed project site have been considered and will be addressed in the EIA. The Air Quality Impact Assessment will include an assessment of potential impacts that are anticipated during the construction, operational, and decommissioning phases, and provide an air quality management plan to mitigate negative impacts.</p>
10	<b>ANIMAL THEME</b>  Sensitivity Rating: <b>High</b>  Requiring a Terrestrial Animal Species Assessment  Actual Sensitivity: To be confirmed in the EIA Phase	Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species Published in Government Gazette No. 1150, Government Gazette 43855, dated 30 October 2020	<p>According to the STR, the Animal Theme sensitivity is 'High' for the project area.</p> <p>The High Sensitivity denoted by the Screening Tool cannot be disputed at this point. A Terrestrial Biodiversity (Flora and Fauna) Assessment will be undertaken and will provide measures to protect any sensitive animal species that may occur on site.</p> <p>The Terrestrial Biodiversity Assessment will be included as an appendix to the EIA report.</p>
10.	<b>PLANT SPECIES</b>  Sensitivity Rating: <b>Medium</b>  Requiring a Terrestrial Plant Species Impact Assessment or a Terrestrial Plant	Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Plant Species (Published in GN No. 1150, Government 43855, dated 30	<p>The Screening Tool has marked the site as Medium Sensitivity for the plant species theme, and this is based on the possible occurrence of a sensitive plants species on the edges of the Withok TSF.</p> <p>The Medium Sensitivity denoted by the Screening Tool cannot be disputed at this point. A Terrestrial Biodiversity (Flora and Fauna) Assessment will be undertaken and will provide measures to protect any sensitive plant species</p>

No.	Environmental Theme	Applicable Protocol	Response
	Species Compliance Statement  Actual Sensitivity: To be confirmed in the EIA Phase	October 2020)	that may occur on site.  The Terrestrial Biodiversity Assessment will be included as an appendix to the EIA report.

**Table 10-2: Aspects to be excluded from the EIA process**

No.	Environmental Theme	Applicable Protocol	Response
1.	<b>AGRICULTURE</b>  Sensitivity Rating according to the STR: <b>High Sensitivity</b>  <b>Requiring an Agricultural Impact Assessment</b>  Actual Sensitivity: <b>Low</b>	Protocol for the specialist assessment and minimum report content requirements for environmental impact on agricultural resources. (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020)	The STR denoted the site as High sensitivity. This however is not representative to the historical impacts present in the area. The screening report does not record that a TSF was previously situated in the project area. The proposed site was a historical TSF, which was reclaimed, and these mineral deposits have no agricultural potential. The underlying soils have been impacted by the historical mining activities that were undertaken in the area. It was therefore deemed unnecessary for this aspect to be assessed as part of the EIA process.  The DFFE and the Gauteng Department of Agriculture, Land Reform and Rural Development (DALRRD) will be included in the stakeholder database and have been notified about the Proposed Project.
2.	<b>TRAFFIC</b>  No sensitivity rating.  <b>Requiring a Traffic Impact Assessment</b>	Site Sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed (Published in GN No. 320, government Gazette 43110; Dated 20 March 2020).	The screening tool has not assigned a sensitivity rating to the Traffic Theme.  The Proposed Project Site is located in an area with an existing road network. The R23 runs directly east of the project site, and the R550 runs to the South of the proposed project. No major road construction is planned for the project. Roads will mainly be utilised during the construction and decommissioning and rehabilitation phase of the Proposed Project. It was therefore deemed unnecessary for this aspect to be assessed as part of the EIA process.

No.	Environmental Theme	Applicable Protocol	Response
			However, the South African National Roads Agency SOC Limited (SANRAL) are on our stakeholder database and have been notified about the Proposed Project.

Based on professional judgement, the following aspects listed in Table 10-3, which were not included in the STR, will be assessed as part of the EIA process.

**Table 10-3: Additional Aspects to be assessed in the EIA process**

No.	Environmental Theme	Applicable Protocol	Response
1.	<b>GROUNDWATER</b>	No specific Protocol has been prescribed.	<p>The Screening Tool has not assigned a sensitivity rating to groundwater.</p> <p>The Groundwater Study is a requirement as per the NWA. A comprehensive Groundwater Impact Assessment will be prepared to assess the potential impacts that the proposed activities may have and to provide mitigation measures for identified impacts. The impact assessment will make use of a numerical rating system, that takes into consideration the intensity, duration, spatial scale and probability of the impacts in order to determine the impact significance. The cumulative impacts will also be assessed.</p> <p>The final deliverable will be a Groundwater Study that details all methodologies, assumptions, results, discussions and recommendations. Detailed plans will be provided in the report.</p>

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## 10.2 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.

## 10.3 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;
- ❖ Noise;
- ❖ Heritage;
- ❖ Health;
- ❖ Visual; and
- ❖ Socio-economic.

## 10.4 Terms of Reference for Specialist Studies

Table 10-4 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 10-4: Terms of Reference for Specialist Studies.**

Study	Terms of Reference
<p><b>Terrestrial Ecology</b></p>	<p><b><u>Impact Assessment</u></b></p> <p>1. The terrestrial biodiversity impact assessment report will consist of the following:</p> <ul style="list-style-type: none"> <li>❖ Assess impacts of ongoing and proposed activities on biodiversity of the project area;</li> <li>❖ Assess whether proposed activities are likely to have significant impacts on biodiversity and specifically species of conservation concern;</li> <li>❖ Identify practically implementable mitigation measures to reduce the significance of proposed activities on biodiversity;</li> <li>❖ Assess residual and cumulative impacts after implementation of mitigation measures;</li> <li>❖ Assess the impacts of tailings failure on the zone of influence; and</li> <li>❖ Compilation of biodiversity management and monitoring plan.</li> </ul> <p>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.</p>
<p><b>Wetland Study</b></p>	<p><b><u>Impact Assessment</u></b></p> <p>The water resource impact assessment will consist of the following:</p> <ul style="list-style-type: none"> <li>❖ Assess impacts of ongoing and proposed activities on the local water resources;</li> <li>❖ Assess whether proposed activities are likely to have significant impacts on the water resources;</li> <li>❖ Identify practically implementable mitigation measures to reduce the significance of proposed activities on the water resources;</li> </ul>

Study	Terms of Reference
	<ul style="list-style-type: none"> <li>❖ Assess the impacts of tailings failure on the zone of influence; and</li> <li>❖ Assess residual and cumulative impacts after implementation of mitigation measures.</li> </ul>
<b>Surface Water</b>	<p>The study objectives are as follows:</p> <ul style="list-style-type: none"> <li>❖ Provide an operational storm water management plan for the Withok TSF.</li> <li>❖ Provide an operational storm water management plan to accommodate external catchment stormwater.</li> <li>❖ Calculate the water balance and determine the average return.</li> <li>❖ Determine the likely pool control risks associated with various barge decant rates.</li> <li>❖ Size the decant system.</li> <li>❖ Size return water dam infrastructure and return pumping infrastructure.</li> <li>❖ Size clean water diversions.</li> <li>❖ Determine a hydrologically sustainable closure concept.</li> <li>❖ Determine these using probabilistic analysis.</li> </ul>
<b>Groundwater Assessment</b>	<p><b>Waste Classification</b></p> <p>The total and leachable concentrations of the fines and coarse tailings samples were analysed to determine the leachate quality, identify constituents of concern, and classify the waste.</p> <p><b>Withok TSF Seepage Model</b></p> <p>The report outlines the development of the conceptual and numerical seepage model, the simplifying assumptions and the outcomes of predictive simulations, in accordance with the Standard Guide for Documenting a Ground-Water Flow Model Application (ASTM 2006).</p> <p><b>Groundwater Model Report</b></p>

Study	Terms of Reference
	<p>The aim of the Groundwater Model Report is to develop a three-dimensional numerical groundwater flow and transport model for the Brakpan-Withok Tailings Storage Facility (TSF) Complex. This report outlines the development of the conceptual and numerical model, simplifying assumptions and outcomes of predictive simulations. Following the model development and steady-state calibration, the numerical groundwater model will be used to predict potential impacts of seepage from the TSF on the ambient groundwater environment and mitigation measures, namely hydraulic plume containment by a scavenger well system.</p>
<p><b>Air Quality</b></p>	<p><b><u>Baseline Assessment</u></b></p> <p>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:</p> <ul style="list-style-type: none"> <li>❖ Literature review of air pollutant emissions from Tailing Facilities.</li> <li>❖ Literature review of potential health effects associated with these emissions.</li> <li>❖ Outlining of relevant air quality legislation and ambient air quality standards.</li> <li>❖ Description of the site location, topography, general surroundings of the site, as well as the relevant site-specific environment.</li> <li>❖ Establishment of the baseline air quality from Air Quality Management Plans and Air Quality Monitoring Reports in the area.</li> <li>❖ Description of the nature of other major sources of air pollution in the study area.</li> <li>❖ Sourcing and evaluation of local meteorological data to determine the prevailing meteorological conditions.</li> <li>❖ Sourcing and evaluation of Weather and Research Forecasting Model (WRF) meteorological data to facilitate modelling.</li> </ul> <p>The baseline assessment will include:</p> <ul style="list-style-type: none"> <li>❖ Site Location and Topography</li> <li>❖ Air Quality Legislation and Standards</li> <li>❖ Health Effects of Particulate Pollutants</li> <li>❖ Regional Meteorological Overview</li> </ul>

Study	Terms of Reference
	<ul style="list-style-type: none"> <li>❖ Ambient Air Quality</li> <li>❖ Local Meteorology</li> </ul> <p><b><u>Impact Assessment</u></b></p> <p>Preparation of the Air Quality Impact Assessment will include and be based on the information from the scoping/baseline assessment and will also include:</p> <ul style="list-style-type: none"> <li>❖ Compilation of an emissions inventory – a list of activities which are sources of air pollution in the project.</li> <li>❖ Characterisation of the emission sources and the pollutants emitted from them.</li> <li>❖ Calculations of emission rates from the sources identified in the emissions inventory.</li> <li>❖ Preparation of Met data for modelling.</li> </ul> <p>Determining and preparing the input parameters for modelling:</p> <ul style="list-style-type: none"> <li>❖ Source type.</li> <li>❖ Source dimensions: lateral, vertical.</li> <li>❖ Source location and orientation.</li> <li>❖ Emission rate.</li> <li>❖ Receptor grid.</li> <li>❖ 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.</li> <li>❖ Presentation of model outputs/results in the form of contour plots and a summary of the results.</li> <li>❖ Evaluation of the results of the air dispersion modelling against National Ambient Air Quality Standards (NAAQS) as set out by the DFFE.</li> <li>❖ Assessment of any potential cumulative impacts in terms of the NAAQS.</li> <li>❖ Provision of practical and implementable mitigation measures by which to manage and reduce the identified impacts where necessary.</li> </ul>

Study	Terms of Reference
	<ul style="list-style-type: none"> <li>❖ A recommendation in terms of an air quality monitoring programme if necessary.</li> </ul>
<p><b>Heritage &amp; Palaeontology</b></p>	<p><b><u>Impact Assessment:</u></b></p> <p>The Heritage Scoping Report will be compiled in compliance with NHRA and the NEMA. The HIA process consists of three steps:</p> <p><u>1. Literature Review and initial site analysis:</u></p> <p>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.</p> <p><u>2. Physical Survey:</u></p> <p>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.</p> <p>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.</p> <p>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):</p> <ul style="list-style-type: none"> <li>❖ Low - &lt;10/50m<sup>2</sup></li> <li>❖ Medium - 10-50/50m<sup>2</sup></li> <li>❖ High - &gt;50/50m<sup>2</sup></li> <li>❖ Uniqueness.</li> </ul>

Study	Terms of Reference																																
	<p>Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:</p> <ul style="list-style-type: none"> <li>❖ A - No further action necessary;</li> <li>❖ B - Mapping of the site and controlled sampling required;</li> <li>❖ C - No-go or relocate development activity position;</li> <li>❖ D - Preserve site, or extensive data collection and mapping of the site; and</li> <li>❖ E - Preserve site.</li> </ul> <p>Impacts on these sites by the development will be evaluated as follows:</p> <p>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.</p> <table border="1"> <thead> <tr> <th>FIELD RATING</th> <th>GRADE</th> <th>SIGNIFICANCE</th> <th>RECOMMENDED MITIGATION</th> </tr> </thead> <tbody> <tr> <td>National Significance (NS)</td> <td>Grade 1</td> <td>-</td> <td>Conservation; National Site nomination</td> </tr> <tr> <td>Provincial Significance (PS)</td> <td>Grade 2</td> <td>-</td> <td>Conservation; Provincial Site nomination</td> </tr> <tr> <td>Local Significance (LS)</td> <td>Grade 3A</td> <td>High Significance</td> <td>Conservation; Mitigation not advised</td> </tr> <tr> <td>Local Significance (LS)</td> <td>Grade 3B</td> <td>High Significance</td> <td>Mitigation (Part of site should be retained)</td> </tr> <tr> <td>Generally Protected A (GP. A)</td> <td>-</td> <td>High / Medium Significance</td> <td>Mitigation before destruction</td> </tr> <tr> <td>Generally Protected B (GP. B)</td> <td>-</td> <td>Medium Significance</td> <td>Recording before destruction</td> </tr> <tr> <td>Generally Protected C (GP. A)</td> <td>-</td> <td>Low Significance</td> <td>Destruction</td> </tr> </tbody> </table>	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
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<b>Social Impact Assessment</b>	<p>The objective of the Social Impact Assessment (SIA) is to is to:</p> <ul style="list-style-type: none"> <li>❖ Assess the social impacts of the Proposed Project including any impacts on local infrastructure and services;</li> </ul>																																

Study	Terms of Reference
	<ul style="list-style-type: none"> <li>❖ Recommend mitigation measures to minimise adverse impacts and maximise benefits of the Project; and</li> <li>❖ Facilitate the consideration of alternatives.</li> </ul> <p>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 data will be collected as the project progresses. The SIA will use the following sets of data to inform the study:</p> <ul style="list-style-type: none"> <li>❖ An investigative site visit;</li> <li>❖ Interviews with Ward Councillors, municipal officials, directly affected land owners/occupiers</li> <li>❖ Statistics South Africa data;</li> <li>❖ A literature review of the Integrated Development Plan and the Spatial Development Framework; and</li> <li>❖ Scan and analysis of the Comments and Responses Report and various specialist studies (Compiled by Kongiwe Environmental)</li> </ul>
<p><b>Health Impact Assessment</b></p>	<p>Terms of reference for this work is that of a “Rapid Appraisal” HIA. Community safety is excluded from this report. The study area for this assessment will include communities adjacent to the Withok TSF area as described in the social impact studies.</p> <p>This rapid appraisal HIA will comply with prevailing South African regulations, as well as being informed by guidelines written by organizations such as the International Finance Corporation (IFC) and the International Council on Mining and Metals. IFC Performance Standard 4 addresses community health and safety and the IFC provides guidance on conducting HIA, dividing work into 12 Environmental Health Areas (EHA), which framework will be used for this work and the report – these EHA are: Vector-related diseases; respiratory and housing issues; veterinary medicine and zoonotic issues; sexually transmitted infections; soil and water-sanitation related diseases; accidents and injuries; exposure to potentially hazardous materials; social determinants of health; cultural health practices; health services infrastructure and capacity; non-communicable diseases.</p> <p>A literature review will be undertaken. Previous health studies and reports on TSF in Gauteng will be reviewed.</p>

Study	Terms of Reference
	<p>A visit will be made to the project area and surrounds. Health facilities, including at least 2 local clinics and the referral hospital in the area, will be visited to gather available health information and understand prevailing health issues and needs with a focus on respiratory health. It is proposed that one of the clinics visited would be located in a similar local community but far enough away from the TSF (or any other TSF) such that the clinic may proxy as a control for health conditions experienced. No health surveys or medical examinations will be undertaken. No Focus Group Discussion will be undertaken.</p> <p>There will be close liaison with other specialists, especially those conducting air quality, noise and socio-economic studies, in order that duplication of work is avoided. The air quality study is of particular interest to health.</p> <p>The rapid appraisal HIA report will include:</p> <ul style="list-style-type: none"> <li>❖ Literature review with a focus on health issues that may have been associated with TSF in Gauteng.</li> <li>❖ Review of any past health activities and health reports undertaken in the community.</li> <li>❖ Analysis of health in the community using the 12 IFC “environmental health areas” as a framework.</li> <li>❖ A first draft of a Community Health Management Plan (CHMP).</li> <li>❖ Identification of relevant baseline data gaps, which may require to be addressed in a more comprehensive health impact assessment and in turn, inform review of the draft CHMP.</li> </ul> <p>The objective is to establish a health baseline and provide ERGO with pre-execution health advice on how project activities, design, or plans may be changed, modified, or adapted in order to avoid or mitigate negative impacts and enhance anticipated benefits</p>
<p><b>Noise Impact assessment</b></p>	<p>The re-establishment of the tailings facility may require a noise impact assessment as per Regulation 3(d) of GNR154 of 1993 (the National Noise Control Regulations). Due to the low noise levels expected from such a facility, a noise screening report (as per SANS 10328:2008) would be sufficient.</p> <p>The noise compliance statement will be based on the screening requirements as defined in the SANS 10328:2003 guidelines.</p>

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## 10.5 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.

### 10.5.1 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.

### 10.5.2 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.

### 10.5.3 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.

### 10.5.4 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.

#### 10.5.5 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 10-5: High Level Mitigation Measures for Potential Impacts Identified for the Project.**

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
<b>Construction</b>			
Construction of infrastructure, temporary infrastructure.  All necessary activities involved with site preparation including site clearing.	<b>Socio-economic:</b> <ul style="list-style-type: none"> <li>❖ Potential for further contractor opportunities;</li> <li>❖ Population migration due to people seeking employment;</li> <li>❖ Disruption of movement patterns and other displacement impacts;</li> <li>❖ Safety and security;</li> <li>❖ Project-induced population influx ; and</li> <li>❖ Local &amp; regional economic development.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Attempt to extend goods and services from local businesses who are BBBEE (Broad-based Black Economic Empowerment) compliant and currently contracted by Ergo’s subsidiaries;</li> <li>❖ 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;</li> <li>❖ Develop skills development and training targets for local procurement and include these in contractor management plans; and</li> <li>❖ Employ security measures such as fencing, access control and patrols to address security issues and prevent crime.</li> </ul>
	<b>Air quality:</b> Short-term air quality impacts could arise from: <ul style="list-style-type: none"> <li>❖ Increased PM (PM<sub>10</sub> and PM<sub>2.5</sub>) load in the atmosphere leading to deteriorated air quality.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Regular, light watering of unpaved roads;</li> <li>❖ Strict speed control on unpaved roads;</li> <li>❖ Wet suppression wherever possible,</li> </ul>
	<b>Noise:</b> Construction activities will result in a short-term increase in noise levels.		<ul style="list-style-type: none"> <li>❖ Undertake construction operations during working hours only;</li> <li>❖ Construction equipment should be properly</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<ul style="list-style-type: none"> <li>❖ Transportation of workers and equipment to site; and</li> <li>❖ Civil work to install the project infrastructure.</li> </ul> <p><b>Noise impacts are anticipated to only contribute to the surrounding ambient sound levels for a short period of time.</b></p>		<ul style="list-style-type: none"> <li>❖ maintained and switched off when not operational;</li> <li>❖ Regular planned vehicle services are considered best practice; and</li> <li>❖ Comply with the Gauteng Noise Control Regulations</li> </ul>
	<p><b>Surface Water:</b> Potential pollution from:</p> <ul style="list-style-type: none"> <li>❖ Increased sedimentation on downstream watercourses due to erosion of exposed surfaces resulting in siltation of surface water resources;</li> <li>❖ Mixing of upstream clean water runoff with dirty water runoff from cleared site areas;</li> <li>❖ Potential for flooding of pipeline structures at river crossings; and</li> <li>❖ Seepages/spillages of excess rainfall stored on the TSF and the existing paddocks.</li> </ul>		<ul style="list-style-type: none"> <li>❖ The runoff from the upstream clean water catchment is to be diverted away from the proposed infrastructure;</li> <li>❖ Infrastructure to be established should be outside any modelled flood lines;</li> <li>❖ Surface water quality monitoring must be implemented according to a detailed plan;</li> <li>❖ Dirty water runoff should be captured and contained within the dedicated storage facility such as the existing paddocks;</li> <li>❖ Silt fences and/or erosion control berms should be constructed and managed downslope of any stockpiles; and</li> <li>❖ To minimise seepage and the effects of ponding, water volumes should be contained when necessary, pumped out and re-used where required during the construction phase of the project.</li> </ul>
	<p><b>Groundwater:</b> Decrease in groundwater quality as a result of water seepage and</p>		<ul style="list-style-type: none"> <li>❖ Surface water management measures must ensure that runoff and dirty water spills are contained; and</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	runoff.		<ul style="list-style-type: none"> <li>❖ Implement a detailed groundwater monitoring plan for the project as described in the ground water impact report.</li> </ul>
	<p><b>Wetland:</b></p> <ul style="list-style-type: none"> <li>❖ Impeding hydrology;</li> <li>❖ Siltation of channels and wetlands;</li> <li>❖ Erosion of channels and wetlands;</li> <li>❖ Loss of indigenous vegetation;</li> <li>❖ Alien plant proliferation;</li> <li>❖ Direct loss of wetland areas;</li> <li>❖ Decrease in functionality;</li> <li>❖ Additional water quality impairment;</li> <li>❖ Altering hydromorphic soils;</li> <li>❖ Water quality and quantity contamination and deterioration</li> <li>❖ Drainage patterns change; and</li> <li>❖ Altering overland flow characteristics.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Adhere to any prescribed buffers should any be recommended;</li> <li>❖ Adhere to the recommendations proposed in the surface water and groundwater reports;</li> <li>❖ Minimise the footprint of any areas disturbed during construction;</li> <li>❖ Locate all temporary offices, constructors' camps, laydown areas, ablution facilities etc. a minimum of the prescribed distance from any delineated sensitive watercourse/wetland (should wetlands exist).</li> <li>❖ Develop and implement a construction stormwater management plan prior to the commencement of site clearing activities; and</li> <li>❖ A rehabilitation plan for disturbed wetland must be in place as prescribed by the wetland specialist study.</li> </ul>
	<p><b>Traffic:</b></p> <ul style="list-style-type: none"> <li>❖ Increase in traffic volumes on existing traffic network; and</li> <li>❖ Cumulative impact on the road surface</li> </ul>		<ul style="list-style-type: none"> <li>❖ Traffic signage at site access points</li> <li>❖ Road maintenance, on the public road network, is not a responsibility of Ergo. It is therefore recommended that Ergo engages with the planning authorities regarding future maintenance needs of</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>condition.</p> <p><b>This impact is expected to be localised and short-term.</b></p>		<p>the surrounding road network.</p>
	<p><b>Fauna and Flora:</b></p> <ul style="list-style-type: none"> <li>❖ Direct loss of floral species/vegetation types and biodiversity;</li> <li>❖ Disturbance of sites and species of ecological importance;</li> <li>❖ Displacement of animal due to habitat loss;</li> <li>❖ Removal of invasive species;</li> <li>❖ Direct habitat loss for species that have established on the TSF; and</li> <li>❖ Alien vegetation recruitment.</li> </ul>		<ul style="list-style-type: none"> <li>❖ The ecosystem present must be preserved, this includes areas not directly affected by project activities, and can be achieved by limiting project activities to areas where they are essential.</li> <li>❖ The risk of habitat fragmentation must be reduced through preservation of natural corridors.</li> <li>❖ Rehabilitation plans must be initiated during construction to minimise disturbed areas.</li> <li>❖ Follow any local and national policies and plans regulating and protecting biodiversity in the project area.</li> </ul>
<b>OPERATION</b>			
<p><b>Tailings deposition</b></p>	<p><b>Air quality:</b> Increasing the height of the TSF could result in an increase of dust generation.</p>		<ul style="list-style-type: none"> <li>❖ Cladding of the sides of the TSF on an ongoing basis; and</li> <li>❖ Continue monitoring of air quality/dust fallout from the activity.</li> </ul>
	<p><b>Socio-economic:</b></p> <ul style="list-style-type: none"> <li>❖ Potential for further contractor opportunities;</li> <li>❖ Population migration due to people</li> </ul>		<ul style="list-style-type: none"> <li>❖ Attempt to extend goods and services from local businesses who are BBBEE (Broad-based Black Economic Empowerment) compliant and currently contracted by Ergo’s subsidiaries;</li> <li>❖ If jobs are available, Ergo should ensure that local</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	seeking employment; ❖ Disruption of movement patterns and other displacement impacts; ❖ Safety and security; ❖ Project-induced population influx ; and ❖ Local & regional economic development.		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; and ❖ Employ security measures such as fencing, access control and patrols to address security issues and prevent crime.
	<p><b>Noise:</b> Potential impacts include:</p> <p>Potential for noise disturbance from the operation of pump station and pipelines.</p> <p><b>These are anticipated to be very low impacts.</b></p>		❖ 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 water and slurry. ❖ Machines and vehicles should be switched off when not in use.
	<p><b>Surface Water:</b> Potential impacts include:</p> ❖ Overflow of the collection dam to the downstream surface water resources; and ❖ Overflow of the dirty water collected in		❖ The dams must be designed to handle severe rainfall events; ❖ A freeboard of more than 0.8m should be kept; ❖ The stormwater infrastructure must be maintained.

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p>the RWD during a severe weather event.</p>		
	<ul style="list-style-type: none"> <li>❖ <b>Groundwater:</b> Seepage from the TSF and existing paddocks could negatively influence the groundwater quality in the underlying aquifers during the operational phase.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Lining of the RWD;</li> <li>❖ Lining of the TSF;</li> <li>❖ Pumping of process water out of the RWD; and</li> <li>❖ Continuous monitoring of groundwater quality.</li> </ul>
	<p><b>Wetlands and Aquatics:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>❖ Continued loss of water input into surrounding watercourses;</li> <li>❖ Pipeline could pollute the watercourse if failure of the pipeline occurs;</li> <li>❖ Potential for sedimentation and salt loading in the watercourse;</li> <li>❖ Potential to discharge treated water, if required; and</li> <li>❖ Destruction of wetlands in the event of a tailings failure.</li> </ul>		<ul style="list-style-type: none"> <li>❖ The pipelines must be designed to minimise spillages and failure as far as possible;</li> <li>❖ Adhere to any prescribed buffers, should any be recommended;</li> <li>❖ Adhere to the recommendations proposed in the surface water and groundwater reports;</li> <li>❖ A rehabilitation plan for disturbed wetland must be in place as prescribed by the wetland specialist study;</li> <li>❖ Undertake a zone of influence analysis and implement mitigation recommendations; and</li> <li>❖ Design dam walls as per the SANS 10268 and align with the GISTM</li> </ul>
	<p><b>Heritage:</b> Potential impacts could include:</p> <ul style="list-style-type: none"> <li>❖ Destruction of heritage resources should there be a tailings failure.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Undertake a zone of influence analysis and implement mitigation recommendations;</li> <li>❖ Design dam walls as per the SANS and align with the GISTM ; and</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	<p><b>Traffic:</b> During operation, the following impact could occur:</p> <ul style="list-style-type: none"> <li>❖ Cumulative impact on the road surface condition.</li> </ul> <p><b>This is anticipated to be a very low impact.</b></p>		<ul style="list-style-type: none"> <li>❖ Mitigation measures for the construction phase apply here.</li> </ul>
	<p><b>Fauna and Flora:</b> During operation, the following impact could occur:</p> <ul style="list-style-type: none"> <li>❖ Destruction of habitats in the event of a tailings failure.</li> <li>❖ Disturbance of local biodiversity during operation and routine maintenance.</li> <li>❖ Potential for windblown particulates to pollute habitat quality.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Undertake a zone of influence analysis and implement mitigation recommendations;</li> <li>❖ Design dam walls as per the SANS 10268 and align with GISTM;</li> <li>❖ Minimise disturbance and destruction of areas that are not going to be directly reclaimed;</li> <li>❖ Create awareness regarding environmental preservation amongst all personnel involved in the project; and</li> <li>❖ Monitor surrounding vegetation to assess the impact of the TSF re-establishment on the vegetation.</li> </ul>
	<p><b>Fauna and Flora:</b> During operation, the following impact could occur:</p> <ul style="list-style-type: none"> <li>❖ Destruction of habitats in the event of a tailings failure.</li> <li>❖ Disturbance of local biodiversity during operation and routine maintenance.</li> <li>❖ Potential for windblown particulates to</li> </ul>		<ul style="list-style-type: none"> <li>❖ Undertake a zone of influence analysis and implement mitigation recommendations;</li> <li>❖ Minimise disturbance and destruction of areas where deposition of tailings will not directly occur;</li> <li>❖ Create awareness regarding environmental preservation amongst all personnel involved in the re-establishment of the TSF; and</li> <li>❖ Monitor surrounding vegetation to assess the impact of the TSF re-establishment on the on the said</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
	pollute habitat quality.		vegetation.
	<p><b>Health:</b> During operation,</p> <ul style="list-style-type: none"> <li>❖ Operation of the TSF could result in possible impact to local communities health</li> <li>❖ Failure in the TSF could result in detrimental impact to local communities health.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Ensure the required mitigation and monitoring is undertaken on and around the project area;</li> <li>❖ Ensure the required emergency and incident management plans are in place on site; and</li> <li>❖ Ensure that community forum is in place where all health concerns can be raised.</li> </ul>
<b>DECOMMISSIONING</b>			
<b>Rehabilitation of the TSF and the removal of infrastructure.</b>	<ul style="list-style-type: none"> <li>❖ <b>Air quality:</b> Dust entrainment from the top and sides of the TSF</li> </ul>		<ul style="list-style-type: none"> <li>❖ Rehabilitation and vegetating of the TSF; and</li> <li>❖ Monitoring dust levels on site, at upwind and downwind locations preferably at discrete receptors (if identified).</li> </ul>
	<p><b>Surface Water:</b> Potential impacts include:</p> <ul style="list-style-type: none"> <li>❖ Water pollution from accidental spillages of decommissioned infrastructure.</li> <li>❖ Residual water pollution from rehabilitated TSF post closure.</li> <li>❖ Water pollution from a potential tailings failure.</li> </ul>		<ul style="list-style-type: none"> <li>❖ Rehabilitation and vegetating of the TSF;</li> <li>❖ Ongoing management of stormwater infrastructure;</li> <li>❖ Ensure that the pipelines are emptied of all residual material before decommissioning;</li> <li>❖ Ensure the consideration of the durability and longevity of water management designs, e.g. provision of erosion protection for long-term control of erosion and potential pollution to water resources during decommissioning;</li> <li>❖ The final topography should be planned, as far as</li> </ul>

Activity	Potential Impact	Stakeholder Comment	Mitigation Measures
			<p>possible, to be free-draining; and</p> <ul style="list-style-type: none"> <li>❖ Monitor and maintain the TSF and inspect for structural integrity.</li> </ul>
	<ul style="list-style-type: none"> <li>❖ <b>Groundwater:</b> If Seepage continues, this could negatively influence the groundwater quality in the underlying aquifers.</li> </ul>		<ul style="list-style-type: none"> <li>❖ These are expected to be the same as the mitigation measures proposed for the construction and operation phases.</li> </ul>
	<ul style="list-style-type: none"> <li>❖ <b>Wetlands and Aquatics:</b> Potential impacts include those associated with removing site infrastructure, including pipelines.</li> </ul> <p>Wetland destruction from a potential dam tailings failure.</p>		<ul style="list-style-type: none"> <li>❖ Pipelines must be flushed clean and rendered safe for decommissioning and removal;</li> <li>❖ Decommissioning and rehabilitation should be done in the dry season. However, it is recommended that seeding be done with the first rains; and</li> <li>❖ Monitor and maintain the TSF and inspect for structural integrity.</li> </ul>
	<p><b>Traffic:</b> These are expected to be the same as for construction.</p>		<ul style="list-style-type: none"> <li>❖ Mitigation measures for the construction phase apply here.</li> </ul>

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## 10.6 Other Information Requirements

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

A Socio-Economic Impact Assessment (SEIA) will be undertaken and will be finalised during the EIA Phase. Potential Social impacts have been included in Table 10-5.

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

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 area and other associated mining infrastructure are integral components of the historical mining townscapes and settlements of the East Rand

## 11 Declaration of Independence

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### 11.1 Undertaking Regarding Correctness of Information

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

A handwritten signature in black ink that reads "G. Wilreker".

Signature of EAP

DATE: 15 August 2024

### 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.

A handwritten signature in black ink that reads "G. Wilreker".

Signature of EAP

DATE: 15 October 2024

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## 12 References

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**Appendix A:  
EIA Project Team CV's**

## *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 the Technical Director of Kongiwe Environmental (Pty) Ltd. with 18years' 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 the required outcomes. She has a M.Sc. Environmental Management from the former RAU (now UJ) (2004). She is also a registered Environmental Assessment Practitioner (EAP) with the Environmental Assessment Practitioners Association of South Africa (EAPASA) and a Natural Scientist with the South African Council for Natural Science Professionals (SACNASP).

Her skills include:

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

**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 2024

Expires: 28 February 2025

Chairperson

Registrar





**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 field(s) of practice (Schedule 1 of the Act)  
Environmental Science (Professional Natural Scientist)

Effective 11 November 2009

Expires 31 March 2025



A handwritten signature in black ink, appearing to be 'S. V. Neph', written over a horizontal line.

Chairperson

A handwritten signature in black ink, appearing to be 'N. S. S. S.', written over a horizontal line.

Chief Executive Officer



## *Environmental Consultant*

### **Professional Registration**

- South African Council for Natural Science Professionals (SACNASP) – 2024

### **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 is a dedicated Environmental Consultant and holds a BSc (Hons) in Environmental Science and Geography from the University of Pretoria. Her professional experience in mining and construction projects has equipped her with invaluable insights into project processes, spanning from the pre-feasibility phase to implementation and execution. Her versatility shines as she adeptly navigates various contexts and tasks, ensuring optimal outcomes to meet client needs. Her responsibilities include environmental impact reporting and authorisations, water use licencing, environmental compliance and auditing, project management, authority liaison and stakeholder engagement. Driven by a passion for environmental stewardship, Phumla is committed to delivering excellence in every project she undertakes.

Her skills include:

- ❖ Environmental impact reporting and authorisation;
- ❖ Report writing;
- ❖ Stakeholder engagement;
- ❖ Water Use Licencing;
- ❖ Environmental Compliance Auditing; and
- ❖ GIS.



**herewith certifies that**  
**Phumla Nomathemba Mngwengwe**  
Registration Number: 121442  
**is a registered scientist**

in terms of section 20(3) of the Natural Scientific Professions Act, 2003  
(Act 27 of 2003)  
in the following field(s) of practice (Schedule 1 of the Act)  
Environmental Science (Professional Natural Scientist)

Effective **12 June 2024**

Expires **31 March 2025**



A handwritten signature in black ink, appearing to read 'S. Neph'.

Chairperson

A handwritten signature in black ink, appearing to read 'N. Mngwengwe'.

Chief Executive Officer



## *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 Assessment Practitioner with an M.Sc. in Environmental Management from the University of Johannesburg (UJ). He is a registered Professional Natural Scientist (Environmental Management) (Registration No: 124117) with the South African Council for Natural Science Professionals (SACNASP), and a registered Candidate Environmental Assessment Practitioner (EAP) with the Environmental Assessment Practitioners Association of South Africa (EAPASA). His professional background has equipped him with an in-depth understanding of project processes, spanning from the pre-feasibility stages to project execution. He excels in diverse work environments and skilfully completes various tasks. He is adroit at problem-solving within teams, to ensure client and legislated requirements are seamlessly achieved. His responsibilities span a broad range of environmental tasks, such as environmental authorisations and legal permitting, impact reporting, due diligence, compliance monitoring, report writing, auditing, and public engagement. His expertise and track record consistently yield exceptional outcomes in environmental management.

His skills include:

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

**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 2024

Expires: 28 February 2025

Chairperson

Registrar





**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 field(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **11 September 2019**

Expires **31 March 2025**



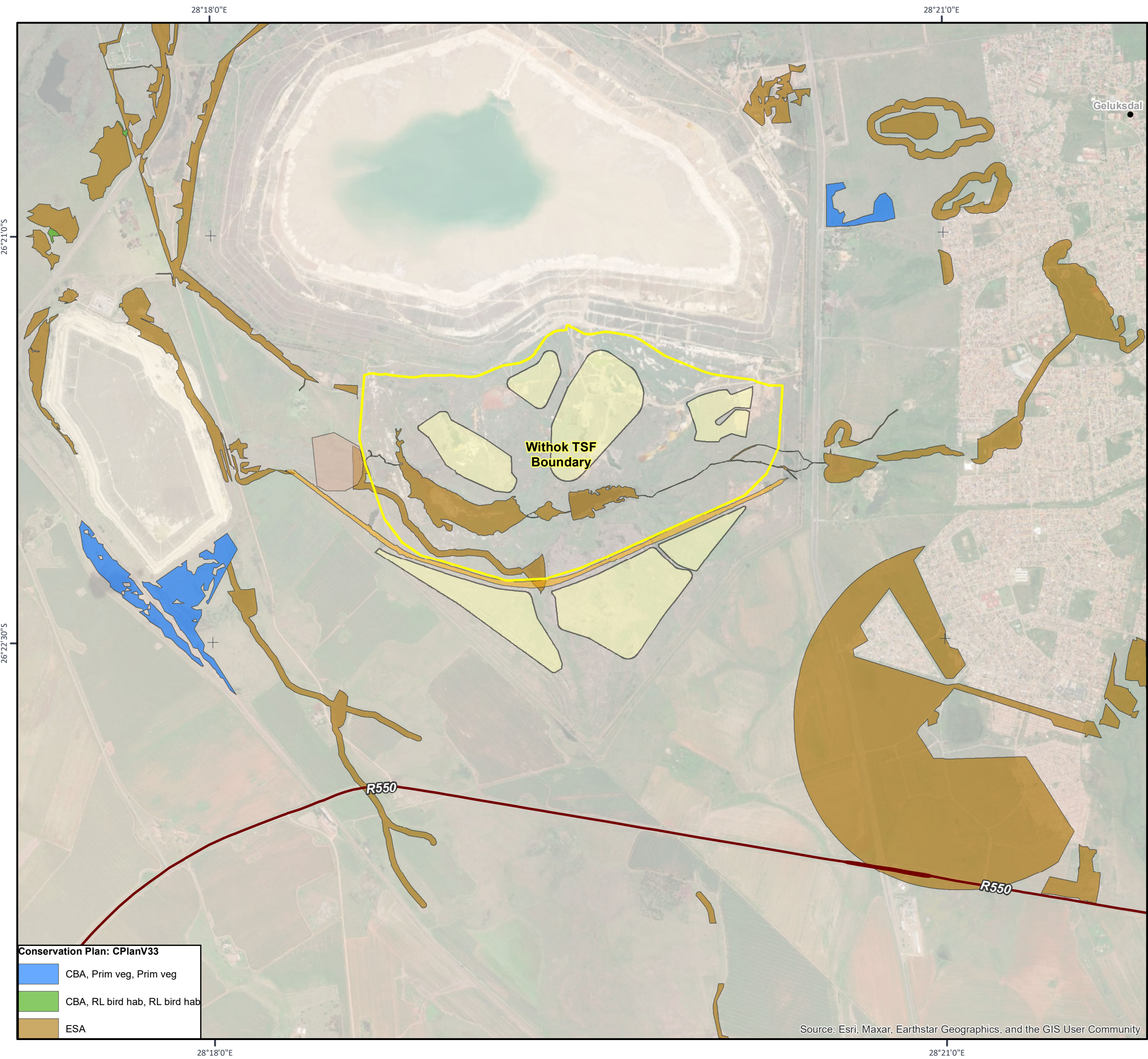
Chairperson

Chief Executive Officer





**Appendix B:**  
**A3 Maps**



**WITHOK  
CONSERVATION PLAN**

**Legend**

- Other Settlement
- Main Road
- Withok TSF Boundary
- Return Water Dam
- Storm Water Diversion
- Borrow Pit Areas



Project Code: DRDG#012  
 Client: Ergo Mining (Pty) Ltd  
 Drawn: Z Omar | Checked: B Thornton  
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 www.kongiwe.com



**1:25 000**

Coordinate System: WGS84 TM L029  
 Projection: Transverse Mercator  
 Datum: WGS 1984

**(A3)**  
 2024 Satellite Imagery

Disclaimer  
 The information represented in this plan is for general information purposes only and is subject to change.

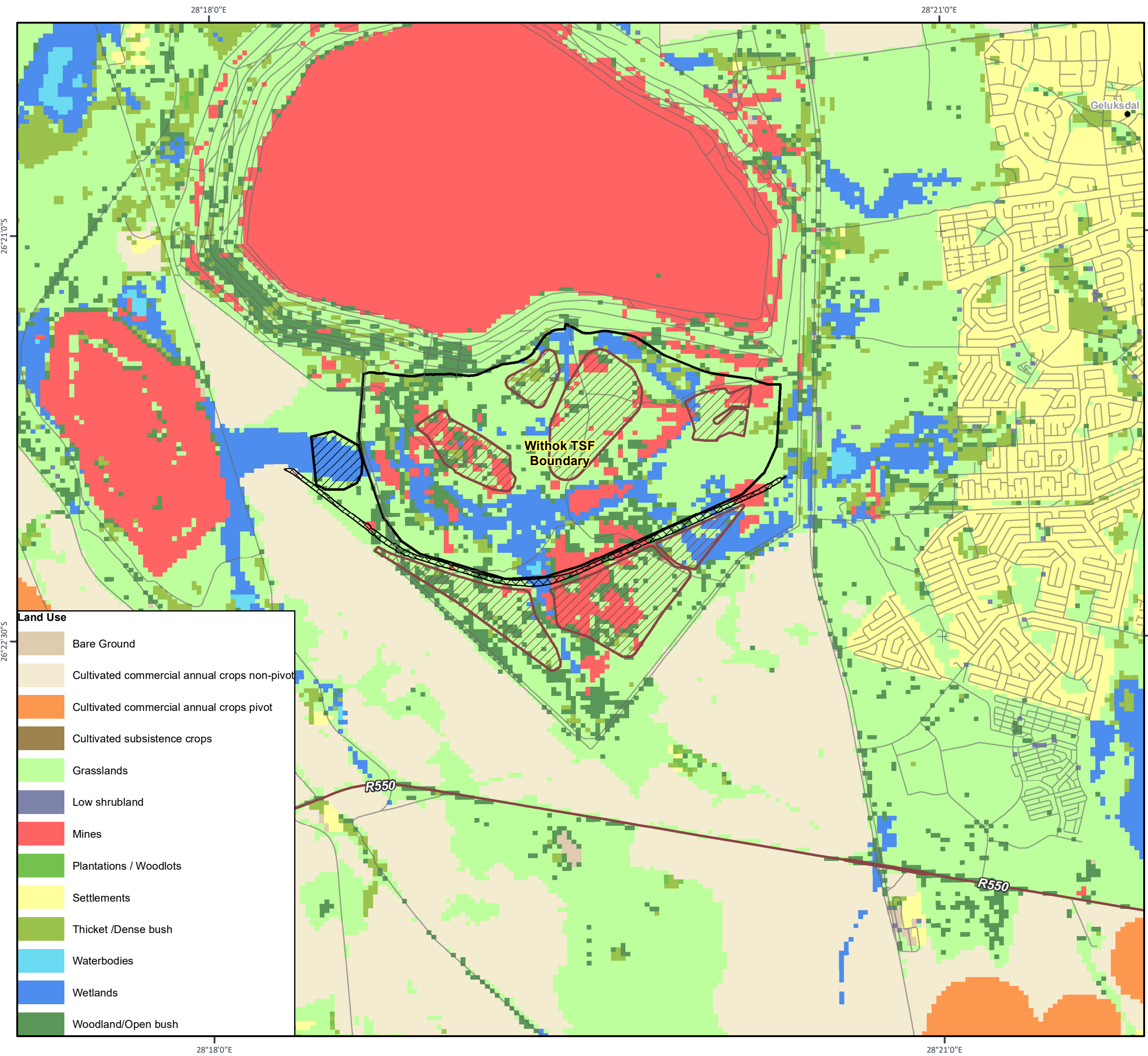
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 Map Set 2\Withok Conservation Plan Landscape A3.mxd

DATE:  
 09 October 2024

**Conservation Plan: CPlanV33**

- CBA, Prim veg, Prim veg
- CBA, RL bird hab, RL bird hab
- ESA

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Land Use**

	Bare Ground
	Cultivated commercial annual crops non-pivot
	Cultivated commercial annual crops pivot
	Cultivated subsistence crops
	Grasslands
	Low shrubland
	Mines
	Plantations / Woodlots
	Settlements
	Thicket /Dense bush
	Waterbodies
	Wetlands
	Woodland/Open bush



**WITHOK  
LAND USE**

**Legend**

- Other Settlement
- Main Road
- Local Roads
- Withok TSF Boundary
- Return Water Dam
- Storm Water Diversion
- Borrow Pit Areas



Project Code: DRDG#012  
 Client: Ergo Mining (Pty) Ltd  
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 Projection: Transverse Mercator  
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**FILE REF:**  
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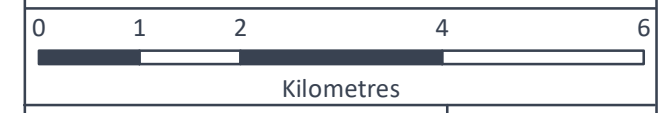
**DATE:**  
 09 October 2024



## WITHOK RECOMMISIONING PROJECT LOCAL ORIENTATION

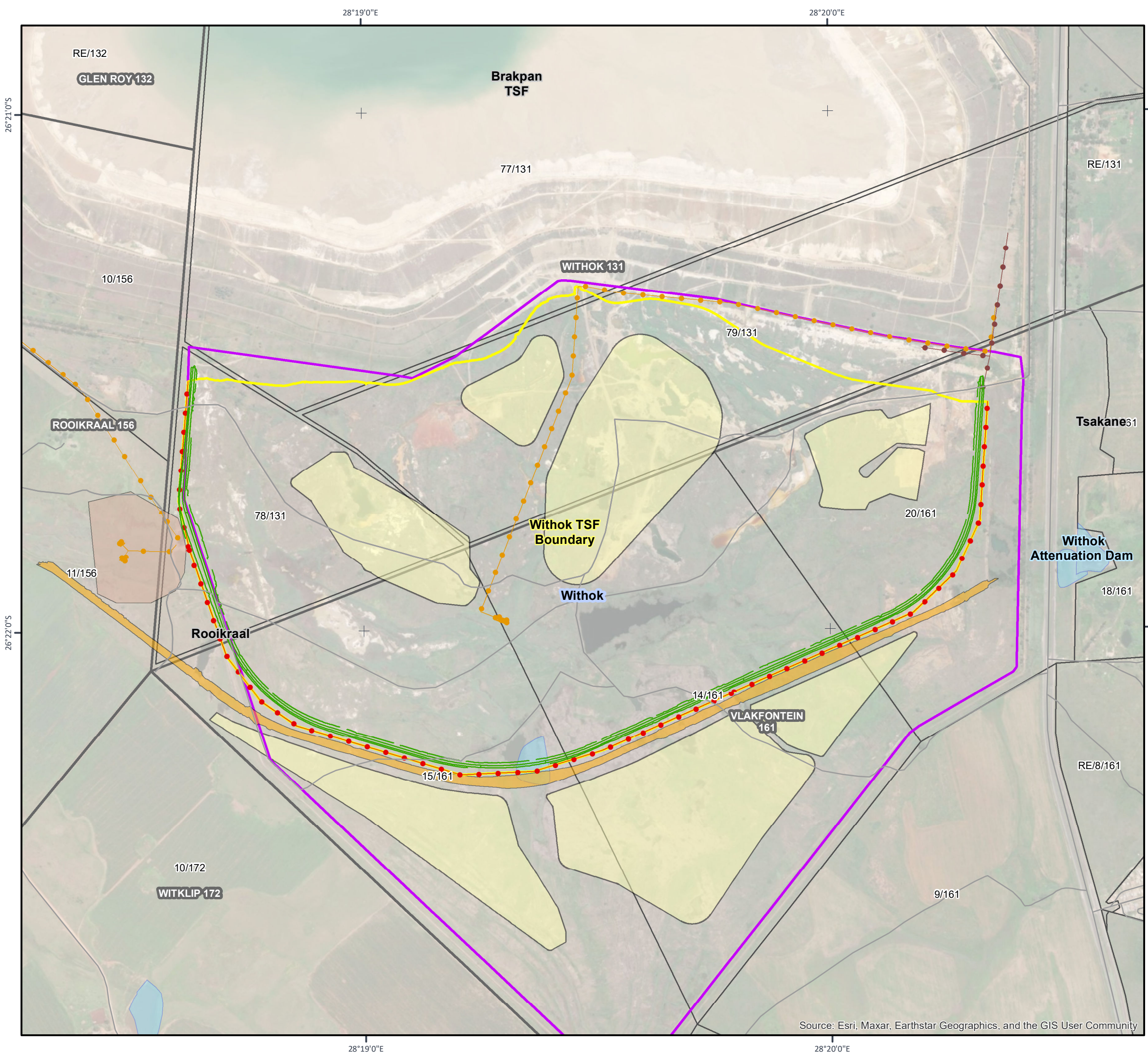
### Legend

- Capital
- City
- Major Town
- Other Settlement
- National Road
- Main Road
- + + + Railway
- Streams
- Withok TSF Boundary
- Local Municipality
- Ward Boundary
- Water Area



Project Code: DRDG#012 Client: Ergo Mining (Pty) Ltd Drawn: Z Omar   Checked: B Thornton © 2024 Kongiwe Environmental (Pty) Ltd <a href="http://www.kongiwe.com">www.kongiwe.com</a>	 <b>1:75 000</b>
Coordinate System: WGS84 TM LO29 Projection: Transverse Mercator Datum: WGS 1984	<b>(A3)</b> 2024 Satellite Imagery
<b>Disclaimer</b> The information represented in this plan is for general information purposes only and is subject to change.	
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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



## WITHOK RECOMMISSIONING PROJECT SITE INFRASTRUCTURE

### Legend

- National Road
- Main Road
- Minor Road
- Railway
- Streams
- National Road
- Main Road
- Collector Pipeline
- Decant Pipeline
- Incoming Slurry Pipeline
- Toe Embankment/Access Roads
- Farm Portion
- Parent Farm
- Withok Project Boundary
- Withok TSF Boundary
- Return Water Dam
- Storm Water Diversion
- Water Area
- Borrow Pit Areas



Project Code: DRDG#012  
 Client: Ergo Mining (Pty) Ltd  
 Drawn: Z Omar | Checked: B Thornton  
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Coordinate System: WGS84 TM LO29  
 Projection: Transverse Mercator  
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**DATE:**  
 09 October 2024

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Appendix C:**  
**Public Participation Information**



**Environmental Authorisation and Integrated Water Use  
Licence Application for the Recommissioning of the Withok  
Tailings Storage Facility (TSF), Ekurhuleni, Gauteng  
Province**

DMRE reference number: GP30/5/1/2/2(158) MR

DWS reference number: WU38174

**Public Participation Process Report: (Appendix C)**

**October 2024**

## Report Information

<b>Project:</b>	Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province.
<b>Report Title:</b>	Public Participation Report
<b>DMRE Reference No:</b>	GP30/5/1/2/2(158) MR
<b>DWS Reference No:</b>	WU38174
<b>Client:</b>	Ergo Mining (Pty) Ltd
<b>Project No:</b>	DRDG#012
<b>Compilation Date:</b>	October 2024
<b>Status of Report:</b>	<b>PP Report for Draft Scoping Report</b>

Verification	Capacity	Name	Signature	Date
<b>By Author</b>	Stakeholder Consultant	Vanessa Viljoen		21 October 2024
<b>Reviewed by:</b>	Technical Director / EAP	Gerlinde Wilreker		21 October 2024
<b>Reviewed by:</b>	Legal Review	Michael Hennessy		30 July 2024
<b>Authorised by:</b>	CEO	Bradly Thornton		16 October 2024

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**Kongiwe Environmental (Pty) Ltd.**

Reg No 2016 / 135562 / 07

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- Appendix C7: Authority Correspondence**
- Appendix C8: Meeting Minutes**
- Appendix C9: Comment and Response Report**

## Abbreviations

<b>BID</b>	Background Information Document
<b>CA</b>	Competent Authority
<b>CRR</b>	Comments and Response Report
<b>DALRRD</b>	Department of Agriculture, Land Reform and Rural Development
<b>DFFE</b>	Department of Forestry, Fisheries and the Environment
<b>DMRE</b>	Department of Mineral Resources and Energy
<b>DSR</b>	Draft Scoping Report
<b>DWS</b>	Department of Water and Sanitation
<b>EAP</b>	Environmental Assessment Practitioner
<b>EIA</b>	Environmental Impact Assessment
<b>I&amp;AP</b>	Interested and Affected Party
<b>GDARD</b>	Gauteng Department of Agriculture and Rural Development
<b>DoH</b>	National Department of Health
<b>SAHRA</b>	South African Heritage Resources Agency
<b>DPWI</b>	Department of Public Works and Infrastructure
<b>NEMA</b>	National Environmental Management Act, 1998 (Act No. 107 of 1998)
<b>NNR</b>	National Nuclear Regulator
<b>PAIA</b>	Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)
<b>POPIA</b>	Protection of Personal Protection Act, 2013 (Act No. 4 of 2013)
<b>PPP</b>	Public Participation Process
<b>NGO's</b>	Non-Governmental Organisations
<b>SMS</b>	Short Message Services

## 1 INTRODUCTION

The following document outlines the Public Participation activities undertaken as part of the Scoping and Environmental Impact Assessment (S&EIA) and Integrated Water Use Licence Application (IWULA) for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province, as well as the consultation undertaken within the Withok potential Zone of Influence (Zoi).

## 2 PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) offers stakeholders an opportunity to be informed about the Proposed Project, to raise issues 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 project.

### 2.1 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 was 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);
- ❖ International good-practice guidelines for public participation and the Core Values of the International Association for Public Participation; and
- ❖ Any additional considerations noted in the International Finance Corporation (IFC) Performance Standards.

#### **POPIA: 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.

## 2.2 Objectives of the Public Participation Process

The PPP objectives are to:

- ❖ Ensure that stakeholders are informed about the proposed recommissioning of the Withok Tailings Storage Facility 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, considered and addressed.
- ❖ Verify that stakeholder comments have been recorded and addressed.
- ❖ Create awareness of the Global Industry Standards on Tailings Management (GISTM) processes and that environmental permitting is the first step to this alignment.

The stakeholder engagement process will be undertaken in four phases as presented in Table 2-1 below:

**Table 2-1: Stakeholder Engagement activities**

Project Phase	Activities to be Undertaken
Pre-scoping Phase	<ul style="list-style-type: none"> <li>❖ Site Visit;</li> <li>❖ Identification of stakeholders (WinDeed searches, compilation of stakeholder database);</li> <li>❖ Consultation with Authorities (including ward councillors) – (One-on-One consultation meetings / Online via Microsoft Teams / Telephonic Discussions);</li> <li>❖ Compilation of announcement documents (BID, Reg Sheet, Advert, site notice and DSR notification letter) and providing project information to stakeholders;</li> <li>❖ Compilation of awareness creation Fact Sheet for GISTM;</li> <li>❖ Obtaining initial comments and suggestions from stakeholders; and</li> <li>❖ Land Claims enquiry.</li> </ul>
Scoping Phase	<ul style="list-style-type: none"> <li>❖ Consultations with Directly Affected Landowners (One-on-One consultation meetings / online via Microsoft Teams Meetings);</li> <li>❖ Distribution and placement of project announcement materials (site notices, newspaper advertisements);</li> <li>❖ Updating of the stakeholder database;</li> <li>❖ Availability of the Scoping Report for public review and comment;</li> <li>❖ Providing stakeholders with further details of the proposed project and associated specialist studies;</li> <li>❖ Consultations with stakeholders (Open Day &amp; Online Meeting);</li> <li>❖ Obtaining further comments and suggestions from stakeholders; and</li> <li>❖ Informing specialists and the applicant about comments received from stakeholders.</li> </ul>

Project Phase	Activities to be Undertaken
EIA Phase	<ul style="list-style-type: none"> <li>❖ Provide feedback about the specialist studies conducted and mitigation measures proposed by means of consultation with stakeholders;</li> <li>❖ Provide opportunity for stakeholders to comment on specialist findings, impacts assessments and recommendations;</li> <li>❖ Make the relevant environmental reports available for public review and comment;</li> <li>❖ Consultation with stakeholders (Open Day &amp; Online Meeting);</li> <li>❖ Verify that comments raised by stakeholder have been accurately recorded; and</li> <li>❖ Inform specialists and the proponent of stakeholders' comments.</li> </ul>
Decision Making Phase	<ul style="list-style-type: none"> <li>❖ 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 will be explained.</li> </ul>

### 2.3 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.

### 2.4 Public Participation Process Approach

#### 2.4.1 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. 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 rights of way with the affected landowners.

In this case the applicant, Ergo Mining, is the landowner and consent is not required.

#### 2.4.2 Submission of the Environmental Authorisation Application Form / IWULA Registration

An application for an Environmental Authorisation for the proposed recommissioning of the Withok TSF project has been submitted to the Department of Mineral Resources and Energy (DMRE), the Competent Authority (CA), on **Friday, 18 October 2024**.

A Water Use Licence Application (WULA) process will be initiated via the electronic Water Use Licence Application and Authorisation System (e-WULAAS). The project will be registered and the IWULA process will then commence and will be ongoing.

### 2.4.3 Stakeholder Identification and Analysis

Project stakeholders (or Interested and Affected Parties (I&APs)) 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 recommissioning of the Withok TSF 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 will be used as part of the stakeholder identification and analysis process for the Withok Project Area as well as the Withok Zol Area where relevant:

- ❖ WinDeed searches for the directly affected and adjacent farms;
- ❖ Desktop and online research;
- ❖ Developing a list of relevant community leaders and authorities (Tsakane);
- ❖ Consult with relevant district and local authorities:
  - Ekurhuleni Metropolitan Municipality;
  - Sedibeng District Municipality;
    - Lesedi Local Municipality;
- ❖ Identifying the relevant ward councillors for the affected wards;
  - Ward 99, 112 – Ekurhuleni (Gauteng);
  - Ward 10 – Lesedi (Gauteng);
- ❖ Consulting landowners and land occupiers (directly affected and adjacent);
- ❖ Consulting with the Gauteng Department of Agriculture, Land Reform and Rural Development (GDALRRD), 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.

Additional stakeholders for the Withok Zone of Influence include:

- ❖ Consultation with relevant district and local municipalities:
  - Ekurhuleni Metropolitan Municipality (Gauteng);
  - Sedibeng District Municipality;
    - Lesedi Local Municipality (Gauteng); and
    - Midvaal Local Municipality (Gauteng);
- ❖ Identifying the relevant ward councillors for the affected areas;
  - Ward 4, 12, 13, 15 Midvaal (Gauteng);

- Ward 10 Lesedi (Gauteng); and
- Ward 45, 61, 62, 64, 99, 108 Ekurhuleni (Gauteng).
- ❖ Stakeholders who respond to the publication of newspaper advertisements;
- ❖ Stakeholders who respond to the distribution of project documentation (site notices, emails & bulk sms);
- ❖ 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

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

#### 2.4.3.1 *Withok Project Area*

Identified stakeholders who are affected by or interested in the Withok 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 a stakeholder.
- ❖ **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;
- ❖ **Business and industry:** Small, Medium and Micro Enterprises (SMMEs), mines, industrial and large business organisations; and
- ❖ **Nature Reserves:** Suikerbosrand Provincial Nature Reserve

#### 2.4.3.2 *Withok Zone of Influence*

Stakeholders who are affected by or interested in the Withok Zol are grouped into the following broad categories:

- ❖ Identification and consultation with potentially affected properties / structures within selected parts of the Zol.

- ❖ District and local municipalities;
- ❖ Ward councillors for the affected areas; and
- ❖ Environmental forums; and
- ❖ Mineral Rights Holders: Surrounding areas;

These stakeholders will be identified and **informed** of the proposed project and will be invited to the **Open Days** which will be held within the public review period.

#### 2.4.4 Land Claims Enquiry

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 **Friday, 18 October 2024**. 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**).

#### 2.4.5 Communication and Engagement

##### 2.4.5.1 Public Participation Materials

Considering the legislative requirements and good practice, the following documents were developed and distributed to stakeholders. The various PPP information materials were used as part of the S&EIA and IWULA process.

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

- ❖ A project description of the proposed recommissioning of the Withok TSF 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 or online meeting.

The BIDs were emailed on **Tuesday, 22 October 2024**, to the stakeholder database (**Appendix C6**). The BID is available on the following website:

- Kongiwe's website: <https://kongiwe.com/projects/>

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

**Fact Sheet:** The purpose of the fact sheet is to create awareness of GISTM within the EIA Process. The fact sheet was emailed to all stakeholders on the database, including the new identified stakeholders within the Withok zone of influence, when the project was announced. The Fact Sheet is available on

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Kongiwe's website: <https://kongiwe.com/projects/>

**Newspaper advertisements:** Newspaper adverts (**Appendix C4**) were placed in the *Ekurhuleni News, on Thursday, 24 October 2024, The Star, on Tuesday, 22 October 2024*. 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 stakeholders were included in the Site Notice. Pictures and coordinates 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 Registration and Comment Form:** An email was sent to stakeholders to inform them about the proposed recommissioning of the Withok TSF Project. The email also shared details of the open day and invited the greater public to formally register as I&APs. A Registration and Comment 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 issues and suggestions regarding the proposed recommissioning of the Withok TSF project. Comments raised through telephonic discussions are recorded and addressed by the project team (EAP and the relevant specialists).

#### 2.4.5.2 *Scoping Phase Consultation*

Stakeholders will be invited to participate through online and face-to-face engagements. One-on-one consultation meetings with authorities, directly and indirectly affected landowners will be held via on-line forums such as Microsoft Teams, or telephonically or face-to-face depending on preference. 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.

**Consultation meetings:** Consultation 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 recommissioning of the

Withok TSF project. Locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Authority Meetings** will be held with various Organs of State on a one-on-one basis. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Landowner Consultation Meetings** will be held with directly and indirectly affected landowners on a one-on-one basis. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.

**Online meetings** will be held with stakeholders who prefer online engagements, and an open day will be held with the broader public who prefer online meetings.

**Broader Public Consulting meetings:** An Open day will be held with the broader public who prefer online meetings during the public review period. 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.

Refer to Table 2-2 for the stakeholders’ meeting schedule.

**Table 2-2: Stakeholder Meetings**

Proposed dates	Available time slots	Method of Engagement
<b>Online meeting</b>		
Wednesday, 6 November 2024	10H00 – 11H00	Microsoft teams/ scheduled Telephonic discussions
<b>Face-to-Face meeting: Open Day</b>		
Saturday, 9 November 2024	09H00 – 10H00	Tsakane ext.22 Mega Primary School 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
	10H00 – 11H00	
	11H00 – 12H00	

Focused efforts will be made to engage with directly impacted stakeholders (those residents in the proposed project area). Meetings will be held in a culturally appropriate manner, allowing stakeholders to voice their opinions and/or concerns openly. To respect the social and political hierarchy in the project area, meetings with the local and traditional leadership structures might be held prior to wider communication with the broader public but these meetings will be made known to the communities and will not displace community engagement. All affected communities and groups will be made aware of the project feedback.

Stakeholders will also be given the option to raise issues in the language of their choice, and where translation is required, it will be provided. It is anticipated that the languages would be English, Afrikaans, Zulu and Sotho.

Stakeholder meetings will be accessible and adequate notice will be given to stakeholders to encourage stakeholder involvement and participation. 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.

Refer to **(Appendix C8)** for a list of all the above 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)**.

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)**.

#### 2.4.5.3 Availability of Reports for Public Review and Comment

Copies of the Draft Scoping Report (DSR) will be made available for public review and comment for a period of 30 days from **Thursday, 24 October 2024 until Friday, 22 November 2024**.

#### The DSR will be made available as follows:

- ❖ Copies of the DSR will be made available for public review and comment on the following website: Kongiwe’s website: <https://kongiwe.com/projects/>
- ❖ A hard copy of the DSR will be made available at the following public place within the Withok Project Area as indicted in the table below:

Location	Physical Adress	Contact Person
<b>Public Libraries (Scoping Report):</b>		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Librarian (011) 999 7748 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548	Ms Lindiwe Shandu, Librarian (011) 999 8046 Mon – Fri: 09h00 – 16h00

A non-technical summary of the reports will be compiled and distributed electronically to stakeholders and a hard copy provided 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 of the reports can be made available upon a request directed to the stakeholder engagement team.

- ❖ A hard copy of the DSR non-technical summary will be made available at the following public place within the Withok Zone of Influence as indicated in the table below:

Location	Physical Address	Contact Person
<b>Public Libraries (non-technical summary):</b>		
Vosloruus Public Library	6125 Mc Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane, Librarian (011) 999 5937, Stated on the website. Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Katlehong Public Library	Civic Centre, 01 Masakhane Street, Katlehong	Ms Zanele Mpevu, Librarian (011) 999 1466 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Zonkizizwe Public Library	4748, 4749 Ext 1 Zone 6, Zonkizizwe	Ms Thuli Mashego, Librarian (011) 999 1415 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Randvaal Public Library	514 Houtkapper Street, Randvaal, 1873	Ms Mara Frost, Librarian (016) 365 5093 – (071) 207 7269 Mon-Fri: 9:00am – 5:00pm Sat: 9:00am- 12:00pm
Henley on Klip Public Library	45 Regatta Rd, Henley on Klip, Meyerton, 1961	Ms Ntswaki Mofokeng, Librarian (016) 366 0112 – (074) 933 8715 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am-12:00pm
Meyerton Public Library	Loch Str, Mayerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am-12:00pm

- ❖ An electronic copy will be made available on request.
- ❖ Copies of the non-technical summary of the DSR will be distributed electronically to all stakeholders on the database. Copies will also be made available at the public place within the Withok Zone of Influence as indicated in the table above.

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.

The DSR and appendices will be delivered to the DMRE on **Thursday, 24 October 2024**. 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;
- ❖ Ekurhuleni Metropolitan Municipality (Gauteng);
- ❖ Sedibeng District Municipality (Gauteng);
- ❖ Lesedi Local Municipality (Gauteng); and
- ❖ Midvaal Local Municipality (Gauteng).

Table 2-3 below provides a summary of the stakeholder engagement activities that formed part of the Draft Scoping Phase.

**Table 2-3: Summary of activities undertaken as part of the Scoping Phase**

Activity	Details	Reference in Draft Scoping Report
<b>Stakeholder identification and analysis</b>	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.	<b>Appendix C1</b>  Stakeholder database
<b>Identification of land claims</b>	A formal Letter of enquiry was compiled and sent to the Land Claims Commission, Mr Solomon Maruma from the Department of Agriculture, Land Reform and Rural Development (DALRRD), Office of the Regional Land Claims Commissioner: Gauteng Province. The letter contained a list of all the directly affected properties for the project. Should GDALRRD confirm that there are land claims on the affected project areas, our project team will consult with the relevant parties.	<b>Appendix C2</b>  Land claims enquiry letter and correspondence from the GDALRRD.
<b>Distribution of Background Information Document</b>	The BID was compiled and distributed to stakeholders. The BID is available on the following website: Kongiwe's website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a>	<b>Appendix C3</b>  BIDs
<b>Distribution of GISTM Fact Sheet</b>	The fact sheet was emailed to all stakeholders on the database, including the new identified stakeholders within the Withok zone of influence, when the project was announced. The Fact Sheet is available on Kongiwe's website: Kongiwe's website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a>	<b>Appendix C3</b>  GISTM Fact Sheet
<b>Placement of newspaper advertisements</b>	Newspaper adverts were placed in the <b>Ekurhuleni News</b> , on <b>Thursday, 24 October 2024</b> , <b>The Star</b> , on <b>Tuesday, 22 October 2024</b> .	<b>Appendix C4</b>  Newspaper advertisements
<b>Placement of site notices</b>	Site notices will be placed at publicly accessible places within proximity of the project.  Copies of the Site Notices will also be placed at the following public places:	<b>Appendix C5</b>  Site notice report and placement map

Activity	Details	Reference in Draft Scoping Report
	<p><b>Public Libraries within the <u>Withok Project Area</u> (Scoping Report):</b></p> <ul style="list-style-type: none"> <li>❖ Brakpan Public Library</li> <li>❖ Tsakane Public Library</li> </ul> <p><b>Public Libraries within the <u>Withok Zone of Influence</u> (non-technical summary):</b></p> <ul style="list-style-type: none"> <li>❖ Vosloruus Public Library</li> <li>❖ Katlehong Public Library</li> <li>❖ Zonkizizwe Public Library</li> <li>❖ Randvaal Public Library</li> <li>❖ Henley on Klip Public Library</li> <li>❖ Meyerton Public Library</li> </ul> <p>Photos 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.</p>	
<p><b>Announcement of the project and the availability of the Draft Scoping Report</b></p> <p><b>DSR Non-technical Summary</b></p>	<p>The announcement letter was distributed to stakeholders to:</p> <ul style="list-style-type: none"> <li>❖ Announce availability of the Draft Scoping Report;</li> <li>❖ Invite stakeholders to the open day;</li> <li>❖ Indicate where the Scoping Report will be available for public review and comment.</li> </ul> <p>The Draft Scoping Report will be made available on the following website: Kongiwe’s website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a></p> <p>A copy of the DSR and non-technical summaries will also be placed in the following public place:</p> <p><b>Public Libraries within the <u>Withok Project Area</u> (Scoping Report):</b></p> <ul style="list-style-type: none"> <li>❖ Brakpan Public Library</li> <li>❖ Tsakane Public Library</li> </ul> <p><b>Public Libraries within the <u>Withok Zone of Influence</u> (non-technical summary):</b></p> <ul style="list-style-type: none"> <li>❖ Vosloruus Public Library</li> <li>❖ Katlehong Public Library</li> <li>❖ Zonkizizwe Public Library</li> <li>❖ Randvaal Public Library</li> <li>❖ Henley on Klip Public Library</li> <li>❖ Meyerton Public Library</li> </ul>	<p><b>Appendix C6</b></p> <p>Announcement Correspondence</p> <p><b>Appendix C3</b></p> <p>BID</p>
<p><b>Stakeholder meetings</b></p>	<p>Consultation during the scoping phase will be aimed at providing key stakeholders with an overview of the</p>	<p><b>Appendix C8</b></p>

Activity	Details	Reference in Draft Scoping Report
	<p>proposed project, potential impacts, mitigation measures, risks, opportunities and to obtain comments which will inform specialist studies and project planning.</p> <p>Stakeholders will be invited to participate through online and face-to-face engagements. One-on-one consultation meetings with authorities, directly and indirectly affected landowners will be held via on-line forums such as Microsoft Teams, or telephonically or face-to-face depending on preference. The project team will do a formal presentation of the proposed project the locality, infrastructure and land tenure maps will be distributed as part of the meetings.</p>	<p>List of meetings &amp; Meeting Minutes</p> <p><b>Appendix C9</b></p> <p>Comment and Response Report</p>
<p><b>Broader Public Consulting meetings:</b></p> <p><b>Scoping Phase</b></p>	<p>Stakeholders will be invited to participate through online and face-to-face engagements. Consultation meetings will be held via online forums such as Microsoft Teams and an Open day will be held with the broader public who prefer online meetings during the public review period. 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.</p> <p>The following meetings will be held:</p> <p><b>Face-to-Face Meeting:</b></p> <ul style="list-style-type: none"> <li>❖ An <u>Open day</u> will be held on <b>Saturday, 9 November 2024 from 09H00 – 12H00</b> at Tsakane ext.22 Mega Primary School, 19732 Mashimin St &amp;, Shiburi St, Tsakani, Brakpan, 1550</li> </ul> <p><b>Online Meeting:</b></p> <ul style="list-style-type: none"> <li>❖ <b>Wednesday, 6 November 2024 from 10H00-11H00</b> on Microsoft teams/scheduled Telephonic discussions.</li> </ul> <p>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.</p>	<p><b>Appendix C8</b></p> <p>List of meetings &amp; Meeting Minutes</p> <p><b>Appendix C9</b></p> <p>Comment and Response Report</p>

#### 2.4.5.4 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 2-4: PPP activities to be undertaken during the Final Scoping Phase**

Activity	Details
<b>Update of stakeholder information</b>	The stakeholder database will be updated with new I&APs who formally registered, participated in stakeholder meetings or submitted comments.
<b>Placement of Final Scoping Reports</b>	The Final Scoping Report will be made available following websites: Kongiwe’s website: <a href="https://kongiwe.com/projects/">https://kongiwe.com/projects/</a>
<b>Announcement of the Final Scoping Report</b>	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.

#### 2.4.5.5 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 Report (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.

#### 2.4.5.6 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.

# Appendix C1: Stakeholder Database

## Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province

### Stakeholder Database

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Agricultural Union	AFGRI SA	Mr	Johan	Smuts	Legal Representative	Gauteng
Agricultural Union	TAU SA (National)	Mr	Janse	Rabie	Head of Natural Resources	Gauteng
Agricultural Union	TAU SA Limpopo Region	Ms	Wilma	Prinsloo	Regional Secretary	Gauteng
Agricultural Union	AFGRI SA	Ms	Nadia	Hetzel	Legal Representative	Gauteng
Agricultural Union	Transvaal Agricultural Union of South Africa (TAUSA)	Mr	Henry	Geldenhuis	President	Gauteng
Agricultural Union	AFGRI SA (Gauteng)	Mrs	Lynette	Du Plessis	TAU SA Central Region	Gauteng
Agricultural Union	AFGRI SA	Mr	Ernest	Botha	Attorney	Gauteng
Business & Commerce	Johannesburg Chamber of Commerce & Industry	Ms	Bernadette	Zerler	Chief Executive	Gauteng
Business & Commerce	Eskom	Mr	Sbu	Nkalanga	Ekurhuleni Representative	Gauteng
Business & Commerce	Eskom	Ms	Nkateko	Msimango	Ekurhuleni Environmental	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Business & Commerce	Minerals Council South Africa	Mr	Babalwa	Matiwane	Environment Department	Gauteng
Business & Commerce	Passenger Rail Agency of South African (PRASA)	Mr	Siphiwe	Mathobela	General Manager	Gauteng
Business & Commerce	Eskom	Ms	Charmaine	Mare	Eskom Enviro. Manager	Gauteng
Business & Commerce	Passenger Rail Agency of South African (PRASA)	Ms	Nosizwe Nokwe	Macamo	Chairperson:Nosizwe Nokwe-Macamo (Gauteng Rep)	Gauteng
Business & Commerce	Transnet Freight Rail	Mr	Xolisa	Kilani	Technical Engineer	Gauteng
Business & Commerce	Eskom	Mr	Moitheri	Khuphane	Ekurhuleni Environmental	Gauteng
Business & Commerce	Eskom	Mr	Jason	Kasper	Land and Rights Manager	Gauteng
Business & Commerce	Eskom (National): National Transmission Company South Africa SOC Ltd (NTCSA)	Mr	John	Geeringh	Senior Consultant Environmental Management Grid Planning: Land and Rights	Gauteng
Business & Commerce	Eskom	Mr	Luvuyo	Diniso	W/L Allocations	Gauteng
Business & Commerce	South African National Roads Agency Limited (SANRAL)	Ms	Victoria	Bota	Environmentalist (Gauteng Region)	Gauteng
Business & Commerce	South African National Roads Agency Limited (SANRAL)	Ms	Ria	Barkhuizen	Environmentalist (NR)	Gauteng
Business & Commerce	Andrew Barker Development Consultant	Mr	Andrew	Barker	Development Consultant	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Business & Commerce	Transnet Ltd Gauteng	Ms	Suzan	Aidelomo	Gauteng Environmental Specialist	Gauteng
Business & Commerce	Transnet Limited	Mr	Thembinkosi	Memela	Property Technician	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Mogale	Matseba	Control Environmental Officer, Wonderfontein Catchment Forum Chair	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Jacob	Mahloko	Construction Project Management	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Friedah	Khoza	Property Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Agrippa	Semata	Real Estate	Gauteng
Directly Affected Landowner	Private Landowner	Mr	Hendrick	Groenewald	Landowner	Gauteng
Directly Affected Landowner	Best by Shelving Pty Ltd	Ms	Liza Ann	Bezuidenhout	Landowner	Gauteng
Directly Affected Landowner	Kiron Projects Pty Ltd	Mr	Barend	Greyling	Landowner	Gauteng
Directly Affected Landowner	Kiron Projects Pty Ltd	Ms	Jana		Landowner	Gauteng
Directly Affected Landowner	East Rand Water Care Company	Ms	Ntokozo	Makhaya	Landowner	Gauteng
Directly Affected Landowner	Private Owner	Mr	Nkgodi Stephen	Aphane	Landowner	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Directly Affected Landowner	Macsteel Service Centres S A Pty Ltd	Mr	Frikkie	Erasmus	Manager	Gauteng
District Municipality	Sedibeng District Local Municipality	Ms	Julia	Rasegwete	Environmental Officer	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Nthabiseng	Tshivhenga	Municipal Speaker	Gauteng
District Municipality	Sedibeng District Local Municipality	Mr	Pieter	Nieuwanhuizen	Disaster Operational Manager	Gauteng
District Municipality	Sedibeng District Local Municipality	Ms	Sarah	Mothapo	Director: Disaster Manager	Gauteng
Environmental NGO's	Wildlife and Environmental Society of South Africa (WESSA)	Mr	John	Wesson	Manager: Conservation Specialist	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	David	van Wyk	Lead Researcher	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Ms	Busi	Thabane	General Manager	Gauteng
Environmental NGO's	Johannesburg Heritage Foundation	Mr	Mark	Schaerer	Member of the Joint Plans Committee West	Gauteng
Environmental NGO's	Groundwork	Mr	Bobby	Peek	Director	Gauteng
Environmental NGO's	South African National Biodiversity Institute (SANBI)	Ms	Zama	Nzeru		Gauteng
Environmental NGO's	African Wattle Crane Programme (ICF/EWT)	Ms	Kerryn	Morrison	Senior Manager: Africa	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Gauteng Wetland Forum	Ms	Keitumetse	Mekgoe	DEA Provincial Coordinator	Gauteng
Environmental NGO's	Mining Affected Communities United in Action (MACUA) Ekurhuleni	Mr	Meshack	Mbangula		Gauteng
Environmental NGO's	Gauteng Wetland Forum	Mr	Bismark	Mashau	Chairperson	Gauteng
Environmental NGO's	Wildlife and Environmental Society of South Africa (WESSA)	Ms	Tevya	Lotriet	Senior Sustainability Programme Manager	Gauteng
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Ian	Little	Head of Conservation and Science	Gauteng
Environmental NGO's	Federation for Sustainable Environment (FSE)	Ms	Mariette	Liefferink	Chief Executive Officer	Gauteng
Environmental NGO's	Earthlife Africa Johannesburg	Ms	Makoma	Lekalakala	Director	Gauteng
Environmental NGO's	WESSA (Wildlife & Environmental Society of South Africa) Springs & Nigel branch	Mr	Peter	Law		Gauteng
Environmental NGO's	South African Human Rights Commission	Ms	Chantal	Kisoon	CEO PA	Gauteng
Environmental NGO's	Klipwas	Mr	Dennis	Jane	Operations	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	Simo	Gumede	Logistics and Administration Lead	Gauteng
Environmental NGO's	Johannesburg Heritage Foundation	Mr	Wynand	Dreyer	Secretary of the Joint Plans Committee	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Environmental NGO's	Birdlife South Africa (BLSA)	Dr	Kirsten	Day	Policy & Advocacy Manager	Gauteng
Environmental NGO's	Endangered Wildlife Trust (EWT)	Dr	Oliver	Cowan	Conservation Science Officer	Gauteng
Environmental NGO's	Council of Geosciences	Mr	Henk	Coetzee	Environmental Manager	Gauteng
Environmental NGO's	Benchmarks Foundation (BMF)	Mr	Moses	Cloete	Director	Gauteng
Environmental NGO's	South African Human Rights Commission	Mr	Wisani	Baloyi	Communications Co-ordinator	Gauteng
Environmental NGO's	Centre for Environmental Rights (CER)	Mr	Brandon	Abdinor	Programme Head: Pollution & Climate Change	Gauteng
Environmental NGO's	Gauteng Wetland Forum (Downstream)	Ms	Lumka	Kuse	Chairman	Gauteng
Farmers Association	African Farmers' Association of South Africa (AFASA)	Ms	Nicky	Mabokela	Gauteng Chairperson	Gauteng
Indirectly Affected Landowner, Local Municipality	City of Ekurhuleni Metropolitan Municipality	Dr	Zenzo	Ndimma	Property Management Division, Real Estate Department	Gauteng
Indirectly Affected Landowner	Private Landowner	Mr	Ronald Erol	Hirschowitz	Landowner	Gauteng
Indirectly Affected Landowner	Heidi & Tskane Eiendomme Pty Ltd	Mr	Nizam Uddi	Omar	Director	Gauteng
Indirectly Affected Landowner	Nkomo Prop CC				Landowner	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Indirectly Affected Landowner	Multi-Waste Pty Ltd				Landowner	Gauteng
Labour Union	Congress of South Africa Trade Union (COSATU)	Mr	Nomthunzi	Unknown	Gauteng Spokesman	Gauteng
Labour Union	National Union of Metal Workers of South Africa (NUMSA)	Ms	Zwiitwaho	Raidane	RLA - Legal Representative	Gauteng
Labour Union	National Union of Mine Workers (NUM)	Mr	Thenji	Phoko	NUM National	Gauteng
Labour Union	National Union of Metal Workers of South Africa (NUMSA)	Mr	Gift	Nkabinde	RLO - Legal Representative	Gauteng
Libraries	Tsakane Public Library	Ms	Lindiwe	Shandu	Librarian	Gauteng
Libraries	Ekurhuleni: Public Library	Ms	Zanele	Mpevu	Librarian	Gauteng
Libraries	Henley on Klip Public Library	Ms	Ntswaki	Mofokeng	Librarian	Gauteng
Libraries	Brakpan Public Library	Ms	Vincent	Moabelo	Librarian	Gauteng
Libraries	Meyerton Public Library	Ms	Prudence	Matitwane	Librarian	Gauteng
Libraries	Zonkizizwe Public Library	Ms	Thuli	Mashigo	Librarian	Gauteng
Libraries	Randvaal Public Library	Ms	Mara	Frost	Librarian	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Business	KTL Machinery and Plant Hire	Ms	Marissa	van der Walt	Marketing & Sales	Gauteng
Local Business	KTL Machinery and Plant Hire	Mr	Charles	Le Roux	Director	Gauteng
Local Business	KTL Machinery and Plant Hire	Ms	Nicky	Botha	Plant Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Nkosindiphile	Xhakaza	Mayor	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Adv	Tersia	Visser	Area Manager: Property Management- Springs and Kwa-Thema CCA	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mrs	Adri	Venter	Municipal Managers PA	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Dudu	Twala	Area Manager: Brakpan CCA: City Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Betty	Thabethhe	Waste Management Services Division : Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Samukelo	Shongwe	Air Quality Section	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Themba	Ntuli	Caretaker Regional Executive Manager: Property Management	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Itumeleng	Nkoane	Area Manager: Germiston: City Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Victor	Nesengani	Waste Management Services Division : Compliance	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Scelo	Ndimma	Environmental Resource and Waste Management Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Helen	Naidoo	CRM Manager Brakpan / Springs	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Michael	Myrtl	Senior Property Officer: Property Management	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Christopher	Munyai	Brakpan Economic Development	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Bongeka	Mtyana	Environmental Resource and Waste Management Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Rebotile	Motau	CRM Manager Tsakane / Geluksdal	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Boitumelo	Mona	Governance and Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Makhudu	Molepo	Senior Environmental Health Practitioner	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Katlego	Mokwena	IDP Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Pheta P.	Mokoena	Waste Manager: EMM	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Thabang	Mokoena	Strategic Advisor -Office of the City Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Mpho	Mohale	Environmental Officer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Nonhlanhla	Mnisi	Waste Management Services Division : Compliance	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Kwanele	Mdletshe	Environmental Resource and Waste Management Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Bafana	Mazibuko	Disaster & Emergency Services Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Dr	Imogen	Mashazi	Municipal Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Dr	Ewert	Maseko	Senior Property Officer: Property Management Springs and Kwa-Thema CCA	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Smuts	Marais	Water Quality Section	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Martha	Maluleke	Social & Health Department - Springs	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Mhlengi	Makhubane	Emergency Services	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Ntambudzeni	Makhari	Acting Area Manager: City Planning - Springs	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Gerhard	Mac Carron	Ekurhuleni Spatial Planning	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Lilian	Kwakwa	Environmental Resource and Waste Management Department	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Koekemoer	Manager Environmental Health	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Rendani	Khorombi	Waste Management Services Division : Compliance	Gauteng
Local Municipality	Midvaal Local Municipality	Mr	Steyn	Hannes	Disaster Management: Chief Fire Officer	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Maggy	Hadebe	Ekurhuleni Spatial Planning	Gauteng
Local Municipality	Midvaal Local Municipality	Mr	Anton	Groenewald	Municipal Manager	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Regina	Gosebo	Senior Admin	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Sthembiso	Garane	LED Manager: (HOD: Economic Development)	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Moses	Gafane	Health & Social Department - Germiston / Delmore /Brakpan	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Hennie	Croucamp	Emergency Services Codes	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Johan	Crafford	City Planning: Chief Building Inspector	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Gemina	Chabalala	Waste Management Services Division: Compliance Department of Environmental Re	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Martin	Bekker	Spatial Planning, City Planning Department	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	Lesedi Local Municipality	Ms	Marinda	van Kraayenburg	Senior Environmental Health Practitioner	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Cllr	Alex	Thobejane	Ward Councillor: Ward 108	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Cllr	Nkululeko	Sidu	Ward Councillor: Ward 45	Gauteng
Local Municipality	Midvaal Local Municipality	Cllr	P	Pretorius	Ward Councillor: Ward 14	Gauteng
Local Municipality	Midvaal Local Municipality	Cllr	F	Peters	Ward Councillor: Ward 1	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Mr	Sanele	Ngobene	Ward Councillor: Ward 61	Gauteng
Local Municipality	Midvaal Local Municipality	Cllr	M	Myburg	Ward Councillor: Ward 4	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Cllr	Thekiso	Motsopi	Ward Councillor: Ward 64	Gauteng
Local Municipality	Lesedi Local Municipality	Ms	Lerato	Mokoena	GIS Specialist	Gauteng
Local Municipality	City of Ekurhuleni Metropolitan Municipality	Ms	Annah	Mnguni	Ward Councillor: Ward 112	Gauteng
Local Municipality	Lesedi Local Municipality	Mr	Sizwe	Mazibuko	HOD: Local Economic Development and Planning	Gauteng
Local Municipality	Sedibeng District Local Municipality	Mr	Motsumi	Mathe	Municipal Manager	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality	Lesedi Local Municipality	Mr	Mandla	Masina	Chief Fire Officer	Gauteng
Local Municipality	Lesedi Local Municipality	Mr	Lloyd	Machimana	Senior Town Planner	Gauteng
Local Municipality	Midvaal Local Municipality	Mr	Thabo	Mabula	Waste Management: Manager	Gauteng
Local Municipality	Lesedi Local Municipality	Ms	Nompumelelo	Khawula	HOD: Community Services	Gauteng
Local Municipality	Midvaal Local Municipality	Mr	Samukelo	Simamane	Assistant Director: Environmental Management:	Gauteng
Local Municipality, Ward Councillor	City of Ekurhuleni Metropolitan Municipality	Cllr	Henry	Buitendacht	Ward Councillor: Ward 82	Gauteng
Local Municipality, Ward Councillor	Midvaal Local Municipality	Cllr	J	Viljoen	Ward Councillor: Ward 13	Gauteng
Local Municipality, Ward Councillor	City of Ekurhuleni Metropolitan Municipality	Cllr	Thabiso	Letsoela	Ward Councillor: Ward 62	Gauteng
Local Municipality, Ward Councillor	Midvaal Local Municipality	Cllr	M	Kruger	Ward Councillor: Ward 12	Gauteng
Local Municipality, Ward Councillor	Lesedi Local Municipality	Mr	Obed	Kgolane	Waste Management Specialist	Gauteng
Local Municipality, Ward Councillor	Midvaal Local Municipality	Cllr	B	Jordan	Ward Councillor: Ward 3	Gauteng
Local Municipality, Ward Councillor	Midvaal Local Municipality	Cllr	S	Jan van Rensburg	Ward Councillor: Ward 2	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Local Municipality, Ward Councillor	Midvaal Local Municipality	Cllr	A	Dickson	Ward Councillor: Ward 15	Gauteng
Local Municipality, Ward Councillor	City of Ekurhuleni Metropolitan Municipality	Cllr	Petrus Andile	Daemane	Ward Councillor: Ward 99	Gauteng
Local Municipality, Ward Councillor	Lesedi Local Municipality	Cllr		Naidoo	Ward Councillor: Ward 10	Gauteng
Local Municipality, Ward Councillor	City of Ekurhuleni Metropolitan Municipality	Cllr	Precious	Luvalo	Ward Councillor: Ward 99	Gauteng
Local Municipality, Ward Councillor	City of Ekurhuleni Metropolitan Municipality	Cllr	Moses	Sibiya	Ward Councillor: Ward 85	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Siyabonga	Vezi	Acting Gauteng Regional Director	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Dr	Mpho	Tshitangoni	Chief Director: Land Remediation	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Thabelo	Tshipate	Case Officer	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mpho Patience	Thenga		Gauteng
National Government	Department of water and Sanitation (DWS)	Ms	Puseletso	Teffo	Candidate Scientific Technician	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Mulalo	Sundani	National Office: Directorate: Forestry Regulation and Oversight: Environmental	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Mulalo	Sidogi	Environmental Officer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Amukelani	Shiburi	Land Claim Officer	Gauteng
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Albertina	Setsiba	PS	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Vuyiswa	Qobo	Environmental Officer	Gauteng
National Government	Department of Transport	Ms	Michelle	Phenya	Personal Assistant to the Director-General	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Pumeza	Nodada	Chief Director: Forestry Management	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Victor	Nkuna	Environmental Officer	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Andrew	Ngubeni		Gauteng
National Government	South African Heritage Resources Agency	Ms	Nokusho	Ngobeni	Heritage Officer	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Ms	Buyisiwe Ntokozo	Ngcwabe	DDG- Mineral Policy & Promotions	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Lutendo	Neduvhuledza	Town Planning Services (HO)	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Rendani	Ndou	Control Environmental Officer	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Fundiswa	Ndaba	Commission on Restitution of Land Rights- Gauteng Regional Officer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Water and Sanitation (DWS)	Ms	Londolani	Mutshekwa	Mine Water Quality Management	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Desmond	Mutshaine	Geochemistry	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mashudu	Mukwevho	Resource Auditor	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Khathutshelo	Mudau	Specialised Production	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Mashudu	Mudau	Protected Areas Planning and Management Effectiveness	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Ayanda	Mtetwa	National	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	David	Msiza	Mine Health and Safety Inspectorate	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Desire	Msimango		Gauteng
National Government	National Nuclear Regulator (NNR)	Mr	Patle	Mohajane	Programme Manager: NORM	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Ms	Phyllistas	Mmakola	Resource Auditor	Gauteng
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Loyiso	Mkwana	Chief Director	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Jacob	Mbele	Director General PA: Ms Mamabefu Modipa	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Water and Sanitation (DWS)	Mr	Andrew	Mbedzi	Instream	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Lerato	Mbatha		Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Nosie	Mazwi	Director: Mining and Industry Water Quality Regulation	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Boikanyo	Matsha	Senior Forestry Regulation Officer	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development (DALRRD)	Mr	Solomon	Maruma	Land Claims Gauteng Regional Officer	Gauteng
National Government	Department of Agriculture, Land Reform and Rural Development	Ms	Mashudu	Marubini	Deputy Director	Gauteng
National Government	Department of Mineral Resources (DMRE)	Mr	Tseliso	Maqubela	Minerals and Petroleum Regulation	Gauteng
National Government	Department of Rural Development and Land Reform (DRDLR)	Mr	Harry	Maphutha	Regional Land Claims Commissioner	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Noe	Malise	Resource Protection & Waste	Gauteng
National Government	Department of Mineral Resources (DMRE)	Adv	Mmadikeledi	Malebe	DDG: Mineral Regulation	Gauteng
National Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Nhlanhla	Makhathini	Assistant Director	Gauteng
National Government	National Department of Health (DOH)	Ms	Belinda	Makhafola	Directorate: Environmental Health Services	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Lucas	Mahlangu	Control Environmental Officer: Waste Licensing	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Mogadi	Machaba	Environmental Officer	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Rudzani	Mabogo	Head of Environment: Assistant Director	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Ms	Jabulile	Mabaso	Acting Regional Manager	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Faith Fulufhelo	Khosa	Gauteng Regional Representative	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Ms	Carol	Khanyile	Gauteng Regional: Secretary	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Santie	Janse van Rensburg	Legal	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Malusi	Ganiso	Town Planning Services (HO)	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Candace	Enoch	Environmental Officer	Gauteng
National Government	Department of Public Works and Infrastructure (DPWI)	Mr	Thapelo	Duma	PA to Regional Manager	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Themba	Dlamini	Gauteng Regional Office	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Adriaan	Claassen	Chief Engineer	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
National Government	Department of Water and Sanitation (DWS)	Ms	Portia C	Chawane	Control Environmental Officer Grade A	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Nicholas	Chavalala	Regional Manager: Environmental Management	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Lydia	Bosoga	Deputy Director: Sustainable Land Management	Gauteng
National Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Obed	Baloyi	Environmental Impact Evaluation	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Kevin Koketso	Aphane	GT	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Calisile	Simelane	Control Environmental Officer, Vaal Dam Catchment Forum	Gauteng
National Government	Department of Water and Sanitation (DWS)	Ms	Nosibusiso	Mfunywa	Control Environmental Officer, Taaibosspuit Catchment Forum	Gauteng
National Government	Department of Mineral Resources and Energy (DMRE)	Mr	Musa	Mangobe	Gauteng Environment	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Mabona (Rodney)	Lesiba	Control Environmental Officer, Klip River and Natalspruit Catchment Forum Assis	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Philemon	Khwinana	Control Environmental Officer, Blesbospruit and Rietspruit Catchment Forum Ch	Gauteng
National Government	Department of Water and Sanitation (DWS)	Mr	Jacques	Jansen Van Vuuren	Vaal Dam Catchment Forum, Chairperson	Gauteng
Nature Reserve	SANParks	Ms	Nakisani	Namethe	Personal Assistant	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Nature Reserve	Suikerbosrand Nature Reserve	Mr	Mpere	Mokoka	Manager	Gauteng
Nature Reserve	Suikerbosrand Nature Reserve	Mr	Talfryn	Harris	Chairperson	Gauteng
Nature Reserve	Suikerbosrant Nature Reserve	Mr	Mavhungu	Malima	Environmental Education	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Anga	Yaphi	PS - Biodiversity	Gauteng
Provincial Government	Department of Forestry, Fisheries and the Environment (DFFE)	Ms	Christina	Seegers	Protected Areas	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Tendani	Rambuda	Control Environmental Officer Grade B	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Joshua	Quinton	PSG B	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Mokutu	Nketu		Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Eric	Mulibana	Air Quality	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Steven	Mukhola	Director	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Ms	Lydia	Muditambi	Air Quality	Gauteng
Provincial Government	Department of Health Johannesburg District	Ms	Thabiso	Motlhamme	African Director: Environment Department	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Dan	Motaung	Deputy Director: EIA	Gauteng
Provincial Government	Gauteng: Department of Economic Development	Mr	Blake	Mosley-Lefatola		Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Tjatja	Mosia	Environmental Officer	Gauteng
Provincial Government	Gauteng Department of Agriculture and Rural Development (GDARD)	Mr	Erick	Moletsane	Environmental Officer	Gauteng
Provincial Government	Department of Health Westonaria District: West Rand District Health Services	Ms	Sentle	Mofokeng	Chief Environmental Health Practitioner	Gauteng
Provincial Government	Department of Health: Gauteng Province	Ms	Londiwe	Mkhize	Environmental Health Practitioner- Ekurhuleni District	Gauteng
Provincial Government	Gauteng Department of Roads and Transport	Dr	Thulani	Mdadane	Gauteng Head of Department	Gauteng
Provincial Government	Gauteng Department: Co-operative Governance and Traditional Affairs	Mr	Lebogang Isaac	Maile	MEC: Human Settlements, Urban Planning and (COGTA) (ANC)	Gauteng
Provincial Government	Department of Health Johannesburg District	Ms	Kgomotso	Leola	Environmental Health Practitioner	Gauteng
Provincial Government	Department of Health: Gauteng Province	Mr	Cheleng	Khotle	Ekurhuleni District	Gauteng
Provincial Government	Department of Forestry, Fisheries and the Environment (DFFE)	Mr	Shumani	Dzivhani	Deputy Director: Forestry Regulation	Gauteng
Provincial Government	Department of Health: Gauteng Province	Mr	Simon	Choma	Acting Chief Director: Ekurhuleni District	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Provincial Government, Directly Affected Landowner	Gauteng Department of Roads and Transport	Ms	Mmaphuti	Mokobane	Deputy Director General: Roads Branch	Gauteng
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Mr	Edward	Nduvheni	Environmental Manager	Gauteng
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Ms	Mpho	Mosia	Environmental Officer	Gauteng
Water Bodies -Institution	Johannesburg Water (Pty) Ltd	Mr	Thendo Stanely	Makuya	Environmental Specialist	Gauteng
Water Bodies -Institution	Randwater	Ms	Zesha	Ramrathan	Civil Engineering Technologist	Gauteng
Water Bodies -Institution	Randwater	Ms	Nomkhosi	Mohlahlo		Gauteng
Water Bodies -Institution	Randwater	Mr	Thokozani	Masilela	Environmental Assessor	Gauteng
Water Bodies -Institution	Randwater	Mr	Jimmy	Maluleke	Environmental Co-ordinator	Gauteng
Water Bodies -Institution	Randwater	Ms	Natalie	Koneight	Secretary - Nursery-CD	Gauteng
Water Bodies -Institution	Randwater	Mr	Lesley	Hoy	Manager Environmental Assessments & Compliance	Gauteng
Water Bodies -Institution	Randwater	Mr	Noel	Dzhivhuho	Civil Engineering Assistant - HO	Gauteng
Water Bodies -Institution	Randwater	Mr	Marc	de Fontein	Senior Water Quality Advisor & Blesbokspruit to Forum Member	Gauteng

I&AP Sector	Organisation	Mr/Ms	First Name	Last Name	Position	Province
Water Bodies -Institution	Water Research Commission	Ms	Charmaine	Khanyile	Water Use & Waste Management	Gauteng
Water Bodies -Institution	Water Research Commission	Mr	Bennie	Mokgonyana	Coordinator	Gauteng
Water Bodies -Institution	Water Research Commission	Ms	Penny	Jaca	Water Resource Management	Gauteng
Water Bodies -Institution	Water Research Commission	Ms	Sherly	Machelisi	Water Use & Waste Management	Gauteng
Water Bodies -Institution	Water Research Commission	Mr	Jay	Bhagwan	Executive Manager: Water Use and Waste Management	Gauteng
Water Bodies -Institution	Water Research Commission	Dr	Shafick	Adams		Gauteng

**Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the  
Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province**

**Landowners Database Withok Project Area**

**Directly Affected Landowners**

<b>Farm Name &amp; Number</b>	<b>Farm ID</b>	<b>Farm Portion</b>	<b>Owner-Windeed</b>	<b>Farm owner</b>	<b>Contact Person</b>
Withok 131	IR	77	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Withok 131	IR	78	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Withok 131	IR	79	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Withok 131	IR	80	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Vlakfontein 161	IR	14	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Vlakfontein 161	IR	15	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Vlakfontein 161	IR	20	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Rooikraal 156	IR	11	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens

## Indirectly Affected Landowners

Farm Name & Number	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Withok 131	IR	0 (RE)	No windeed info	No windeed info	No windeed info
Withok 131	IR	Withok 398	No windeed info	No windeed info	No windeed info
Withok 131	IR	Withok 375 (Holdings)	National Government of The Republic Of South Africa	Department of Public Works and Infrastructure (DPWI)	Ms Friedah Khoza, Property Manager
Withok 131	IR	Withok 376 (Holdings)	Municipality Brakpan	City of Ekurhuleni Metropolitan Municipality	Dr Zenzo Ndimma, Property Management Division, Real Estate Department
Withok 131	IR	1 of Withok 397 (Holdings)	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Withok 131	IR	Withok 397 (Holdings)	Hirschowitz Erol Ronald	Mr Ronald Erol Hirschowitz	Mr Ronald Erol Hirschowitz
Withok 131	IR	76	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Glen Roy 132	IR	0 (RE)	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Rooikraal 156	IR	10	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Rooikraal 156	IR	11	Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Vlakfontein 161	IR	5	Town Council of Brakpan	City of Ekurhuleni Metropolitan Municipality	Dr Zenzo Ndimma, Property Management Division, Real Estate Department

Farm Name & Number	Farm ID	Farm Portion	Owner-Windeed	Farm owner	Contact Person
Vlakfontein 161	IR	8 (RE)	Municipality Tsakane	City of Ekurhuleni Metropolitan Municipality	Dr Zenzo Ndim, Property Management Division, Real Estate Department
Vlakfontein 161	IR	9	Heidi & Tskane Eiendomme Pty Ltd	Heidi & Tskane Eiendomme Pty Ltd	Mr Nizam Uddi Omar, Director
Vlakfontein 161	IR	12	Nkomo Prop CC	Nkomo Prop CC	No windeed info
Vlakfontein 161	IR	18	Multi-Waste Pty Ltd	Multi-Waste (Jet Park) (Pty)	No windeed info
Witklip 172	IR	10	National Government of the Republic of South Africa	Department of Public Works and Infrastructure (DPWI)	Ms Friedah Khoza, Property Manager
Glen Roy 155	IR	1	National Government of The Republic Of South Africa	Department of Public Works and Infrastructure (DPWI)	Ms Friedah Khoza, Property Manager
Rooikraal 156	IR	16	Knights Gold Mining Co Ltd/ Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens
Rooikraal 156	IR	0	Knights Gold Mining Co Ltd/ Ergo Mining Pty Ltd	Ergo Mining Pty Ltd	Mr Greg Ovens

## Appendix C2: Land Claims

## Vanessa Viljoen

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**From:** Vanessa Viljoen  
**Sent:** Friday, 18 October 2024 10:15  
**To:** Solomon Maruma  
**Cc:** Gerlinde Wilreker; Thuli Phakathi  
**Subject:** EA and IWULA for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province  
**Attachments:** Lclaims\_Let.pdf

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) and Integrated Water Use Licence application (IWULA) process which is aimed at critically evaluating the potential environmental and social impacts of the recommissioning of the Withok Tailing Storage Facility (TSF) (the proposed project).

Ergo Mining (Pty) Ltd (Ergo) reprocesses historical Mine dumps and Tailings Storage Facilities (TSFs) throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. Brakpan TSF is reaching its designed capacity and height as such Ergo has identified the Withok TSF footprint as a potential future deposition site. The Withok TSF footprint, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has been previously reclaimed.

The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR, Portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR owned by Ergo, are located in the magisterial subdistrict of Brakpan. The TSF is situated 7km south of Brakpan, in Ward 99 & 112 of the City of Ekurhuleni Metropolitan Municipality.

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

Kind Regards,



**Vanessa Viljoen | Senior Stakeholder Engagement Consultant | Kongiwe Environmental (Pty) Ltd.**

Tel: +27 (10) 140 1725 | Cell: +27 (71) 485 5388 | Fax: +27 (86) 476 6438 | Email: [vviljoen@kongiwe.com](mailto:vviljoen@kongiwe.com)

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Friday, 18 October 2024

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

## Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, 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) and Integrated Water Use Licence application (IWULA) process which is aimed at critically evaluating the potential environmental and social impacts of the recommissioning of the Withok Tailing Storage Facility (TSF) (the proposed project).

Ergo Mining (Pty) Ltd (Ergo) reprocesses historical Mine dumps and Tailings Storage Facilities (TSFs) throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. Brakpan TSF is reaching its designed capacity and height as such Ergo has identified the Withok TSF footprint as a potential future deposition site. The Withok TSF footprint, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has been previously reclaimed.

The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR, Portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR owned by Ergo, are located in the magisterial subdistrict of Brakpan. The TSF is situated 7km south of Brakpan, in Ward 99 & 112 of the City of Ekurhuleni Metropolitan Municipality.

The project area is made up of 8 farm portions 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 & Number	Farm ID	Farm Portion	Landowner
Withok 131	IR	77	Ergo Mining Pty Ltd
Withok 131	IR	78	Ergo Mining Pty Ltd
Withok 131	IR	79	Ergo Mining Pty Ltd
Withok 131	IR	80	Ergo Mining Pty Ltd
Vlakfontein 161	IR	14	Ergo Mining Pty Ltd
Vlakfontein 161	IR	15	Ergo Mining Pty Ltd

Farm Name & Number	Farm ID	Farm Portion	Landowner
Vlakfontein 161	IR	20	Ergo Mining Pty Ltd
Rooikraal 156	IR	11	Ergo Mining Pty Ltd

Kongiwe wishes 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,

A handwritten signature in black ink, appearing to read "Viljoen".

**Vanessa Viljoen**  
**Stakeholder Engagement Consultant**

## Appendix C3: Consultation Materials

# Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province

## Background Information Document

DMRE reference number: GP30/5/1/2/2(158) MR

DWS reference number: WU38174

**October 2024**

### PURPOSE OF THE DOCUMENT

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

- ❖ The proposed recommissioning of the Withok Tailings Storage Facility (TSF);
- ❖ The independent Environmental Impact Assessment (EIA) and the Public Participation Process (PPP) to be undertaken as part of the Environmental Authorisation process;
- ❖ The Integrated Water Use Licence Application (IWULA) 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) Ltd (Ergo) is reprocessing historical gold mine dumps and Tailings Storage Facilities (TSFs) throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. The Brakpan TSF will in future reach its designed capacity and height and Ergo is investigating other viable deposition sites in the area, which will enable it to continue with its reclamation operations.

Ergo has identified the footprint of the original Withok TSF (Withok TSF footprint) as a potential deposition site. Withok TSF was reclaimed by Ergo up until 2006 where it was processed and deposited onto the current Brakpan TSF. The

Withok TSF footprint has been envisaged for recommissioning since the new order Mining Right was issued to Ergo Mining in 2012. The Withok TSF footprint, although managed as an active mining area, has self-rehabilitated over the past decade. The recommissioning of the TSF triggers environmental permitting requirements.

The following facility components are currently present on site:

- ❖ Access roads;
- ❖ Withok TSF footprint;
- ❖ Withok pump station; and
- ❖ Attenuation dam, sump and diversion pipeline.

The proposed recommissioned Withok TSF will buttress the southern flank of the Brakpan TSF. The footprint required for the new Withok TSF is approximately 400ha, which is less than the original Withok TSF footprint of approximately 550ha. The maximum vertical height at the end of the facility life is planned to be 103m.

The intended recommissioning of the Withok TSF is to utilize similar methodology as previously deployed, i.e. cyclone deposition with a floating decant pumping system. However, the first phases (lower portion) of development will be on a centreline basis to provide a much wider underflow prism, improving geotechnical characteristics and drainage. The principle of cyclone development is to create a sufficiently robust underflow perimeter wall to contain the overflow with adequate freeboard and inherent stability to avoid overtopping and to prevent side slope failure.

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## TECHNICAL DETAILS

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The recommissioning of the Withok TSF entails the following:

- ❖ Upgrading of the current footprint to allow for the redevelopment of the Withok TSF. This will involve the following civil engineering work:
  - A sump and stormwater diversion trench.
  - A toe embankment which acts as an access road and slurry distribution pipeline servitude.
  - A starter embankment.
  - An HDPE liner system.
  - Toe drain, intermediate drain, main drain, radial drain, and interface drain platforms.
  - Drainage outlet pipe platforms (cross walls).

- Toe drain, intermediate drain, main drain, radial, basin drain, interface blanket drain, as well as below liner seepage cutoff/collector drains.
- A decant berm and pool wall.
- Drainage collector pipes.
- A return water dam (RWD) (approved DWS liner system) and return water pumping system.
- A floating decant barge pumping system, as well as a decant pipeline.
- Slurry feed pipelines.
- Slurry distribution pipelines.
- An HDPE pipe ring main.
- 250mm diameter cyclones, complete with feed pipes, valves, overflow pipes.
- ❖ Deposition of tailings.
- ❖ Water management.
- ❖ Temporary construction camp.
- ❖ Borrow pits for material required during civil works and concurrent rehabilitation of the side slopes of the Withok TSF.

The water management plan details:

- ❖ Dirty side slope storm water management on the TSF will be achieved through chutes discharging into catchment paddocks, some of which decant into a collector pipe. This water will be piped to the RWD and pumped to the Brakpan RWD and from there to the Ergo plant for re-use in the system. The remainder is evaporated in the catchment paddocks.
- ❖ Drain flows will also be collected in the same collector pipe.
- ❖ Decant return is pumped directly to the Brakpan RWD for re-use in the process. Most dirty side slope storm water and all drain water are routed to the Withok RWD. The remaining dirty side slope storm water is evaporated in the catchment paddocks.

Because decant water is not pumped to the Withok RWD, a silt trap at the Withok RWD is not required. Desilting is taking place in the catchment paddocks. Water is pumped to the Brakpan RWD for re-use in the process.

- ❖ The Withok RWD must have a capacity of at least 65 000m<sup>3</sup> to comply with the Department of Water and Sanitation's Regulations on Use of Water for Mining and Related Activities aimed at the Protection of Water Resources (Regulation GN 704). Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Currently, the design capacity of the Withok RWD is 100 000m<sup>3</sup>.
- ❖ Water must be returned to process, from the Withok RWD at a rate of up to 9 800m<sup>3</sup>/day.
- ❖ There is an attenuation dam located to the east of Heidelberg Road. Drainage from the Tsakane township collects in the attenuation dam. From there, overflow is released into a culvert which crosses below Heidelberg Road and into a sump. From there an underground pipe diverts the stormwater under the site and releases the water into a tributary to the

Rietspruit, a short distance west of the site. The new design, however, includes a storm water diversion trench, which will divert the stormwater water from the sump, east to west along the southern flank of the optimised Withok TSF footprint. Upgrades to the attenuation dam will be undertaken as part of the proposed project.

The Withok TSF will be designed, constructed and managed as per the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012). Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM). The final life of the Withok TSF design, construction, operation and monitoring will align with these requirements where appropriate.

Based on an average deposition rate of 1.3 million dry tonnes per month, the design life of the facility is approximately 20 years. Ergo is submitting this form in support of an integrated NEMA and NEM:WA application for the Proposed Project.

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## LOCALITY

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The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR, Portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR owned by Ergo, are located in the magisterial subdistrict of Brakpan. The TSF is situated 7km south of Brakpan, in Ward 99 & 112 of the City of Ekurhuleni Metropolitan Municipality.

The extent of the current Withok TSF footprint is approximately 400 hectares. 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 & Number	Farm ID	Farm Portion	Landowner
Withok 131	IR	77	Ergo Mining Pty Ltd
Withok 131	IR	78	Ergo Mining Pty Ltd
Withok 131	IR	79	Ergo Mining Pty Ltd
Withok 131	IR	80	Ergo Mining Pty Ltd
Vlakfontein 161	IR	14	Ergo Mining Pty Ltd
Vlakfontein 161	IR	15	Ergo Mining Pty Ltd
Vlakfontein 161	IR	20	Ergo Mining Pty Ltd
Rooikraal 156	IR	11	Ergo Mining Pty Ltd

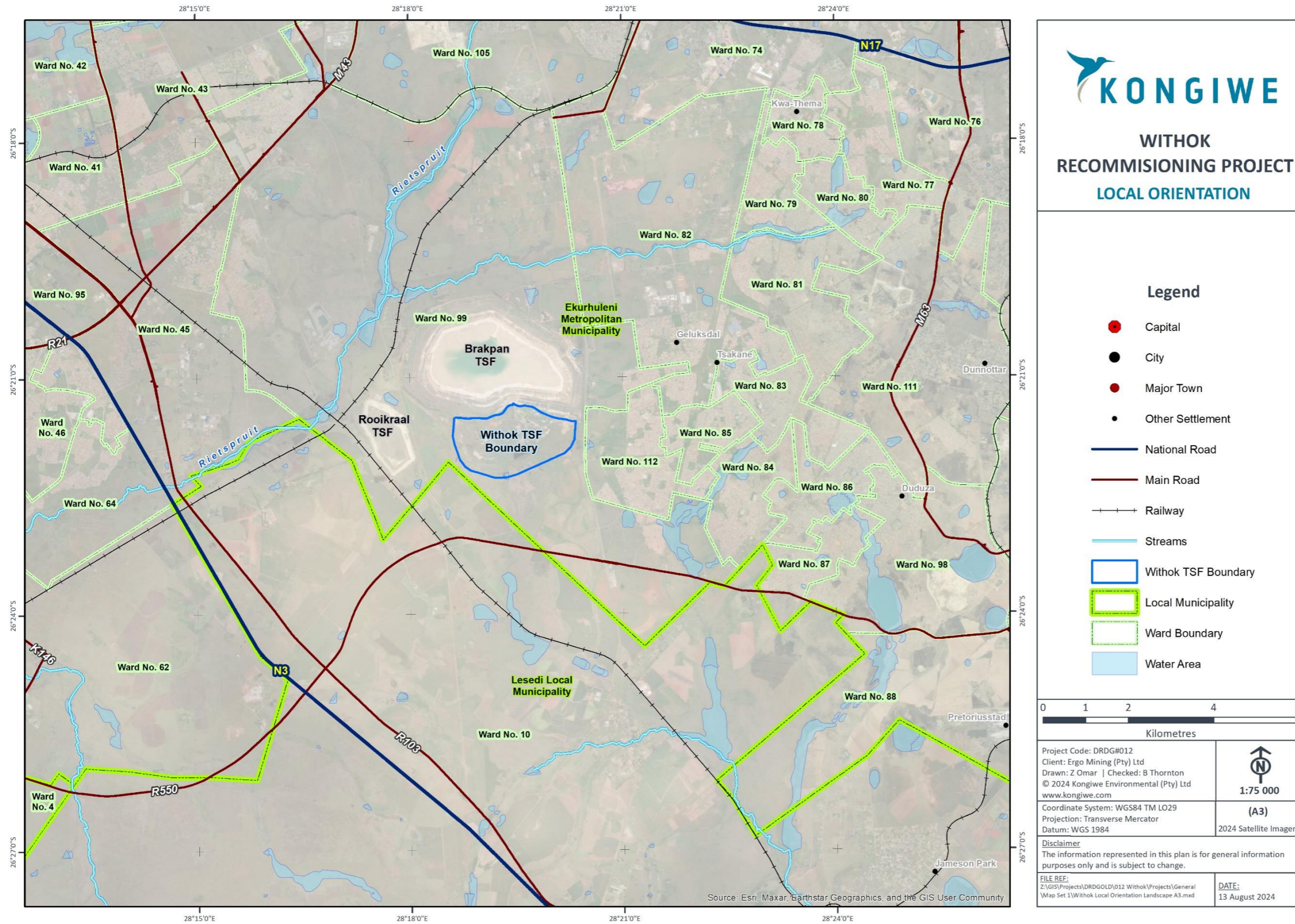


Figure 1: Withok Locality Map

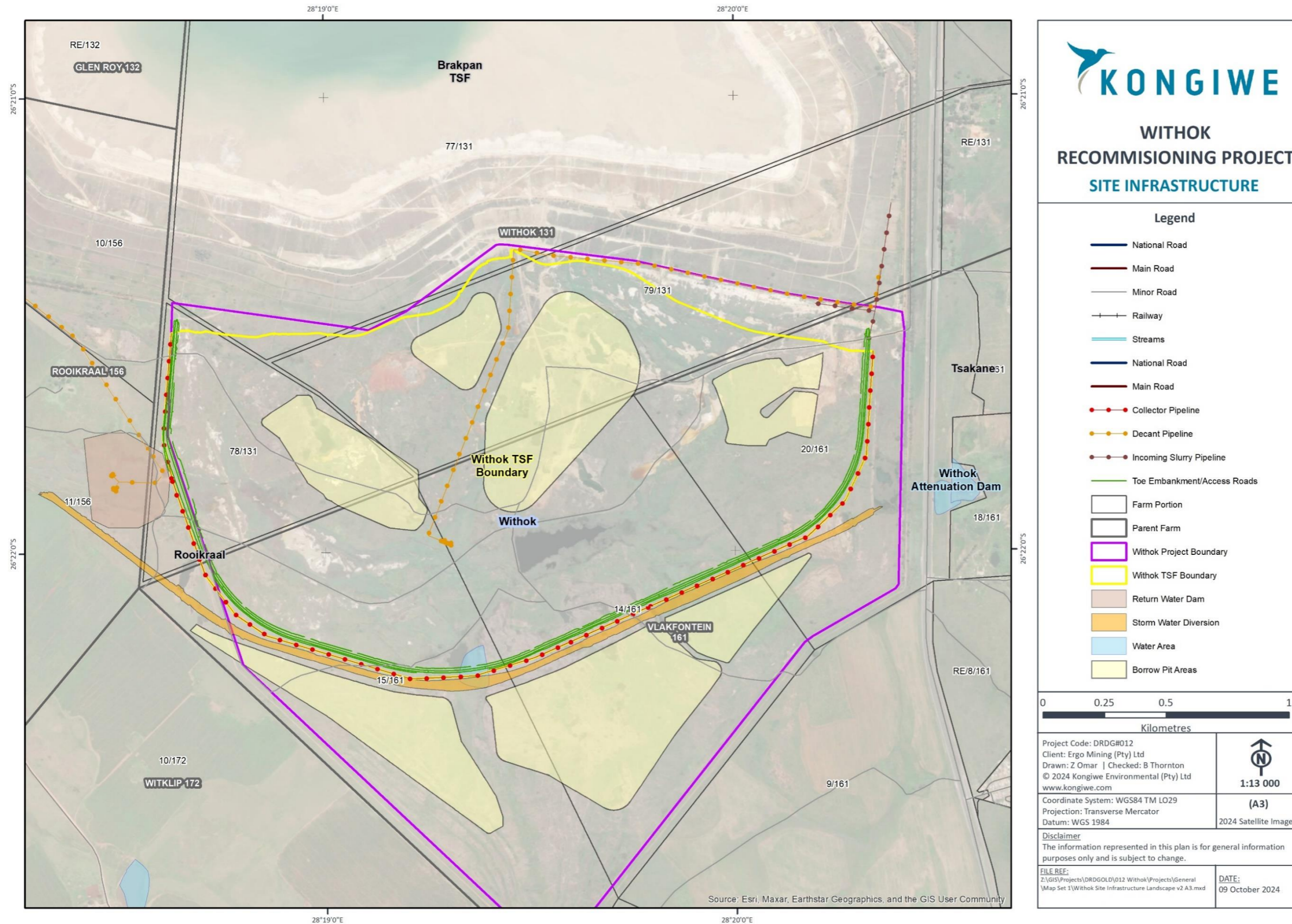
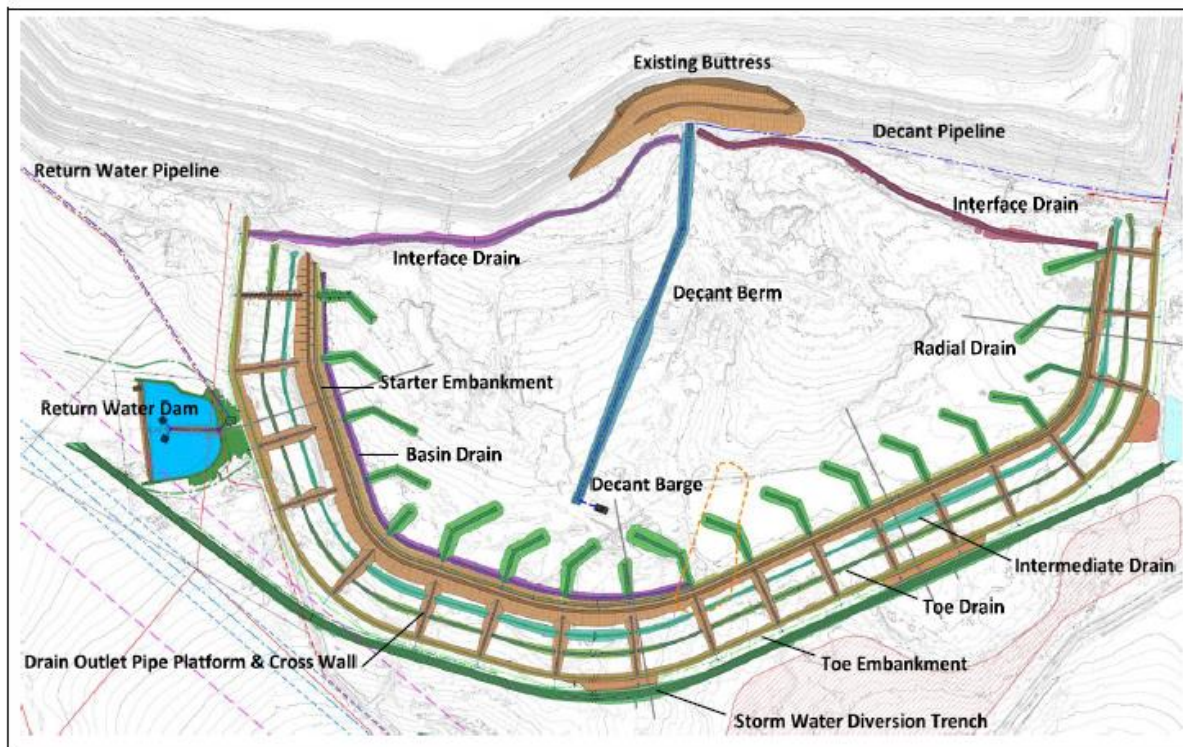


Figure 2: Project infrastructure

## INFRASTRUCTURE

The following infrastructure will be utilised on site:

- ❖ Access roads;
- ❖ Withok TSF;
- ❖ Slurry deposition pipelines;
- ❖ Return water pipelines;
- ❖ RWD;
- ❖ Catchment paddocks;
- ❖ Sump and stormwater diversion trench; and
- ❖ Temporary construction camp which will include site office, vehicle service area, hydrocarbon storage, diesel storage, and septic tanks.



**Figure 3: Pre-deposition civil works showing site infrastructure**

## ACCESS

Access to the Brakpan/Withok TSF is via existing access roads. The R23 runs in a north-south direction directly to the east of the Brakpan/Withok TSF.

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## LIFE OF OPERATION

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Based on an average deposition rate of 1.3 million dry tonnes per month, the design life of the facility is approximately 20 years.

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## REHABILITATION

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Once deposition is completed, the Withok TSF will need to be rehabilitated:

- ❖ The side slopes will be progressively clad. The cladding provides a natural growing medium for the vegetation, but must also fulfil other crucial requirements. The cladding must contain sufficient gravel to impart “armouring” for erosion resistance (water and wind) and, secondly, the clay content must not be too high that moisture is prevented from moving to the surface. Material stockpiled for cladding also needs to be well selected.
- ❖ The side slope will require vegetating as soon as the cover material has been placed. The vegetation is to consist of a mix of trees, shrubs, and grasses of ideally indigenous vegetation. This vegetation of the slope will need to be undertaken through the planting of young plants and some hydroseeding.
- ❖ Storm water from the final rehabilitated side slopes is assumed to be clean and will be released to the environment utilising the storm water management infrastructure.
- ❖ The recommended closure concept is to paddock the top surface, while treating drain flows. The drain water can be treated to discharge quality and released into the receiving environment. Alternatively, this water can be treated to higher water quality standards for appropriate reuse. The brine from the treatment process will be pumped to the top surface where it will be evaporated. There will be significant periods where the paddocks are dry so no long-term brine ponds will form.
- ❖ The applicable parts of the operating infrastructure, i.e., power supply, seepage re-cycling and water storage dams and pump stations will be used and/or re-purposed to suit the post-closure requirements.

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## LEGISLATIVE FRAMEWORK

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

1. **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985<sup>1</sup> 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

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<sup>1</sup> 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

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 application is being made to the DWS:

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

**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	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
The collector pipe will exceed the length of 1000m and will have an internal diameter 0.8m. The Withok TSF is outside the urban edge.	Pipeline length: approximately 4.5km long Pipeline internal diameter: 0.8m Pipeline throughput: 126 litres/second	GNR 983 – Activity 9	The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		21 (c) & (i)
The development of pipelines for the transportation of reprocessed slurry. The Withok TSF is outside the urban edge.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 983 – Activity 10	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or		21 (c) & (i)

<sup>2</sup> Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities. These have not been specifically listed in this Application, but the necessary application will be submitted to the DWS

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			(ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		
The development of pipelines for the transportation of reprocessed slurry.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 984 – Activity 7	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods— (i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day; (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 50 cubic metres per day; or (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day.		21 (c) & (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
Construction and operation of the Withok return water dam	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 983 – Activity 12	<p>The development of—</p> <ul style="list-style-type: none"> <li>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</li> <li>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</li> </ul> <p>where such development occurs—</p> <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</li> </ul> <p>excluding—</p> <ul style="list-style-type: none"> <li>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</li> <li>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</li> </ul>		21 (g) 21(c) & (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			(dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.		
		GNR 983 – Activity 13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2.		21 (g) 21(c) & (i)
The construction and operation of the RWD	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 984 – Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding— (i) activities which are identified and included in Listing Notice 1 of 2014;		Section 21(g) Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			<p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>		
The upgrading of the Withok attenuation dam wall.		GNR 983 – Activity 19	<p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p>		Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			(a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.		
Re-establishment of the Withok TSF and associated infrastructure	TSF size: 400ha	GNR 983 – Activity 19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;  but excluding where such infilling, depositing, dredging, excavation, removal or moving-		Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			<p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>		
		GNR 984 – Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—	Category B – 10 The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste	Section 21(g) Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			<p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>	<p>management activity).</p> <p>Category B – 11          The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	
		GNR 984 – Activity 15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding		

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			<p>where such clearance of indigenous vegetation is required for:</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>		
Temporary hydrocarbon and diesel storage at the construction camp	To be determined	GNR 983 – Activity 14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.		Section 21(c) and (i)
Borrow pits		GNR 984 – Activity 15	<p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for:</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>		
		GNR 983 – Activity 21D	Any activity including the operation of that activity which requires an amendment or		Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			variation to a right or permit in terms of section 102 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity contained in this Listing Notice or in Listing Notice 3 of 2014, required for such amendment.		

## 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:

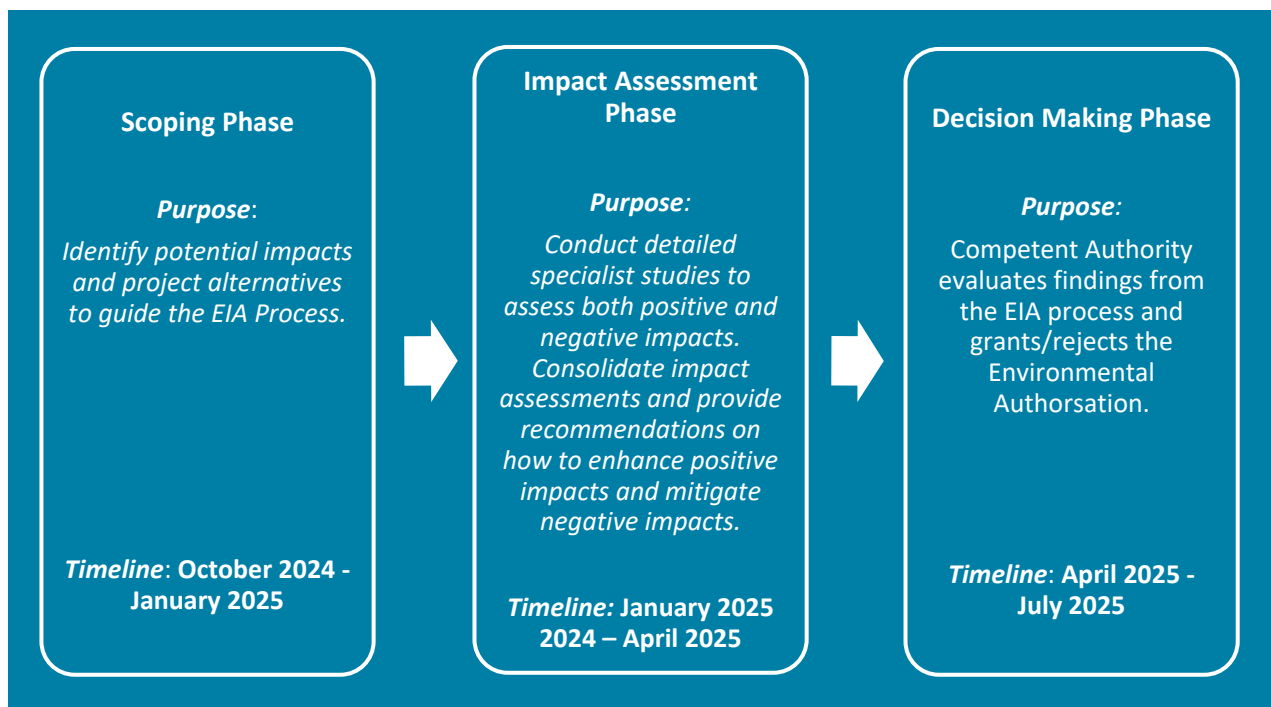


Figure 4: S& EIA process and the associated timeline

## INTEGRATED WATER USE LICENCE

An IWULA will be undertaken for water uses associated with Section 21 of the National Water Act, 1998 (Act No.36 of 1998) (NWA). Section 21 (c) and (i) activities are activities that impede or divert the flow of water in a watercourse; or which alter the bed, banks, course or characteristics of a watercourse. These can be activities such as the stream diversion, crossing of watercourses by roads, upgrading of the Withok attenuation dam wall, pipelines, or any other infrastructure within 100m of a river/stream or 500m of a wetland. Section 21 (g) activities are concerned with the disposing of waste in a manner which may detrimentally impact on a water resource. These includes activities such as the TSF itself, the disposal of effluent into a water containment facility, dust suppression of roads, etc. Section 21 (f) activities deal with the discharging of waste or water containing waste into a water resource. This includes the diverted stormwater discharge.

## SPECIALIST STUDIES

Various specialist studies are being 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 and Wetlands
- ❖ Surface Water
- ❖ Groundwater
- ❖ Air Quality
- ❖ Noise
- ❖ Socio-Economic Impact Assessment
- ❖ Visual
- ❖ Closure & Rehabilitation
- ❖ Health
- ❖ Radiation

## 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, 24 October 2024 until Friday, 22 November 2024**.

### The DSR will be made available as follows:

- ❖ Copies of the DSR will be made available for public review and comment on Kongiwe’s website: <https://kongiwe.com/projects/>
- ❖ A hard copy of the DSR will be made available at the following public places within the Withok Project Area as indicted in the table below:

Location	Physical Adress	Contact Person
<b>Public Libraries within the Withok Project Area (Scoping Report):</b>		
Brakpan Public Library	Escombe St, Brakpan, 1541	Mr Vincent Moabelo, Librarian (011) 999 7748 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Tsakane Public Library	3851 Xhosa St, Tsakane, Brakpan, 1548	Ms Lindiwe Shandu, Librarian (011) 999 8046 Mon – Fri: 09h00 – 16h00

- ❖ A hard copy of the DSR non-technical summary will be made available at the following public place within the Withok Zone of Influence as indicated in the table below:

Location	Physical Address	Contact Person
<b>Public Libraries within the Withok Zone of Influence (non-technical summary):</b>		
Vosloorus Public Library	6125 Mc Botha Dr, Vosloorus Ext 1, Vosloorus, 1475	Ms Jane, Librarian (011) 999 5937, Stated on the website. Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Katlehong Public Library	Civic Centre, 01 Masakhane Street, Katlehong	Ms Zanele Mpevu, Librarian (011) 999 1466 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Zonkizizwe Public Library	4748, 4749 Ext 1 Zone 6, Zonkizizwe	Ms Thuli Mashego, Librarian (011) 999 1415 Mon – Thur: 08h00 – 16h30/Fri: 08h30 – 16h30/Sat 08h00 – 13h00
Randvaal Public Library	Randvaal Public Library 514 Houtkapper Street, Randvaal, 1873	Ms Mara Frost, Librarian (016) 365 5093 – (071) 207 7269 Mon-Fri: 9:00am – 5:00pm Sat: 9:00am- 12:00pm
Henley on Klip Public Library	45 Regatta Rd, Henley on Klip, Meyerton, 1961	Ms Ntswaki Mofokeng, Librarian (016) 366 0112 – (074) 933 8715 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm
Meyerton Public Library	Loch Str, Mayerton, 1960	Ms Prudence Matitwana (061) 360 7443 Mon-Fri: 9:00am – 5:00pm / Sat: 9:00am- 12:00pm

- ❖ An electronic copy will be made available on request.
- ❖ Copies of the non-technical summary of the DSR will be distributed electronically to all stakeholders on the database.

## AVAILABILITY OF THE EIA/EMPR AND IWWMP FOR PUBLIC REVIEW AND COMMENT

During the EIA phase of the project, the Draft Environmental Impact Assessment and Draft Environmental Management Programme (DEIA/EMPr) will be made available for public review for **30 days**.

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 online and face-to-face engagements. Consultation meetings will be held using platforms like Microsoft Teams, telephonic discussions, and an Open Day. 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 refer to **Table 3** for the proposed stakeholders' meeting schedule. Please confirm your attendance at the meeting by **Monday, 4 November 2024 and which time slot you would like to participate in.**

**Table 3: Proposed dates and methods of public engagement**

Proposed dates	Available time slots	Method of Engagement
<b>Online meeting</b>		
Wednesday, 6 November 2024	10H00 – 11H00	Microsoft teams/ scheduled Telephonic discussions
<b>Face-to-Face meeting: Open Day</b>		
Saturday, 9 November 2024	09H00 – 10H00	Tsakane ext.22 Mega Primary School 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
	10H00 – 11H00	
	11H00 – 12H00	

## INVITATION TO BECOME INVOLVED AS AN I&AP

Kongiwe has put measures in place to ensure that 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 (SMS);
- ❖ 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;
- ❖ Focus Group 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.

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**FOR CONSULTATION TO BE INCLUSIVE IT IS THE RESPONSIBILITY OF STAKEHOLDERS TO:**

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- ❖ Register or ensure you are registered as an Interested and Affected Party (IAP);
- ❖ Inform others whom you think may be interested and/or affected by the proposed project;
- ❖ Ensure comments are submitted within the allowed timeframes received by the Stakeholder Engagement office;
- ❖ Contributing information and/or knowledge of the environment;
- ❖ Provide comments on the proposed project; and
- ❖ Attend meetings scheduled throughout the process to participation and access information.

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**COMMENTS AND QUERIES:**

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Any person affected by or who may be interested in the proposed project is asked to register as an I&AP. Should you have any comments/queries, please contact the stakeholder engagement team.

Contact Details:		
Ms Vanessa Viljoen	+27 (10) 140 1725	stakeholders@kongiwe.com
Ms Thuli Phakathi	+27 (10) 140 1726	stakeholders@kongiwe.com
Ms Anela Fixi	+27 (10) 140 1729	stakeholders@kongiwe.com

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

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# Ergo Mining (Pty) Limited

## Management of Tailings

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### *Global Industry Standard on Tailings Management (GISTM)*

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Ergo Mining (Pty) Ltd (Ergo) is reprocessing Tailings Storage Facilities (TSFs) in the East and Central Rand of Gauteng. At present, reprocessed tailings are deposited on the Brakpan TSF. It is anticipated that in the future the Brakpan TSF will eventually reach its maximum capacity and Ergo is investigating other viable deposition sites in the area, which will enable it to continue with its reclamation operations.

Although not a legislated requirement, Ergo and its holding company DRDGOLD Limited (DRDGOLD) proactively intends to align with the requirements imposed by the Global Industry Standard on Tailings Management (GISTM). This Standard strives to achieve the ultimate goal of zero harm to people and the environment. To do so, it has set out particular Principles with which complying Operators will be bound.

In the development or recommissioning of TSFs, Ergo intends to observe the following requirements:

- ❖ Ergo intends to respect the rights of all persons affected by the project and engage with them meaningfully so as to keep them informed of the potential risks of TSF failure scenarios.
- ❖ Ergo intends to develop and maintain a knowledge base to support safe TSF management. This will include a detailed site characterisation of the TSF site.
- ❖ Ergo intends to use all elements of the knowledge base to inform decisions throughout the TSF lifecycle, including closure. The aim of this analysis is to minimise risks to people and the environment.
- ❖ Ergo intends to develop a robust design that integrates the knowledge base and minimises the risk of failure to people and the environment for all phases of the TSF lifecycle, including closure.
- ❖ Ergo intends to plan, build and operate the TSF to manage risk during all its phases, including closure. To do so, it will implement and operate a comprehensive and integrated engineering monitoring system for the TSF.
- ❖ Ergo will appoint an engineering firm with expertise and experience in the design and construction of TSFs to provide services for operating the TSF.
- ❖ Ergo intends to establish a formal process to receive and address concerns from employees and contractors about possible permit violations or other matters relating to regulatory compliance, public safety, TSF integrity or the environment.
- ❖ Ergo intends to use best practices and emergency response expertise to prepare and implement a TSF Emergency Preparedness and Response Plan (EPRP) based on credible flow failure scenarios and the assessment of potential consequences. Based on credible TSF failure scenarios and the assessment of potential consequences, take reasonable steps to engage meaningfully with public sector agencies and other organisations that would participate in medium- and long-term social and environmental post-failure response strategies.
- ❖ Ergo intends to publicly disclose and provide access to information about the TSF to support public accountability.

Ergo intends to align to the Principles of GISTM to prevent the unlikely event of a failure of the TSF. Accordingly, it will engage with Stakeholders at the stages of the construction, operation and eventual closure of the TSF.

## Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province

*DMRE reference number: GP30/5/1/2/2(158) MR*

*DWS reference number: WU38174*

### Stakeholder Registration and Comment Form

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

**Ms Vanessa Viljoen / Phone: (010) 140 1725 / Ms Thuli Phakathi / Phone: (010) 140 1726 /**

**Ms Anela Fixi (010) 140 1729 or E-mail: [stakeholders@kongiwe.com](mailto: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)**

Meeting dates	Available time slots	Method of Engagement	Yes	No
<b>Virtual meeting</b>				
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions	Yes	No
<b>Live Meeting: Open Day</b> <i>(Please indicate which time slot you would like to participate in)</i>				
Saturday, 9 November 2024	09H00 - 10H00	Tsakane ext.22 Mega Primary School, 19732 Mashimin St & Shiburi St, Tsakani, Brakpan, 1550	Yes	No
	10H00 – 11H00		Yes	No
	11H00 – 12H00		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:	
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# **THE RECOMMISSIONING OF THE WITHOK TAILINGS STORAGE FACILITY IN THE CITY OF EKURHULENI, GAUTENG PROVINCE**

## **DRAFT SCOPING REPORT - NON TECHNICAL SUMMARY**

**DMRE Reference Number: GP 30/5/1/2/2 (158) MR**

**DWS Reference Number: WU38174**

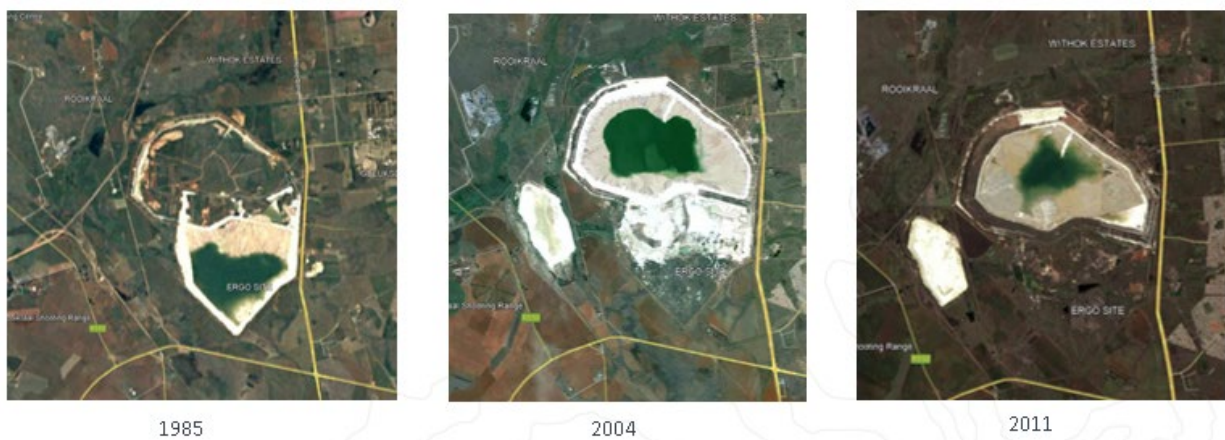
## Draft Scoping Report - Non-Technical Summary

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 **Recommissioning of the Withok Tailings Storage Facility (TSF)** (hereafter the Proposed Project).

### Project Introduction and Background

Ergo reprocesses historical gold mine dumps and Tailings Storage Facilities (TSFs) throughout the Central Eastern areas of Gauteng. At present, reprocessed tailings are deposited on the Brakpan TSF. The Brakpan TSF will in future reach its designed capacity and height and Ergo is investigating other viable deposition sites in the area, which will enable it to continue with its reclamation operations.

Ergo has identified the Withok TSF footprint as a potential deposition site. The Withok TSF footprint, which is situated immediately adjacent and directly south of the Brakpan TSF, is a historic TSF footprint (approximately 550 hectares), which has been previously reclaimed.



**Figure 1: Historic progression of the Brakpan / Withok TSF.**

Successfully implementing the recommissioning of Withok TSF will allow Ergo to continue reclaiming areas that act as a significant contributor to the progressive, permanent, removal of a myriad of historic, tailings facilities scattered across the Central and East Rand. Making vast portions of currently sterilized land, available for redevelopment in an economically beneficial manner aligning with the Gauteng Mine Residue Area Strategy (2012), Ekurhuleni Metropolitan Spatial Development Framework (2011), City of Johannesburg (CoJ) Metropolitan Spatial Development Framework (MSDF), the CoJ Integrated Public Transport Network (IPTN), and the Ekurhuleni Environmental Management Framework's (2014) objectives to remove historic TSFs scattered throughout the Gauteng landscape.

Economic value attributed to the continuation of Ergo Mining, represents a significant investment into the East of Gauteng over an expected 20-year period, the associated job creation and multiplier effect are unquestionably aligned with Government's objective to accelerate sustainable job creation and supporting local business.

Ergo's objective is to reprocess the remaining large historical TSFs located in Gauteng such as but not limited to the Marievale cluster, Crown Tailings Complex, Benoni Cluster and other dumps in the Springs area. Through this process Ergo will clear and rehabilitate approximately 1800 ha of sterilized mine land, into that of wilderness or industrial land uses. Not only are there great economic benefits in terms of the immediate land use, but the retreatment and tailings removal make lives easier for communities living next to these facilities by reducing dust, runoff, and fine sediment siltation.



Removing current tailings facilities off highly sensitive permeable dolomitic landscapes susceptible to acid mine drainage, formation of sinkholes and rapid movements of contaminants in the groundwater is highly beneficial. The reclamation/rehabilitation of these historic facilities potentially reduces groundwater seepage of around 3,7 million m<sup>3</sup> per year. This is equivalent to just over 10 000 m<sup>3</sup>/d over the Witwatersrand area, which is a significant reduction in groundwater contamination. This will further result in a reduction of around 7 400 tons in the sulphate salt load to the groundwater aquifers per year.

The design of Withok TSF through its design engineer and specialist team has used a systematic, scientifically sound methodology to develop a design which meets the stringent requirements of the regulators as well as aligning to international guidelines, norms and standards. This ensures that the final deposition of the reclaimed historical dumps and tailings dam will be onto a facility which ensures it significantly reduces environmental impacts, is structurally safe and very well managed to the final rehabilitation at the end of its life.

The following facility components are currently active on the footprint:

- ❖ Access road;
- ❖ Withok TSF footprint;
- ❖ Withok pump station; and
- ❖ Attenuation dam, sump and diversion pipeline.



Unchanneled Valley Bottom Wetland on eastern edge of the project area	Cladding stockpiles for the Brakpan TSF
	
South side of the adjacent BrakpanTSF	Vegetation established on site

**Figure 2: Current status of the site**

**Locality**

The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR and Portions 14, 15 and 20 of Vlakfontein 161 IR, in the magisterial subdistrict of Brakpan, which are all owned by Ergo. The Withok TSF is situated 7km south of Brakpan. Tsakane is situated directly east across the R23 from the TSF. The Rooikraal TSF which is currently being reclaimed is located directly west of the Withok TSF. The project is situated in Ward 99 of the City of Ekurhuleni Metropolitan Municipality.

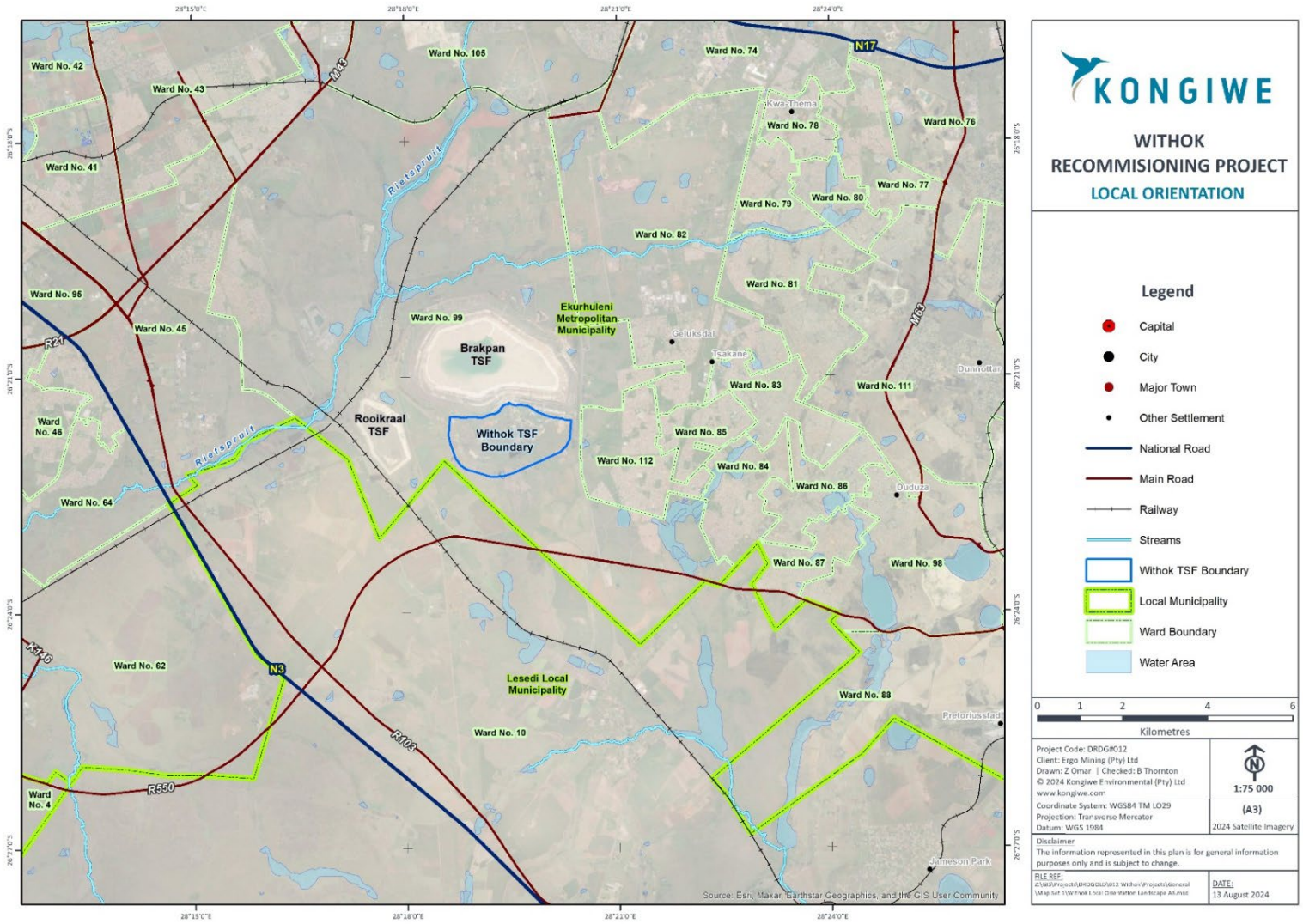


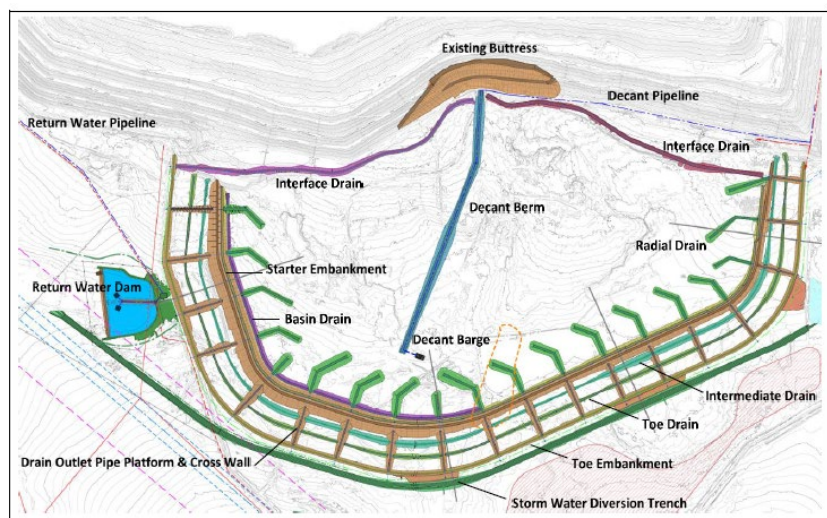
Figure 3: Project location

## Technical Details

The recommissioning of the Withok TSF entails the following:

- ❖ Upgrading of the current footprint to allow for the redevelopment of the Withok TSF. This will involve the following civil engineering work:
  - A sump and stormwater diversion trench;
  - A toe embankment which acts as an access road and slurry distribution pipeline servitude;
  - A starter embankment;
  - An HDPE liner;
  - Toe drain, intermediate drain, main drain, radial drain, and interface drain platforms;
  - Drainage outlet pipe platforms (cross walls);
  - Toe drain, intermediate drain, main drain, radial, basin drain, interface blanket drain, as well as below liner seepage cutoff/collector drains;
  - A decant berm and pool wall;
  - Drainage collector pipes;
  - A dual compartment lined return water dam (Withok RWD) and return water pumping system;
  - A floating decant barge pumping system, as well as a decant pipeline;
  - Slurry feed pipelines;
  - Slurry distribution pipelines;
  - An HDPE pipe ring main; and
  - 250mm diameter cyclones, complete with feed pipes, valves, overflow pipes.
- ❖ Deposition of tailings.
- ❖ Water management.
- ❖ Temporary construction camp.
- ❖ Borrow pits for material required during civil works and concurrent rehabilitation of the side slopes of the Withok TSF.

The proposed recommissioned Withok TSF will buttress the southern flank of the Brakpan TSF. The footprint required for the new Withok TSF is approximately 400ha, which is less than the original Withok TSF footprint of approximately 550ha. The maximum vertical height at the end of the facility life is planned to be 103m.



The Withok TSF will be designed, constructed and managed as per the Code of Practice for Mine Residue Deposits (SANS 10286) and the Dam Safety Regulations (GNR. 139 of 24 February 2012). Ergo Mining is cognisant of the Global Industry Standard on Tailings Management (GISTM). The final life of the Withok TSF design, construction, operation and monitoring will align with these requirements where appropriate.

### ***Deposition***

The intended recommissioning of the Withok TSF is to utilize similar methodology as previously deployed, i.e. cyclone deposition with a floating decant pumping system. However, the first phases (lower portion) of development will be on a centreline basis to provide a much wider underflow prism, improving geotechnical characteristics and drainage. The principle of cyclone development is to create a sufficiently robust underflow perimeter wall to contain the overflow with adequate freeboard and inherent stability to avoid overtopping and to prevent side slope failure.

### ***Stormwater Management***

The water management plan details are below:

- ❖ Dirty side slope storm water management on the TSF will be achieved through chutes discharging into catchment paddocks, some of which decant into a collector pipe. This water will be piped to the RWD and pumped to the Brakpan RWD and from there to the Ergo plant for re-use in the system. The remainder is attenuated in catchment paddocks where it evaporates.
- ❖ Drain flows will also be collected in the same collector pipe.
- ❖ Decant return is pumped directly to the Brakpan RWD for re-use in the process. Most dirty side slope storm water and all drain water are routed to the Withok RWD. The remaining dirty side slope storm water is evaporated in the catchment paddocks. Because decant water is not pumped to the Withok RWD, a silt trap at the Withok RWD is not required. Desilting is taking place in the catchment paddocks. Water is pumped to the Brakpan RWD for re-use in the process.
- ❖ The Withok RWD must have a capacity of at least 65 000m<sup>3</sup> to comply with the Department of Water and Sanitation's Regulations on Use of Water for Mining and Related Activities aimed at the Protection of Water Resources (Regulation GN 704). Additional capacity will provide operational flexibility and reduce the risk of discharge during high rainfall periods. Currently, the design capacity of the Withok RWD is 100 000m<sup>3</sup>.
- ❖ Water must be returned to process, from the Withok RWD at a rate of up to 9 800m<sup>3</sup>/day.
- ❖ There is an attenuation dam located to the east of Heidelberg Road. Drainage from the Tsakane township collects in the attenuation dam. From there, overflow is released into a culvert which crosses below Heidelberg Road and into a sump. From there an underground pipe diverts the stormwater under the site and releases the water into a tributary to the Rietspruit, a short distance west of the site. The new design, however, includes a storm water diversion trench, which will divert the stormwater water from the sump, east to west along the southern flank of the optimised Withok TSF footprint. Upgrades to the attenuation dam will be undertaken as part of the proposed project.

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## ***Rehabilitation***

Once deposition is completed, the Withok TSF will be rehabilitated.

- ❖ The side slopes will be progressively clad. The cladding serves an environmental purpose, providing a natural growing medium for the vegetation, but must also fulfil other crucial requirements. Firstly, the cladding must contain sufficient gravel to impart “armouring” for erosion resistance (water and wind) and, secondly, the clay content must not be too high that moisture is prevented from moving to the surface. Material stockpiled for cladding needs to be well selected.
- ❖ The side slope will require vegetating as soon as the cover material has been placed. The vegetation is to consist of a mix of trees, shrubs, and grasses of ideally indigenous vegetation. This vegetation of the slope will need to be undertaken through the manual planting of young plants and some hydroseeding.
- ❖ Storm water from the final rehabilitated side slopes is assumed to be clean and will be released to the environment utilising the existing stormwater infrastructure.
- ❖ The recommended closure concept is to paddock the top surface, while treating drain flows. The drain water can be treated to discharge quality and released into the receiving environment. Alternatively, this water can be treated to higher water quality standards for appropriate reuse. The brine from the treatment process would have to be pumped to the top surface where it will be evaporated. There will be significant periods where the paddocks are dry so no long-term brine ponds will form.
- ❖ The applicable parts of the operating infrastructure, i.e., power supply, seepage re-cycling and water storage dams and pump stations will be used and/or re-purposed to suit the post-closure requirements.

## ***The Period required for Environmental Authorisation***

Based on an average deposition rate of 1.3 million dry tons per month (tpm), the design life of the facility is approximately 20 years.

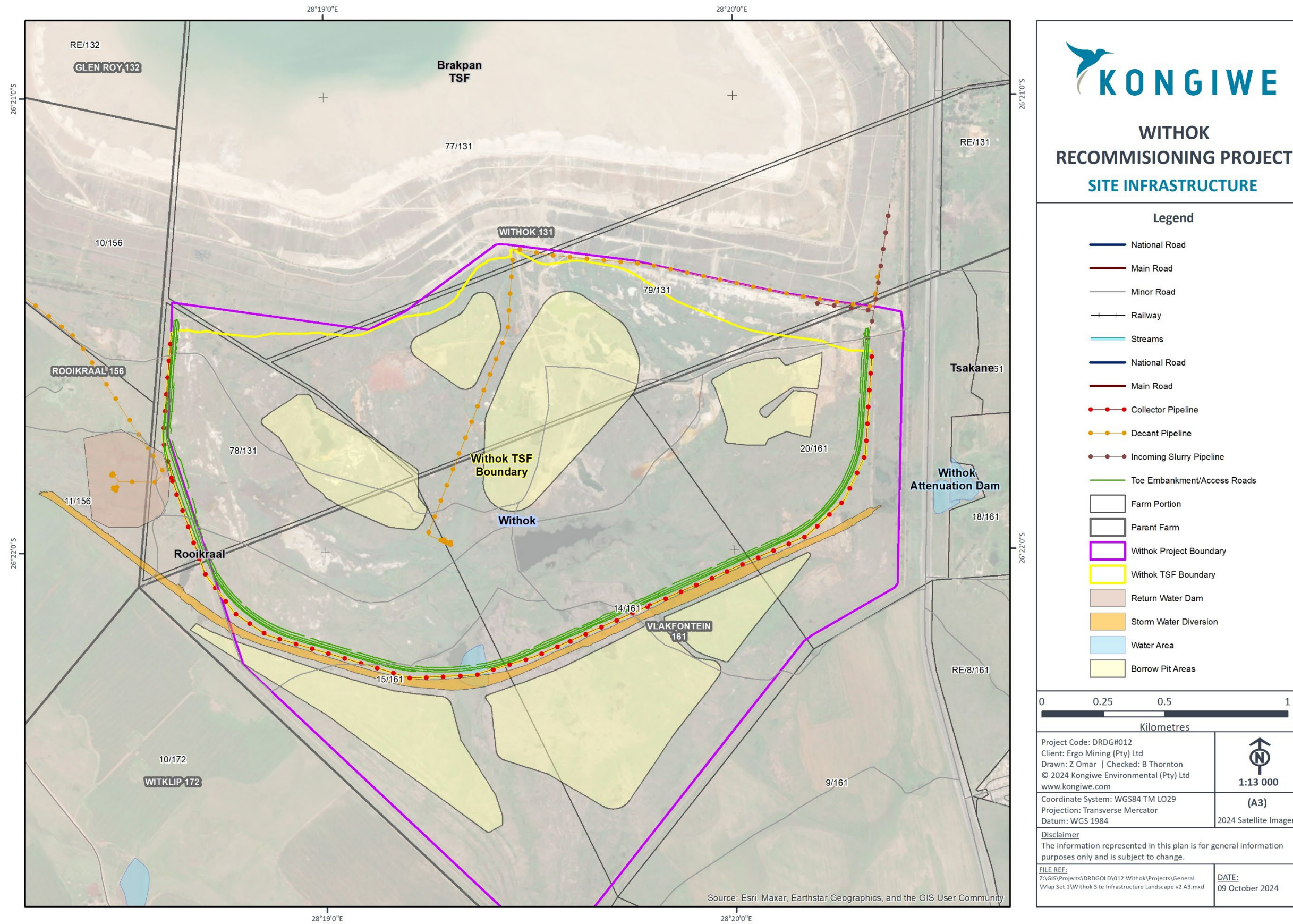


Figure 4: Project infrastructure

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## Project Alternatives

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The Proposed Project is the recommissioning of a TSF on a previously disturbed footprint. This location is preferred because it is an existing historical deposition site adjacent to the operational Brakpan TSF and its associated and existing infrastructure. Therefore, there can be no alternative sites in terms of the Project location.

The current layout plan for the Proposed Project is considered as the preferred layout plan. The layout plan is dictated by the previously impacted TSF footprint and the adjacent Brakpan TSF, existing paddocks, associated infrastructure and the routes of the existing pipelines. There will be no expansion of the TSF footprint. The footprint will be smaller than the original footprint.

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## Environmental Authorisation Process

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

1. **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985<sup>1</sup> 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 application is 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) will be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project. In this regard, any objection to that application may be lodged in writing within sixty days of the date of this notice to the Minister of the DWS as provided in Section 41(4) of the NWA.

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<sup>1</sup> 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

**Table 1: List of Activities to be authorised in accordance with NEMA, NEM:WA and NWA**

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
The collector pipe will exceed the length of 1000m and will have an internal diameter 0.8m. The Withok TSF is outside the urban edge.	Pipeline length: approximately 4.5km long Pipeline internal diameter: 0.8m Pipeline throughput: 126 litres/second	GNR 983 – Activity 9	The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		21 (c) & (i)
The development of pipelines for the transportation of reprocessed slurry. The Withok TSF is outside the urban edge.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 983 – Activity 10	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.		21 (c) & (i)
The development of pipelines for the transportation of reprocessed slurry.	Pipeline length: 1000m Pipeline internal diameter: 0.5m Pipeline throughput: 247 litres/second	GNR 984 – Activity 7	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods— (i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day; (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 50 cubic metres per day; or (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day.		21 (c) & (i)
Construction and operation of the Withok return water dam	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 983 – Activity 12	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;		21 (g) 21(c) & (i)

<sup>2</sup> Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities. These have not been specifically listed in this Application, but the necessary application will be submitted to the DWS

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.		
		GNR 983 – Activity 13	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2.		21 (g) 21(c) & (i)
The construction and operation of the RWD	Dam Size: 101 000 m <sup>3</sup> Area: 0.56ha	GNR 984 – Activity 6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding— (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.		Section 21(g) Section 21(c) and (i)
The upgrading of the Withok attenuation dam wall.		GNR 983 – Activity 19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or		Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
			(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.		
Re-establishment of the Withok TSF and associated infrastructure	TSF size: 400ha	GNR 983 – Activity 19	<p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>		Section 21(c) and (i)
		GNR 984 – Activity 6	<p>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—</p> <p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.</p>	<p>Category B – 10 The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).</p> <p>Category B – 11 The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	Section 21(g) Section 21(c) and (i)

Name of Activity	Aerial Extent of the Activity (ha)	Applicable listing notice	Listed Activity	Waste Management Authorisation	Water Use Licence Authorisation <sup>2</sup>
		GNR 984 – Activity 15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for:  (i) the undertaking of a linear activity; or  (ii) maintenance purposes undertaken in accordance with a maintenance management plan.		
Temporary hydrocarbon and diesel storage at the construction camp	To be determined	GNR 983 – Activity 14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.		Section 21(c) and (i)
Borrow pits		GNR 984 – Activity 15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for:  (i) the undertaking of a linear activity; or  (ii) maintenance purposes undertaken in accordance with a maintenance management plan.		
		GNR 983 – Activity 21D	Any activity including the operation of that activity which requires an amendment or variation to a right or permit in terms of section 102 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity contained in this Listing Notice or in Listing Notice 3 of 2014, required for such amendment.		Section 21(c) and (i)

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## Environmental Considerations

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The Proposed Project will adopt the standards as set out in Ergo's Environmental Policy. The Policy states that FWGR 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.

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## Key Findings of the Scoping Report

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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 is 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 2 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 2 overleaf.

**Table 2: Potential identified impact because of the Proposed Project**

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
<b>Physical Environment (non-living)</b>	Hydrology (including wetlands, surface water and ground water)	<ul style="list-style-type: none"> <li>❖ Potential for further acid mine drainage (AMD), increased heavy metal concentrations and increased sulphate concentrations in local surface and groundwater if runoff from operations is not adequately managed through efficient storm water management structures or adequate liners;</li> <li>❖ Pollution of the Rietspruit and further downstream in the event of TSF breach;</li> <li>❖ Water and ground contamination due to pipeline leaks/spillages if adequate preventative measures are not implemented;</li> </ul>	<p>Surface Water Impact Assessment</p> <p>Groundwater Impact Assessment</p> <p>Wetland Impact Assessment</p>
<b>Biological Environment (living)</b>	Ecology and Biodiversity (including fauna and flora)	<ul style="list-style-type: none"> <li>❖ Disturbance of site and species of ecological importance in the event of a TSF beach;</li> <li>❖ Loss of migration corridors, and access to nesting and refuge areas, watering points, food supplies for faunal species in the event of a TSF breach;</li> <li>❖ Displacement of animal habitat due to the reinstatement of the TSF and, in the event of a TSF breach;</li> <li>❖ Long-term improvement of ecosystem health and functioning of the project area following rehabilitation.</li> </ul>	Biodiversity Impact Assessment
<b>Cultural Environment</b>	Heritage Resources	<ul style="list-style-type: none"> <li>❖ Should heritage resources be present in the area, the reinstatement of the TSF might disturb them. A TSF breach could potentially also impact these.</li> </ul>	Heritage Impact Assessment
<b>Social and Economic Environment</b>	Employment	<ul style="list-style-type: none"> <li>❖ Continued employment and job security;</li> <li>❖ Continued investment in local economy;</li> </ul>	Social Impact Assessment

Environmental Component	Component Type	Potential Impact	Specialist Study Planned for EIA
		❖ Possible health and economic impacts downstream due to the recommissioning of the TSF or in the event of a TSF breach	
	Land-use	❖ Land use impacts in the due to the recommissioning of the TSF or in the event of a TSF breach	Social Impact Assessment
	Air Quality	❖ Increase in dust levels as a result of increased size 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

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## Overall Conclusions

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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.

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 proposed location for the TSF recommissioning was the site of a historical TSF that was reclaimed.

The Proposed Project will assist Ergo in continuing its operations, which in turn is 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.

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## Way Forward

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This DSR has been undertaken with the aim of identifying potential positive and negative impacts on the environment and gathering comments on concerns 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 procedure for this study going forward is as follows:

- ❖ Submit the finalised Scoping Report to the DMRE for permission to undertake the EIA Phase of the project;
- ❖ Upon the decision to grant or refuse the final Scoping Report, all stakeholders will be notified. If granted, stakeholders will also be notified of the conditions of 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

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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 DMRE; and
- ❖ DMRE review period and decision-making for 107 calendar days.

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## Specialist Studies

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Various specialist studies are being 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 and Wetlands | ❖ Socio-Economic Impact Assessment |
| ❖ Surface Water             | ❖ Visual                           |
| ❖ Groundwater               | ❖ Closure & Rehabilitation         |
| ❖ Air Quality               | ❖ Health                           |
| ❖ Noise                     | ❖ Radiation                        |

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## Glossary

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

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

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

**Scoping Report:** The Scoping Report describes the proposed project and identifies the possible impacts of the proposed development.

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

## **Appendix C4: Newspaper Advertisement**

# Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province

• DMRE reference number: GP30/5/1/2/2(158) MR • DWS reference number: WU38174

- **Applicant:** Ergo Mining (Pty) Limited
- **Project Name:** Recommissioning of the Withok Tailings Storage Facility (TSF)

Ergo Mining (Pty) Ltd (Ergo) reprocesses historical Mine dumps and Tailings Storage Facilities (TSFs) throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. Brakpan TSF is reaching its designed capacity and height as such Ergo has identified the Withok TSF footprint as a potential future deposition site. The Withok TSF footprint, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has been previously reclaimed. The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR, Portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR owned by Ergo, are located in the magisterial subdistrict of Brakpan. The TSF is situated 7km south of Brakpan, in Ward 99 & 112 of the City of Ekurhuleni Metropolitan Municipality.

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

1. **Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985 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 application is 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) will be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project. In this regard, any objection to that application may be lodged in writing within sixty days of the date of this notice to the Minister of the DWS as provided in Section 41(4) of the NWA.

**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, 24 October 2024 until Friday, 22 November 2024**. The DSR will also be made available electronically on Kongiwe's website <https://kongiwe.com/projects/>, and an electronic copy will be made available upon request. Copies of the non-technical summary of the DSR will also be distributed to stakeholders.

**A hard copy of the DSR will be made available at the following public places within the Withok Project Area:** Brakpan Public Library, Escombe St, Brakpan, 1541; Tsakane Public Library, 3851 Xhosa St, Tsakane, Brakpan, 1548.

**A hard copy of the DSR non-technical summary will be made available at the following public places:** Vosloorus Public Library, 6125 Mc Botha Dr, Vosloorus Ext 1, Vosloorus, 1475; Katlehong Public Library, Civic Centre, 01 Masakhane Street, Katlehong; Zonkizizwe Public Library, 4748, 4749 Ext 1 Zone 6, Zonkizizwe; Randvaal Public Library, 514 Houtkapper Street, Randvaal, 1873; Henley on Klip Public Library, 45 Regatta Rd, Henley on Klip, Meyerton, 1961; Meyerton Public Library, Loch Str, Meyerton, 1960.

**STAKEHOLDER MEETINGS:** Stakeholders are invited to participate through virtual and non-virtual engagements. Consultation meetings will be held using platforms like Microsoft Teams, telephonic discussions, and an Open Day. 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 stakeholder meeting schedule.

Proposed dates	Available time slots	Method of Engagement
<b>Virtual Meeting</b>		
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
<b>Live Meeting: Open Day (Please indicate which time slot you would like to participate in)</b>		
Saturday, 9 November 2024	09H00 - 10H00	Tsakane ext.22 Mega Primary School, 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550
	10H00 - 11H00	
	11H00 - 12H00	

To register as an I&AP please contact: Kongiwe Environmental Stakeholder Engagement Team, **Ms Vanessa Viljoen / Phone: (010) 140 1725 / Ms Thuli Phakathi / Phone: (010) 140 1726 / Ms Anela Fixi (010) 140 1729 or E-mail: [stakeholders@kongiwe.com](mailto:stakeholders@kongiwe.com)**

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



## Appendix C5: Site Notice



# Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility (TSF), Ekurhuleni, Gauteng Province

DMRE reference number: GP30/5/1/2/2(158) MR

DWS reference number: WU38174

**Applicant:** Ergo Mining (Pty) Ltd

**Project Name:** Recommissioning of the Withok Tailings Storage Facility (TSF)

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

- Application for EA** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985 published pursuant to the EIA Regulations 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA); and
- Application for a waste management licence (WML)** authorising waste management 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 application is being made to the relevant Competent Authority:

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

**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, 24 October 2024 until Friday, 22 November 2024**. The DSR will also be made available electronically on Kongiwe's website <https://kongiwe.com/projects/>, and an electronic copy will be made available upon request. Copies of the non-technical summary of the DSR will also be distributed to stakeholders.

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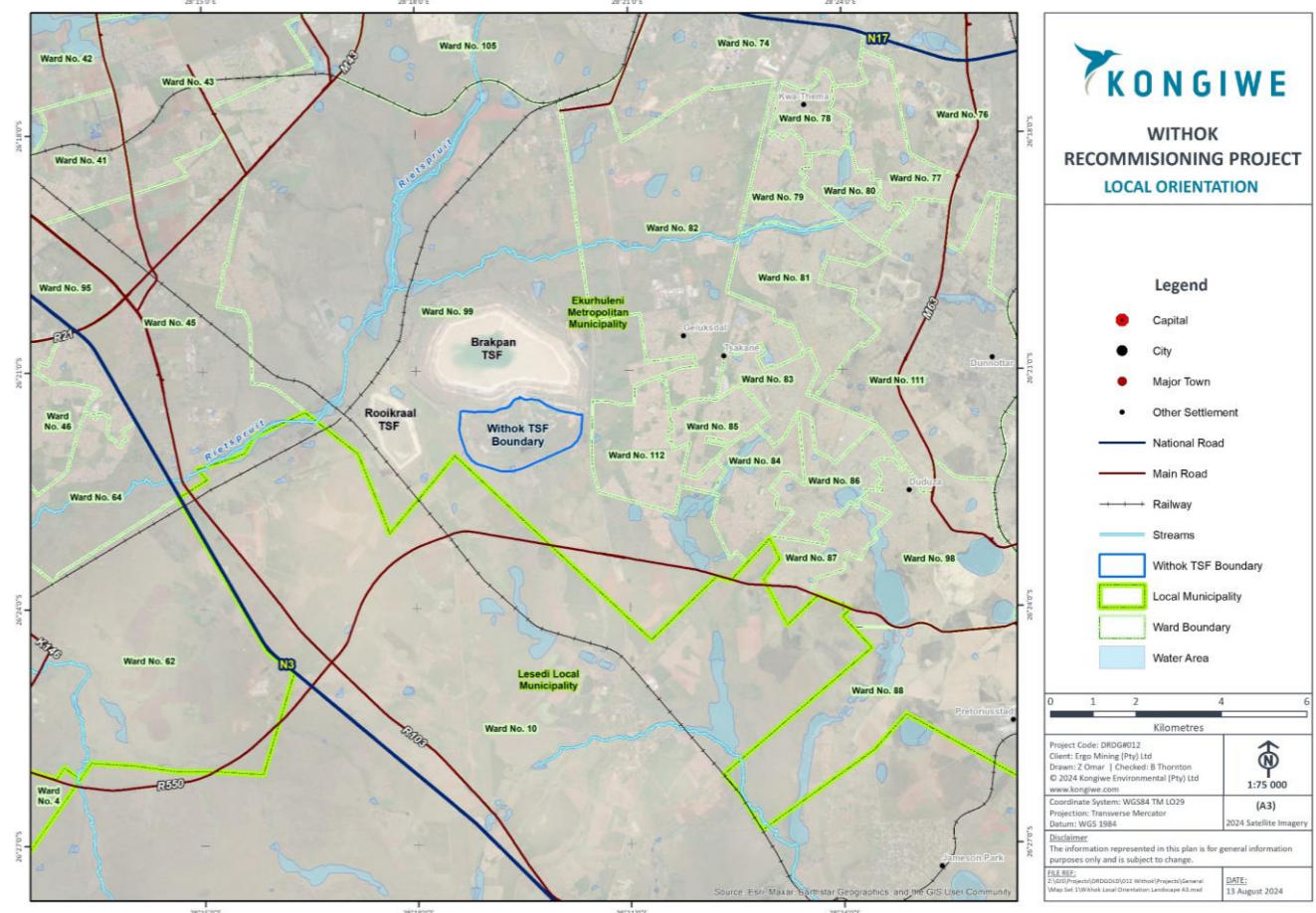
Proposed dates	Available slots	Method of Engagement
<b>Virtual meeting</b>		
Wednesday, 6 November 2024	10H00 - 11H00	Microsoft teams/scheduled Telephonic discussions
<b>Live Meeting: Open Day</b> (Please indicate which time slot you would like to participate in)		
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	10H00 – 11H00	
	11H00 – 12H00	

**A hard copy of the DSR will be made available at the following public places within the Withok Project Area:** Brakpan Public Library, Escombe St, Brakpan, 1541; Tsakane Public Library, 3851 Xhosa St, Tsakane, Brakpan, 1548.

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To register as an I&AP please contact: Kongiwe Environmental Stakeholder Engagement Team  
**Ms Vanessa Viljoen / Phone: (010) 140 1725 / Ms Thuli Phakathi / Phone: (010) 140 1726 / Ms Anela Fixi (010) 140 1729 or E-mail: [stakeholders@kongiwe.com](mailto:stakeholders@kongiwe.com)**

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



**Figure 1: Locality map of the Withok project.**

## Appendix C6: Correspondence

## Kongiwe Stakeholder Engagement

---

**From:** Kongiwe Stakeholder Engagement  
**Sent:** Tuesday, 22 October 2024 13:11  
**To:** Bradly Thornton; Gerlinde Wilreker; Thuli Phakathi; Anela Fixi; Ripfumelo Macevele  
**Subject:** Environmental Authorisation and Integrated Water Use Licence Application for the Recommissioning of the Withok Tailings Storage Facility, Ekurhuleni (TSF), Gauteng Province

**Attachments:** Withok\_BID\_V7\_20241022.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Bradly Thornton	
	Gerlinde Wilreker	Read: 2024/10/22 13:19
	Thuli Phakathi	Read: 2024/10/22 13:12
	Anela Fixi	
	Ripfumelo Macevele	Read: 2024/10/22 13:14
	Vanessa Viljoen	Read: 2024/10/22 13:15

Dear Stakeholder

This email serves to inform you that Ergo Mining (Pty) Ltd (Ergo) reprocesses historical Mine dumps and Tailings Storage Facilities (TSFs) throughout the Central and Eastern areas of Gauteng. At present, reprocessed mine tailings are deposited on the Brakpan TSF. Brakpan TSF will in future reach its designed capacity and as such Ergo has identified the Withok TSF footprint as a potential future deposition site. The Withok TSF footprint, situated adjacent and directly south of the Brakpan TSF, is a historic TSF footprint which has been previously reclaimed. The Withok TSF is located on Portions 77, 78, 79 and 80 of the farm Withok 131 IR, Portions 14, 15 and 20 of Vlakfontein 161 IR and Portion 11 of Rooikraal 156 IR owned by Ergo, are located in the magisterial subdistrict of Brakpan. The TSF is situated 7km south of Brakpan, in Ward 99 & 112 of the City of Ekurhuleni Metropolitan Municipality.

In terms of the environmental legislation, Kongiwe has been appointed by Ergo Mining (Pty) Ltd (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).

### **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, 24 October 2024 until Friday, 22 November 2024.**

### **INVITATION TO AN OPEN DAY**

Interested and Affected Parties (I&APs) are invited to attend an Open Day which will be held at the **Tsakane ext.22 Mega Primary School 19732 Mashimin St &, Shiburi St, Tsakani, Brakpan, 1550 on Saturday, 9 November 2024 from 09H00 - 12H00.** 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 Comment Form or by contacting the stakeholder engagement team.

Contact Details:		
Ms Vanessa Viljoen	+27 (10) 140 1725	<a href="mailto:stakeholders@kongiwe.com">stakeholders@kongiwe.com</a>
Ms Thuli Phakathi	+27 (10) 140 1726	<a href="mailto:stakeholders@kongiwe.com">stakeholders@kongiwe.com</a>
Ms Anela Fixi	+27 (10) 140 1729	<a href="mailto:stakeholders@kongiwe.com">stakeholders@kongiwe.com</a>

Please refer to the attached Background Information Document for further information.

Kind Regards,



**Stakeholder Engagement Team | Kongiwe Environmental (Pty) Ltd.**

Tel: +27 (10) 140 6508 | Fax: +27 (86) 476 6438 | Email: [stakeholders@kongiwe.com](mailto:stakeholders@kongiwe.com)

150 Bryanston Drive, Bryanston, Sandton, 2191, South Africa.

PostNet Suite no 163, Private Bag X21, Bryanston, 2021, South Africa.

[www.kongiwe.com](http://www.kongiwe.com)

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## **Appendix C7: Authority Correspondence**

## Appendix C8: Meeting Minutes

# Appendix C9: Comments and Response Report



**Appendix D**  
**Site Photographs**



Unchanneled Valley Bottom Wetland on eastern edge of the project area



Cladding stockpiles for the Brakpan TSF



Dam



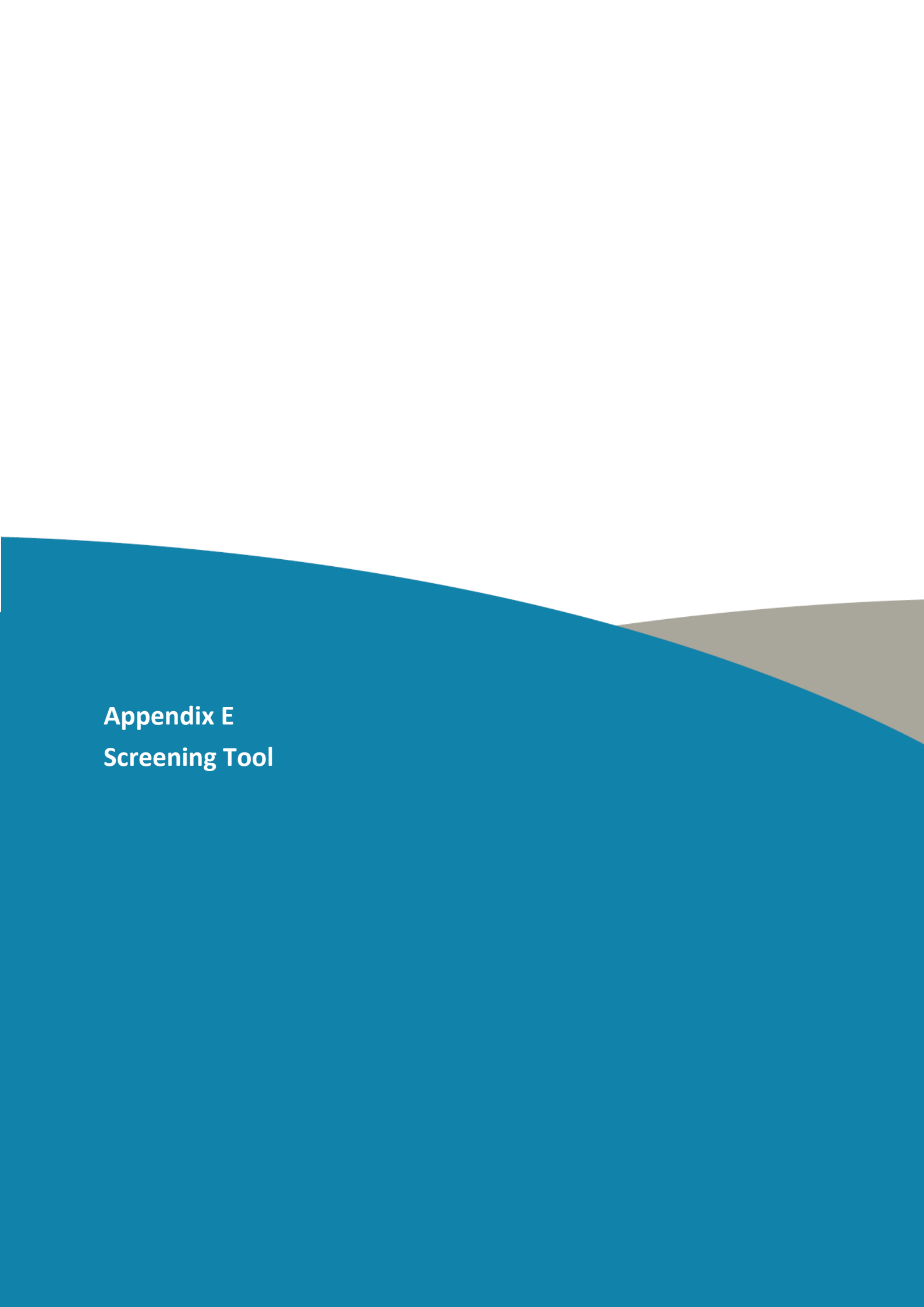
Artificial seep



South side of the adjacent BrakpanTSF



Vegetation established on site



**Appendix E**  
**Screening Tool**

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

**EIA Reference number:**

**Project name:** Withok Recommissioning Project

**Project title:** Withok Recommissioning Project

**Date screening report generated:** 04/04/2024 10:33:07

**Applicant:** Ergo Mining (Pty) Ltd

**Compiler:** Kongiwe Environmental (Pty) Ltd

**Compiler signature:** ..... *J. Wilcker* .....

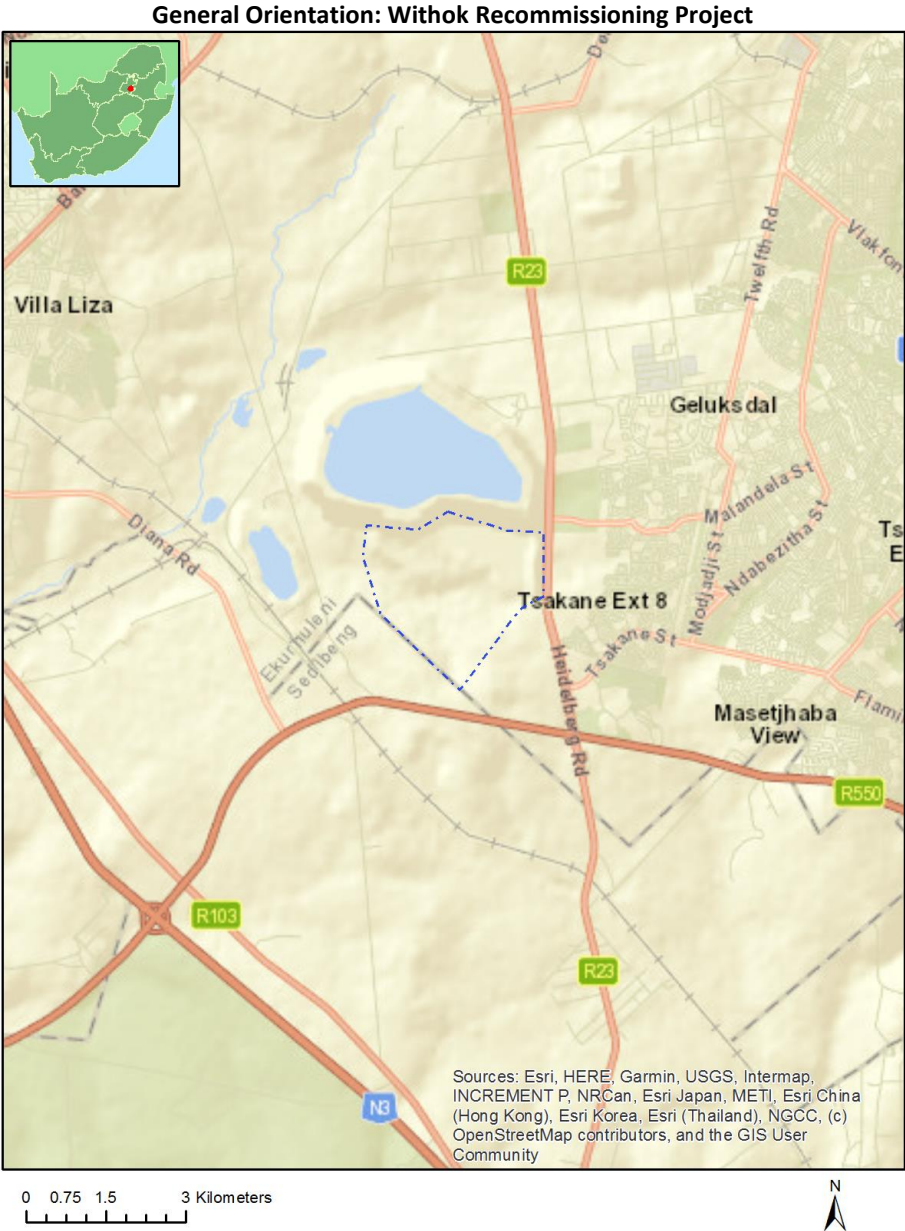
**Application Category:** Services|Waste Management Services|Storage Facilities|Hazardous

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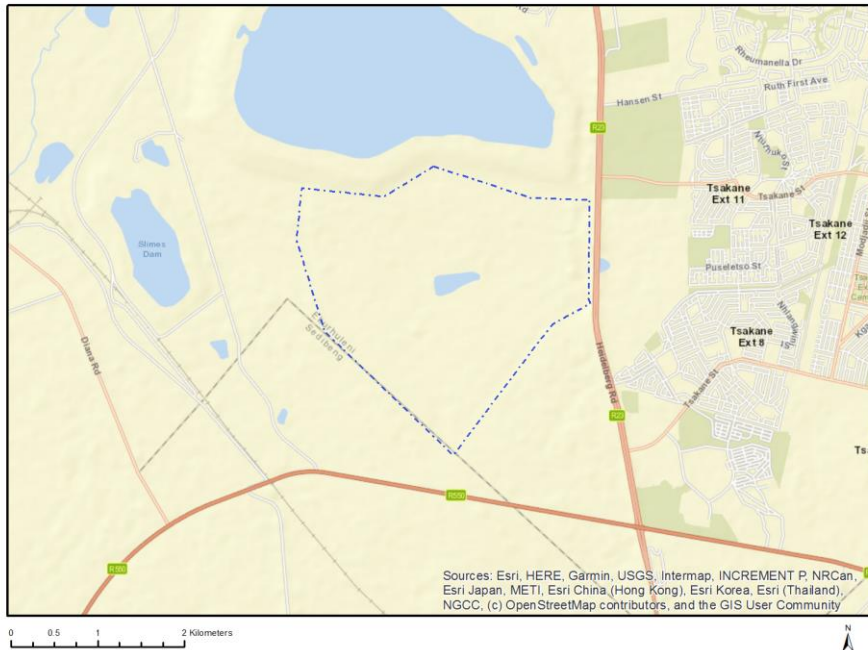
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  - Orientation map 1: General location ..... 3
- Map of proposed site and relevant area(s) ..... 4
  - Cadastral details of the proposed site ..... 4
  - Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area ..... 4
  - Environmental Management Frameworks relevant to the application ..... 5
- Environmental screening results and assessment outcomes ..... 5
  - Relevant development incentives, restrictions, exclusions or prohibitions ..... 6
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# Proposed Project Location

Orientation map 1: General location



## 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	VLAKFONTEIN	161	0	26°22'29.44S	28°21'14.34E	Farm
2	WITHOK	131	0	26°19'33.44S	28°20'34.31E	Farm
3	WITHOK	131	78	26°21'46.55S	28°18'48.06E	Farm Portion
4	WITHOK	131	79	26°21'26.79S	28°19'46.61E	Farm Portion
5	VLAKFONTEIN	161	20	26°21'46.9S	28°20'15.17E	Farm Portion
6	VLAKFONTEIN	161	15	26°22'20.37S	28°19'11.56E	Farm Portion
7	WITHOK	131	77	26°20'55.02S	28°19'30.76E	Farm Portion
8	VLAKFONTEIN	161	9	26°22'36.94S	28°20'15.52E	Farm Portion
9	WITHOK	131	80	26°21'26.92S	28°18'36.36E	Farm Portion
10	VLAKFONTEIN	161	5	26°23'17.94S	28°20'20.45E	Farm Portion
11	VLAKFONTEIN	161	14	26°22'8.78S	28°19'42.68E	Farm Portion

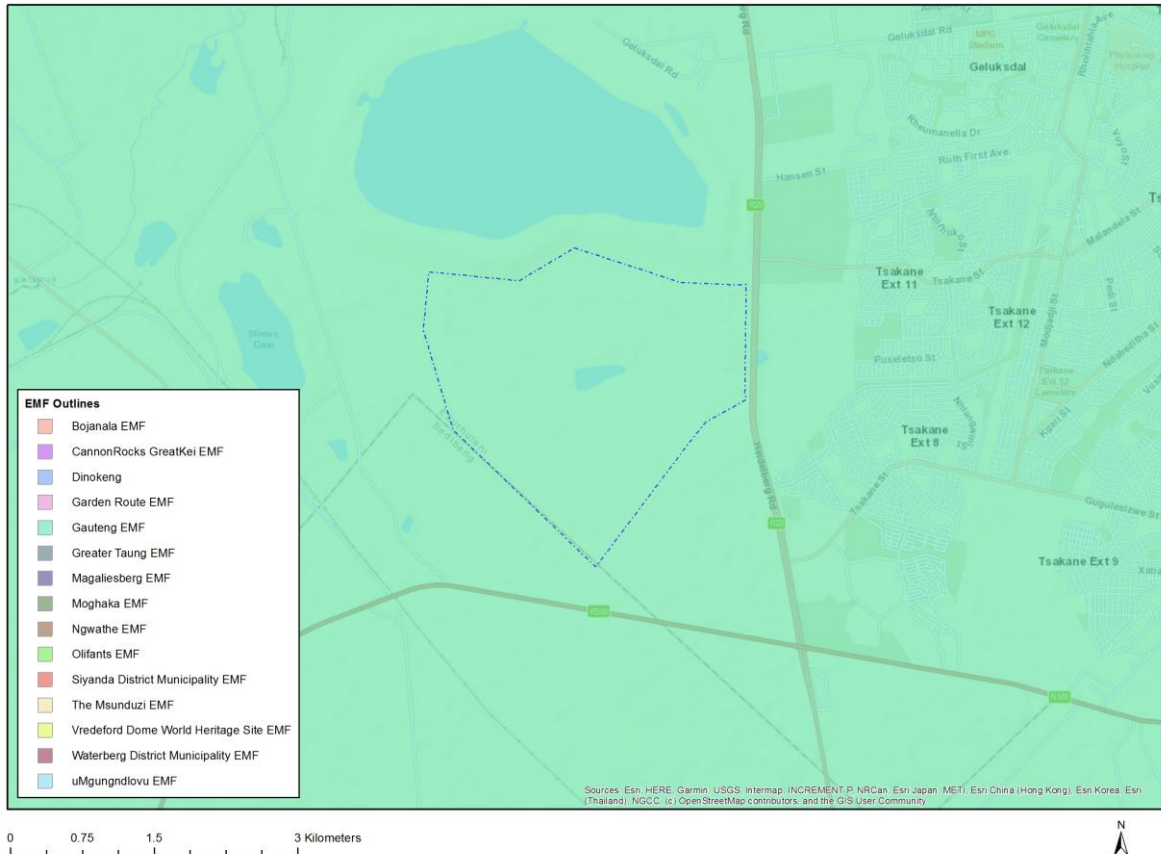
Development footprint<sup>1</sup> vertices:  
No development footprint(s) specified.

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

<sup>1</sup> “development footprint”, means the area within the site on which the development will take place and includes 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.

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/2/375/AM1	Solar PV	Approved	20.1
2	14/12/16/3/3/1/2358	Solar PV	Approved	21.9
3	14/12/16/3/3/2/825	Solar PV	Approved	26.9
4	12/12/20/2147/A1	Solar PV	Approved	28.6
5	12/12/20/2147	Solar PV	Approved	28.6
6	14/12/16/3/3/1/569	Solar PV	Approved	6.6

## Environmental Management Frameworks relevant to the application



<b>Environmental Management Framework</b>	<b>LINK</b>
Gauteng EMF	<a href="https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf">https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf</a>

## 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:

**Services | Waste Management Services | Storage Facilities | Hazardous.**

## 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	<a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf</a>
Air Quality-Highveld Priority Area	<a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf</a>

## 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 known impacts associated with the proposed development, 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.

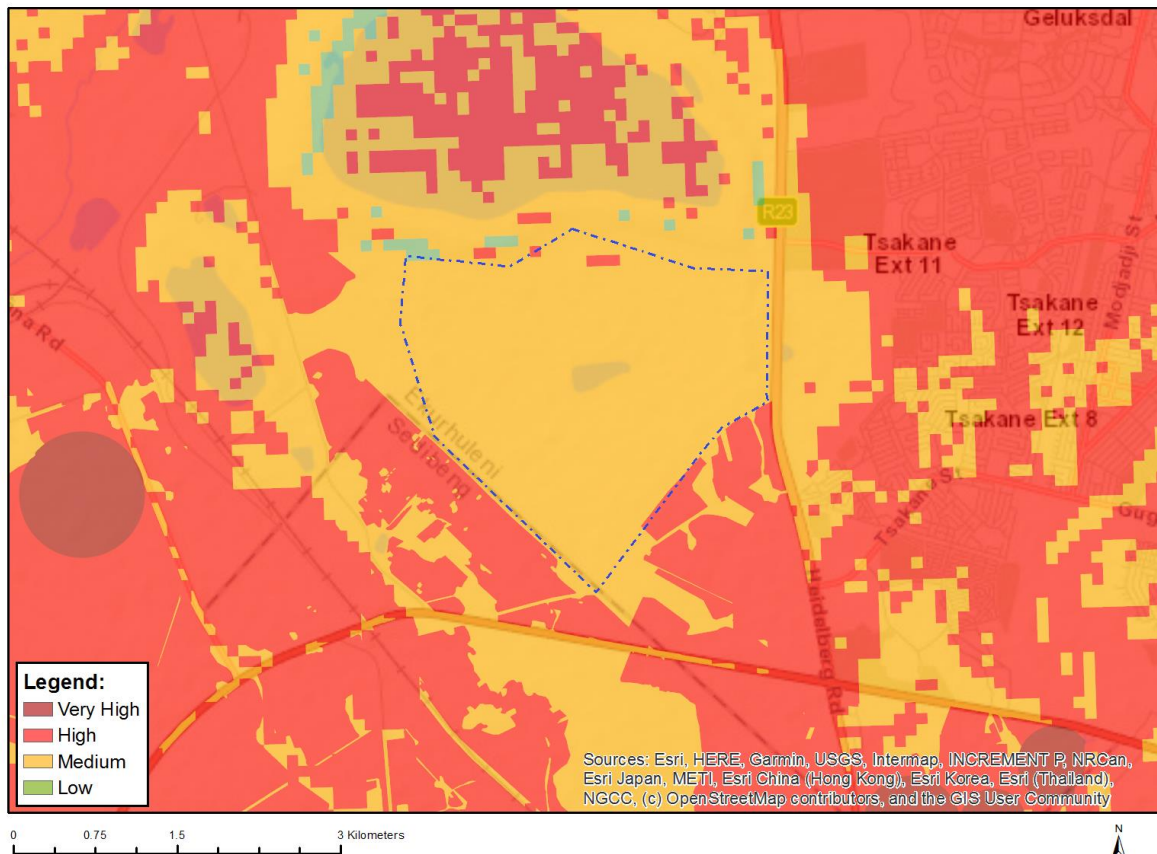
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf</a>
2	Archaeological and Cultural Heritage Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>
3	Palaeontology Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf</a>

		<a href="#">rotocols.pdf</a>
4	Terrestrial Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Terrestrial Biodiversity Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Terrestrial Biodiversity Assessment Protocols.pdf</a>
5	Aquatic Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Aquatic Biodiversity Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Aquatic Biodiversity Assessment Protocols.pdf</a>
6	Hydrology Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
7	Noise Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Noise Impacts Assessment Protocol.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Noise Impacts Assessment Protocol.pdf</a>
8	Traffic Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
9	Health Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
10	Socio-Economic Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
11	Ambient Air Quality Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
12	Plant Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf</a>
13	Animal Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf</a>

## 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

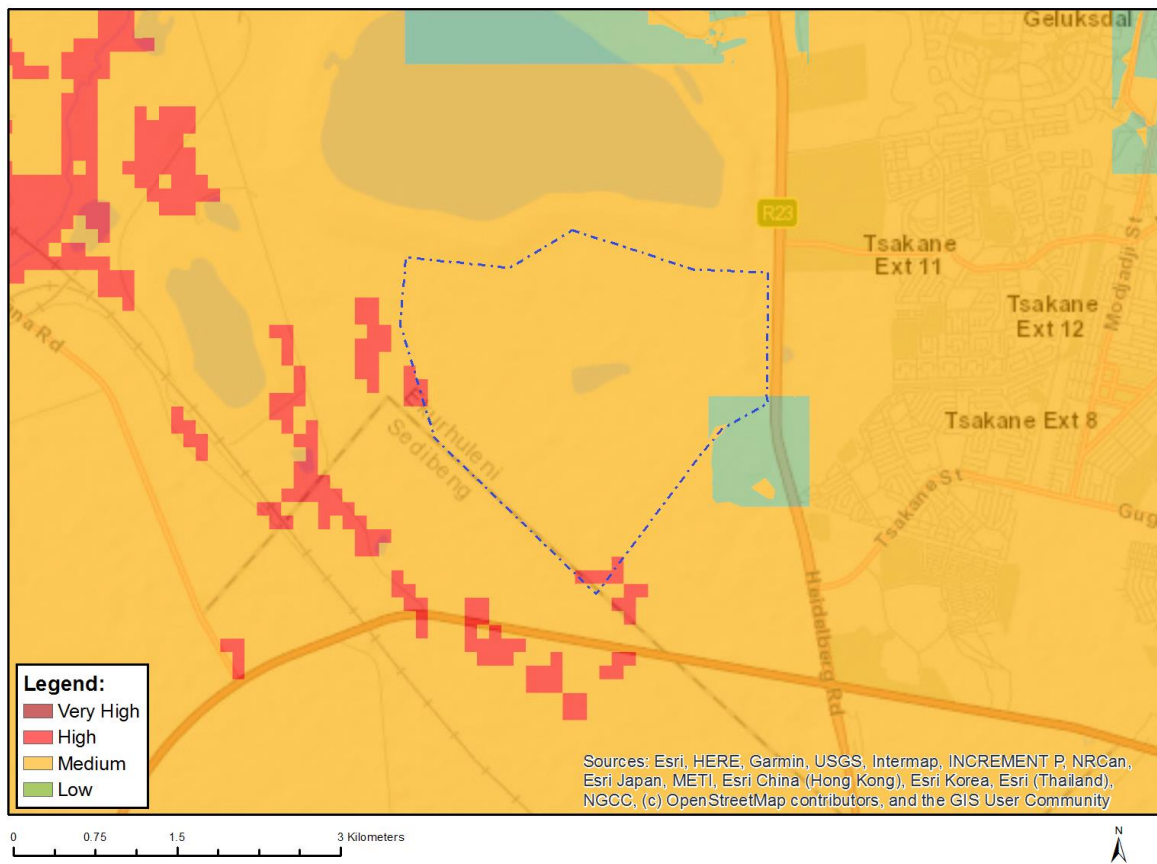


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

#### Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
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



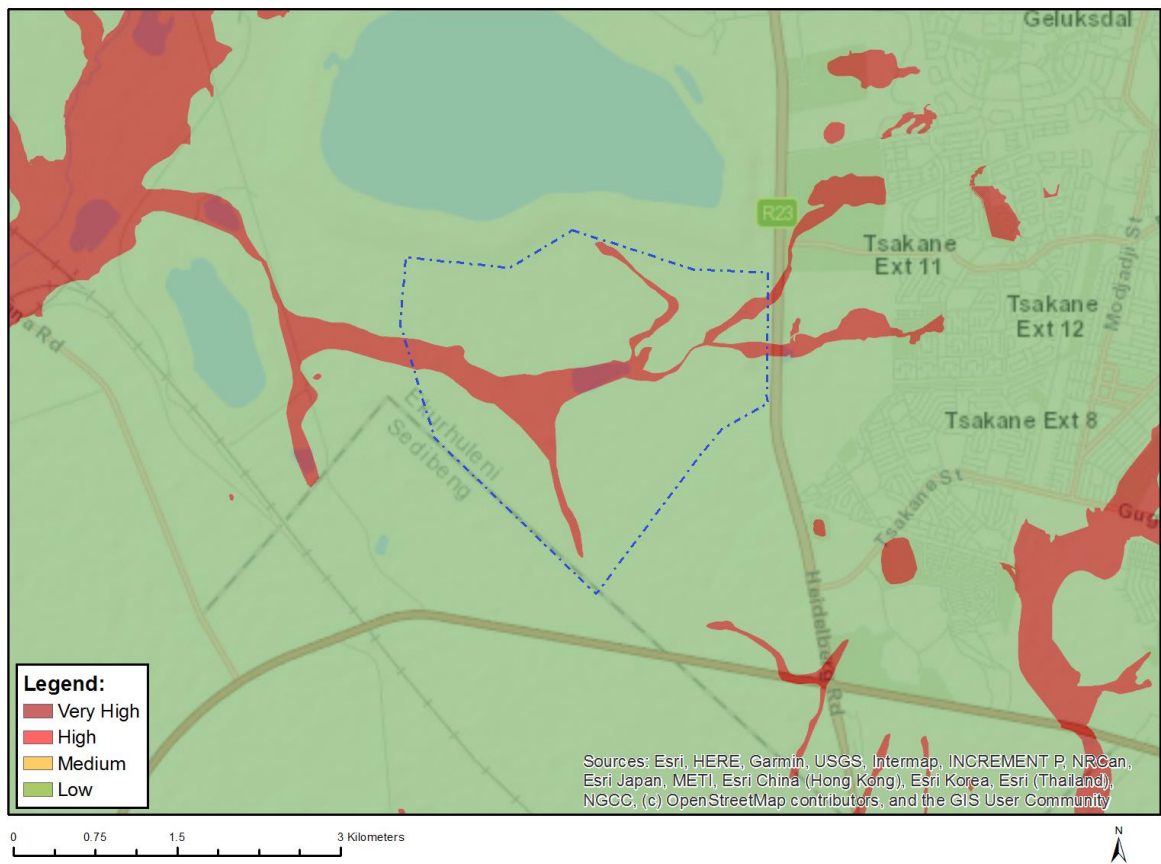
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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)
High	Aves-Circus ranivorus
Low	Subject to confirmation
Medium	Aves-Hydroprogne caspia
Medium	Insecta-Aloeides dentatis dentatis
Medium	Insecta-Lepidochrysops procerca
Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii
Medium	Mammalia-Hydricteis maculicollis

## MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

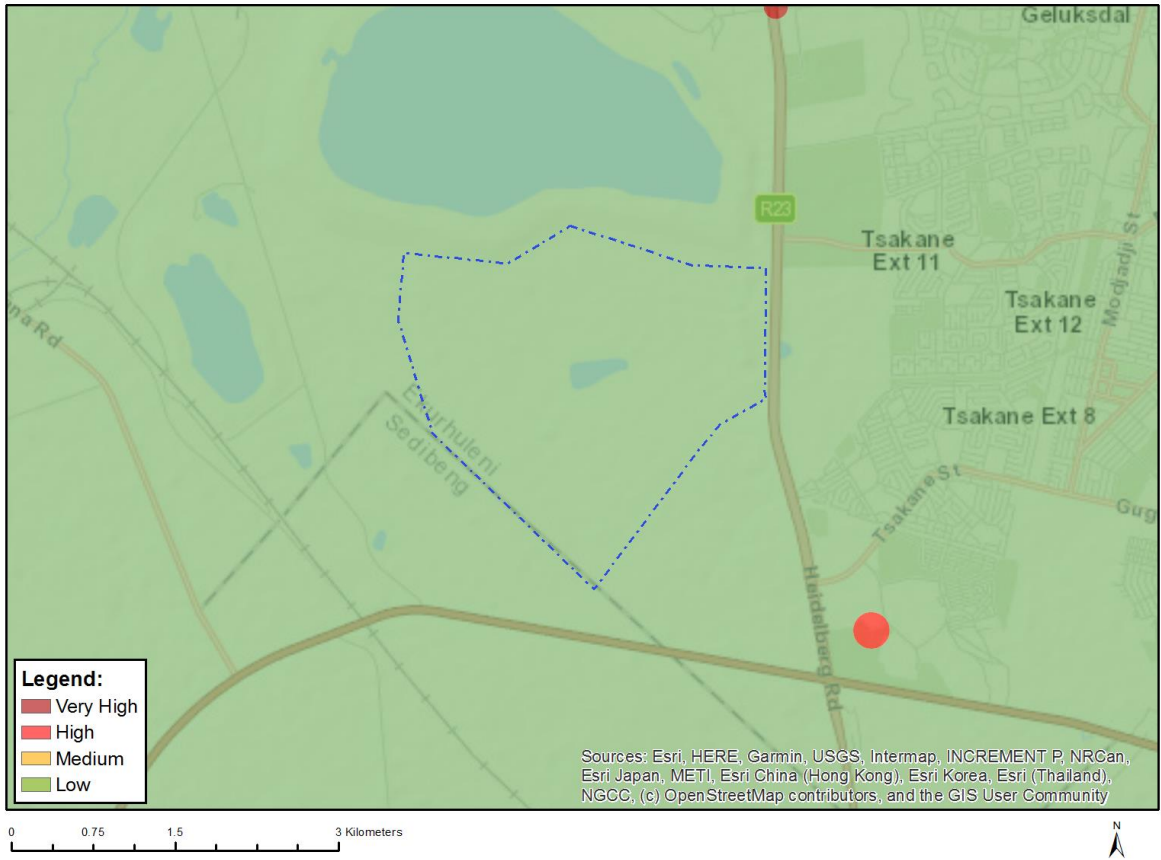


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	ESA 1
Very High	ESA 2

# MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

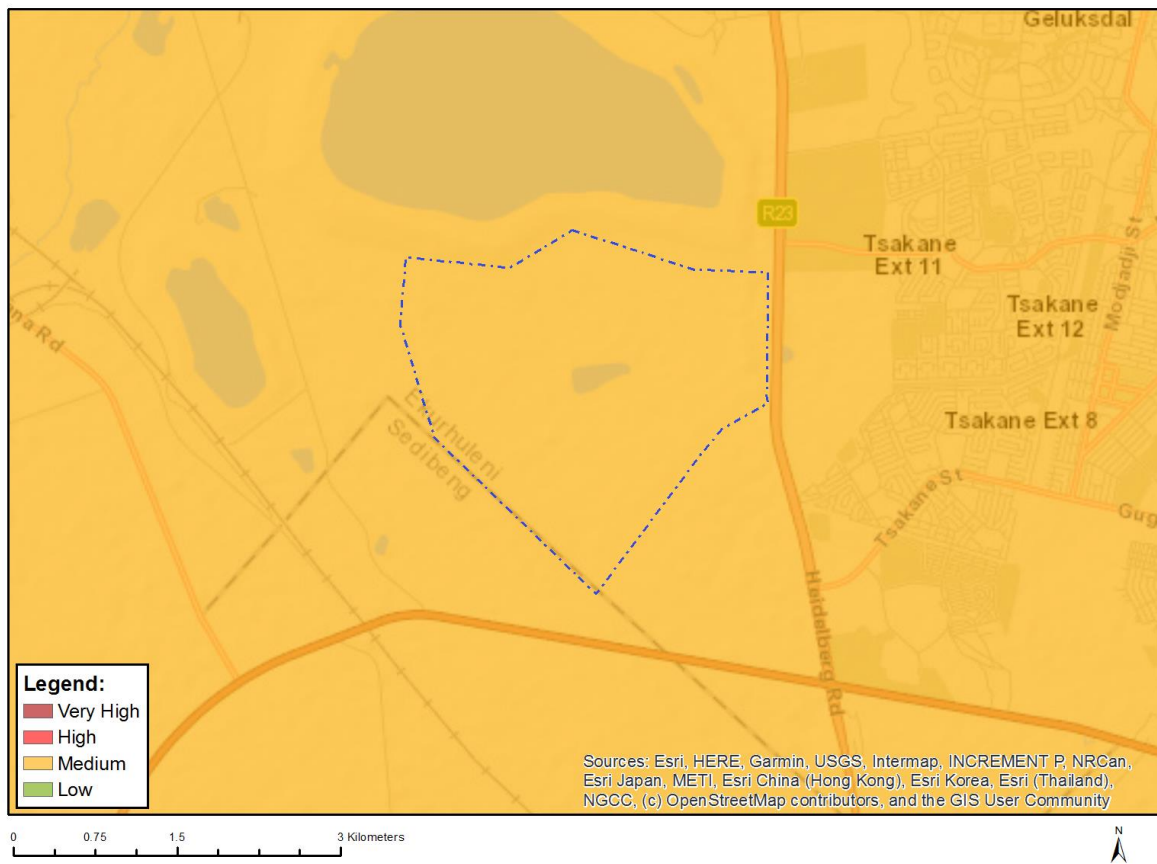


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

## 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)
Medium	Between 15 and 35 km from a civil aviation radar
Medium	Between 15 and 35 km from a major civil aviation aerodrome
Medium	Between 8 and 15 km of other civil aviation aerodrome

# MAP OF RELATIVE DEFENCE THEME SENSITIVITY

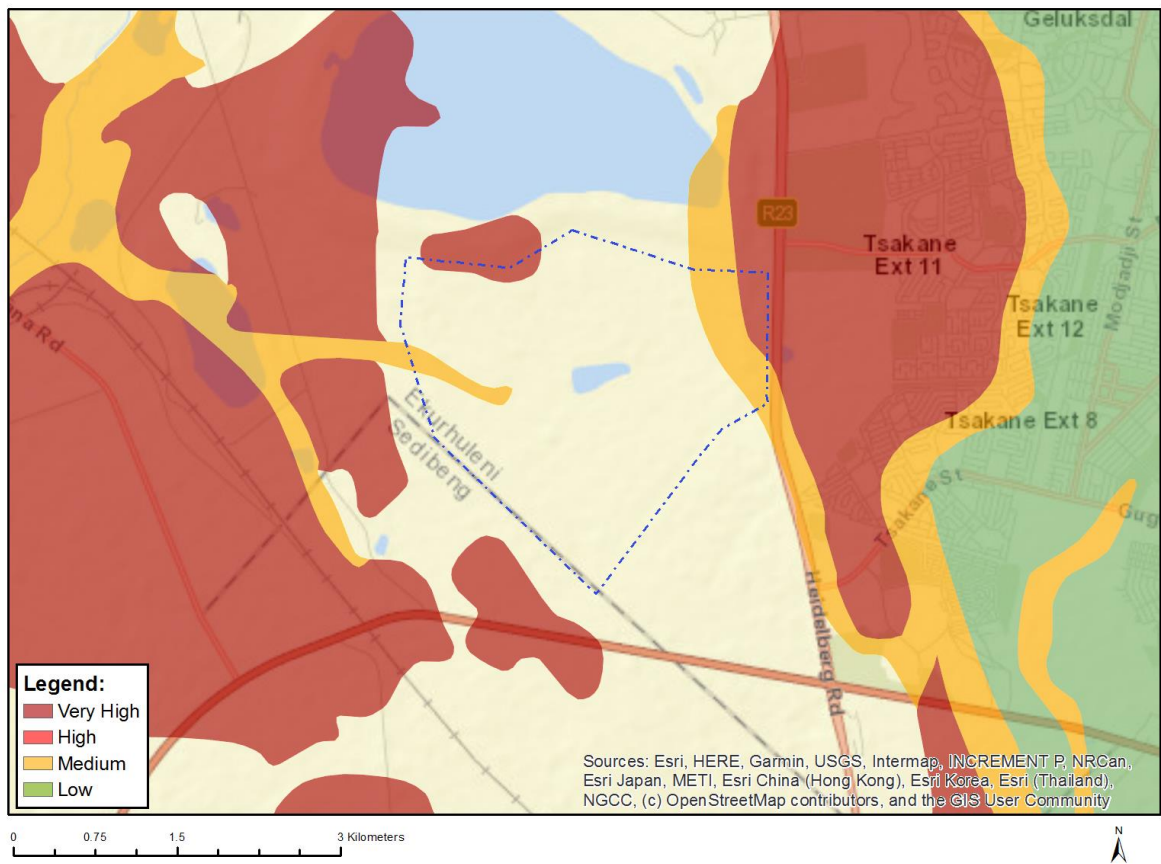


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

## MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

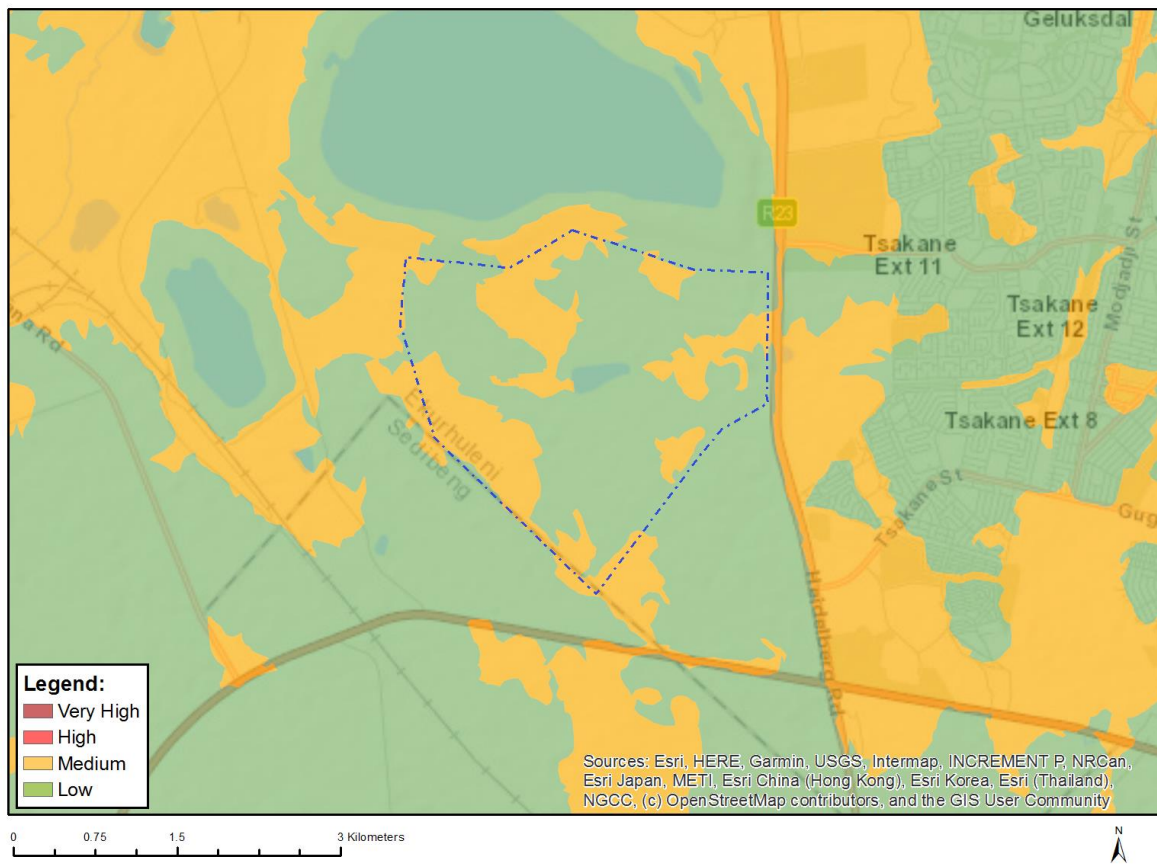


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Medium	Features with a Medium paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

## MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



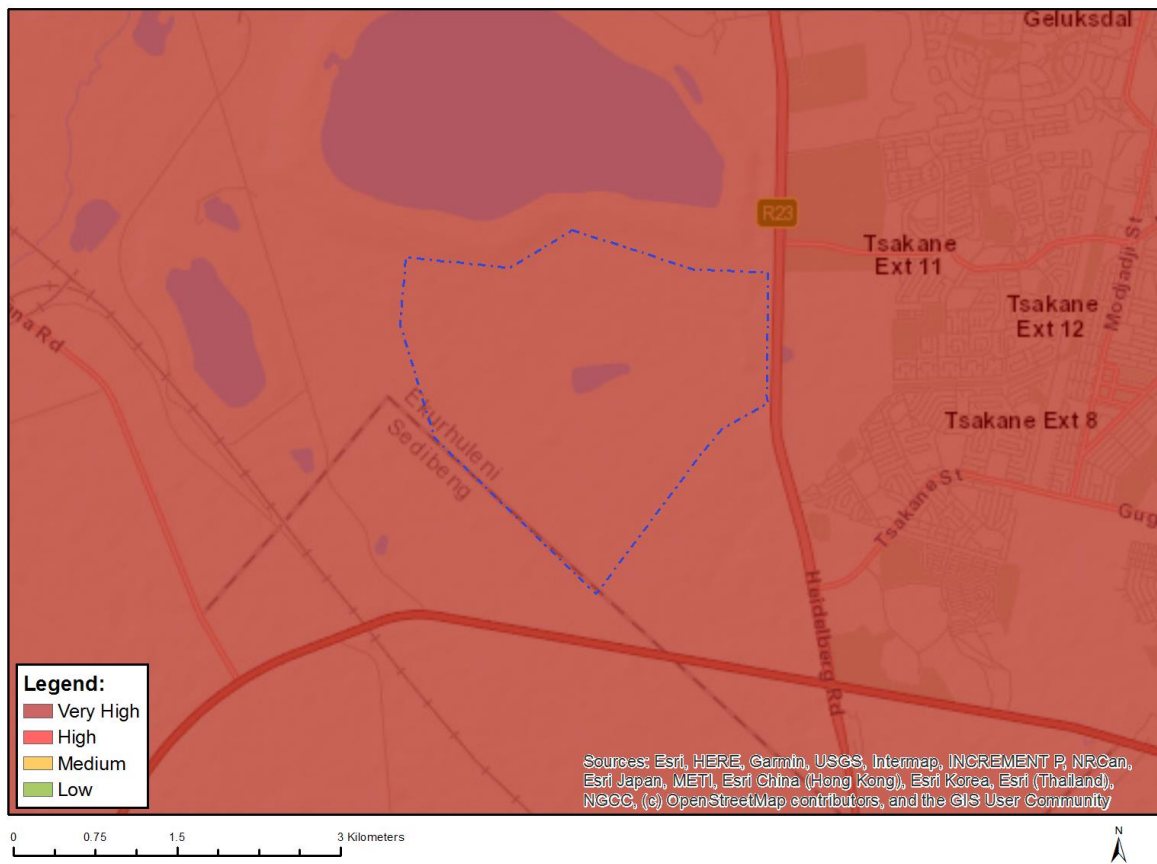
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at [eiadatarequests@sanbi.org.za](mailto:eiadatarequests@sanbi.org.za) 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	Cineraria longipes
Medium	Sensitive species 691
Medium	Sensitive species 1248

## MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Very High	CBA 1
Very High	ESA 2
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	VU_Soweto Highveld Grassland
Very High	EN_Tsakane Clay Grassland